



Water Resources Data Maryland and Delaware Water Year 1983



U.S. GEOLOGICAL SURVEY WATER-DATA REPORT MD-DE-83-1
Prepared in cooperation with the States of Maryland and Delaware
and with other agencies

CALENDAR FOR WATER YEAR 1983

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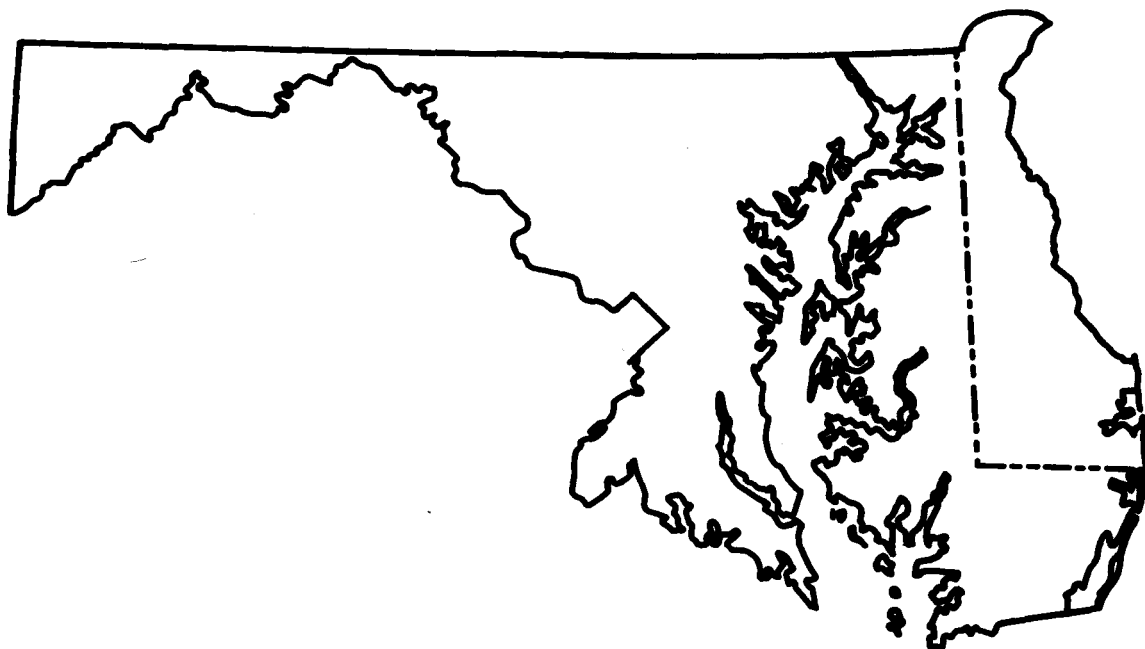
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Water Resources Data Maryland and Delaware Water Year 1983

by Robert W. James, Jr., Robert H. Simmons, and Bernard F. Strain



U.S. GEOLOGICAL SURVEY WATER-DATA REPORT MD-DE-83-1
Prepared in cooperation with the States of Maryland and Delaware
and with other agencies

UNITED STATES DEPARTMENT OF THE INTERIOR

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PREFACE

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

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

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REPORT DOCUMENTATION PAGE	1. REPORT NO. USGS/WRD/HD/84/022	2.	3. Recipient's Accession No.			
4. Title and Subtitle Water Resources Data Maryland and Delaware Water Year 1983	5. Report Date April 1984		6.			
	8. Performing Organization Rept. No. USGS-WDR-MD-DE-83-1		10. Project/Task/Work Unit No.			
7. Author(s) Robert W. James, Jr., Robert H. Simmons, and Bernard F. Strain	11. Contract(C) or Grant(G) No. (C) (G)		13. Type of Report & Period Covered 14.			
9. Performing Organization Name and Address U.S. Geological Survey, Water Resources Division 208 Carroll Building 8600 La Salle Road Towson, Maryland 21204						
12. Sponsoring Organization Name and Address U.S. Geological Survey, Water Resources Division 208 Carroll Building 8600 La Salle Road Towson, Maryland 21204		15. Supplementary Notes Prepared in cooperation with the States of Maryland and Delaware and with other agencies.				
16. Abstract (Limit: 200 words) <p>Water resources data for the 1983 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 98 gaging stations; stage and contents at 1 reservoir; water quality at 33 gaging stations and 325 wells; and water levels at 24 observation wells. Also included are data for 13 crest-stage and 4 tidal crest-stage partial-record stations. Additional water data were collected at various sites not involved in the systematic data-collection program and are published as miscellaneous measurements. These data represent that part of the National Water Data System operated by the U.S. Geological Survey and cooperating State, local, and Federal agencies in Maryland and Delaware.</p>						
17. Document Analysis a. Descriptors *Maryland, *Delaware, *District of Columbia, *Hydrologic data, *Surface water, *Ground water, *Water quality, Flow rate, Gaging stations, Lakes, Reservoirs, Chemical analyses, Sediments, Water temperatures, Sampling sites, Water levels, Water analyses. b. Identifiers/Open-Ended Terms c. COSATI Field/Group						
18. Availability Statement No restriction on distribution. This report may be purchased from: National Technical Information Service Springfield, VA 22161	19. Security Class (This Report) UNCLASSIFIED	21. No. of Pages 365	22. Price			
	20. Security Class (This Page) UNCLASSIFIED					

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WATER RESOURCES DATA FOR MARYLAND AND DELAWARE, 1983

INTRODUCTION

Water resources data for the 1983 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 98 gaging stations; stage and contents at 1 reservoir; water quality at 33 gaging stations and 325 wells; and water levels at 24 observation wells. Also included are data for 13 crest-stage, and 4 tidal crest-stage partial-record stations. Locations of these sites are shown on figures 3, 4, and 5. Additional water data were collected at various sites not involved in the systematic data-collection program and are published as miscellaneous measurements. 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, 604 South Pickett Street, Alexandria, Virginia 22304.

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

Beginning with the 1971 water year, water data for streamflow, water quality, and ground water are published 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-83-1." 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, Virginia 22161.

Additional information, including current prices, for ordering specific reports may be obtained from the District Chief at the address given on the back of the title page or by telephone (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, William Eichbaum, assistant secretary.

District of Columbia Department of Environmental Services, William B. Johnson, director.

Assistance in the form of funds or services was given by the Corps of Engineers, U.S. Army, for 20 gaging stations, and by the National Park Service, U.S. Department of the Interior, for 1 gaging 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.

Organizations that supplied data are acknowledged in station descriptions.

SUMMARY OF HYDROLOGIC CONDITIONS

Streamflow at the start of the 1983 water year was in the normal range throughout most of Maryland. However, in Delaware and on the eastern shore of Maryland, streamflow was in the deficient range (lower 25 percent of the record). These conditions continued until January when flows dropped into the deficient range throughout the bistate area following several months of deficient rainfall. Heavy rains in March brought flows into the excessive range (upper 25 percent of record) on the Eastern Shore and in central Maryland. Continued excessive rainfall brought flows throughout the bistate area into the excessive range during April and May. Flows dropped into the normal range in June except for the Eastern Shore and central Maryland, which remained in the excessive range. For the remainder of the year, flows in the bistate area were in the normal range.

During the 1983 water year, all four index stations--Potomac River near Washington, D.C., in central Maryland, North Branch Potomac River at Paw Paw, W. Va., in western Maryland, Seneca Creek at Dawsonville in central Maryland, and Choptank River near Greensboro on the Eastern Shore--were in the normal range for the year.

Monthly and annual mean discharge are compared with the long-term averages (reference period 1951-80) for two representative gaging stations in figure 1. Data for the station, Potomac River at Point of Rocks in central Maryland, reflects runoff conditions in the Potomac River basin, excluding the Coastal Plain. Data for the station, Choptank River at Greensboro on the eastern shore of Maryland, 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.

Average freshwater inflow to the Chesapeake Bay was estimated at 75,900 ft³/s (2,150 m³/s) based on flows of the James, Potomac, and Susquehanna Rivers. This is 100 percent of the long-term average during the reference period 1951-83. Inflow to the Bay during April set a new record high for the reference period. Heavy area-wide rains were the major factor contributing to the new high.

The combined storage in the three major water-supply reservoirs in the Baltimore City Municipal System, with a combined usable capacity of 85,340,000,000 gal (323 hm³), increased from 78 percent of capacity in September 1982, to 91 percent of capacity at the end of September 1983.

The water table at the beginning of the 1983 water year was at or just below normal in most cases as reflected by the statewide network of observation wells. Heavy rains in November raised water levels throughout the bistate area into the normal range. After heavy spring rains, 10 record high ground-water levels were established: One high in the Piedmont province, three in the Eastern Shore, and six in the western shore part of the Coastal Plain. A midsummer drought lowered water levels throughout the bistate area. Twenty-three record lows resulted: One in the Piedmont province, three in the Eastern Shore, and 19 in the western shore part of the Coastal Plain resulted. Nineteen of the record lows were in Southern Maryland. This reflected an increase in pumpage that was attributed to the growth in population in that area. Above-average rainfall in September brought water levels back into the normal levels by the end of the water year.

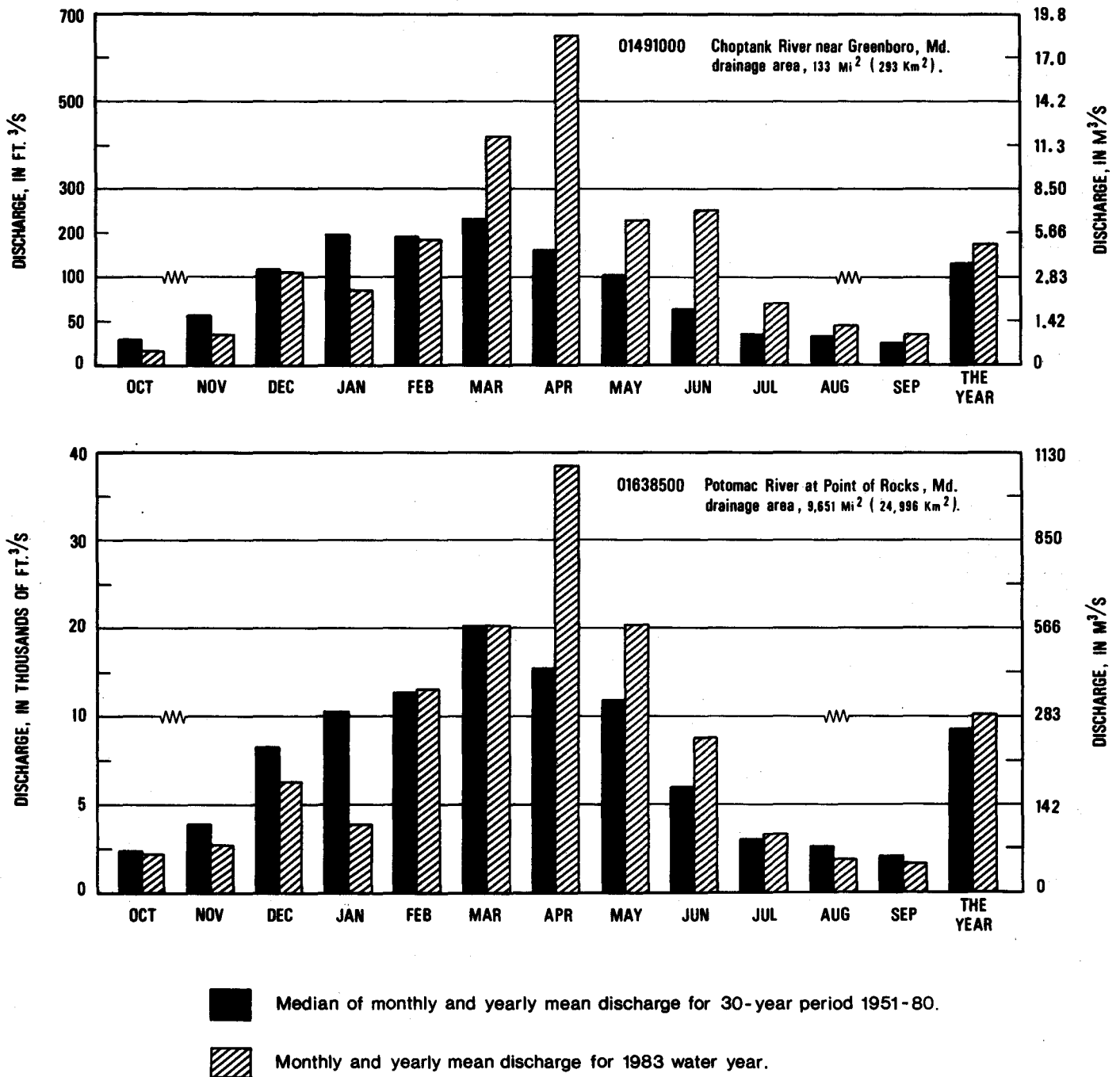


FIGURE 1. COMPARISON OF DISCHARGE AT TWO LONG-TERM REPRESENTATIVE GAGING STATIONS DURING THE 1983 WATER YEAR WITH MEDIAN DISCHARGE FOR INDICATED PERIOD.

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

Fecal coliform bacteria are bacteria that are present in the intestines or feces of warm-blooded animals. They are often used as indicators of the sanitary quality of the water. In the laboratory they are defined as all organisms which produce blue colonies within 24 hours when incubated at 44.5°C ± 0.2°C on M-FC medium (nutrient medium for 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 ± 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 emersed or submersed solid surface, such as a rock or tree, upon which an organism lived.

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

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

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

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

Suspended, recoverable is the amount of a given constituent that is in solution after the 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 ft^3/s , times the mg/L of the constituent, times the factor 0.0027, times the number of days.

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

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.

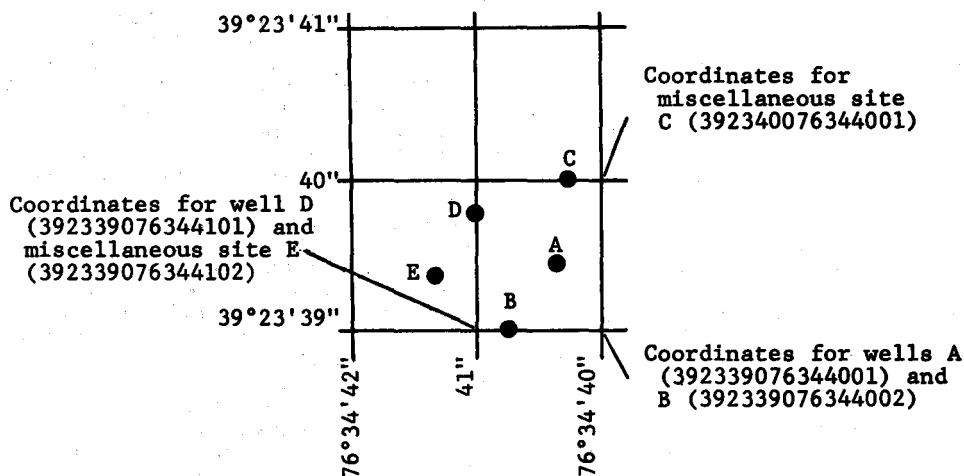


Figure 2. System for numbering wells and miscellaneous sites (latitude and longitude)

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.

Revisions

If errors in published water-quality records are discovered after publication, appropriate updates are made to the Water-Quality File in the U.S. Geological Survey's computerized data system, WATSTORE, and subsequently by monthly transfer of update transactions to the U.S. Environmental Protection Agency's STORET system. Because the usual volume of updates makes it impractical to document individual changes in the State data-report series or elsewhere, potential users of U.S. Geological Survey water-quality data are encouraged to obtain all required data from the appropriate computer file to insure the most recent updates.

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.

ACCESS TO WATSTORE DATA

The National Water Data STORAGE and RETRIEVAL System (WATSTORE) was established for handling water data collected through the activities of the U.S. Geological Survey and to provide for more effective and efficient means of releasing the data to the public. The system is operated and maintained on the central computer facilities of the Survey at its National Center in Reston, Virginia.

WATSTORE can provide a variety of useful products ranging from simple data tables to complex statistical analyses. A minimal fee, plus the actual computer cost incurred in producing a desired product, is charged to the requester. Information about the availability of specific types of data, the acquisition of data or products, and user charges can be obtained locally from each of the Water Resources Division's district offices (see address given on the back of the title page).

General inquiries about WATSTORE may be directed to:

Chief Hydrologist
U.S. Geological Survey
437 National Center
Reston, Virginia 22092

PUBLICATIONS ON TECHNIQUES OF WATER-RESOURCES INVESTIGATIONS

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

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

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

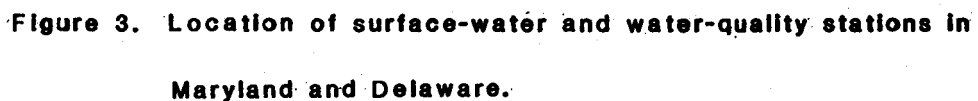
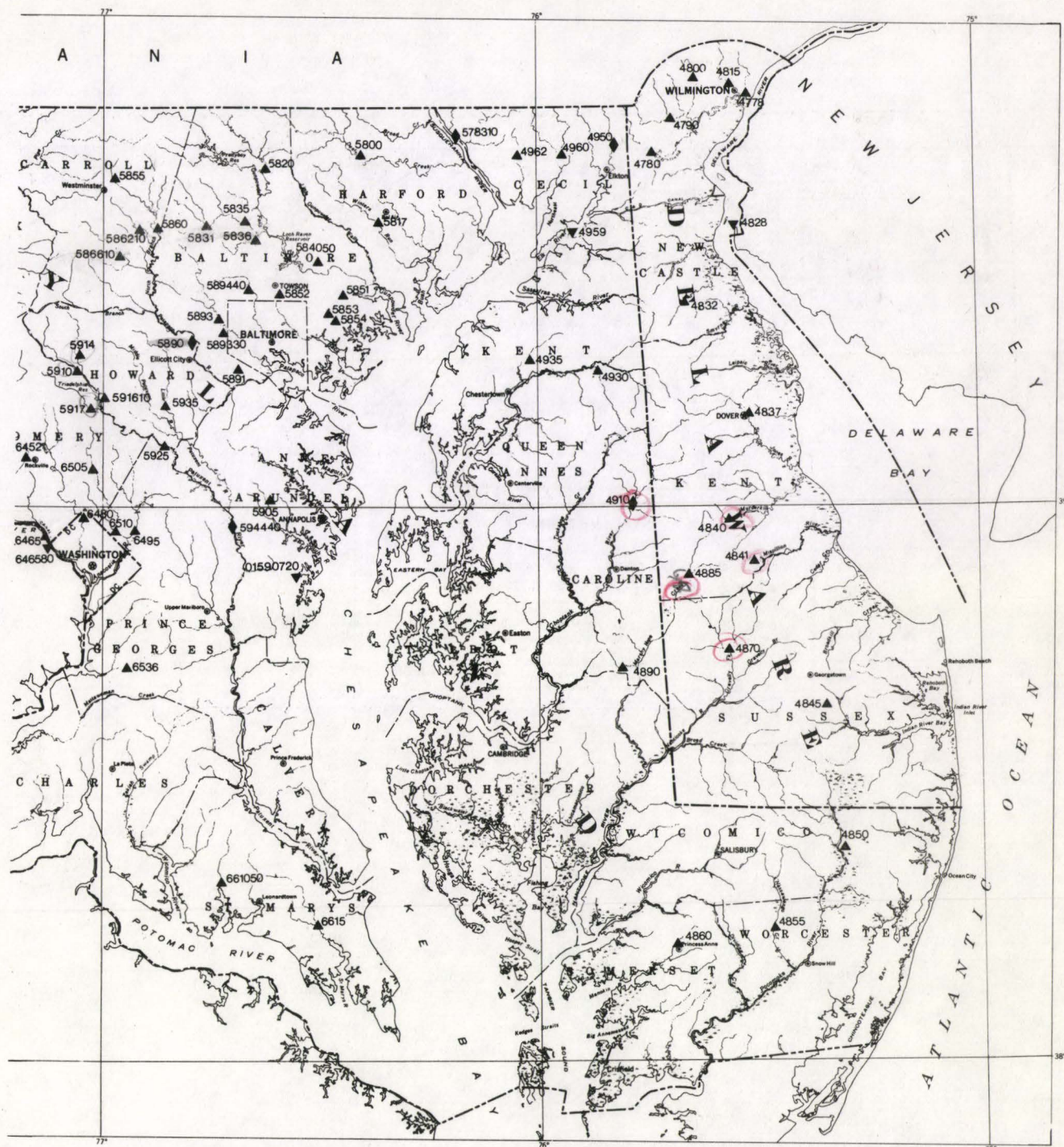


Figure 3. Location of surface-water and water-quality stations in Maryland and Delaware.



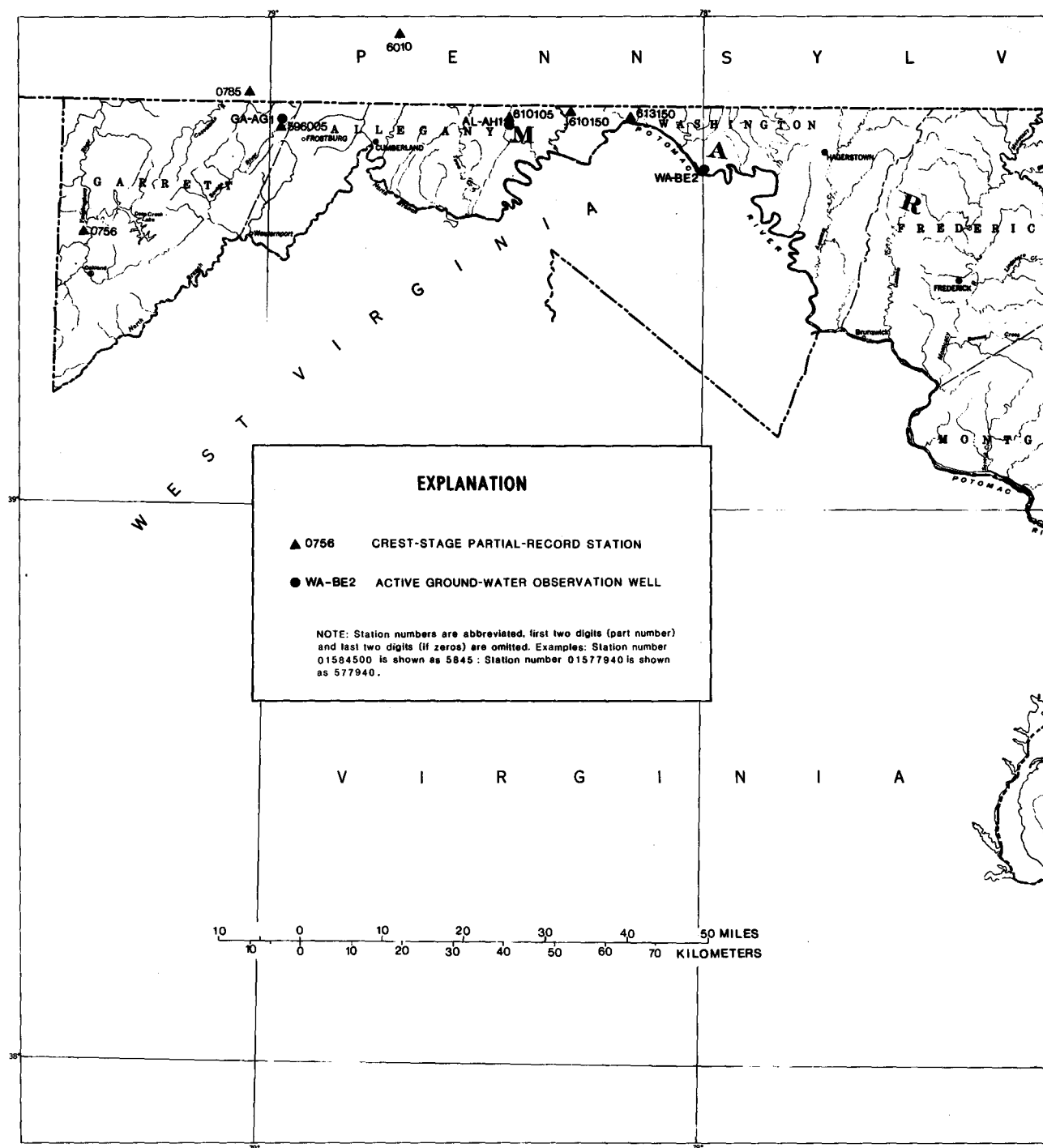
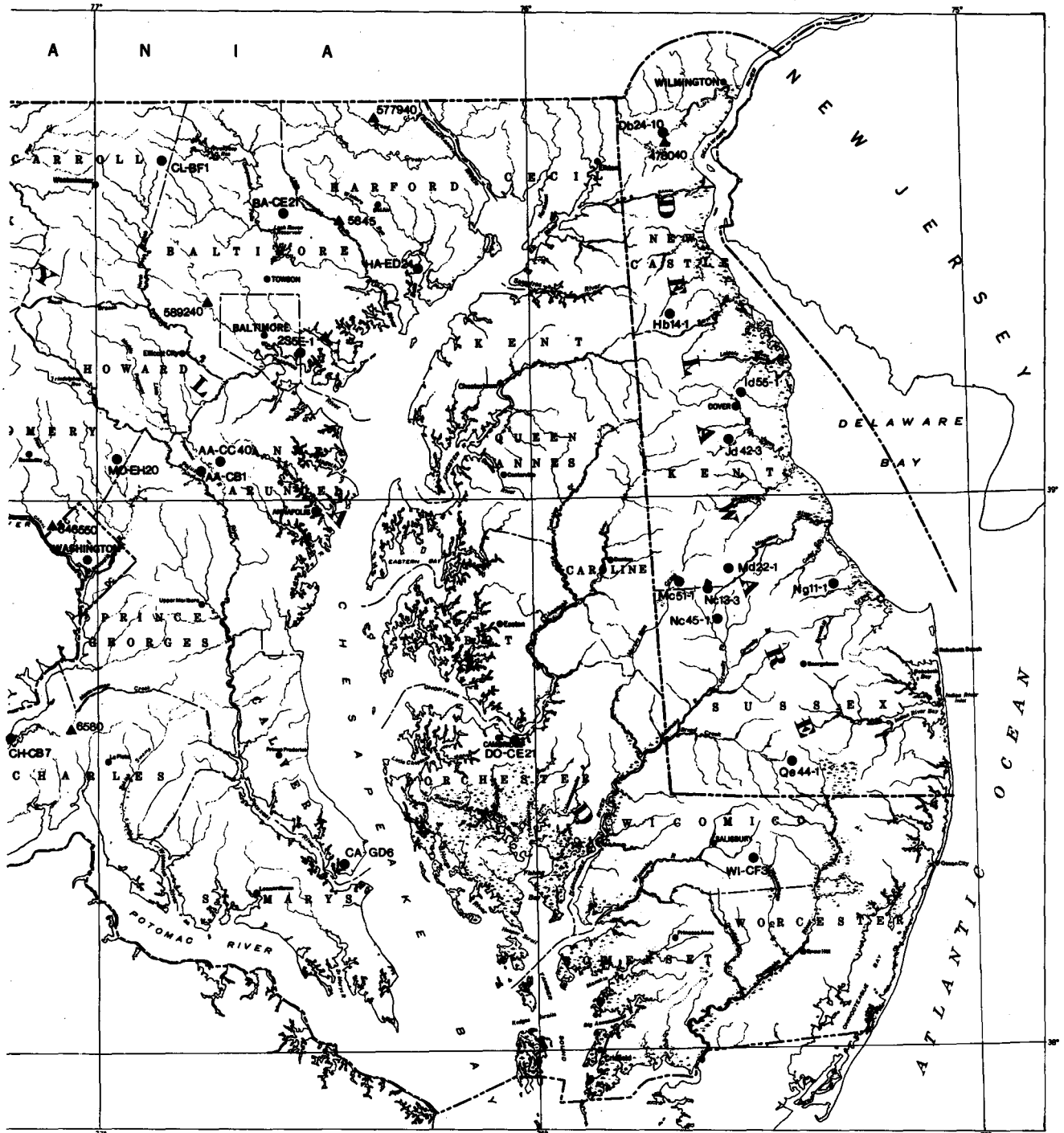


Figure 4. Location of crest-stage partial-record stations and ground-water observation wells in Maryland and Delaware.



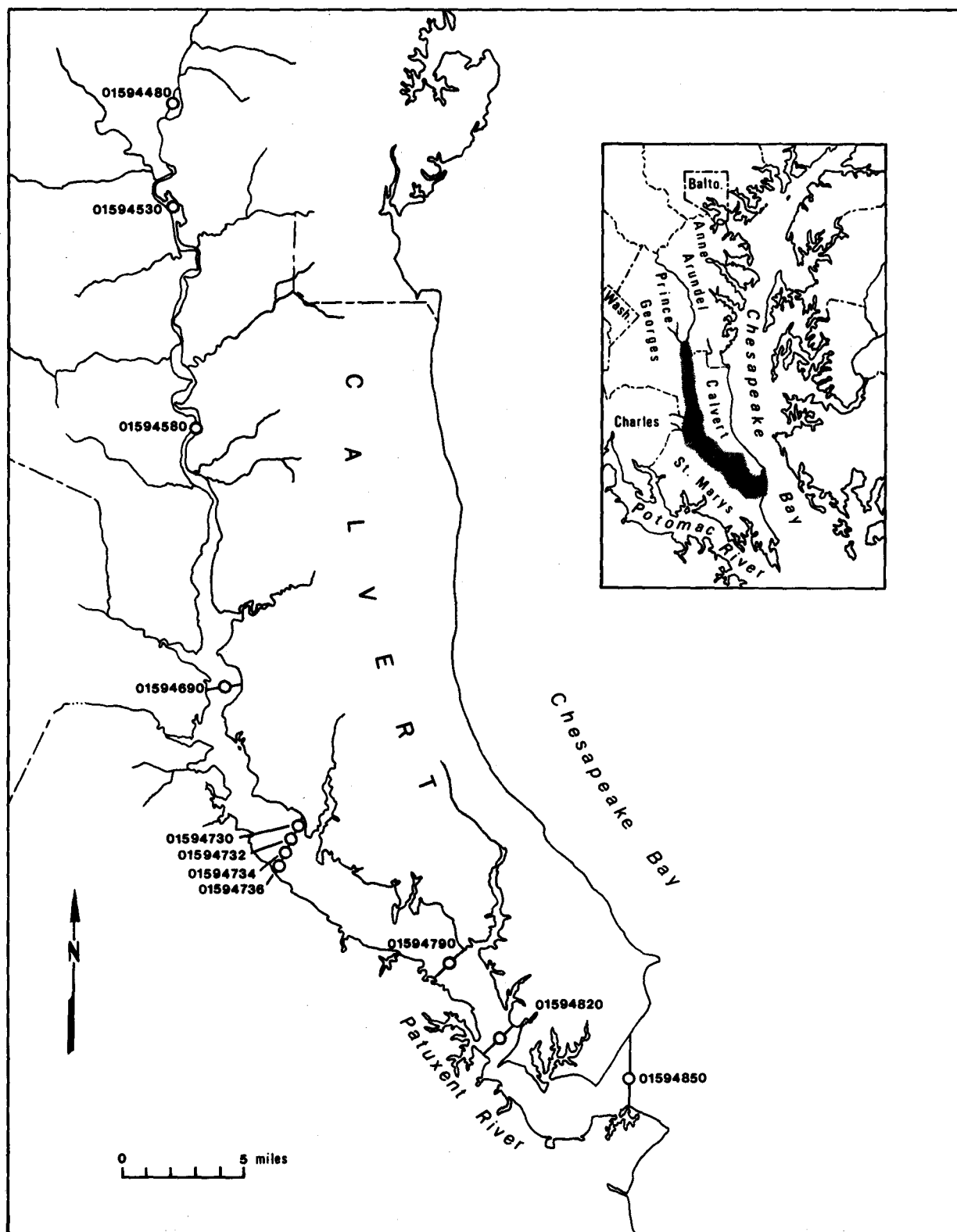


Figure 5. Location of water-quality partial-record stations in tidal portion of the Patuxent River, Maryland.

HYDROLOGIC-DATA STATION RECORDS

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 Geodetic Vertical Datum of 1929.

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

AVERAGE DISCHARGE.--37 years (water years 1947-83), 9.63 ft³/s (0.273 m³/s), 17.53 in/yr (445 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), 7.97 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 discharge, 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. 16	1015	650 18.4	3.78 1.152	Apr. 16	0430	790 22.4	4.00 1.219
Mar. 21	0915	*2020 57.2	6.03 1.838	May 21	1905	1100 31.2	4.59 1.399
Mar. 27	2050	1080 30.6	4.57 1.393	May 22	2240	883 25.0	4.19 1.277
Apr. 10	1030	1330 37.7	4.99 1.521	May 30	0420	783 22.2	3.99 1.216
Apr. 15	2330	737 20.9	3.92 1.195	Sept. 21	1845	627 17.8	3.74 1.140

Minimum daily discharge, 0.24 ft³/s (0.007 m³/s) Sept. 10, 11.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.70	.93	15	1.7	3.0	26	5.0	5.3	6.1	1.8	.68	.33
2	.65	.92	6.6	1.6	17	32	5.4	5.0	4.6	1.8	.64	.33
3	.65	.81	2.9	1.6	37	6.8	79	5.0	4.9	1.7	.59	.30
4	.65	47	2.8	1.4	5.7	4.8	9.1	9.9	40	1.7	.58	.30
5	.70	21	2.2	11	3.5	4.0	6.0	4.7	11	1.6	.58	.33
6	.76	2.0	3.2	8.9	3.0	4.1	5.1	3.4	4.5	1.4	.62	.36
7	.74	1.5	1.9	2.7	22	8.9	7.4	2.6	5.0	1.2	.58	.43
8	.69	1.3	1.7	2.1	11	24	24	2.4	3.3	1.2	.52	.30
9	.62	1.4	1.5	1.8	5.9	35	16	2.3	2.7	1.2	.47	.25
10	.57	1.4	1.4	61	4.3	28	247	2.1	2.6	1.2	.41	.24
11	.54	1.3	1.7	29	2.7	9.8	19	2.2	2.5	1.2	22	.24
12	.55	1.3	2.1	5.3	3.4	28	9.0	2.2	2.4	1.2	4.3	6.5
13	.95	53	1.9	3.1	4.6	9.3	7.2	2.1	2.2	1.1	.92	3.2
14	1.3	3.0	1.8	2.5	3.7	5.7	5.7	2.0	2.1	.99	.61	.65
15	.87	1.8	2.3	11	5.3	4.7	75	13	2.0	.94	.54	.40
16	.66	1.6	71	6.0	13	4.0	189	106	2.2	.87	.51	.33
17	.55	1.4	6.5	3.2	20	3.7	13	17	1.8	7.2	.51	.30
18	.56	1.3	3.1	2.3	34	55	8.5	4.7	1.8	22	1.3	.28
19	.54	1.2	2.5	1.8	23	81	8.5	3.7	12	2.2	.94	.27
20	.55	1.2	2.8	1.7	16	11	21	6.0	23	3.3	.60	.27
21	13	1.2	2.2	1.8	16	291	9.0	103	19	1.3	.43	74
22	1.1	1.2	1.9	1.8	17	16	6.4	105	3.4	1.0	.53	9.5
23	.78	1.2	1.8	53	28	7.6	6.0	47	2.3	.81	1.2	.87
24	.62	1.2	1.8	11	11	6.1	85	13	2.1	4.7	.60	.51
25	44	.95	1.8	4.7	6.7	5.1	74	5.7	1.8	1.2	.47	.47
26	13	1.1	2.0	3.4	4.8	4.4	12	38	1.6	.87	.36	.47
27	1.6	.99	2.0	3.0	3.9	150	8.5	31	1.6	.76	.33	.47
28	1.1	5.0	2.3	2.5	3.6	36	7.2	6.7	18	.71	.30	.47
29	1.0	51	4.9	2.3	---	11	6.4	14	22	.65	.44	.36
30	.94	3.8	2.5	5.9	---	6.7	5.3	97	2.1	.77	.43	.43
31	.90	---	1.8	5.0	---	5.7	---	9.9	---	.71	.40	---
TOTAL	91.84	213.00	159.9	254.1	329.1	925.4	979.7	671.9	210.6	69.28	43.39	103.16
MEAN	2.96	7.10	5.16	8.20	11.8	29.9	32.7	21.7	7.02	2.23	1.40	3.44
MAX	.44	.53	.71	.61	.37	.291	.247	.106	.40	.22	.22	.74
MIN	.54	.81	1.4	1.4	2.7	3.7	5.0	2.0	1.6	.65	.30	.24
CFSM	.40	.95	.69	1.10	1.58	4.01	4.38	2.91	.94	.30	.19	.46
IN.	.46	1.06	.80	1.27	1.64	4.61	4.88	3.35	1.05	.35	.22	.51

CAL YR 1982 TOTAL 3112.96 MEAN 8.53 MAX 220 MIN .38 CFSM 1.14 IN 15.52
WTR YR 1983 TOTAL 4051.37 MEAN 11.1 MAX 291 MIN .24 CFSM 1.49 IN 20.20

DELAWARE RIVER BASIN

25

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, 3.3 mi (5.3 km) south of Newark, 3.6 mi (5.8 km) upstream from Belltown Run, 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.

REVISED RECORDS.--WDR MD-DE-79-1: 1943-70 (P).

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.--Records good. Low and medium flow regulated by mill above station. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--40 years, 28.4 ft³/s (0.804 m³/s), 18.81 in/yr (478 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,330 ft³/s (123 m³/s) May 1, 1947, gage height, 12.41 ft (3.783 m); 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)
Mar. 19	0330	1560 44.2	10.46 3.188	Apr. 16	0600	1370 38.8	10.28 3.133
Mar. 21	1245	*2410 68.3	11.29 3.441	Apr. 24	1130	1050 29.7	9.93 3.027
Mar. 27	2345	1830 51.8	10.72 3.267	Apr. 25	0515	1100 31.2	10.00 3.048
Apr. 10	1330	2010 56.9	10.90 3.322	May 21	2200	1530 43.3	10.43 3.179

Minimum daily discharge, 1.3 ft³/s (0.037 m³/s) Sept. 11.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.2	6.1	34	12	14	42	26	20	21	13	5.0	3.4
2	3.3	4.2	30	12	50	115	23	20	18	12	5.2	3.1
3	3.4	3.9	13	12	190	25	170	19	17	11	5.5	2.9
4	4.7	69	12	13	30	19	37	24	33	11	5.0	2.8
5	3.5	145	10	16	17	17	26	20	20	11	6.0	2.6
6	3.7	14	11	26	16	16	24	18	16	11	5.2	2.6
7	4.5	11	9.2	16	95	38	24	17	18	10	4.0	3.4
8	3.1	9.6	8.4	14	45	74	61	18	15	9.7	6.8	2.8
9	4.2	9.0	8.1	13	25	137	55	18	14	8.4	2.2	2.7
10	3.4	9.4	7.8	75	15	78	788	16	14	8.7	3.7	1.5
11	3.5	7.5	8.2	154	12	36	84	16	12	9.3	18	1.3
12	3.8	7.6	9.6	25	16	83	43	14	13	7.4	12	21
13	3.9	172	10	17	23	29	33	15	12	9.5	6.8	17
14	4.1	14	7.4	17	18	22	29	14	12	6.3	5.7	5.0
15	5.4	11	8.9	39	21	19	103	30	11	8.2	5.7	3.5
16	3.8	8.4	247	23	34	18	560	254	11	6.1	4.5	2.5
17	2.7	9.2	43	17	50	17	50	82	10	6.2	5.2	2.6
18	3.7	7.3	17	14	94	180	34	22	11	8.7	5.2	2.8
19	2.0	8.3	14	13	100	515	30	18	12	6.8	3.5	4.4
20	3.5	6.9	15	11	69	48	39	19	82	8.9	3.1	1.5
21	13	7.3	13	13	68	829	30	355	124	7.3	3.2	75
22	6.0	8.1	12	12	88	73	26	232	24	7.2	4.9	33
23	2.7	6.5	13	258	135	37	24	244	16	7.1	6.3	5.2
24	4.3	7.7	11	61	59	30	376	36	14	14	3.6	3.8
25	60	6.0	11	23	31	27	353	23	13	8.3	3.2	2.2
26	47	7.7	13	18	22	23	46	65	12	7.1	3.3	4.6
27	8.1	5.9	13	15	18	300	33	76	12	6.0	2.8	2.7
28	5.0	9.6	13	13	17	306	28	22	24	4.7	2.9	1.9
29	6.1	200	18	13	---	47	25	31	95	5.7	11	3.3
30	4.8	18	15	17	---	32	22	121	15	5.7	3.8	3.4
31	3.4	---	12	20	---	28	---	28	---	4.7	3.4	---
TOTAL	234.8	810.2	667.6	1002	1372	3260	3202	1907	721	261.0	166.7	224.5
MEAN	7.57	27.0	21.5	32.3	49.0	105	107	61.5	24.0	8.42	5.38	7.48
MAX	60	200	247	258	190	829	788	355	124	14	18	75
MIN	2.0	3.9	7.4	11	12	16	22	14	10	4.7	2.2	1.3
CFSM	.37	1.32	1.05	1.58	2.39	5.12	5.22	3.00	1.17	.41	.26	.37
IN.	.43	1.47	1.21	1.82	2.49	5.92	5.81	3.46	1.31	.47	.30	.41

CAL YR 1982	TOTAL	10690.85	MEAN 29.3	MAX 845	MIN .75	CFSM 1.43	IN 19.40
WTR YR 1983	TOTAL	13828.80	MEAN 37.9	MAX 829	MIN 1.3	CFSM 1.85	IN 25.69

DELAWARE RIVER BASIN

01479000 WHITE CLAY CREEK NEAR NEWARK, DE

LOCATION.--Lat 39°51'47", 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).

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.--Records good. Slight diurnal fluctuation at low flow caused by mills above station. Records do not include a negligible diversion above station by E. I. du Pont de Nemours & Co. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--43 years (water years 1932-36, 1944-57, 1960-83, 113 ft³/s (3.200 m³/s), 17.22 in/yr (437 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 discharge, 4.7 ft³/s (0.13 m³/s) Sept. 11, 1966; minimum daily discharge, 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)
Mar. 21	1100	3230 91.5	13.59 4.142	Apr. 10	1345	*3240 91.8	13.60 4.145
Mar. 28	0100	2920 82.7	13.25 4.039	May 23	0315	2350 66.6	12.53 3.819

Minimum daily discharge, 26 ft³/s (0.74 m³/s) Oct. 11, 12, Sept. 20.

REVISIONS.--The maximum discharges for some water years have been revised, as shown in the following table. They supersede figures published in reports for 1978-1982.

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)
1978	Mar. 14, 1978	2130	*3470 98.3	13.83 4.215	1979	Sept. 6, 1979	0700	2640 74.8	12.92 3.938
	Mar. 26, 1978	2100	3120 88.4	13.47 4.106		Sept. 22, 1979	0815	2730 77.3	13.04 3.975
	May 14, 1978	2245	2860 81.0	13.18 4.017		Sept. 30, 1979	0500	2530 71.6	12.78 3.895
	July 3, 1978	2000	3470 98.3	13.83 4.215	1980	Nov. 26, 1979	1630	*1730 49.0	11.26 3.432
	Aug. 28, 1978	0600	3300 93.5	13.66 4.164	1981	Aug. 8, 1981	1515	*2980 84.4	13.32 4.060
1979	Jan. 21, 1979	1200	4130 117	14.45 4.404	1982	Jan. 4, 1982	1445	2460 69.7	12.69 3.868
	Jan. 24, 1979	2230	*4380 124	14.67 4.471		Feb. 3, 1982	0530	*2490 70.5	12.72 3.877
	Feb. 24, 1979	1100	2180 61.7	12.29 3.746					
	Feb. 25, 1979	0115	4090 116	14.41 4.392					
	Feb. 26, 1979	0445	3900 110	14.24 4.340					

DELAWARE RIVER BASIN

27

01479000 WHITE CLAY CREEK NEAR NEWARK, DE--Continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	32	36	84	45	58	129	171	177	166	87	52	35
2	30	35	86	44	171	252	161	172	155	87	53	34
3	29	36	59	43	657	125	582	168	147	82	50	34
4	28	124	54	42	144	106	209	184	180	80	51	32
5	27	370	50	50	100	99	164	167	168	82	50	32
6	28	59	49	64	92	95	154	156	141	77	52	31
7	28	45	44	50	182	133	152	151	144	73	51	29
8	28	40	42	46	125	159	197	153	130	68	47	27
9	30	37	41	44	100	283	260	148	121	69	45	26
10	27	35	40	145	87	219	1510	139	118	68	44	26
11	26	34	42	287	81	155	409	136	117	65	101	26
12	26	34	48	81	75	194	256	133	114	64	75	52
13	30	226	51	60	81	139	214	131	109	63	46	48
14	34	64	49	54	84	116	201	129	107	61	42	33
15	31	46	53	79	100	110	319	160	103	60	40	30
16	31	41	525	64	112	103	1130	671	100	60	39	29
17	29	39	149	52	123	100	281	417	95	58	37	29
18	28	38	75	52	155	232	215	173	98	88	41	29
19	28	36	63	52	168	807	201	149	141	113	40	28
20	29	36	61	51	141	197	231	154	277	133	37	26
21	62	36	57	52	137	1550	210	510	373	66	35	167
22	38	36	52	62	166	420	177	706	156	64	34	104
23	32	35	51	632	218	226	169	907	121	59	41	40
24	32	34	50	232	168	188	744	243	111	74	36	33
25	88	33	49	103	125	166	846	189	104	62	35	32
26	111	33	50	77	111	152	272	244	97	60	34	32
27	49	34	48	66	99	576	221	399	96	57	34	32
28	39	41	50	61	96	983	205	182	148	55	34	32
29	37	373	55	57	---	264	192	207	292	54	60	31
30	36	88	48	64	---	202	184	356	98	53	38	33
31	37	---	45	68	---	185	---	186	---	53	34	---
TOTAL	1140	2154	2220	2879	3956	8665	10249	7997	4327	2195	1408	1172
MEAN	36.8	71.8	71.6	92.9	141	280	342	258	144	70.8	45.4	39.1
MAX	111	373	525	632	657	1550	1510	907	373	133	101	167
MIN	26	33	40	42	58	95	152	129	95	53	34	26
CFSM	.41	.81	.80	1.04	1.58	3.14	3.84	2.90	1.62	.80	.51	.44
IN.	.48	.90	.93	1.20	1.65	3.62	4.28	3.34	1.81	.92	.59	.49

CAL YR 1982	TOTAL	33926	MEAN	92.9	MAX	1690	MIN	24	CFSM	1.04	IN	14.16
WTR YR 1983	TOTAL	48362	MEAN	132	MAX	1550	MIN	26	CFSM	1.48	IN	20.19

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).

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.--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.--40 years, 64.2 ft³/s (1.818 m³/s), 18.55 in/yr (471 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 discharge, 2.9 ft³/s (0.082 m³/s) Sept. 4, 1966; minimum daily discharge, 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)
Mar. 21	1230	1690 47.9	5.60 1.707	Apr. 10	1500	*1880 53.2	5.86 1.786
Mar. 27	2400	1650 46.7	5.54 1.689	May 23	0115	1460 41.3	5.26 1.603

Minimum discharge, 5.6 ft³/s (0.159 m³/s) Sept. 19, gage height, 2.16 ft (0.658 m), result of regulation; minimum daily discharge, 14 ft³/s (0.396 m³/s) Oct. 10, Sept. 10, 19.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20	19	41	26	36	57	88	103	103	58	29	23
2	19	19	50	26	106	116	84	99	95	56	30	21
3	17	19	35	25	207	61	252	97	91	52	29	20
4	16	34	32	24	67	54	114	103	114	52	28	20
5	17	159	30	26	49	50	96	94	120	54	28	19
6	18	35	29	38	45	48	89	88	91	48	29	19
7	18	27	27	29	69	61	89	86	87	46	31	18
8	17	25	26	27	61	71	116	85	78	45	24	17
9	16	24	25	26	51	100	148	82	73	45	25	20
10	14	22	24	43	45	80	659	79	72	42	27	14
11	15	21	26	146	31	68	177	79	70	42	39	15
12	17	22	28	48	38	87	128	75	67	41	52	20
13	18	79	24	37	52	71	114	74	67	39	30	23
14	20	36	24	33	56	58	107	73	63	38	28	19
15	21	28	25	39	54	55	137	89	62	37	27	20
16	15	25	165	39	55	52	409	272	61	37	26	16
17	19	24	72	32	53	51	159	179	59	37	25	19
18	15	23	41	28	63	79	133	95	59	93	28	19
19	16	23	34	26	74	265	128	85	101	43	27	14
20	20	23	34	26	66	91	146	90	121	41	25	15
21	30	23	32	28	67	578	131	187	163	39	22	41
22	21	22	30	28	81	163	113	280	84	36	23	54
23	18	25	29	234	91	103	108	453	68	34	24	22
24	18	19	29	106	78	88	259	144	63	43	24	20
25	34	21	28	55	62	81	337	111	58	37	23	20
26	61	21	28	45	55	75	147	122	55	35	24	18
27	26	21	28	40	49	258	127	177	54	32	20	19
28	22	22	29	38	48	388	118	104	57	31	21	18
29	20	145	30	35	---	125	111	123	115	30	27	18
30	20	46	28	36	---	101	107	153	61	30	22	18
31	20	---	27	45	---	94	---	116	---	30	21	---
TOTAL	638	1052	1110	1434	1809	3629	4931	3997	2432	1323	838	619
MEAN	20.6	35.1	35.8	46.3	64.6	117	164	129	81.1	42.7	27.0	20.6
MAX	61	159	165	234	207	578	659	453	163	93	52	54
MIN	14	19	24	24	31	48	84	73	54	30	20	14
CFSM	.44	.75	.76	.99	1.37	2.49	3.49	2.75	1.73	.91	.57	.44
IN.	.50	.83	.88	1.13	1.43	2.87	3.90	3.16	1.92	1.05	.66	.49

CAL YR 1982 TOTAL 17389 MEAN 47.6 MAX 684 MIN 14 CFSM 1.01 IN 13.76
WTR YR 1983 TOTAL 23812 MEAN 65.2 MAX 659 MIN 14 CFSM 1.39 IN 18.85

DELAWARE RIVER BASIN

29

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 Rising Sun Bridge, in Wilmington, and 4.2 mi (6.8 km) upstream from mouth.

DRAINAGE AREA.--314 mi² (813 km²).

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.--Records good. Some diurnal fluctuation at low flow caused by mills above station. Flow regulated since November 1973 by Marsh Creek Reservoir, capacity 7,230,000,000 gal (27.4 hm³), 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. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--37 years, 479 ft³/s (13.57 m³/s), 20.72 in/yr (526 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 discharge, about 30 ft³/s (0.85 m³/s) Dec. 26, 1948, during period of ice effect; minimum daily discharge, 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)
Mar. 21	1815	4910 139	7.62 2.323	Apr. 16	1145	5380 152	7.90 2.408
Mar. 28	0900	5190 147	7.79 2.374	Apr. 25	1400	4870 138	7.60 2.316
Apr. 11	0030	*7060 200	8.75 2.667	May 23	0915	4480 127	7.34 2.237

Minimum discharge, 68 ft³/s (1.93 m³/s) Oct. 11, gage height, 2.49 ft (0.759 m); minimum daily discharge, 92 ft³/s (2.61 m³/s) Sept. 9.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	154	137	339	255	351	548	942	1050	785	403	165	143
2	148	129	490	249	403	1070	890	1010	725	373	167	133
3	138	127	343	236	2320	779	2190	993	715	353	159	124
4	137	182	293	194	958	615	1320	1010	829	337	159	117
5	133	1250	263	192	605	556	998	938	776	346	157	112
6	134	386	244	328	524	525	960	885	675	320	161	111
7	136	234	228	280	615	603	986	854	656	301	157	106
8	131	205	207	228	593	649	1120	836	628	285	145	99
9	135	185	200	203	512	829	1360	839	592	276	145	92
10	126	172	187	297	459	807	3620	786	574	265	134	94
11	124	165	190	875	373	853	3120	770	583	251	184	93
12	124	159	212	479	215	775	1610	743	540	255	309	94
13	128	478	189	334	470	713	1380	715	532	245	195	144
14	161	361	204	277	469	584	1270	708	508	231	165	140
15	154	223	240	331	446	544	1480	732	485	224	153	122
16	135	198	887	353	466	515	4540	1520	485	224	147	109
17	128	178	840	297	478	488	2040	1720	454	213	144	104
18	129	172	401	260	544	614	1710	883	431	333	144	102
19	128	166	324	229	624	2110	1610	778	583	239	153	101
20	130	167	312	213	595	1070	1790	797	656	256	140	99
21	163	160	311	214	586	2960	1840	1130	742	218	128	182
22	137	159	280	217	666	2140	1460	1810	574	242	115	499
23	130	161	275	872	812	1100	1120	3010	477	209	128	169
24	129	155	285	1100	849	954	1880	1440	431	226	133	130
25	183	155	275	787	704	871	3980	934	401	216	125	114
26	352	151	273	551	616	811	1990	857	380	198	119	113
27	239	146	271	458	515	1200	1770	1260	367	185	118	115
28	167	152	713	417	490	3440	1620	802	367	179	113	114
29	149	856	361	382	---	1340	1430	865	812	178	146	110
30	143	567	273	368	---	1060	1150	1280	500	178	142	106
31	141	---	251	407	---	976	---	917	---	166	131	---
TOTAL	4646	7936	10161	11883	17258	32099	53176	32872	17263	7925	4681	3891
MEAN	150	265	328	383	616	1035	1773	1060	575	256	151	130
MAX	352	1250	887	1100	2320	3440	4540	3010	829	403	309	499
MIN	124	127	187	192	215	488	890	708	367	166	113	92
(+)	-5.2	+8.2	-40.2	-5.7	+3.2	+18.2	-27.6	+8.0	+9.4	+4.2	-8.1	-8.7
MEAN#	145	273	288	377	609	1053	1745	1068	584	260	143	121
CFSM#	0.46	0.87	0.92	1.20	1.97	3.35	5.56	3.40	1.86	0.83	0.46	0.39
IN#	0.53	0.97	1.06	1.39	2.05	3.87	6.20	3.92	2.08	0.95	0.52	0.43

CAL YR 1982 TOTAL 154877 MEAN 424 MAX 4640 MIN 124 MEAN# 422 CFSM# 1.34 IN# 18.24
WTR YR 1983 TOTAL 203791 MEAN 558 MAX 4540 MIN 92 MEAN# 554 CFSM# 1.76 IN# 23.98

* 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

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 (29,000 km²), approximately.

PERIOD OF RECORD.--Water years 1964 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.

INSTRUMENTATION.--Water-quality monitor since February 1970.

REMARKS.--Interruptions in record due to instrument malfunctions and pump failures.

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, 8.9 units Mar. 4, 1980; minimum, 5.4 units Dec. 31, 1972.

WATER TEMPERATURES: Maximum, 31.5°C July 21, 1977, July 19, 1982; minimum, 0.0°C on many days during winter periods.

DISSOLVED OXYGEN: Maximum, 17.1 mg/L Dec. 16, 19, 1976; minimum, 0.3 mg/L Sept. 16, 17, 1971.

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			DECEMBER			JANUARY			
1	21600	11900	15900	21400	16600	---	18300	10400	12900	---	---	---
2	19700	12700	15500	---	---	---	18100	10000	12900	---	---	---
3	20900	12700	16400	---	---	---	17400	10100	12500	---	---	---
4	21100	13200	16200	---	---	---	16300	9480	12400	---	---	---
5	20300	13000	15600	---	---	---	16100	9440	11300	---	---	---
6	20900	12800	15700	---	---	---	14700	9880	11900	---	---	---
7	19200	12700	15300	---	---	---	---	---	---	---	---	---
8	20200	13000	15500	---	---	---	---	---	---	---	---	---
9	18000	12800	15100	---	---	---	---	---	---	---	---	---
10	23000	14300	17600	---	---	---	---	---	---	---	---	---
11	21700	14200	17600	---	---	---	---	---	---	---	---	---
12	21000	14100	17100	---	---	---	---	---	---	---	---	---
13	19000	14200	---	---	---	---	---	---	---	---	---	---
14	---	---	---	---	---	---	---	---	---	---	---	---
15	---	---	---	---	---	---	---	---	---	---	---	---
16	---	---	---	---	---	---	---	---	---	---	---	---
17	---	---	---	---	---	---	---	---	---	---	---	---
18	19200	11800	---	---	---	---	---	---	---	---	---	---
19	17200	11800	14100	---	---	---	---	---	---	---	---	---
20	17700	11800	14100	---	---	---	---	---	---	---	---	---
21	16200	10800	13100	---	---	---	---	---	---	---	---	---
22	17400	11000	13600	---	---	---	---	---	---	---	---	---
23	18400	11200	14400	---	---	---	---	---	---	---	---	---
24	19500	12800	16100	---	---	---	---	---	---	---	---	---
25	22500	11900	17800	---	---	---	---	---	---	---	---	---
26	25700	9880	19200	---	---	---	---	---	---	---	---	---
27	26000	17000	22000	---	---	---	---	---	---	---	---	---
28	25400	17800	21700	---	---	---	---	---	---	17200	9760	---
29	25700	17200	20500	16200	11100	---	---	---	---	21400	9240	14400
30	24500	17200	20400	17100	10200	12900	---	---	---	18800	9520	13100
31	24600	17100	20000	---	---	---	---	---	---	17200	8880	12300
MONTH	26000	9880	16800	21400	10200	12900	18300	9440	12300	21400	8880	13300

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

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY			MARCH			APRIL			MAY			
1	15500	8200	11400	13500	6000	8500	2560	720	1090	360	200	233
2	15700	9360	11600	15100	6160	10500	4200	720	1510	360	200	278
3	16400	8360	12000	13700	4920	8150	7200	760	2090	280	240	262
4	11400	6960	8590	11100	4680	6550	1840	520	869	280	200	246
5	8160	4360	5860	11000	4280	---	1880	400	792	240	200	219
6	9720	4080	6920	---	---	---	3400	560	1360	1040	160	249
7	12400	4160	8590	7120	3720	---	5320	600	2320	4680	200	1460
8	11600	3600	7740	11900	4920	8160	5920	1000	3100	4240	360	1590
9	13000	3840	8580	12600	5680	9330	6840	1320	3520	3720	280	888
10	13800	6080	9680	14200	5280	10000	6800	1320	3910	5960	320	1500
11	17200	7920	11600	15000	5160	9630	4200	880	1910	5840	360	1490
12	19700	7800	13800	15200	6680	---	1160	680	928	5760	600	1800
13	19200	8680	13500	---	---	---	1080	640	815	7240	760	2120
14	16400	9000	12300	15600	5320	---	920	480	735	7120	960	2400
15	18200	8800	12900	13600	5200	8520	1000	400	693	6480	1120	2510
16	15900	10900	---	13400	5080	7740	880	320	580	5080	1120	2120
17	---	---	---	12600	5240	8120	520	240	369	5520	1000	2500
18	---	---	---	13700	7040	10000	480	240	369	5320	960	2080
19	---	---	---	15000	5320	9670	520	320	432	4040	1080	1940
20	---	---	---	9600	3480	5900	1400	320	603	3720	1040	1620
21	---	---	---	---	---	---	3240	400	1140	2840	1000	1460
22	13600	7440	---	---	---	---	2880	320	698	3480	800	1400
23	16900	7560	11300	2240	1360	---	1680	320	521	2920	640	1250
24	17000	7120	11100	5560	1400	2410	2000	280	563	3200	600	1080
25	16300	7320	10500	8800	1560	4100	520	200	326	3600	560	1160
26	14800	6480	9880	10800	1720	4580	480	160	227	9760	560	1400
27	15700	5880	9210	9680	1720	4190	240	160	200	2560	560	1030
28	13200	5480	8280	7440	1600	3710	240	160	198	3720	520	1090
29	---	---	---	4880	760	1870	280	160	206	3000	520	970
30	---	---	---	2320	680	1130	280	200	232	2080	520	835
31	---	---	---	1720	720	958	---	---	---	1960	480	807
MONTH	19700	3600	10300	15600	680	6530	7200	160	1080	9760	160	1290

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
JUNE			JULY			AUGUST			SEPTEMBER			
1	3720	440	1100	8160	2680	4570	14800	7480	10900	---	---	---
2	3960	400	1320	7520	2640	4210	15100	7280	9980	---	---	---
3	6280	560	2890	7000	2400	4040	15300	7240	10200	---	---	---
4	7800	1160	3910	17400	2520	5340	15900	7240	10500	---	---	---
5	6360	1040	3180	9640	2880	5510	16500	7240	10300	---	---	---
6	7360	1600	3650	10800	2960	5630	17400	7520	10700	18300	10400	---
7	6680	1480	3310	13500	3040	6540	16500	8040	10700	19300	10600	13600
8	8080	1480	3310	14400	4120	7390	17000	8280	11200	18500	10700	13600
9	7400	1400	3010	14400	4640	7550	17500	8680	11400	17900	10700	13800
10	7720	1600	3350	14100	5080	8040	16700	8920	12100	18100	11100	14000
11	8000	1680	3250	15200	5600	8590	18200	9360	12700	17600	11000	13600
12	7200	1560	2930	14600	6040	9170	17500	9440	12600	18100	11100	13800
13	7080	1640	3110	14700	6320	9220	17600	9440	13000	18100	11400	13700
14	7960	1800	3460	14200	6400	9350	17600	10000	13700	19200	12200	14600
15	7920	2000	3600	14500	6880	9900	17600	9960	13900	19500	12600	15800
16	7200	2040	3560	14400	7160	10100	17100	9720	12300	19300	12600	15400
17	7000	2080	3680	15200	7520	10300	17200	9840	12300	---	---	---
18	6680	2240	3750	15200	7720	10500	17000	9440	12300	---	---	---
19	7000	2320	3720	15400	7840	10600	18400	9120	12200	19400	12300	---
20	6880	2280	3580	15600	7880	10400	18300	9520	13300	19600	11600	14600
21	5840	2080	3290	16100	7880	10300	19300	9560	12600	19900	12200	14600
22	6600	1880	3100	16600	7800	10100	19500	9920	14200	16400	10100	12600
23	6120	1800	2830	18800	8120	11800	19500	10300	13300	16700	10100	12900
24	6280	1760	2720	18700	9200	12200	19700	10200	13700	16400	9880	12200
25	6080	2960	---	18400	8680	12400	18400	10600	13500	17700	10200	13200
26	---	---	---	18400	8920	12400	18500	10600	13600	17100	10700	13500
27	5920	2320	---	17700	9080	12300	17800	10300	13200	18400	11000	13600
28	8000	2400	3870	18000	9560	12700	17000	9920	---	19200	10600	13800
29	8520	2840	5140	16800	8800	11600	---	---	---	20200	12200	15700
30	9680	2840	5300	15200	7440	10500	---	---	---	21200	13700	16500
31	---	---	---	14200	6800	9860	---	---	---	---	---	---
MONTH	9680	400	3330	18800	2400	9130	19700	7240	12200	21200	9880	14100

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

PH (STANDARD UNITS), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			DECEMBER			JANUARY			
1	7.8	7.6	7.7	8.0	7.8	7.9	8.0	7.8	7.9	---	---	---
2	7.7	7.6	7.7	---	---	---	7.9	7.7	7.8	---	---	---
3	7.7	7.6	7.7	---	---	---	7.9	7.7	7.8	---	---	---
4	7.7	7.6	7.7	---	---	---	7.8	7.7	7.8	7.6	7.5	---
5	7.7	7.6	7.6	---	---	---	7.8	7.7	7.7	7.6	7.5	7.5
6	7.6	7.6	7.6	---	---	---	7.8	7.7	7.7	7.6	7.4	7.5
7	7.6	7.5	7.6	---	---	---	---	---	---	7.6	7.5	7.5
8	7.6	7.5	7.6	---	---	---	---	---	---	7.6	7.4	7.5
9	7.6	7.5	7.6	---	---	---	---	---	---	7.6	7.4	7.5
10	7.8	7.6	7.7	---	---	---	---	---	---	7.7	7.5	7.6
11	7.7	7.6	7.7	---	---	---	---	---	---	7.7	7.5	7.6
12	7.7	7.6	7.7	---	---	---	---	---	---	7.6	7.5	7.5
13	7.6	7.6	---	---	---	---	---	---	---	---	---	---
14	---	---	---	---	---	---	---	---	---	---	---	---
15	---	---	---	---	---	---	---	---	---	---	---	---
16	---	---	---	---	---	---	---	---	---	---	---	---
17	---	---	---	---	---	---	---	---	---	---	---	---
18	7.9	7.7	---	---	---	---	---	---	---	---	---	---
19	8.0	7.7	7.8	---	---	---	---	---	---	---	---	---
20	7.8	7.7	7.7	---	---	---	---	---	---	---	---	---
21	7.8	7.7	7.7	---	---	---	---	---	---	---	---	---
22	7.9	7.7	7.8	---	---	---	---	---	---	---	---	---
23	7.9	7.8	7.9	---	---	---	---	---	---	---	---	---
24	8.0	7.8	7.9	---	---	---	---	---	---	---	---	---
25	8.0	7.9	8.0	---	---	---	---	---	---	---	---	---
26	8.1	8.0	8.0	---	---	---	---	---	---	---	---	---
27	8.1	8.0	8.1	---	---	---	---	---	---	---	---	---
28	8.1	8.0	8.0	---	---	---	---	---	---	7.7	7.5	---
29	8.0	7.9	8.0	8.0	7.9	---	---	---	---	7.8	7.5	7.6
30	8.0	7.9	8.0	8.0	7.8	7.9	---	---	---	7.7	7.5	7.6
31	8.0	7.9	7.9	---	---	---	---	---	---	7.7	7.4	7.5
MONTH	8.1	7.5	7.8	8.0	7.8	7.9	8.0	7.7	7.8	7.8	7.4	7.5
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY			MARCH			APRIL			MAY			
1	7.8	7.4	7.6	7.8	7.6	7.7	7.3	7.1	7.2	6.8	6.7	6.8
2	7.8	7.6	7.7	8.0	7.6	7.8	7.3	7.1	7.1	6.8	6.7	6.8
3	7.8	7.6	7.7	7.9	7.6	7.7	7.3	7.1	7.2	6.9	6.8	6.8
4	7.7	7.5	7.6	7.8	7.5	7.6	7.2	7.0	7.1	6.9	6.8	6.8
5	7.7	7.5	7.6	7.7	7.5	---	7.1	6.7	6.8	6.9	6.8	6.8
6	7.7	7.5	7.6	---	---	---	6.8	6.7	6.8	6.9	6.8	6.8
7	7.8	7.5	7.7	7.6	7.5	---	6.9	6.7	6.8	7.0	6.7	6.9
8	7.7	7.5	7.6	7.9	7.6	7.7	6.9	6.8	6.8	7.0	6.8	6.9
9	7.8	7.5	7.6	7.9	7.7	7.8	6.8	6.7	6.7	6.9	6.8	6.9
10	7.8	7.6	7.7	8.0	7.7	7.9	6.8	6.7	6.8	7.4	6.8	7.0
11	7.9	7.6	7.8	8.1	7.7	7.8	6.8	6.7	6.7	7.4	7.2	7.2
12	8.0	7.7	7.9	8.1	7.7	---	6.8	6.7	6.7	7.3	7.2	7.2
13	8.0	7.7	7.9	---	---	---	6.7	6.6	6.7	7.4	7.2	7.2
14	7.9	7.7	7.8	8.3	7.7	---	6.9	6.6	6.7	7.3	7.1	7.2
15	8.0	7.7	7.8	8.1	7.7	7.8	6.9	6.6	6.7	7.3	7.1	7.2
16	7.9	7.8	---	8.0	7.6	7.7	6.8	6.6	6.7	7.3	7.1	7.2
17	---	---	---	7.9	7.6	7.7	6.7	6.6	6.7	7.3	7.2	7.3
18	---	---	---	8.0	7.8	7.9	6.7	6.6	6.6	7.3	7.2	7.2
19	---	---	---	8.1	7.7	7.8	6.6	6.6	6.6	7.3	7.2	7.3
20	---	---	---	7.8	7.6	7.7	6.7	6.5	6.6	7.3	7.2	7.3
21	---	---	---	7.8	7.6	7.7	7.0	6.4	6.6	7.2	7.1	7.2
22	7.8	7.6	---	7.7	7.5	7.6	7.0	6.7	6.8	7.2	7.1	7.1
23	8.0	7.7	7.8	7.3	7.1	---	6.9	6.7	6.8	7.2	7.0	7.1
24	7.9	7.5	7.7	7.5	7.2	7.4	6.9	6.7	6.8	7.2	7.0	7.1
25	7.8	7.5	7.7	7.6	7.2	7.4	6.9	6.6	6.7	7.2	7.0	7.1
26	7.9	7.6	7.7	7.8	7.3	7.5	7.0	6.6	6.8	7.2	7.0	7.1
27	8.0	7.6	7.8	7.6	7.3	7.4	6.9	6.8	6.9	7.2	7.0	7.2
28	7.9	7.5	7.7	7.6	7.3	7.4	6.8	6.7	6.8	7.2	7.0	7.1
29	---	---	---	7.4	7.2	7.3	6.8	6.7	6.8	7.2	7.0	7.1
30	---	---	---	7.4	7.2	7.3	6.8	6.7	6.8	7.2	7.1	7.2
31	---	---	---	7.3	7.1	7.2	---	---	---	7.2	7.1	7.1
MONTH	8.0	7.4	7.7	8.3	7.1	7.6	7.3	6.4	6.8	7.4	6.7	7.1

DELAWARE RIVER BASIN

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

PM (STANDARD UNITS), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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

DELAWARE RIVER BASIN

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

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY			MARCH			APRIL			MAY			
1	4.0	3.0	3.5	5.0	4.5	5.0	8.5	7.5	8.0	14.5	12.5	13.5
2	4.5	3.5	4.0	6.0	5.0	5.5	8.5	8.0	8.0	15.0	13.5	14.5
3	5.0	4.0	4.5	6.5	5.0	6.0	9.5	8.0	8.5	16.0	14.5	15.5
4	4.5	4.0	4.5	7.5	6.0	6.5	9.5	9.0	9.0	16.0	15.0	15.5
5	4.0	3.5	4.0	7.5	6.0	---	10.0	9.0	9.5	16.0	15.5	16.0
6	3.5	3.0	3.5	---	---	---	10.0	9.5	9.5	17.0	15.5	16.0
7	3.5	3.0	3.5	7.0	6.0	---	10.0	9.5	10.0	17.0	15.5	16.0
8	4.0	3.0	3.5	6.5	6.0	6.0	10.5	9.5	10.0	17.0	15.5	16.0
9	4.0	2.5	3.5	6.5	6.0	6.5	10.0	9.5	10.0	17.0	15.5	16.0
10	3.5	2.5	3.0	6.5	6.0	6.5	10.0	9.5	10.0	16.5	15.0	16.0
11	2.5	1.0	2.0	7.0	6.0	6.5	10.5	10.0	10.0	16.5	15.0	16.0
12	2.5	1.0	1.5	6.5	6.0	---	11.5	10.0	10.5	17.0	15.5	16.0
13	2.5	1.5	2.0	---	---	---	11.5	10.0	11.0	17.5	15.5	16.5
14	2.0	1.5	2.0	7.5	6.5	---	11.5	10.5	11.0	18.0	16.0	17.0
15	3.0	2.0	2.5	8.0	6.5	7.0	11.5	11.0	11.5	18.0	16.5	17.5
16	2.5	2.5	---	8.0	7.0	7.5	12.0	11.0	11.5	17.5	16.0	17.0
17	---	---	---	7.5	7.0	7.0	12.0	10.5	11.5	17.5	16.0	16.5
18	---	---	---	8.0	7.0	7.5	11.5	10.5	11.0	17.5	16.0	17.0
19	---	---	---	8.5	7.5	8.0	11.0	9.5	10.5	17.0	16.5	16.5
20	---	---	---	9.0	8.0	8.5	10.5	9.5	10.0	18.0	16.5	17.0
21	---	---	---	9.0	8.5	9.0	11.5	9.5	10.0	18.0	17.0	17.5
22	5.0	4.0	---	9.0	8.0	8.5	11.5	9.5	10.5	18.0	17.0	17.5
23	5.0	4.0	4.5	8.5	7.5	---	11.5	10.0	10.5	19.5	17.5	18.0
24	5.0	4.0	4.5	8.5	7.5	8.0	11.0	10.0	10.5	19.5	18.0	18.5
25	5.0	4.5	4.5	8.0	7.0	7.5	10.5	10.0	10.0	19.5	18.0	18.5
26	4.5	4.0	4.5	8.0	6.5	7.5	11.0	9.5	10.0	19.5	18.0	18.5
27	5.5	4.0	4.5	7.5	7.0	7.5	11.0	10.0	10.5	20.5	18.5	19.5
28	5.0	4.0	4.5	8.0	7.5	7.5	12.0	10.5	11.0	20.0	18.5	19.5
29	---	---	---	8.5	7.5	8.0	12.5	11.0	12.0	19.0	18.5	19.0
30	---	---	---	8.5	7.0	8.0	13.5	12.0	12.5	20.0	19.0	19.5
31	---	---	---	8.0	7.5	8.0	---	---	---	20.0	19.0	19.5
MONTH	5.5	1.0	3.5	9.0	4.5	7.0	13.5	7.5	10.5	20.5	12.5	17.0
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
JUNE			JULY			AUGUST			SEPTEMBER			
1	20.5	19.0	19.5	25.5	24.5	25.0	29.0	27.5	28.0	---	---	---
2	20.0	19.0	19.5	26.5	25.0	25.5	29.5	28.0	28.5	---	---	---
3	20.5	19.0	19.5	27.5	25.5	26.5	29.5	28.0	28.5	---	---	---
4	20.5	19.5	20.0	28.0	26.0	26.5	29.5	28.0	28.5	---	---	---
5	22.0	19.5	20.5	27.5	26.0	26.5	29.0	28.0	28.5	---	---	---
6	22.0	20.0	21.0	27.5	26.0	26.5	29.0	28.0	28.5	28.5	27.0	---
7	22.5	21.0	21.5	27.0	25.5	26.0	30.0	28.0	28.5	28.5	27.0	27.5
8	23.0	21.5	22.0	27.5	25.5	26.0	30.0	28.5	29.0	28.0	27.0	27.5
9	22.5	21.0	21.5	27.0	25.5	26.0	29.5	28.5	29.0	27.5	26.5	27.0
10	22.5	21.0	21.5	26.5	25.0	26.0	29.0	27.5	28.5	27.5	26.5	27.0
11	23.0	21.0	22.0	26.5	25.0	26.0	28.5	28.0	28.5	28.0	26.5	27.0
12	23.5	21.5	22.5	27.0	25.5	26.0	28.0	27.0	28.0	28.0	26.5	27.0
13	24.5	22.0	23.0	26.5	25.5	26.5	27.0	26.0	26.5	27.0	25.5	26.5
14	24.5	22.5	23.5	27.5	26.0	26.5	26.5	25.5	26.0	26.0	24.5	25.0
15	25.0	23.0	24.0	27.5	26.0	27.0	27.0	25.5	26.0	25.5	23.5	24.5
16	25.5	23.5	24.5	28.0	26.5	27.5	27.5	25.5	26.0	24.5	23.5	24.0
17	26.5	24.0	25.0	30.0	27.5	28.5	27.5	25.5	26.0	---	---	---
18	26.0	24.5	25.0	30.0	27.5	28.5	27.0	26.0	26.5	---	---	---
19	26.0	25.0	25.5	28.5	27.5	28.0	28.0	26.0	27.0	25.0	24.0	---
20	26.0	25.0	25.5	29.5	27.5	28.0	28.0	26.5	27.0	25.0	22.5	24.0
21	25.0	24.0	24.5	30.0	27.5	28.5	28.0	26.5	27.0	24.0	23.5	24.0
22	26.0	24.0	25.0	28.5	27.0	28.0	28.0	26.0	27.0	23.5	22.5	23.0
23	26.0	24.5	25.0	28.0	26.5	27.5	27.5	26.5	27.0	22.5	21.5	22.0
24	26.0	24.5	25.0	28.0	26.5	27.5	28.0	26.5	27.0	22.0	20.5	21.5
25	25.0	25.0	---	28.0	27.0	27.5	28.0	26.5	27.0	21.5	20.5	21.0
26	---	---	---	28.5	26.5	27.5	27.5	26.0	26.5	21.5	20.5	21.0
27	26.5	25.5	---	28.5	27.0	27.5	27.5	26.0	26.5	21.5	20.5	21.0
28	26.5	25.5	26.0	28.5	27.0	27.5	27.0	26.5	---	21.0	20.5	21.0
29	26.0	24.5	25.0	28.0	27.0	27.5	---	---	---	20.5	20.0	20.5
30	25.5	24.5	25.0	28.5	27.0	28.0	---	---	---	20.0	19.0	19.5
31	---	---	---	29.5	27.5	28.0	---	---	---	---	---	---
MONTH	26.5	19.0	23.0	30.0	24.5	27.0	30.0	25.5	27.5	28.5	19.0	24.0

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

OXYGEN, DISSOLVED (DO), MG/L, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER				NOVEMBER			DECEMBER			JANUARY		
1	7.2	6.8	7.0	8.9	8.8	---	11.5	9.6	10.4	---	---	---
2	7.3	6.9	7.0	---	---	---	11.5	9.5	10.1	---	---	---
3	7.2	6.9	7.0	---	---	---	11.4	9.4	10.6	---	---	---
4	7.2	6.8	7.0	---	---	---	11.3	9.1	9.7	12.8	12.0	---
5	7.1	6.7	6.9	---	---	---	9.3	8.8	9.1	12.5	12.2	12.3
6	6.9	6.7	6.8	---	---	---	9.2	8.6	8.9	12.6	12.2	12.4
7	6.9	6.6	6.7	---	---	---	---	---	---	12.6	12.3	12.5
8	6.9	6.6	6.7	---	---	---	---	---	---	12.6	12.4	12.5
9	6.9	6.5	6.7	---	---	---	---	---	---	12.9	12.4	12.6
10	7.1	6.7	6.9	---	---	---	---	---	---	12.9	12.6	12.7
11	7.0	6.6	6.8	---	---	---	---	---	---	12.8	12.2	12.7
12	6.9	6.6	6.7	---	---	---	---	---	---	12.8	12.6	12.7
13	6.7	6.6	---	---	---	---	---	---	---	---	---	---
14	---	---	---	---	---	---	---	---	---	---	---	---
15	---	---	---	---	---	---	---	---	---	---	---	---
16	---	---	---	---	---	---	---	---	---	---	---	---
17	---	---	---	---	---	---	---	---	---	---	---	---
18	7.9	7.7	---	---	---	---	---	---	---	---	---	---
19	8.0	7.7	7.8	---	---	---	---	---	---	---	---	---
20	8.1	7.8	7.9	---	---	---	---	---	---	---	---	---
21	8.1	7.9	7.9	---	---	---	---	---	---	---	---	---
22	8.2	7.9	8.1	---	---	---	---	---	---	---	---	---
23	8.5	8.1	8.3	---	---	---	---	---	---	---	---	---
24	8.8	8.3	8.6	---	---	---	---	---	---	---	---	---
25	9.1	8.6	8.9	---	---	---	---	---	---	---	---	---
26	9.2	8.9	9.1	---	---	---	---	---	---	---	---	---
27	9.2	8.9	9.0	---	---	---	---	---	---	---	---	---
28	9.1	8.9	9.0	---	---	---	---	---	---	12.9	12.3	---
29	9.1	8.9	9.0	11.6	9.7	---	---	---	---	13.2	12.6	12.9
30	9.0	8.9	9.0	11.6	9.6	10.4	---	---	---	13.0	12.4	12.7
31	9.1	8.8	8.9	---	---	---	---	---	---	12.8	12.2	12.6
MONTH	9.2	6.5	7.8	11.6	8.8	10.4	11.5	8.6	9.8	13.2	12.0	12.6

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY				MARCH			APRIL			MAY		
1	12.7	12.0	12.5	11.8	11.5	11.7	10.2	9.6	9.9	8.1	7.5	7.8
2	12.7	11.9	12.3	11.6	10.7	11.3	10.2	9.3	9.7	8.2	7.6	7.9
3	12.2	11.5	12.0	11.4	10.9	11.1	10.0	9.2	9.6	8.1	7.3	7.8
4	12.3	11.7	12.1	11.2	10.6	11.0	9.6	8.9	---	7.7	7.2	7.4
5	12.5	11.5	11.9	11.0	10.2	---	---	---	---	7.1	6.6	6.9
6	12.6	11.9	12.2	---	---	---	---	---	---	7.0	6.1	6.6
7	12.6	12.2	12.4	11.7	10.7	---	---	---	---	7.0	6.2	6.6
8	12.4	11.9	12.2	10.7	10.5	10.6	---	---	---	7.6	6.7	7.1
9	12.4	11.9	12.2	10.6	10.4	10.5	---	---	---	8.4	7.2	7.5
10	12.4	11.2	12.0	10.6	10.3	10.4	---	---	---	9.6	8.1	8.6
11	12.9	12.1	12.4	10.5	10.2	10.4	9.1	8.7	---	9.7	8.8	9.1
12	13.1	12.3	12.7	10.7	10.1	---	9.2	8.5	8.9	---	---	---
13	13.4	12.5	13.0	---	---	---	9.1	8.5	8.7	---	---	---
14	13.9	13.4	13.6	10.8	10.3	---	8.8	8.3	8.5	---	---	---
15	13.8	13.1	13.5	10.5	9.8	10.2	8.5	8.2	8.3	---	---	---
16	13.6	13.4	---	10.2	9.6	9.9	8.7	8.0	8.4	---	---	---
17	---	---	---	9.9	9.6	9.8	8.8	8.4	8.6	---	---	---
18	---	---	---	9.8	9.6	9.7	9.0	8.5	8.8	---	---	---
19	---	---	---	9.8	9.5	9.6	9.5	9.0	9.2	---	---	---
20	---	---	---	9.7	9.3	9.5	9.6	9.1	9.3	---	---	---
21	---	---	---	9.5	9.1	9.3	9.7	8.4	9.2	---	---	---
22	13.4	13.0	---	9.3	9.0	9.1	9.2	7.9	8.7	---	---	---
23	13.2	12.7	12.9	9.8	8.6	---	9.6	8.5	9.1	9.0	7.8	---
24	12.8	12.0	12.4	10.1	9.6	9.8	9.8	8.9	9.3	9.3	8.5	8.8
25	12.4	11.8	12.0	10.2	9.6	10.0	9.9	9.2	9.5	9.4	8.3	8.8
26	12.1	11.6	11.9	10.4	9.8	10.1	9.8	9.3	9.5	8.8	8.4	8.6
27	12.0	11.2	11.8	10.3	9.7	10.1	9.8	9.2	9.5	8.3	7.4	7.9
28	11.9	11.5	11.7	10.3	9.7	10.0	9.8	9.0	9.4	8.2	7.5	7.8
29	---	---	---	10.1	9.1	9.4	9.2	8.4	8.8	8.3	7.9	8.1
30	---	---	---	9.9	9.0	9.4	8.6	7.9	8.2	7.9	7.4	7.7
31	---	---	---	9.9	9.6	9.8	---	---	---	8.9	7.1	7.9
MONTH	13.9	11.2	12.4	11.8	8.6	10.1	10.2	7.9	9.1	9.7	6.1	7.8

DELAWARE RIVER BASIN

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

OXYGEN, DISSOLVED (DO), MG/L, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	10.8	8.9	9.8	5.4	5.1	5.2	6.6	6.0	6.3	---	---	---
2	11.2	10.2	10.8	5.6	5.2	5.4	6.3	6.1	6.2	---	---	---
3	11.3	8.3	10.2	5.7	5.2	5.5	6.7	5.9	6.2	---	---	---
4	8.9	7.5	8.2	5.7	5.3	5.5	6.9	6.4	6.6	---	---	---
5	9.7	7.4	8.3	6.2	5.7	5.9	7.1	6.8	6.9	---	---	---
6	9.0	7.1	7.7	6.2	5.8	6.0	7.2	6.8	7.0	5.8	5.4	---
7	8.2	7.2	7.6	6.2	5.8	6.0	7.0	6.6	6.9	5.5	4.8	5.2
8	8.8	8.0	8.3	6.1	5.7	5.9	7.1	6.9	---	5.7	5.3	5.5
9	9.2	8.5	8.7	6.3	5.9	6.1	---	---	---	5.7	5.3	5.5
10	9.3	8.7	9.1	6.5	6.0	6.3	---	---	---	6.0	5.5	5.7
11	9.4	8.7	9.1	6.5	6.0	6.2	---	---	---	5.7	5.1	5.4
12	9.4	8.6	9.0	6.4	6.0	6.1	---	---	---	6.2	5.1	5.6
13	9.3	8.0	8.8	6.4	6.1	6.2	---	---	---	6.7	6.0	6.4
14	9.0	8.2	8.6	6.2	6.0	6.1	---	---	---	7.2	6.5	6.9
15	8.8	8.2	8.5	6.6	6.2	6.3	---	---	---	7.6	6.9	7.2
16	8.7	7.9	8.3	6.9	6.4	6.5	---	---	---	7.9	7.4	7.6
17	8.2	6.7	7.2	7.1	6.1	6.7	---	---	---	---	---	---
18	7.0	6.5	6.7	7.0	6.0	6.6	---	---	---	---	---	---
19	6.8	6.3	6.6	6.9	6.0	6.4	---	---	---	7.7	6.7	---
20	6.9	5.8	6.3	6.5	5.7	6.0	---	---	---	7.2	6.5	6.8
21	6.2	5.9	6.1	6.4	5.8	6.1	---	---	---	7.3	6.5	6.9
22	6.3	5.7	6.0	6.7	6.3	6.6	---	---	---	7.2	6.5	6.8
23	6.2	5.7	6.0	6.9	6.4	6.7	---	---	---	6.9	6.5	6.7
24	6.0	5.6	5.8	6.8	6.3	6.6	---	---	---	6.7	6.4	6.5
25	5.7	5.5	---	6.6	6.3	6.5	---	---	---	6.6	6.2	6.4
26	---	---	---	6.3	5.8	6.1	---	---	---	6.6	6.1	6.3
27	5.4	5.0	---	6.7	6.1	6.3	---	---	---	6.9	6.2	6.6
28	5.4	5.0	5.2	6.9	6.5	6.7	---	---	---	7.2	6.4	6.9
29	5.3	4.8	5.1	7.0	6.5	6.8	---	---	---	7.8	7.1	7.4
30	5.2	4.9	5.0	6.8	6.4	6.6	---	---	---	8.0	7.3	7.7
31	---	---	---	6.7	6.2	6.5	---	---	---	---	---	---
MONTH	11.3	4.8	7.7	7.1	5.1	6.2	7.2	5.9	6.6	8.0	4.8	6.5

DELAWARE RIVER BASIN

37

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

AVERAGE DISCHARGE.--27 years, 4.75 ft³/s (0.135 m³/s), 16.75 in/yr (425 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)				
Mar. 19	0115	62	1.76	2.29	0.698	Apr. 24	1845	53	1.50	2.20	0.671
Mar. 21	1730	164	4.64	2.97	0.905	May 17	0100	56	1.59	2.23	0.680
Mar. 28	0630	66	1.87	2.32	0.707	May 23	0500	67	1.90	2.33	0.710
Apr. 10	1545	*195	5.52	3.14	0.957	July 4	1545	127	3.60	2.77	0.844
Apr. 16	0845	189	5.35	3.11	0.948						

Minimum discharge, 0.12 ft³/s (0.003 m³/s) Sept. 12, gage height, 0.70 ft (0.213 m)

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.63	.98	4.2	2.5	2.8	7.0	8.3	7.2	7.5	3.4	.77	.78
2	.52	.97	4.4	2.5	3.2	20	7.7	6.8	6.5	3.1	1.2	.56
3	.44	.89	3.0	2.3	6.9	9.6	17	6.4	5.9	2.5	.92	.47
4	.42	1.7	2.7	2.2	4.1	6.0	13	11	9.1	20	.84	.40
5	.43	7.1	2.5	3.6	2.9	5.4	8.4	7.9	5.8	17	.92	.33
6	.45	4.3	3.0	7.3	3.1	5.1	7.5	6.2	5.2	5.0	.94	.33
7	.46	1.7	2.5	3.7	7.1	5.8	7.3	6.0	14	3.3	.77	.25
8	.35	1.5	2.1	3.0	6.6	12	8.6	5.8	6.8	2.8	.59	.18
9	.34	1.4	2.1	2.7	4.9	11	12	5.5	4.9	2.5	.45	.15
10	.34	1.3	1.9	3.8	3.9	7.7	102	5.1	4.4	2.2	.40	.16
11	.32	1.3	2.2	6.8	3.1	6.6	40	4.9	4.2	2.0	1.3	.15
12	.35	1.4	2.6	3.9	3.3	11	21	4.7	3.7	2.0	4.5	.15
13	.45	10	2.4	2.9	4.3	8.6	13	4.5	3.4	1.8	1.3	.48
14	1.0	7.6	2.2	2.8	4.1	6.0	11	4.4	3.1	1.7	.98	.82
15	.58	2.8	2.5	4.7	4.4	5.7	13	6.6	2.9	1.8	.77	.51
16	.94	2.1	12	4.0	5.4	5.2	110	22	2.8	1.4	.66	.44
17	.66	1.8	10	3.0	6.5	5.0	28	30	2.7	1.2	.58	.34
18	.49	1.8	4.0	2.6	8.3	22	16	8.3	2.6	1.2	.57	.26
19	.49	1.7	3.2	2.1	9.1	40	14	6.3	2.9	2.3	.63	.22
20	.49	1.7	3.2	1.9	7.2	13	14	6.3	5.1	3.8	.52	.21
21	1.8	1.6	2.8	2.0	6.3	70	12	14	20	1.9	.43	1.1
22	1.1	1.6	2.6	2.4	6.2	33	10	26	8.9	4.0	.46	4.8
23	.74	1.6	2.6	6.1	8.8	13	9.4	42	4.3	1.5	1.2	.89
24	.62	1.7	2.6	5.1	8.2	10	34	15	3.4	1.7	.68	.51
25	4.3	1.5	2.6	3.5	5.5	9.1	36	8.9	2.9	1.7	.51	.43
26	9.8	1.5	2.7	3.1	4.7	8.0	17	7.8	2.4	1.3	.44	.41
27	3.9	1.4	2.5	2.9	4.3	13	12	28	2.3	1.2	.41	.40
28	1.6	1.8	2.6	2.7	4.4	41	10	12	3.0	1.0	.45	.37
29	1.3	13	3.3	2.6	---	15	8.7	11	20	.89	.76	.32
30	1.2	8.4	3.2	2.9	---	10	7.8	17	4.7	.85	2.4	.83
31	1.1	---	2.6	3.5	---	9.0	---	10	---	.87	.90	---
TOTAL	37.61	88.14	102.8	105.1	149.6	443.8	628.7	357.6	174.4	97.91	28.25	17.25
MEAN	1.21	2.94	3.32	3.39	5.34	14.3	21.0	11.5	5.81	3.16	.91	.58
MAX	9.8	13	12	7.3	9.1	70	110	42	20	20	4.5	4.8
MIN	.32	.89	1.9	1.9	2.8	5.0	7.3	4.4	2.3	.85	.40	.15
CFSM	.31	.76	.86	.88	1.39	3.71	5.46	2.99	1.51	.82	.24	.15
IN.	.36	.85	.99	1.02	1.45	4.29	6.07	3.45	1.68	.95	.27	.17
CAL YR 1982 TOTAL	1358.47		MEAN 3.72	MAX 39	MTN .15	CFSM .97	IN 13.12					
WTR YR 1983 TOTAL	2231.16		MEAN 6.11	MAX 110	MTN .15	CFSM 1.59	IN 21.55					

ST. JONES RIVER BASIN

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).

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

GAGE.--Water-stage recorder and concrete control. Datum of gage is 0.00 ft (0.000 m) National Geodetic Vertical Datum of 1929. Prior to June 1973, at datum 0.50 ft (0.152 m) higher.

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

AVERAGE DISCHARGE.--25 years, 37.4 ft³/s (1.059 m³/s), 15.92 in/yr (404 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, 675 ft³/s (19.1 m³/s) Apr. 16, gage height, 6.30 ft (1.920 m); minimum daily discharge, 2.0 ft³/s (0.057 m³/s) Oct. 11.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.1	5.1	72	21	19	57	73	57	104	29	4.7	12
2	3.4	4.9	41	20	19	122	62	52	63	24	5.4	9.0
3	2.9	4.6	30	19	36	153	132	47	47	20	5.5	7.6
4	3.0	5.3	20	17	38	110	172	69	46	31	6.6	6.1
5	3.0	17	16	19	24	69	130	81	44	26	5.5	5.3
6	3.2	16	37	26	21	52	88	57	37	18	8.1	5.0
7	3.1	13	58	28	48	52	70	41	57	15	10	4.8
8	3.1	8.3	51	23	63	90	68	37	69	13	7.4	4.1
9	2.7	6.9	28	19	57	130	83	32	44	12	5.9	3.5
10	2.2	6.4	17	23	42	128	278	28	30	11	3.8	3.6
11	2.0	5.6	17	39	39	103	530	26	25	10	11	3.3
12	2.1	5.6	23	43	20	107	338	25	21	10	33	3.1
13	2.8	45	18	29	27	111	190	24	19	9.9	15	12
14	4.8	43	17	21	34	95	131	22	16	9.1	8.8	14
15	3.3	40	18	29	37	69	106	30	15	8.9	6.4	8.2
16	7.5	18	77	34	46	54	438	89	14	8.7	5.4	5.2
17	4.1	13	146	28	58	49	526	172	13	7.7	5.4	4.5
18	2.7	10	123	23	75	124	238	147	13	7.1	6.3	4.1
19	2.9	9.1	62	15	93	340	159	72	14	10	6.2	3.9
20	3.1	8.4	39	14	90	251	130	47	47	16	5.6	3.6
21	4.2	8.3	32	14	72	210	115	72	258	12	4.9	11
22	2.9	8.1	27	14	60	286	96	219	536	13	6.6	29
23	2.8	8.1	24	25	73	195	78	257	264	8.6	18	12
24	2.9	9.5	22	36	95	130	148	183	128	9.3	9.8	7.0
25	18	5.6	22	31	93	92	368	119	66	7.5	6.2	5.0
26	36	6.2	22	24	63	69	245	74	39	7.1	4.9	4.8
27	32	7.2	20	21	46	79	154	123	28	6.2	3.6	4.9
28	15	8.1	20	20	40	177	108	160	27	5.7	22	4.6
29	8.8	73	25	17	---	209	84	111	55	4.9	35	4.5
30	7.0	85	28	18	---	138	66	92	49	5.0	31	8.8
31	5.7	---	24	21	---	95	---	123	---	5.1	18	---
TOTAL	201.3	504.3	1176	731	1428	3946	5404	2688	2188	380.8	326.0	214.5
MEAN	6.49	16.8	37.9	23.6	51.0	127	180	86.7	72.9	12.3	10.5	7.15
MAX	36	85	146	43	95	340	530	257	536	31	35	29
MIN	2.0	4.6	16	14	19	49	62	22	13	4.9	3.6	3.1
CFSM	.20	.53	1.19	.74	1.60	3.98	5.64	2.72	2.29	.39	.33	.22
IN.	.23	.59	1.37	.85	1.67	4.60	6.30	3.13	2.55	.44	.38	.25

CAL YR 1982 TOTAL 11496.7 MEAN 31.5 MAX 164 MTN 1.2 CFSM .99 IN 13.41
WTR YR 1983 TOTAL 19187.9 MEAN 52.6 MAX 536 MIN 2.0 CFSM 1.65 IN 22.38

MURDERKILL RIVER BASIN

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

AVERAGE DISCHARGE.--25 years (water years 1932-33, 1961-83), 18.4 ft³/s (0.521 m³/s), 18.37 in/yr (467 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 discharge, 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)
Mar. 19	0845	149 4.22	4.76 1.451	Apr. 10	1800	222 6.29	5.18 1.579
Mar. 21	2300	135 3.82	4.66 1.420	Apr. 16	1330	*333 9.43	5.63 1.716
Mar. 28	0945	145 4.11	4.73 1.442	Apr. 25	0030	218 6.17	5.16 1.573

Minimum daily discharge, 2.1 ft³/s (0.059 m³/s) Oct. 3, 4.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.4	3.1	12	9.1	7.6	28	28	24	57	12	3.4	12
2	2.3	3.3	11	8.8	8.7	81	25	22	42	11	3.7	5.7
3	2.1	4.4	8.9	8.5	14	47	80	21	28	9.9	6.0	5.2
4	2.1	6.3	8.1	7.9	11	30	59	33	33	9.1	6.7	4.6
5	2.3	11	7.4	8.1	9.1	25	36	26	26	9.1	4.5	4.3
6	2.3	5.9	8.5	10	9.1	22	30	20	20	8.7	4.3	4.2
7	2.3	5.1	8.1	9.1	26	28	28	19	18	8.0	4.0	4.0
8	2.2	4.9	6.8	8.4	23	48	29	18	18	7.4	3.6	3.5
9	2.2	4.9	6.5	7.8	17	43	45	17	16	7.0	3.4	3.0
10	2.3	4.7	6.0	9.9	14	37	144	16	14	6.8	3.2	3.1
11	2.5	4.7	7.4	14	13	32	159	15	13	6.4	9.6	2.8
12	2.6	4.9	9.9	12	18	51	97	15	12	6.2	32	2.7
13	3.0	31	7.7	9.8	15	43	52	14	11	5.6	7.8	7.0
14	3.6	11	7.0	9.1	14	29	39	13	10	5.2	5.4	5.1
15	3.1	10	8.4	13	16	25	35	20	9.9	5.1	4.7	4.1
16	3.4	6.8	34	12	19	22	214	49	9.3	4.7	4.3	3.5
17	3.2	5.4	31	10	24	20	141	84	8.8	4.3	4.0	3.3
18	3.3	4.7	16	9.2	36	46	65	35	8.6	4.4	3.9	3.2
19	3.4	4.5	13	7.8	41	122	50	24	8.9	7.6	3.8	3.0
20	3.3	4.3	12	7.3	33	60	49	27	12	13	3.6	2.9
21	3.2	4.3	11	7.3	28	74	42	34	72	7.5	3.3	3.9
22	3.3	4.1	10	8.2	26	92	34	76	62	7.3	3.4	16
23	3.4	4.0	10	12	34	44	31	60	25	5.5	7.4	3.9
24	3.4	4.0	9.9	11	40	32	98	35	18	5.1	4.5	3.0
25	10	3.8	9.7	9.5	27	28	159	25	15	4.8	3.8	2.9
26	7.2	3.7	9.8	8.8	22	24	74	21	12	4.7	3.5	2.8
27	3.7	3.8	9.3	8.3	19	31	48	46	11	4.3	3.4	2.7
28	3.2	4.9	9.2	8.1	18	112	38	30	11	4.0	6.5	2.6
29	3.0	43	11	7.8	---	60	31	26	24	3.7	18	2.6
30	3.0	19	10	8.0	---	37	27	30	15	3.6	9.9	5.2
31	3.0	---	9.4	8.2	---	31	---	76	---	3.4	8.8	---
TOTAL	100.3	235.5	339.0	289.0	582.5	1404	1991	971	640.5	205.4	194.4	132.8
MEAN	3.24	7.85	10.9	9.32	20.8	45.3	66.4	31.3	21.4	6.63	6.27	4.43
MAX	10	43	34	14	41	122	214	84	72	13	32	16
MIN	2.1	3.1	6.0	7.3	7.6	20	25	13	8.6	3.4	3.2	2.6
CFSM	.24	.58	.80	.69	1.53	3.33	4.88	2.30	1.57	.49	.46	.33
IN.	.27	.64	.93	.79	1.59	3.84	5.45	2.66	1.75	.56	.53	.36

CAL YR 1982 TOTAL 4567.8 MEAN 12.5 MAX 87 MIN 1.9 CFSM .92 IN 12.49
WTR YR 1983 TOTAL 7085.4 MEAN 19.4 MAX 216 MIN 2.1 CFSM 1.43 IN 19.38

01484100 BEAVERDAM BRANCH AT HOUSTON. DE

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.

DRAINAGE AREA.--2.83 mi² (7.33 km²).

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

GAGE.--Water-stage recorder and concrete control; timber control prior to Nov. 8, 1979. Datum of gage is 35.67 ft (10.872 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Diversion for irrigation of about 150 acres (60.7 hm²) above station during some years. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--25 years, 3.70 ft³/s (0.105 m³/s), 17.75 in/yr (451 mm/yr).

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).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 30 ft³/s (0.84 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)		Gage height (ft) (m)		Date	Time	Discharge (ft ³ /s) (m ³ /s)		Gage height (ft) (m)	
Mar. 28	0400	31	0.88	3.12	0.951	Apr. 16	1115	*61	1.73	3.39	1.033
Apr. 10	1530	44	1.25	3.25	0.991						

Minimum discharge, 0.26 ft³/s (0.007 m³/s) Aug. 21, gage height, 2.30 ft (0.701 m), result of irrigation; minimum daily discharge, 0.51 ft³/s (0.014 m³/s) Nov. 4, 10.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.69	.54	1.8	2.3	2.0	6.7	6.9	6.6	6.6	3.6	2.0	1.8
2	.69	.52	1.7	2.2	2.1	7.9	6.6	6.5	6.2	3.3	2.3	1.6
3	.64	.54	1.6	2.2	2.8	5.7	11	6.4	5.5	3.1	2.2	1.6
4	.64	.51	1.5	2.1	2.3	5.1	7.9	7.0	6.6	3.0	2.2	1.5
5	.64	.71	1.4	2.2	2.1	4.8	7.0	6.3	5.7	2.9	2.1	1.5
6	.63	.59	2.6	2.5	2.2	4.7	6.6	5.8	5.2	2.8	2.1	1.4
7	.62	.54	2.1	2.3	4.3	5.0	6.6	5.7	4.9	2.6	2.0	1.4
8	.62	.54	1.7	2.1	3.4	7.5	6.5	5.7	4.9	2.6	1.9	1.3
9	.60	.54	1.7	2.1	2.8	6.4	7.5	5.4	4.6	2.6	1.7	1.0
10	.58	.51	1.7	2.4	2.7	5.9	26	5.2	4.4	2.5	1.3	1.3
11	.60	.52	1.8	2.7	2.8	5.6	23	5.1	4.3	2.4	1.7	1.2
12	.59	.53	2.1	2.2	2.7	8.8	14	5.0	4.1	2.2	2.7	1.9
13	.65	2.9	1.8	2.1	2.7	6.6	9.5	4.9	4.0	2.1	2.0	2.5
14	.65	1.2	1.8	2.0	2.8	5.7	8.4	4.9	3.8	1.6	1.9	2.4
15	.59	1.3	1.9	2.4	2.9	5.4	8.1	5.5	3.5	2.2	1.7	1.9
16	.57	1.0	4.7	2.3	3.3	5.1	34	7.9	3.3	2.0	1.7	1.6
17	.57	.89	3.2	2.2	3.7	5.0	16	7.3	3.3	2.0	1.6	1.6
18	.64	.83	2.6	2.1	5.2	10	11	5.3	2.9	1.9	1.6	1.5
19	.66	.75	2.5	2.0	4.8	14	9.9	4.9	3.3	6.2	1.5	1.3
20	.66	.75	2.5	1.9	4.0	7.7	9.6	5.4	3.5	5.1	1.1	1.3
21	.65	.75	2.4	2.0	3.8	16	8.4	6.1	10	2.9	.70	1.7
22	.66	.75	2.4	2.0	3.6	11	7.6	7.4	5.9	2.6	.92	3.8
23	.68	.75	2.4	2.4	6.8	7.6	7.3	7.1	4.5	2.5	1.6	1.9
24	.64	.73	2.4	2.2	7.7	6.8	15	5.7	4.3	2.4	1.5	1.7
25	1.2	.69	2.4	2.1	5.6	6.4	16	5.2	4.0	2.4	1.5	1.7
26	.98	.69	2.4	2.1	4.6	6.0	10	5.2	3.7	2.3	1.3	1.6
27	.75	.69	2.4	2.0	4.4	8.2	8.6	8.7	3.6	2.2	1.1	1.6
28	.67	.78	2.4	2.1	4.0	20	7.9	6.1	3.7	2.2	1.5	1.5
29	.60	6.4	2.4	2.0	---	9.6	7.3	6.0	4.3	2.0	4.7	1.4
30	.57	2.2	2.3	2.0	---	7.7	6.9	6.1	3.7	1.9	2.1	1.6
31	.55	---	2.3	2.0	---	7.4	---	10	---	1.4	1.8	---
TOTAL	20.48	30.64	68.9	67.2	102.1	240.3	331.1	190.4	138.3	81.5	56.02	50.1
MEAN	.66	1.02	2.22	2.17	3.65	7.75	11.0	6.14	4.61	2.63	1.81	1.67
MAX	1.2	6.4	4.7	2.7	7.7	20	34	10	10	6.2	4.7	3.8
MIN	.55	.51	1.4	1.9	2.0	4.7	6.5	4.9	2.9	1.4	.70	1.0
CFSM	.23	.36	.78	.77	1.29	2.74	3.89	2.17	1.63	.93	.64	.59
IN.	.27	.40	.91	.88	1.34	3.16	4.35	2.50	1.82	1.07	.74	.66
CAL YR 1982	TOTAL	872.81	MEAN	2.39	MAX	9.4	MIN	.30	CFSM	.85	IN	11.47
WTR YR 1983	TOTAL	1377.04	MEAN	3.77	MAX	34	MIN	.51	CFSM	1.33	IN	18.09

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.

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)	
Mar. 19	0130	46	1.30	3.05	0.930	Apr. 10	1600	57	1.61	3.24	0.988
Mar. 21	1800	*73	2.07	3.48	1.061	Apr. 11	1430	55	1.56	3.21	0.978
Mar. 28	0400	50	1.42	3.13	0.954	Apr. 16	1230	67	1.90	3.39	1.033
Apr. 3	0930	48	1.36	3.08	0.939						

Minimum discharge, 1.6 ft³/s (0.045 m³/s) all or part of each day Oct. 10, 16, 20, 21, 23-25, gage height, 1.84 ft (0.561 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.0	2.2	7.2	7.8	7.7	19	18	15	13	7.9	2.7	6.9
2	1.8	2.2	7.4	7.7	7.9	30	17	14	14	7.5	2.6	4.2
3	1.7	2.2	6.5	7.7	8.7	20	36	14	12	7.1	2.5	3.7
4	1.7	2.2	6.5	7.3	8.0	17	25	14	12	6.9	2.5	3.2
5	1.8	3.0	6.5	7.5	7.4	15	20	13	11	6.8	2.4	3.0
6	1.9	2.3	13	9.3	7.7	15	18	12	10	6.6	2.4	2.9
7	1.8	2.2	11	8.3	13	15	18	11	9.4	6.2	2.4	2.8
8	1.8	2.3	8.7	8.0	10	18	18	11	8.8	5.7	2.5	2.5
9	1.7	2.2	8.4	7.7	9.4	19	20	10	8.3	5.2	2.5	2.3
10	1.7	2.2	8.0	8.9	9.0	19	44	9.9	8.0	4.6	2.3	2.2
11	1.7	2.2	8.4	14	9.0	17	46	9.5	7.7	5.1	3.1	2.3
12	1.7	2.2	9.4	9.9	9.2	27	33	8.5	7.4	5.0	8.1	2.3
13	1.8	7.0	8.5	9.2	9.1	22	25	9.1	7.1	4.9	3.1	4.1
14	1.9	4.3	8.2	8.8	9.2	18	21	8.5	7.1	4.6	2.7	5.0
15	1.7	7.3	8.6	10	10	16	20	8.8	6.7	3.9	2.5	3.7
16	1.6	5.4	15	9.7	12	15	49	14	6.6	4.3	2.4	3.0
17	1.8	4.6	13	8.9	14	14	32	14	6.4	4.1	2.4	2.9
18	1.7	4.0	11	8.5	16	24	25	9.9	6.3	4.1	2.3	2.7
19	1.7	4.0	10	8.1	16	37	25	9.2	6.8	4.5	2.2	2.6
20	1.7	4.0	9.8	7.7	13	23	24	9.7	7.6	4.4	2.1	2.5
21	1.8	4.0	9.4	7.7	13	45	21	13	28	4.0	2.0	3.5
22	1.7	4.0	8.8	7.8	12	48	19	20	19	3.8	2.2	6.7
23	1.7	4.0	8.5	12	23	27	18	18	12	3.6	3.5	3.7
24	1.7	4.0	8.5	10	26	22	26	15	10	3.6	2.4	3.2
25	9.3	3.8	8.3	9.2	18	20	25	13	9.7	3.4	2.2	3.0
26	7.0	3.8	8.3	8.8	16	18	21	12	8.7	3.2	2.1	3.1
27	3.4	3.9	8.0	8.5	14	19	19	15	8.2	3.1	2.0	3.0
28	2.8	4.1	8.0	8.5	13	40	17	12	7.9	3.0	2.1	2.9
29	2.6	11	8.5	8.3	---	25	16	15	11	2.9	20	2.8
30	2.4	7.0	8.3	8.3	---	20	14	16	8.4	2.8	6.2	4.0
31	2.2	---	8.0	8.0	---	19	---	14	---	2.7	5.0	---
TOTAL	71.8	117.6	277.7	272.1	341.3	703	732	388.1	299.1	145.5	105.4	100.7
MEAN	2.32	3.92	8.96	8.78	12.2	22.7	24.4	12.5	9.97	4.69	3.40	3.36
MAX	9.3	11	15	14	26	48	40	20	28	7.9	20	6.9
MIN	1.6	2.2	6.5	7.3	7.4	14	14	8.5	6.3	2.7	2.0	2.2
CFSM	.44	.75	1.71	1.68	2.33	4.33	4.66	2.39	1.90	.90	.65	.64
IN.	.51	.83	1.97	1.93	2.42	4.99	5.20	2.75	2.12	1.03	.75	.71

CAL YR 1982	TOTAL	1882.0	MEAN	5.16	MAX	19	MIN	1.6	CFSM	.99	IN	13.36
WTR YR 1983	TOTAL	3554.3	MEAN	9.74	MAX	49	MIN	1.6	CFSM	1.86	IN	25.23

POCOMOKE RIVER BASIN

43

01485500 NASSAWANGO CREEK NEAR SNOW HILL, MD

LOCATION.--Lat 38°13'44", long 75°28'19", Worcester County, Hydrologic Unit 02060009, on right bank 15 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.--Records good except those for period of missing record, Aug. 22 to Sept. 30, which are poor. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--33 years (water years 1951-83), 54.2 ft³/s (1.535 m³/s), 16.39 in/yr (416 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)
Mar. 3	0900	286 8.10	5.35 1.631	Apr. 4	2100	298 8.44	5.43 1.655
Mar. 20	0200	549 15.5	6.27 1.911	Apr. 12	0600	295 8.35	5.41 1.649
Mar. 29	1300	369 10.5	5.72 1.743	Apr. 17	1100	*806 22.8	6.77 2.063

Minimum recorded discharge, 2.1 ft³/s (0.059 m³/s) Aug. 22, but may have been less during period of no gage-height record.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.5	14	66	79	42	102	122	61	212	15	2.7	3.8
2	4.0	12	69	71	41	209	105	53	187	12	2.7	3.6
3	3.5	11	63	64	52	279	162	47	148	9.5	2.7	3.5
4	3.3	9.9	59	56	55	214	274	51	113	7.4	2.9	3.4
5	3.2	16	54	48	57	139	253	49	90	22	3.1	3.3
6	3.2	13	54	54	55	102	159	43	69	18	2.7	3.2
7	3.1	12	55	53	81	96	115	38	55	15	3.4	3.2
8	3.0	12	57	54	105	130	102	34	48	11	11	3.1
9	2.9	12	58	51	123	181	94	31	40	9.1	10	3.1
10	2.7	12	49	58	105	193	117	27	33	7.4	6.0	3.0
11	2.7	12	44	84	84	161	217	25	28	6.0	4.1	3.0
12	2.8	11	58	109	89	160	288	23	24	5.4	4.1	3.0
13	4.0	42	62	113	105	188	222	22	20	4.5	4.1	4.5
14	7.3	34	66	89	113	177	141	21	16	4.1	3.6	8.0
15	5.2	73	67	76	144	126	104	20	14	3.6	3.2	6.5
16	3.9	94	86	76	187	95	404	24	12	3.4	2.7	5.0
17	3.3	101	121	76	218	77	768	39	10	3.2	2.7	4.0
18	3.1	89	159	72	202	121	516	35	9.5	2.9	2.6	3.5
19	3.1	68	128	53	171	410	297	32	8.6	10	2.4	3.0
20	3.1	52	94	44	130	508	220	38	14	26	2.3	2.8
21	3.1	39	75	36	100	330	167	44	31	29	2.3	3.0
22	3.1	33	64	36	81	263	123	63	55	29	2.2	7.0
23	3.1	31	56	64	93	216	98	112	53	18	3.0	5.5
24	3.1	27	49	88	181	152	128	141	51	10	2.6	4.5
25	37	25	42	99	260	110	209	106	47	6.3	2.5	4.0
26	55	23	38	92	205	88	229	79	27	5.4	2.4	3.8
27	28	23	35	76	138	82	164	76	18	5.7	2.3	3.6
28	23	23	34	65	105	193	113	67	13	4.5	2.1	3.5
29	22	48	47	58	---	342	88	78	17	3.8	2.5	4.0
30	20	55	60	52	---	264	72	166	17	3.4	4.0	5.0
31	17	---	71	47	---	160	---	232	---	3.1	3.9	---
TOTAL	286.3	1026.9	2040	2093	3322	5868	6071	1877	1480.1	313.7	108.8	120.4
MEAN	9.24	34.2	65.8	67.5	119	189	202	60.5	49.3	10.1	3.51	4.01
MAX	55	101	159	113	260	508	768	232	212	29	11	8.0
MIN	2.7	9.9	34	36	41	77	72	20	8.6	2.9	2.1	2.8
CFSM	.21	.76	1.47	1.50	2.65	4.21	4.50	1.35	1.10	.23	.08	.09
IN.	.24	.85	1.69	1.73	2.75	4.86	5.03	1.56	1.23	.26	.09	.10

CAL YR 1982 TOTAL 16449.9 MEAN 45.1 MAX 376 MIN 2.4 CFSM 1.00 IN 13.63
WTR YR 1983 TOTAL 24607.2 MEAN 67.4 MAX 768 MIN 2.1 CFSM 1.50 IN 20.39

MANOKIN RIVER BASIN

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

AVERAGE DISCHARGE.--29 years (water years 1952-71, 1975-83), 4.56 ft³/s (0.129 m³/s), 12.90 in/yr (328 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)
Mar. 18	1800	70 1.98	3.26 0.994	Apr. 3	0730	69 1.95	3.27 0.997
Mar. 28	0030	74 2.10	3.31 1.009	Apr. 16	0615	*175 4.96	4.03 1.228

Minimum discharge, 0.19 ft³/s (0.005 m³/s) Sept. 12, gage height, 1.90 ft (0.579 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.27	.32	2.8	5.1	3.5	13	12	4.6	9.2	1.3	.44	.65
2	.26	.31	2.9	4.5	3.7	25	10	4.3	11	1.2	.43	.48
3	.26	.31	2.7	4.2	5.2	14	41	4.1	7.0	1.0	.42	.46
4	.25	.31	2.6	3.7	4.7	10	22	4.7	5.5	1.0	.41	.44
5	.25	.37	2.4	3.6	3.8	8.0	15	4.2	4.7	3.2	.40	.44
6	.24	.33	3.4	5.2	3.9	7.0	12	3.6	3.8	1.7	.42	.43
7	.24	.31	4.0	4.9	11	10	12	3.3	3.2	1.3	.40	.42
8	.24	.31	3.0	4.2	9.3	29	12	3.2	3.1	1.2	.37	.42
9	.24	.31	2.7	3.8	6.8	26	11	3.0	2.8	1.1	.34	.42
10	.23	.30	2.4	5.2	5.7	23	23	2.6	2.6	.97	.32	.42
11	.22	.31	2.5	10	6.2	16	26	2.5	2.4	.91	.32	.31
12	.24	.32	4.5	6.9	8.8	21	18	2.4	2.2	.89	.48	.27
13	.30	1.1	4.3	5.2	7.3	14	12	2.3	2.0	.87	.34	2.0
14	.34	.84	3.6	4.4	10	10	9.9	2.2	1.8	.79	.32	.87
15	.29	2.4	3.9	7.4	22	8.7	8.8	2.2	1.7	.77	.31	.51
16	.26	2.8	13	7.5	17	7.3	90	2.5	1.6	.75	.31	.39
17	.23	1.9	10	5.7	15	6.5	34	3.0	1.6	.72	.30	.33
18	.22	1.7	6.4	4.8	14	35	20	2.6	1.5	.68	.30	.33
19	.22	1.7	5.2	3.9	10	33	15	2.3	1.5	.75	.28	.30
20	.23	1.6	4.7	3.4	7.9	18	13	2.7	1.9	.72	.27	.28
21	.24	1.4	4.1	3.2	6.8	29	10	3.0	2.8	.72	.24	.53
22	.23	1.4	3.6	3.3	6.3	22	8.6	3.6	3.0	.72	.24	1.7
23	.22	1.4	3.4	8.9	14	14	7.6	9.4	2.4	.55	.32	.97
24	.22	1.3	3.3	9.1	18	11	21	5.8	2.0	.55	.25	.72
25	.67	1.2	3.1	6.6	12	9.1	16	4.0	1.7	.53	.23	.53
26	.67	1.1	3.1	5.5	9.9	7.4	11	3.6	1.5	.51	.22	.51
27	.43	1.2	2.9	4.9	7.3	14	8.8	4.8	1.5	.49	.22	.48
28	.37	1.2	3.0	4.5	6.5	42	7.3	3.8	1.5	.46	.51	.46
29	.36	2.5	4.4	4.1	---	20	6.1	9.1	1.4	.45	.79	.51
30	.34	3.3	6.2	4.0	---	14	5.2	13	1.4	.45	.49	.91
31	.32	---	5.3	3.7	---	12	---	9.8	---	.44	.55	---
TOTAL	9.10	33.85	129.4	161.4	256.6	529.0	518.3	132.2	90.3	27.69	11.24	17.49
MEAN	.29	1.13	4.17	5.21	9.16	17.1	17.3	4.26	3.01	.89	.36	.58
MAX	.67	3.3	13	10	22	42	90	13	11	3.2	.79	2.0
MIN	.22	.30	2.4	3.2	3.5	6.5	5.2	2.2	1.4	.44	.22	.27
CFSM	.06	.24	.87	1.09	1.91	3.56	3.60	.89	.63	.19	.08	.12
IN.	.07	.26	1.00	1.25	1.99	4.10	4.02	1.02	.70	.21	.09	.14

CAL YR 1982 TOTAL 1335.38 MEAN 3.66 MAX 37 MIN .22 CFSM .76 IN 10.35
WTR YR 1983 TOTAL 1916.57 MEAN 5.25 MAX 90 MIN .22 CFSM 1.09 IN 14.85

NANTICOKE RIVER BASIN

45

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).

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.--Records good except those for period of missing record, Jan. 9 to Feb. 10, which are fair. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--40 years, 91.9 ft³/s (2.603 m³/s), 16.55 in/yr (420 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 discharge 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)
Mar. 21	2100	414 11.7	6.48 1.975	Apr. 16	1500	*667 18.9	7.22 2.201
Mar. 28	0800	443 12.5	6.58 2.006	Apr. 25	0200	464 13.1	6.65 2.027
Apr. 11	1800	563 15.9	6.95 2.118				

Minimum daily discharge, 23 ft³/s (0.65 m³/s) Oct. 17, 18, 23, 24.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	27	24	59	61	51	114	186	188	125	90	35	56
2	27	26	55	60	54	169	175	180	127	85	41	49
3	26	25	51	59	58	148	209	176	120	82	39	47
4	26	26	50	57	54	130	209	180	124	78	41	44
5	26	30	49	56	51	123	183	171	122	78	38	42
6	25	27	58	62	54	117	174	161	115	74	38	41
7	25	26	66	59	90	120	169	153	111	72	37	39
8	25	25	57	59	80	141	168	150	108	67	36	37
9	25	26	54	60	67	150	171	146	104	66	33	36
10	24	26	53	64	67	141	358	139	100	65	33	34
11	24	26	55	70	70	137	493	134	97	61	35	34
12	25	26	63	72	69	170	395	130	91	59	54	33
13	25	50	59	65	69	172	289	127	90	56	42	41
14	25	48	57	60	69	149	248	125	87	56	39	47
15	24	45	58	71	74	141	230	122	85	54	36	40
16	24	40	82	68	77	132	505	135	84	52	34	37
17	23	36	108	64	88	126	425	156	78	50	33	36
18	23	34	84	60	114	151	315	138	79	48	32	34
19	24	33	78	57	131	292	281	130	78	52	30	33
20	24	32	76	54	122	212	268	129	83	65	29	33
21	24	32	73	55	116	272	243	132	167	62	30	35
22	24	31	70	60	116	298	224	149	207	54	29	63
23	23	32	69	67	125	213	211	154	142	50	29	49
24	23	32	69	66	145	187	304	144	125	49	29	43
25	33	31	67	60	128	175	419	133	118	46	26	40
26	35	31	67	59	119	163	308	127	108	45	27	39
27	29	31	66	57	110	166	259	138	100	42	27	38
28	27	33	65	56	107	374	233	135	98	40	25	37
29	26	91	69	56	---	267	214	129	102	37	130	36
30	26	97	65	56	---	216	199	128	93	36	125	40
31	26	---	62	53	---	196	---	126	---	36	66	---
TOTAL	793	1072	2014	1883	2475	5562	8067	4465	3268	1807	1278	1213
MEAN	25.6	35.7	65.0	60.7	88.4	179	269	144	109	58.3	41.2	40.4
MAX	35	97	108	72	145	374	505	188	207	90	130	63
MIN	23	24	49	53	51	114	168	122	78	36	25	33
CFSM	.34	.47	.86	.81	1.17	2.37	3.57	1.91	1.45	.77	.55	.54
IN.	.39	.53	.99	.93	1.22	2.74	3.98	2.20	1.61	.89	.63	.60

CAL YR 1982 TOTAL 25004 MEAN 68.5 MAX 212 MIN 23 CFSM .91 IN 12.34
WTR YR 1983 TOTAL 33897 MEAN 92.9 MAX 505 MIN 23 CFSM 1.23 IN 16.72

NANTICOKE RIVER BASIN

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).

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

AVERAGE DISCHARGE.--37 years (water years 1944-68, 1972-83), 54.7 ft³/s (1.549 m³/s), 16.92 in/yr (430 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)
Mar. 19	0215	656 18.6	5.50 1.676	Apr. 16	0930	*2080 58.9	9.42 2.871
Mar. 21	1545	688 19.5	5.60 1.707	Apr. 24	2315	555 15.7	5.16 1.573
Mar. 28	0300	773 21.9	5.86 1.786	May 31	0415	756 21.4	5.81 1.771
Apr. 10	1430	1220 34.6	7.12 2.170	June 21	1330	982 27.8	6.47 1.972
Apr. 11	1315	837 23.7	6.07 1.850				

Minimum discharge, 6.9 ft³/s (0.195 m³/s) Oct. 6, Nov. 12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.6	7.2	24	26	25	80	100	77	181	42	18	19
2	7.6	7.2	20	25	25	266	80	71	143	40	18	17
3	7.6	7.4	18	25	33	135	225	67	104	37	18	16
4	7.6	7.5	17	24	34	103	156	73	102	34	18	15
5	7.6	8.2	17	23	30	89	115	70	96	33	17	15
6	7.8	7.7	17	25	29	81	102	63	79	31	17	15
7	7.5	7.6	19	24	63	81	93	57	71	30	16	14
8	7.4	7.5	17	24	80	122	90	55	65	29	15	14
9	7.4	7.5	16	23	55	123	105	52	59	27	16	14
10	7.2	7.3	16	24	49	115	656	48	54	25	15	13
11	7.2	7.2	16	30	48	106	542	46	50	25	18	13
12	7.2	7.2	19	31	47	180	258	44	47	24	39	16
13	7.5	13	17	28	48	139	171	43	45	23	33	25
14	7.6	15	17	27	47	102	133	42	42	22	21	24
15	7.5	12	17	30	49	90	117	43	40	22	17	19
16	7.5	10	88	34	55	81	1250	88	37	20	16	16
17	7.2	9.7	91	33	76	74	360	165	36	20	16	14
18	7.2	9.3	47	31	146	162	202	89	34	19	16	14
19	7.2	9.0	38	28	149	392	170	72	33	24	15	13
20	7.2	8.7	36	27	105	175	149	69	34	84	15	13
21	7.4	8.7	33	28	91	349	123	79	454	46	14	14
22	7.2	8.7	30	27	87	232	105	162	198	30	14	19
23	7.2	8.6	29	29	104	149	94	156	109	25	15	21
24	7.3	8.5	28	29	129	115	305	103	82	23	14	18
25	8.6	8.3	28	28	94	98	393	81	70	21	14	15
26	8.5	8.3	27	28	80	85	208	70	59	21	14	14
27	8.1	8.2	27	27	70	99	150	131	52	19	13	14
28	7.8	8.5	26	26	65	430	117	99	49	20	14	14
29	7.6	83	27	26	---	184	90	81	48	19	56	13
30	7.5	53	26	26	---	133	84	87	44	17	46	14
31	7.3	---	26	26	---	112	---	445	---	18	26	---
TOTAL	233.1	380.0	874	842	1913	4682	6769	2828	2517	870	614	475
MEAN	7.52	12.7	28.2	27.2	68.3	151	224	91.2	83.9	28.1	19.8	15.8
MAX	8.6	83	91	34	149	430	1250	445	454	84	56	25
MIN	7.2	7.2	16	23	25	74	84	42	33	17	13	13
CFSM	.17	.29	.64	.62	1.56	3.44	5.15	2.08	1.91	.64	.45	.36
IN.	.20	.32	.74	.71	1.62	3.97	5.74	2.40	2.13	.74	.52	.40

CAL YR 1982 TOTAL 14896.3 MEAN 40.8 MAX 365 MIN 7.2 CFSM .93 IN 12.62
WTR YR 1983 TOTAL 22997.1 MEAN 63.0 MAX 1250 MIN 7.2 CFSM 1.44 IN 19.49

NANTICOKE RIVER BASIN

47

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 Laurel Grove 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.--Records good. Diversion for irrigation of about 100 acres (40.5 hm²) above station during some years. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--33 years, 9.02 ft³/s (0.255 m³/s), 17.26 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)
Mar. 18	2300	93 2.63	2.69 0.820	Apr. 11	1000	108 3.06	2.83 0.863
Mar. 21	1115	153 4.33	3.11 0.948	Apr. 16	0530	*657 18.6	4.59 1.399
Mar. 27	2315	171 4.84	3.20 0.975	Apr. 24	0845	71 2.01	2.44 0.744
Apr. 10	1030	116 3.29	2.89 0.881				

Minimum discharge, 0.41 ft³/s (0.012 m³/s) Sept. 9, gage height, 1.09 ft (0.332 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.4	1.5	6.3	6.1	5.4	17	21	19	13	4.2	1.2	1.0
2	2.8	1.5	6.1	6.1	5.8	29	19	18	12	4.7	1.2	.90
3	2.4	1.7	5.6	5.8	10	20	32	17	12	4.4	1.2	.83
4	1.8	1.7	5.5	5.5	8.0	18	24	19	13	3.5	1.2	.73
5	1.4	2.4	5.4	5.7	7.2	17	21	16	12	3.2	1.2	.75
6	1.4	2.0	5.7	6.5	7.6	16	20	15	11	3.1	1.2	.76
7	1.5	1.8	5.3	6.0	16	16	19	14	10	2.9	1.2	.72
8	1.5	1.8	5.1	5.6	13	19	19	14	10	2.5	1.1	.66
9	1.5	1.8	5.1	5.5	12	19	19	14	9.2	2.5	1.0	.66
10	1.6	1.8	4.9	6.3	11	18	57	13	8.7	2.3	1.0	.68
11	1.7	1.8	5.2	7.5	9.1	17	61	12	8.3	2.2	1.1	.71
12	1.9	1.8	6.1	6.8	9.6	21	35	11	8.0	2.1	1.4	.77
13	2.2	7.5	5.3	6.4	11	18	28	11	8.0	2.0	1.3	1.4
14	1.8	4.1	5.3	6.3	12	17	25	11	7.7	1.8	1.4	1.4
15	1.7	3.6	5.5	7.3	12	16	25	12	7.6	1.6	1.4	1.1
16	1.7	3.2	13	7.1	14	15	276	16	7.1	1.5	1.2	1.1
17	1.6	2.6	11	6.7	17	14	52	14	6.8	1.5	1.1	1.2
18	1.5	2.4	9.3	6.4	21	36	38	12	6.2	1.5	1.0	1.2
19	1.5	2.3	9.1	6.0	20	44	33	11	5.5	1.8	.94	1.0
20	1.4	2.2	8.7	5.9	18	27	28	12	6.0	2.5	.93	.87
21	1.4	2.3	8.0	5.9	17	62	25	13	10	2.2	.92	1.2
22	1.4	2.4	7.5	6.2	17	33	23	16	8.3	1.5	.93	2.5
23	1.4	2.3	7.2	6.9	18	26	21	17	6.8	1.3	1.2	1.8
24	1.4	2.3	7.1	6.5	17	23	46	15	5.9	1.4	1.1	1.5
25	1.9	2.2	7.0	6.1	16	21	42	13	5.6	1.4	.89	1.2
26	1.9	2.2	7.0	5.8	15	19	31	13	5.5	1.3	.92	1.2
27	1.8	2.2	6.7	5.8	14	34	26	21	5.6	1.4	.94	1.2
28	1.7	2.4	6.7	5.8	13	55	24	15	5.0	1.3	1.1	1.2
29	1.6	20	7.1	5.5	---	30	21	15	5.1	1.2	1.2	1.3
30	1.5	8.1	6.3	5.6	---	25	20	14	4.3	1.2	1.1	1.2
31	1.5	---	6.1	5.6	---	23	---	14	---	1.2	.95	---
TOTAL	53.8	95.9	210.2	191.2	366.7	765	1131	447	244.2	67.2	34.52	32.74
MEAN	1.74	3.20	6.78	6.17	13.1	24.7	37.7	14.4	8.14	2.17	1.11	1.09
MAX	3.4	20	13	7.5	21	62	276	21	13	4.7	1.4	2.5
MIN	1.4	1.5	4.9	5.5	5.4	14	19	11	4.3	1.2	.89	.66
CFSM	.25	.45	.96	.87	1.85	3.48	5.31	2.03	1.15	.31	.16	.15
IN.	.28	.50	1.10	1.00	1.92	4.01	5.92	2.34	1.28	.35	.18	.17

CAL YR 1982 TOTAL 3104.00 MEAN 8.50 MAX 230 MIN 1.1 CFSM 1.20 IN 16.26
WTR YR 1983 TOTAL 3639.46 MEAN 9.97 MAX 276 MIN .66 CFSM 1.40 IN 19.07

CHOPTANK RIVER BASIN

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, 2.0 mi (3.2 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. WDR MD-DE-79-1: 1961 (P).

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. Diversions for irrigation of about 500 acres (202 hm²) above station. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--35 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 discharge, 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)
Mar. 19	2115	1230 34.8	7.08 2.158	Apr. 16	2400	*3260 92.3	10.72 3.267
Mar. 22	0915	1620 45.9	8.01 2.441	Apr. 25	1430	1110 31.4	6.78 2.067
Apr. 11	0730	2520 71.4	9.68 2.950	June 22	0245	1950 55.2	8.71 2.655

Minimum daily discharge, 13 ft³/s (0.368 m³/s) Oct. 11, 12, 20.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16	16	133	81	75	169	257	213	247	157	28	61
2	16	16	84	79	74	300	233	196	206	131	39	48
3	15	16	74	77	106	503	319	181	174	117	35	42
4	14	16	67	74	138	315	568	192	169	104	34	39
5	14	31	61	71	118	244	364	210	168	100	32	37
6	14	31	93	78	99	209	273	190	151	90	29	34
7	14	24	145	84	130	196	245	163	138	79	26	27
8	14	21	121	81	202	226	232	155	142	72	25	27
9	14	20	81	76	212	324	284	156	124	66	25	24
10	14	19	62	75	174	352	1070	120	116	62	25	22
11	13	19	58	93	130	305	2230	117	97	58	25	22
12	13	19	61	113	110	296	1400	120	96	56	74	24
13	14	44	66	104	121	368	742	113	91	51	69	27
14	17	62	64	90	123	297	451	99	83	48	41	34
15	16	52	59	90	131	243	328	106	73	44	34	32
16	15	39	134	103	144	213	1910	153	81	41	30	28
17	15	31	360	104	192	189	2320	360	71	39	26	26
18	14	28	268	93	261	247	936	346	80	37	27	25
19	15	27	173	82	347	901	535	240	95	46	29	25
20	13	26	140	69	327	915	378	203	157	171	26	24
21	16	26	125	71	270	783	314	186	997	133	19	23
22	15	25	111	72	246	1400	278	344	1670	87	20	49
23	14	25	100	82	244	741	256	607	809	66	56	43
24	14	25	95	95	296	390	402	472	361	58	81	30
25	19	24	108	95	295	286	1020	294	243	52	36	27
26	32	23	96	88	240	252	829	230	193	46	28	26
27	27	24	89	83	200	233	483	252	156	42	25	25
28	22	25	75	79	173	648	318	318	137	37	40	25
29	20	84	76	77	---	785	269	258	170	35	126	26
30	18	148	84	75	---	419	239	233	201	32	188	53
31	17	---	86	76	---	290	---	260	---	29	107	---
TOTAL	504	986	3349	2610	5178	13039	19483	7087	7496	2186	1405	955
MEAN	16.3	32.9	108	84.2	185	421	649	229	250	70.5	45.3	31.8
MAX	32	148	360	113	347	1400	2320	607	1670	171	188	61
MIN	13	16	58	69	74	169	232	99	71	29	19	22
CFSM	.14	.29	.96	.75	1.64	3.73	5.74	2.03	2.21	.62	.40	.28
IN.	.17	.32	1.10	.86	1.70	4.29	6.41	2.33	2.47	.72	.46	.31

CAL YR 1982	TOTAL	39330.0	MEAN 108	MAX 781	MIN 8.5	CFSM .96	IN 12.95
WTR YR 1983	TOTAL	64278.0	MEAN 176	MAX 2320	MIN 13	CFSM 1.56	IN 21.16

CHOPTANK RIVER BASIN

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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.--

WATER TEMPERATURES: October 1974 to current year.

SUSPENDED SEDIMENT: October 1980 to current year.

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

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: Maximum daily, 28.0°C July 23, 1978, and July 22, 1980; minimum daily, 0.0°C on many days during winter periods.

SEDIMENT CONCENTRATIONS: Maximum daily mean, 77 mg/L May 12, 1981; minimum daily mean, 1 mg/L on many days during water years 1982-83.

SEDIMENT LOADS: Maximum daily, 363 tons (329 tonnes) Apr. 16, 1983; minimum daily, 0.02 ton (0.02 tonne) Aug. 30, Sept. 7, 1982.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum daily, 27.0°C July 21; minimum daily, 0.0°C Feb. 13, 14.

SEDIMENT CONCENTRATIONS: Maximum daily mean, 66 mg/L Mar. 22; minimum daily mean, 1 mg/L on many days during the water year.

SEDIMENT LOADS: Maximum daily, 363 tons (329 tonnes) Apr. 16; minimum daily, 0.04 ton (0.04 tonne) Oct. 18-20, Nov. 3, 4.

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD UNITS)	TEMPER- ATURE, AIR (DEG C)	TEMPER- ATURE (DEG C)	BARO- METRIC PRES- SURE (MM OF HG)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI KF AGAR (COLS. PER 100 ML)
NOV 22...	1005	25	175	7.2	12.5	19.5	--	3.0	--	--	K12	K24
JAN 11...	1015	99	165	7.0	10.0	7.5	--	--	10.4	--	95	280
MAR 22...	0905	1690	--	5.9	6.5	11.5	--	37	--	--	2600	18000
MAY 23...	0930	638	83	6.6	20.5	18.0	--	28	8.2	--	4400	16000
AUG 16...	1150	31	152	7.1	24.0	20.0	766	--	8.5	92	93	350

DATE	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)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LITY LAB (MG/L AS CAC03)
NOV 22...	51	29	14	3.9	9.1	24	.6	3.8	22
MAR 22...	18	11	4.6	1.6	2.7	22	.3	2.4	7.0
MAY 23...	23	14	6.1	1.9	3.1	20	.3	2.9	9.0

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)
NOV 22...	2.7	26	15	<.10	13	113	98	.15	7.6
MAR 22...	17	13	5.0	<.10	7.5	58	42	.08	264
MAY 23...	4.4	16	7.3	<.10	9.7	85	54	.12	146

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

CHOPTANK RIVER BASIN

01491000 CHOPTANK RIVER NEAR GREENSBORO, MD--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS NH4)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS TOTAL (MG/L AS P04)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P)	PHOS- PHATE, ORTHO, DIS- SOLVED (MG/L AS P04)	
NOV 22...	.99	.030	.04	.40	.040	.12	.020	<.010	--	
JAN 11...	1.4	.130	.17	.10	.330	1.0	.020	.020	.06	
MAR 22...	.56	.190	.24	.70	.130	.40	.040	.030	.09	
MAY 23...	.83	.300	.39	1.40	.150	.46	.070	.070	.21	
AUG 16...	1.2	<.010	--	.60	.080	.25	.060	.010	.03	
DATE	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)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)
NOV 22...	<10	1	83	<1	<1	<1	<3	1	130	1
MAR 22...	200	1	53	<1	<1	3	<3	14	400	5
MAY 23...	200	1	65	<1	1	1	<3	11	690	5
DATE	LITHIUM DIS- SOLVED (UG/L AS LI)	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)	VANA- DIUM, DIS- SOLVED (UG/L AS V)	ZINC, DIS- SOLVED (UG/L AS ZN)
NOV 22...	9	38	<.1	<10	2	<1	<1	120	<6.0	15
MAR 22...	<4	46	.3	<10	2	<1	<1	34	<6.0	28
MAY 23...	<4	49	.3	<10	4	<1	<1	49	<6.0	62
DATE	SEDI- MENT, DIS- CHARGE, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM	DATE	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 26...	4	<.01	--	MAR 22...	71	301	98			
NOV 22...	8	.01	62	MAY 23...	38	65	80			
JAN 29...	1	.20	--	AUG 16...	2	.17	100			
MAR 19...	76	234	97							
MAR 22...	99	428	96							

CHOPTANK RIVER BASIN

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01491000 CHOPTANK RIVER NEAR GREENSBORO, MD--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. FALL DIAM. % FINER THAN .004 MM	SED. SUSP. FALL DIAM. % FINER THAN .008 MM	SED. SUSP. FALL DIAM. % FINER THAN .016 MM
MAR							
19...	1600	1140	76	234	84	--	--
22...	1020	1600	99	428	95	96	96
22...	1130	1570	71	301	97	--	--

DATE	SED. SUSP. FALL DIAM. % FINER THAN .031 MM	SED. SUSP. FALL DIAM. % FINER THAN .062 MM	SED. SUSP. FALL DIAM. % FINER THAN .125 MM	SED. SUSP. FALL DIAM. % FINER THAN .250 MM	SED. SUSP. FALL DIAM. % FINER THAN .500 MM	SED. SUSP. FALL DIAM. % FINER THAN 1.00 MM
MAR						
19...	--	97	97	99	100	--
22...	96	96	96	97	99	100
22...	--	98	99	99	100	--

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	19.0	13.0	10.0	6.5	4.5	5.5	8.5	21.0	18.0	---	26.0	23.5
2	17.0	15.0	10.5	5.5	7.0	9.0	9.5	21.0	16.5	22.0	26.0	23.0
3	---	17.0	11.5	5.5	5.5	9.5	---	20.0	18.0	---	26.0	22.0
4	16.5	19.0	13.0	5.0	6.5	11.0	14.0	20.5	---	26.0	---	22.5
5	17.5	15.0	14.5	---	3.0	10.5	13.0	16.5	20.5	---	25.0	23.5
6	18.0	11.0	15.0	5.0	1.5	10.5	12.0	16.0	21.5	23.5	24.5	24.0
7	20.0	8.0	12.0	5.0	2.5	---	12.0	18.0	21.5	22.5	24.0	25.0
8	20.0	10.5	9.5	5.0	3.0	10.0	---	---	22.5	22.5	24.5	24.0
9	21.0	10.0	8.0	5.5	1.0	8.5	13.5	16.0	20.5	22.0	25.5	21.5
10	17.5	10.5	4.5	7.0	2.0	8.0	10.5	14.0	19.0	---	24.5	23.5
11	14.5	11.0	---	8.5	---	8.5	10.5	---	---	22.5	25.0	23.0
12	15.5	13.0	1.0	7.0	---	5.5	12.0	15.0	20.5	21.5	24.0	24.0
13	15.0	11.5	.5	4.0	.0	6.5	12.0	16.5	22.0	24.0	22.0	22.5
14	15.0	9.0	---	3.0	.0	8.5	13.5	16.5	---	25.0	21.5	20.5
15	15.5	8.5	1.0	3.5	1.0	9.0	13.5	8.0	24.5	25.5	20.0	18.5
16	13.5	7.0	5.0	1.0	---	9.5	13.0	17.5	25.0	---	22.0	17.0
17	---	6.0	5.5	1.5	2.0	9.0	12.0	14.5	---	---	20.5	18.0
18	---	6.0	4.0	1.0	3.0	10.0	11.0	13.5	25.0	---	---	19.5
19	11.0	8.0	3.5	.0	3.0	11.5	10.0	11.0	23.5	---	24.0	21.0
20	13.5	9.0	4.5	.0	3.0	13.0	8.5	16.0	23.0	25.0	24.0	21.0
21	13.5	11.0	4.0	.0	5.0	12.0	8.0	17.5	---	27.0	24.0	22.0
22	11.5	10.5	---	.0	---	11.0	12.0	---	20.5	25.0	24.0	19.0
23	9.5	12.0	3.5	2.5	7.0	8.5	14.0	19.0	21.0	24.0	23.5	16.5
24	9.0	11.5	5.5	3.5	6.0	6.5	13.0	19.0	23.0	25.0	23.0	14.5
25	9.0	8.0	9.0	4.0	6.0	7.0	11.5	19.0	23.5	24.5	23.5	15.0
26	10.0	8.0	11.5	3.5	4.0	7.5	10.0	19.0	---	24.5	22.0	14.0
27	9.0	7.5	10.5	4.0	4.5	8.5	15.0	---	22.0	24.0	22.5	15.0
28	9.0	---	9.0	4.0	4.0	8.0	---	17.0	---	25.0	23.0	15.5
29	11.0	7.0	9.0	4.0	---	9.5	20.0	---	---	25.0	23.0	17.5
30	11.5	8.5	9.0	---	---	9.5	---	19.0	---	25.0	23.0	17.0
31	---	---	6.5	5.0	---	7.5	---	18.0	---	24.5	23.0	---

SUSPENDED-SEDIMENT, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MEAN CONCENTRATION (MG/L)		LOADS (T/DAY)		MEAN CONCENTRATION (MG/L)		LOADS (T/DAY)		MEAN CONCENTRATION (MG/L)		LOADS (T/DAY)		MEAN CONCENTRATION (MG/L)		LOADS (T/DAY)		MEAN CONCENTRATION (MG/L)		LOADS (T/DAY)		MEAN CONCENTRATION (MG/L)		LOADS (T/DAY)	
OCTOBER																								
1	2	.09	2	.09	26	9.3	2	.44	2	.41	14	6.4												
2	3	.13	2	.09	20	4.5	2	.43	2	.40	20	16												
3	3	.12	1	.04	14	2.8	1	.21	6	1.7	26	35												
4	4	.15	1	.04	10	1.8	1	.20	11	4.1	18	15												
5	3	.11	2	.17	6	.99	1	.19	10	3.2	11	7.2												
6	4	.15	3	.25	28	8.2	1	.21	6	1.6	10	5.6												
7	4	.15	2	.13	23	9.0	2	.45	7	2.5	9	4.8												
8	5	.19	2	.11	17	5.6	5	1.1	12	6.5	9	5.5												
9	5	.19	2	.11	14	3.1	8	1.6	31	18	15	13												
10	5	.19	2	.10	7	1.2	5	1.0	30	14	21	20												
11	6	.21	2	.10	6	.94	4	1.0	17	6.0	14	12												
12	6	.21	3	.15	5	.82	5	1.5	10	3.0	18	14												
13	7	.26	7	.77	4	.71	5	1.4	9	2.9	19	19												
14	4	.18	7	1.2	3	.52	4	.97	10	3.3	12	9.6												
15	4	.17	4	.56	3	.48	3	.73	10	3.5	11	7.2												
16	3	.12	5	.53	26	11	3	.83	10	3.9	11	6.3												
17	2	.08	3	.25	56	55	3	.84	11	5.7	10	5.1												
18	1	.04	5	.38	36	27	5	1.3	12	8.5	10	6.9												
19	1	.04	2	.15	19	8.9	6	1.3	19	18	42	111												
20	1	.04	2	.14	10	3.8	5	.93	12	11	36	92												
21	2	.09	2	.14	5	1.7	5	.96	9	6.6	44	101												
22	5	.20	3	.20	4	1.2	4	.78	7	4.6	66	252												
23	2	.08	2	.14	2	.54	3	.66	7	4.6	36	74												
24	2	.08	3	.20	2	.51	4	1.0	14	11	20	21												
25	1	.05	3	.19	2	.58	4	1.0	14	11	14	11												
26	2	.17	2	.12	2	.52	4	.95	14	9.1	9	6.1												
27	2	.15	1	.06	2	.48	4	.90	14	7.6	9	5.7												
28	2	.12	4	.27	2	.41	4	.85	14	6.5	43	76												
29	2	.11	21	4.8	2	.41	4	.83	---	---	42	88												
30	1	.05	37	15	2	.45	3	.61	---	---	31	35												
31	2	.09	---	---	2	.46	3	.62	---	---	20	16												
TOTAL	---	4.01	---	26.48	---	162.92	---	25.79	---	179.21	---	1097.4												
APRIL																								
1	12	8.3	9	5.2	15	10	7	3.0	1	.08	2	.33												
2	9	5.7	8	4.2	11	6.1	5	1.8	1	.11	2	.26												
3	14	13	8	3.9	11	5.2	4	1.3	1	.09	3	.34												
4	30	45	13	6.7	11	5.0	4	1.1	1	.09	2	.21												
5	20	20	20	11	12	5.4	4	1.1	1	.09	1	.10												
6	15	11	9	4.6	13	5.3	4	.97	1	.08	1	.09												
7	9	6.0	7	3.1	12	4.5	3	.64	3	.21	1	.07												
8	7	4.4	6	2.5	8	3.1	4	.78	4	.27	1	.07												
9	14	11	6	2.5	7	2.3	5	.89	2	.14	2	.13												
10	42	140	9	2.9	8	2.5	4	.67	2	.14	1	.06												
11	38	232	8	2.5	8	2.1	3	.47	1	.07	1	.06												
12	18	67	6	1.9	7	1.8	2	.30	8	1.6	1	.06												
13	18	34	4	1.2	7	1.7	2	.28	10	1.9	1	.07												
14	20	24	5	1.3	6	1.3	1	.13	3	.33	1	.09												
15	18	16	8	2.3	5	.99	1	.12	2	.18	1	.09												
16	61	363	11	4.8	5	1.1	1	.11	2	.16	1	.08												
17	42	268	21	2.0	5	.96	1	.11	1	.07	1	.07												
18	21	51	16	1.5	6	1.3	1	.10	1	.07	1	.07												
19	16	23	11	7.1	9	4.0	5	.62	1	.08	1	.07												
20	15	15	8	4.4	19	8.1	27	13	1	.07	1	.06												
21	12	10	4	2.0	36	109	13	4.7	1	.05	1	.06												
22	8	6.0	9	11	29	133	8	1.9	1	.05	3	.40												
23	8	5.5	29	47	18	41	6	1.1	29	4.9	4	.46												
24	19	22	14	18	17	17	5	.78	12	3.0	5	.41												
25	34	94	12	9.5	12	7.9	6	.84	2	.19	2	.15												
26	24	54	11	6.8	10	5.2	5	.62	2	.15	2	.14												
27	14	18	11	7.5	11	4.6	3	.34	3	.20	2	.14												
28	13	11	16	14	11	4.1	2	.20	4	.45	1	.07												
29	13	9.4	14	9.8	12	5.4	1	.09	9	3.1	1	.07												
30	11	7.1	8	5.9	11	6.0	1	.09	14	7.1	2	.30												
31	---	---	13	9.1	---	---	2	.16	4	1.2	---	---												
TOTAL	---	1594.4	---	246.8	---	405.95	---	38.31	---	26.22	---	4.58												
TOTAL LOAD FOR YEAR:		3812.07		TONS.																				

CHESTER RIVER BASIN

53

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.--Records good. Occasional regulation at low and medium flow by fish hatchery above station. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--35 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)
Mar. 19	1230	183 5.18	3.52 1.073	Apr. 24	2000	183 5.18	3.52 1.073
Mar. 21	2200	398 11.3	4.48 1.366	May 23	1130	250 7.08	3.90 1.189
Apr. 10	2130	455 12.9	4.65 1.417	June 21	1100	*825 23.4	5.51 1.679
Apr. 16	1515	586 16.6	4.99 1.521				

Minimum discharge, 0.40 ft³/s (0.011 m³/s) Mar. 2, result of regulation; minimum daily discharge, 7.1 ft³/s (0.201 m³/s) Jan. 22, result of regulation.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.4	8.6	28	14	19	45	45	41	37	33	16	15
2	8.9	8.4	31	14	16	27	41	39	31	30	16	14
3	8.4	8.4	20	21	25	60	71	37	28	28	16	14
4	8.4	12	13	14	28	42	84	43	30	28	16	13
5	8.4	19	13	19	18	33	54	41	28	29	16	13
6	8.4	13	25	20	18	29	44	36	26	26	16	12
7	8.4	10	25	17	32	30	41	33	38	24	16	12
8	8.4	9.7	16	17	36	42	43	32	28	23	15	11
9	8.4	9.3	13	17	35	54	59	30	24	23	15	11
10	7.9	9.3	13	23	27	54	260	29	22	22	15	11
11	7.9	9.2	13	18	18	51	347	28	21	21	16	10
12	7.9	9.6	13	21	18	53	203	27	20	21	23	11
13	9.7	28	19	18	18	58	105	26	19	20	18	13
14	9.2	21	17	16	30	42	70	26	19	20	16	14
15	8.4	14	13	17	28	34	65	29	17	19	15	13
16	9.2	12	21	17	23	30	406	48	16	19	14	11
17	8.5	12	27	23	33	28	293	108	18	18	15	12
18	8.4	11	25	17	33	44	130	61	20	17	16	12
19	8.4	11	24	19	26	153	85	41	19	31	15	11
20	9.2	11	35	17	43	115	69	35	52	102	14	11
21	12	11	35	11	36	190	61	46	565	35	14	18
22	9.2	11	25	7.1	48	302	54	152	308	25	15	30
23	8.7	11	23	7.8	51	135	50	216	136	22	22	15
24	8.0	10	14	23	50	72	109	125	67	21	16	13
25	14	9.7	14	24	38	55	164	59	49	20	14	13
26	18	9.7	15	17	21	46	104	43	38	19	14	12
27	12	9.5	18	17	22	49	69	69	34	18	14	12
28	10	11	20	16	41	132	57	65	34	18	14	12
29	9.2	35	19	13	---	108	50	45	60	17	16	12
30	8.8	37	17	13	---	64	45	60	39	17	17	15
31	8.8	---	14	20	---	51	---	50	---	16	15	---
TOTAL	290.5	401.4	618	527.9	831	2228	3278	1720	1843	782	490	396
MEAN	9.37	13.4	19.9	17.0	29.7	71.9	109	55.5	61.4	25.2	15.8	13.2
MAX	18	37	35	24	51	302	406	216	565	102	23	30
MIN	7.9	8.4	13	7.1	16	27	41	26	16	16	14	10
CFSM	.42	.60	.89	.76	1.33	3.22	4.89	2.49	2.75	1.13	.71	.59
IN.	.48	.67	1.03	.88	1.39	3.72	5.47	2.87	3.07	1.30	.82	.66

CAL YR 1982 TOTAL 7532.05 MEAN 20.6 MAX 132 MIN .65 CFSM .92 IN 12.46
WTR YR 1983 TOTAL 13405.80 MEAN 36.7 MAX 565 MIN 7.1 CFSM 1.65 IN 22.36

CHESTER RIVER BASIN

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, 2.0 mi (3.2 km) southwest of Kennedyville, and 4.5 mi (7.2 km) upstream from mouth.

DRAINAGE AREA.--12.7 mi² (32.9 km²).

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. WDR MD-DE-79-1: 1961(M). WDR MD-DE-80-1: 1976(P).

GAGE.--Water-stage recorder and concrete control. Datum of gage is 1.76 ft (0.536 m) National Geodetic Vertical Datum of 1929.

REMARKS.--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.--32 years, 10.6 ft³/s (0.300 m³/s), 11.33 in/yr (288 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 discharge, 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)
Mar. 21	1815	289 8.18	4.88 1.487	Apr. 16	0945	235 6.66	4.46 1.359
Apr. 10	1245	275 7.79	4.78 1.457	June 21	0400	*672 19.0	6.82 2.079

Minimum daily discharge, 2.8 ft³/s (0.079 m³/s) Oct. 10.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.5	3.8	7.5	5.0	5.3	8.6	9.4	9.0	11	8.7	5.9	6.8
2	3.3	3.8	7.8	4.7	6.6	20	8.7	8.6	9.8	8.4	5.9	6.1
3	3.0	3.8	6.1	4.6	20	9.2	26	8.6	8.7	7.8	5.6	5.9
4	3.1	5.5	5.9	4.3	8.8	6.8	12	11	11	7.6	6.3	5.8
5	3.1	42	5.5	6.5	5.2	6.4	8.7	9.1	11	8.0	5.9	5.5
6	3.0	11	5.9	11	5.0	6.3	8.6	8.2	8.8	7.9	5.9	5.5
7	3.1	4.8	5.3	6.2	13	7.9	8.8	8.1	22	7.4	5.8	5.3
8	3.3	4.2	4.6	5.2	13	19	11	8.1	11	7.1	5.4	5.0
9	3.3	4.2	4.6	5.0	7.5	12	14	8.0	8.3	7.1	5.0	4.6
10	2.8	4.2	4.4	5.3	5.9	26	178	7.6	7.7	7.1	4.8	5.0
11	3.1	4.2	5.1	6.4	3.3	13	70	7.6	7.7	7.1	7.0	4.8
12	3.3	4.4	5.6	5.5	4.1	13	23	7.6	7.6	7.1	21	5.0
13	3.8	16	5.7	4.6	8.3	9.7	12	7.6	7.6	7.0	7.3	6.0
14	4.5	11	5.0	4.5	7.7	7.2	9.9	7.6	7.6	6.7	6.0	7.0
15	3.7	5.7	5.6	6.3	7.6	7.1	16	12	7.6	6.7	5.7	5.4
16	5.3	4.8	41	6.1	8.3	6.7	165	35	7.1	6.7	5.5	5.1
17	4.0	4.6	34	4.6	9.1	6.5	34	51	7.5	6.4	5.5	5.0
18	3.5	4.6	7.2	4.0	11	24	13	13	8.4	6.3	6.3	4.9
19	3.5	4.6	6.3	3.5	15	103	11	9.3	7.6	8.2	6.3	4.6
20	3.5	4.6	6.2	3.3	14	17	10	9.6	28	27	5.6	4.4
21	4.7	4.6	5.5	3.4	12	149	9.7	15	346	8.9	5.0	14
22	4.3	4.6	5.0	4.0	12	72	9.1	25	52	7.8	6.3	54
23	3.8	4.6	5.0	22	18	13	9.1	77	12	6.8	12	11
24	3.8	4.8	5.2	18	15	9.0	70	23	9.1	7.6	6.5	6.2
25	7.2	4.6	5.2	7.2	8.3	8.3	74	10	9.1	6.9	5.7	5.6
26	13	4.3	5.5	6.2	6.9	7.7	23	9.1	8.6	6.7	5.5	5.5
27	7.1	4.6	5.1	5.7	6.1	22	12	22	8.6	6.5	5.5	5.5
28	4.8	5.0	5.2	5.5	6.0	106	11	11	9.1	6.4	5.5	5.3
29	4.3	36	6.1	5.0	---	21	9.7	13	34	6.3	6.1	5.0
30	3.8	17	5.8	5.3	---	11	9.5	45	13	6.3	48	7.3
31	3.8	---	5.0	5.9	---	9.6	---	19	---	6.2	10	---
TOTAL	130.3	241.9	237.9	194.8	263.0	758.0	886.2	515.7	707.5	242.7	248.8	227.1
MEAN	4.20	8.06	7.67	6.28	9.39	24.5	29.5	16.6	23.6	7.83	8.03	7.57
MAX	13	42	41	22	20	149	178	77	346	27	48	54
MIN	2.8	3.8	4.4	3.3	3.3	6.3	8.6	7.6	7.1	6.2	4.8	4.4
CFSM	.33	.64	.60	.49	.74	1.93	2.32	1.31	1.86	.62	.63	.60
IN.	.38	.71	.70	.57	.77	2.22	2.60	1.51	2.07	.71	.73	.67
CAL YR 1982	TOTAL	2782.9	MEAN	7.62	MAX	91	MIN	2.8	CFSM	.60	IN	8.15
WTR YR 1983	TOTAL	4653.9	MEAN	12.8	MAX	346	MIN	2.8	CFSM	1.01	IN	13.63

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).

WATER-DISCHARGE RECORDS

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.--51 years, 69.2 ft³/s (1.960 m³/s), 17.87 in/yr (454 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 discharge, 4.5 ft³/s (0.13 m³/s) Jan. 21, 1955, (result of freezeup); minimum daily discharge, 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.--Flood of June 1884 reached a stage of about 19 ft (5.8 m) from information by local residents, discharge, about 18,000 ft³/s (510 m³/s).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,670 ft³/s (47.3 m³/s) May 23, gage height, 6.22 ft (1.896 m), no peak above base of 1,700 ft³/s (48 m³/s); minimum daily discharge, 17 ft³/s (0.48 m³/s) Sept. 11.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20	23	47	27	40	68	97	113	101	64	30	27
2	19	23	57	26	87	124	93	110	93	63	32	25
3	18	24	40	26	360	72	245	108	88	59	29	24
4	18	51	36	24	95	61	119	118	107	57	29	23
5	18	166	33	26	62	57	97	108	100	59	30	22
6	18	41	31	40	56	55	94	98	85	56	31	21
7	18	29	28	32	83	74	93	96	85	52	31	20
8	18	26	26	28	78	91	119	95	79	50	28	18
9	19	24	25	26	62	125	152	93	73	49	27	18
10	18	22	24	44	54	163	678	88	72	47	26	18
11	18	22	26	124	49	105	199	85	71	45	33	17
12	19	22	30	52	35	99	142	83	69	45	63	31
13	22	86	24	38	41	82	120	81	67	43	36	33
14	28	44	25	33	48	69	112	79	64	41	32	24
15	25	30	27	42	74	66	214	100	63	41	30	21
16	22	27	232	41	88	61	572	337	62	40	28	20
17	20	26	88	35	80	60	178	222	61	37	27	20
18	20	24	48	30	83	122	147	111	61	46	31	20
19	21	24	39	26	98	405	139	97	104	40	32	19
20	22	24	37	25	88	122	159	104	201	39	27	18
21	43	23	35	25	89	558	150	297	194	38	24	21
22	29	23	31	28	110	185	121	311	96	38	23	74
23	22	23	30	279	127	117	114	481	76	35	31	27
24	21	24	30	134	99	104	383	145	69	45	28	23
25	34	24	29	71	74	90	427	116	64	38	26	22
26	55	24	30	54	64	82	176	114	60	36	24	21
27	35	24	29	47	57	189	146	194	59	34	24	21
28	26	26	30	43	56	481	134	107	70	33	24	21
29	23	162	32	39	---	148	123	129	164	31	32	20
30	23	56	29	40	---	115	118	152	70	31	28	20
31	22	---	27	48	---	104	---	113	---	30	25	---
TOTAL	734	1167	1255	1553	2337	4254	5661	4485	2628	1362	921	709
MEAN	23.7	38.9	40.5	50.1	83.5	137	189	145	87.6	43.9	29.7	23.6
MAX	55	166	232	279	360	558	678	481	201	64	63	74
MIN	18	22	24	24	35	55	93	79	59	30	23	17
CFSM	.45	.74	.77	.95	1.59	2.61	3.59	2.76	1.67	.84	.57	.45
IN.	.52	.83	.89	1.10	1.65	3.01	4.00	3.17	1.86	.96	.65	.50
CAL YR 1982 TOTAL	18269			MEAN 50.1	MAX 785	MIN 14	CFSM .95	IN 12.92				
WTR YR 1983 TOTAL	27066			MEAN 74.2	MAX 678	MIN 17	CFSM 1.41	IN 19.14				

ELK RIVER BASIN

01495000 BIG ELK CREEK AT ELK MILLS, MD--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1974-78, October to November 1982 (discontinued).

WATER QUALITY DATA, OCTOBER 1982 TO NOVEMBER 1982

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD UNITS)	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 AS CAC03)	CALCIUM DIS- SOLVED (MG/L AS CA)
NOV 02...	1445	23	108	8.0	14.6	10	11.1	40	13	9.2

DATE	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	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)
NOV 02...	4.1	6.7	25	.5	3.0	.5	10	10	.20	9.6

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,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)
NOV 02...	73	69	.10	4.5	1.9	.40	2.3	10	.030

DATE	PHOS- PHORUS TOTAL (MG/L AS PO4)	PHOS- PHORUS, ORTHO, 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. (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	CARBON, ORGANIC TOTAL (MG/L AS C)
NOV 02...	.09	.020	270	210	65	10	0	16	3.1

ELK RIVER BASIN

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01495900 ELK RIVER NEAR TOWN POINT, MD

LOCATION.--Lat 39°30'09", long 75°54'58", Cecil County, Hydrologic Unit 02060001, at site of Old Town Point wharf, at the Corps of Engineers substation, on left bank of Elk River, 0.7 mi (1.1 km) west of Port Herman, 1.1 mi (1.8 km) northwest of Town Point, and 1.8 mi (2.9 km) downstream from mouth of Back Creek.

PERIOD OF RECORD.--Water years 1982 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1981 to current year.

WATER TEMPERATURES: October 1981 to current year.

INSTRUMENTATION.--Water-quality monitor since October 1981.

REMARKS.--Interruptions in record due to instrument malfunctions.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 19,900 micromhos Oct. 26, 1982; minimum, 120 micromhos May 8, 1983.

WATER TEMPERATURES: Maximum, 32.5°C July 20, 1983; minimum, 0.0°C on many days during winter periods.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum, 19,900 micromhos Oct. 26; minimum, 120 micromhos May 8, 1983.

WATER TEMPERATURES: Maximum, 32.5°C July 20; minimum, 1.0°C Jan. 19-21, Feb. 15.

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			DECEMBER			JANUARY			
1	10000	6480	7960	11700	11200	11500	5780	5260	5470	2280	2040	2200
2	8140	6660	7510	11500	11100	11300	5740	5340	5660	2280	1920	2100
3	8560	7060	7970	11400	10800	11100	5700	4900	5430	2220	1840	2040
4	8280	7440	7740	11200	10600	11000	5300	4120	4780	3380	2020	2240
5	7760	7020	7490	10700	9700	10500	4520	3480	4000	4360	2380	2870
6	7800	7200	7590	10000	7380	8120	4160	3400	3840	4880	2600	3430
7	7740	6920	7420	8720	7620	8080	3920	3280	3540	4060	2560	3280
8	7280	6880	7140	8260	7440	7860	4060	2700	3260	2840	2340	2730
9	7100	6280	6730	8140	7320	7690	3120	2940	3020	3220	2800	2940
10	12500	6740	8090	7800	7420	7730	3560	3080	3290	8700	3200	5580
11	11300	8180	9270	8500	7720	7970	3480	2480	3060	7780	5080	6660
12	9650	8300	9080	7900	7000	7480	8460	2940	4800	6480	4680	5770
13	9160	8400	8860	7260	6580	6890	9560	5420	8320	6040	4320	5480
14	8760	8000	8360	7240	6480	6970	8340	5360	6870	6060	5040	5570
15	8500	6860	7740	6920	6280	6580	5580	4540	5170	5440	4980	5120
16	7340	6400	6940	6740	5780	6370	5180	4240	4640	5060	4480	4870
17	6920	5580	6400	6020	5280	5630	4980	4400	4570	4460	3060	3660
18	6460	5660	6060	6120	5340	5720	10800	5020	8210	3620	2360	2740
19	6160	5540	5850	8720	6080	6660	12000	9260	10200	3140	2400	2670
20	5840	5500	5660	10200	7020	8350	9240	7060	8170	2980	2400	2780
21	5480	5180	5390	8720	7300	7770	7360	4880	5570	4720	2920	3360
22	5540	5260	5400	7900	7520	7690	5020	2940	3670	6420	3120	4550
23	5860	5460	5580	7840	7540	7710	3800	2700	3350	9160	5440	7480
24	12100	5640	7530	7780	7220	7670	3500	2560	2880	9040	6760	8220
25	14600	10400	11900	7600	6600	7190	3420	2340	2810	8180	6020	7110
26	19900	14000	16300	6280	4980	5440	3100	2160	2380	6980	4820	6320
27	17500	11300	15100	5820	5240	5430	3420	2180	2370	7820	6600	7090
28	15900	10800	12900	5560	5260	5450	3080	2300	2490	9860	7460	8550
29	12800	10300	12200	5520	5320	5420	2300	2100	2190	11600	8400	9730
30	12300	11800	12100	5760	5440	5560	2860	1960	2220	10100	9420	9750
31	12100	11600	11800	---	---	---	2320	2060	2180	9560	8720	9170
MONTH	19900	5180	8580	11700	4980	7630	12000	1960	4460	11600	1840	5030

ELK RIVER BASIN

01495900 ELK RIVER NEAR TOWN POINT, MD--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY			MARCH			APRIL			MAY			
1	8860	7700	8340	7440	5540	6220	1660	1580	1620	380	240	305
2	9260	7760	8360	7720	6800	7300	1640	1580	1610	440	160	234
3	8740	5920	7590	7160	4580	6000	1560	1200	1380	280	160	197
4	7020	4200	5640	5560	4760	5180	1640	1400	1570	320	180	241
5	5580	2300	2860	6380	5260	5780	1640	1380	1540	480	220	318
6	3680	2820	3310	6640	6160	6470	1660	1220	1380	340	220	268
7	5100	3720	4510	6460	6140	6250	1680	1220	1330	300	160	219
8	4420	1640	3290	6180	3500	4990	1360	1140	1240	220	120	183
9	2300	1200	1580	7600	5180	6320	1360	1140	1220	500	200	328
10	1940	1520	1750	8960	6640	7580	1860	1200	1510	540	240	363
11	8040	1900	4010	8940	7740	8330	1740	1480	1600	380	160	258
12	8140	5520	6690	7820	6020	6930	1620	1500	1550	300	180	234
13	8100	7040	7450	7460	5480	6760	1580	1460	1510	280	160	213
14	7480	7040	7280	6380	5340	5750	1620	1540	1580	220	160	192
15	7400	6880	7230	5800	4000	4990	1800	1620	1700	240	160	195
16	7260	6880	7050	5860	4900	5310	1720	1260	1590	240	200	213
17	7080	6760	6960	6500	5220	5870	1540	1440	1470	940	200	484
18	9860	6860	7470	7680	5900	6560	1460	880	1250	960	860	913
19	10100	6680	8320	7100	4780	6190	1220	900	1110	840	640	742
20	9520	7260	8180	6000	5360	5760	1180	360	570	680	440	562
21	7960	6220	7400	5720	4440	4920	720	340	479	520	400	458
22	6980	6180	6710	4980	3480	4330	540	220	375	480	380	415
23	7080	6600	6850	4200	1250	2100	520	340	403	400	340	364
24	7180	6760	6950	2140	1160	1350	400	340	378	420	360	388
25	7080	6200	6690	1920	1340	1630	680	360	468	420	380	403
26	7500	6800	7130	2100	1760	1890	660	220	554	460	400	438
27	7880	5160	7310	2100	1780	1950	600	220	484	460	380	420
28	6900	5260	5980	2040	1780	1880	580	420	484	520	400	465
29	---	---	---	2100	1840	1960	500	400	452	500	460	483
30	---	---	---	2120	1600	1910	480	300	402	480	420	453
31	---	---	---	1800	1460	1600	---	---	---	440	380	426
MONTH	10100	1200	6170	8960	1160	4840	1860	220	1090	960	120	367

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
JUNE			JULY			AUGUST			SEPTEMBER			
1	440	420	432	1080	640	913	1100	780	898	3000	2220	2720
2	460	400	423	900	700	780	980	720	853	2980	2540	2760
3	440	360	393	660	500	598	900	800	841	3000	2640	2820
4	380	280	335	560	460	507	860	780	811	2920	2800	2860
5	340	260	308	520	460	481	920	680	828	2920	2800	2880
6	300	260	279	540	400	447	960	680	893	2960	2780	2890
7	300	240	268	640	500	562	960	880	934	2960	2440	2880
8	280	240	266	2720	660	1390	960	880	943	3000	2200	2840
9	300	260	281	1360	900	1150	1000	860	960	3060	2860	2920
10	620	320	456	1320	1000	1170	1840	960	1140	3020	2840	2950
11	760	500	621	1760	940	1410	5560	1180	3080	2920	2020	2820
12	600	440	548	1720	1220	1520	3620	2100	3100	2820	2600	2770
13	580	480	518	1540	1140	1480	10600	1820	6230	4000	2020	2840
14	620	440	532	1540	1220	1390	9380	3880	7780	11300	3380	6080
15	720	540	642	1680	1300	1510	8300	6480	7320	10500	6960	8930
16	640	540	608	1580	1400	1490	6780	5120	5830	9080	4380	7380
17	600	520	584	1560	1260	1430	5660	4600	5180	8060	6260	7120
18	620	560	587	1860	1500	1650	5220	4100	4590	7080	4800	6740
19	600	540	573	1820	1480	1680	4920	3320	4280	7160	6520	6890
20	580	520	553	1780	1500	1660	4520	3600	4110	6680	5960	6480
21	600	520	558	1800	1440	1600	4040	3120	3660	5660	4600	4870
22	680	540	620	1640	880	1500	7680	3020	3760	5580	2980	5140
23	680	540	598	1720	1140	1560	3320	2940	3110	5420	2280	4600
24	600	480	546	1980	1480	1660	3200	2180	3100	4640	4240	4430
25	540	380	477	1920	1500	1670	3120	2900	3030	4680	4400	4540
26	600	440	520	1980	1500	1740	3340	2540	2990	4680	4560	4630
27	520	460	484	1980	1540	1750	3100	2780	4620	4680	4560	4620
28	480	360	424	2000	1480	1820	2840	2480	4390	4800	2360	4390
29	1560	380	646	1740	1180	1480	2800	1900	2570	10600	4820	6050
30	1560	780	1190	1460	980	1190	2680	1940	2560	14900	9040	11700
31	---	---	---	1200	900	1050	2800	2620	2670	---	---	---
MONTH	1560	240	509	2720	400	1300	10600	680	3130	14900	2020	4720

ELK RIVER BASIN

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01495900 ELK RIVER NEAR TOWN POINT, MD--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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

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

ELK RIVER BASIN

01495900 ELK RIVER NEAR TOWN POINT, MD--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	21.0	19.5	20.0	26.5	25.0	25.5	29.0	28.0	28.5	28.0	26.0	27.0
2	21.5	18.5	20.0	28.0	25.5	26.5	30.0	27.5	28.5	28.0	26.0	27.0
3	22.0	20.0	21.0	30.0	26.5	28.0	30.5	27.5	28.5	28.5	26.0	27.0
4	21.0	20.0	20.5	30.0	27.0	28.0	30.0	28.0	28.5	28.5	26.5	27.5
5	25.0	20.0	22.0	28.5	27.0	27.5	30.0	28.0	28.5	30.0	27.0	28.0
6	24.0	21.0	22.0	28.5	26.0	27.0	30.5	27.5	28.5	30.0	27.5	28.5
7	25.0	21.5	23.0	28.5	24.5	26.0	31.0	28.0	29.0	29.5	28.0	28.5
8	26.0	22.0	23.5	29.5	25.5	27.0	31.5	28.5	29.5	29.0	26.0	27.5
9	23.5	21.0	22.5	29.0	25.5	27.0	31.0	28.5	29.5	28.5	26.0	27.5
10	24.5	20.5	22.5	28.0	24.0	26.5	30.0	26.5	28.5	28.5	26.0	27.5
11	25.5	21.5	23.0	28.0	24.5	26.5	29.5	28.0	28.5	28.5	27.0	28.0
12	26.0	22.5	24.0	28.5	25.5	27.0	28.0	25.5	27.0	28.5	27.0	27.5
13	27.0	23.5	25.0	28.5	26.5	27.5	26.5	24.0	25.5	27.0	24.0	25.5
14	27.0	24.5	25.5	28.5	26.0	27.5	26.5	24.5	25.5	25.5	23.5	25.0
15	27.0	25.0	26.0	29.0	27.0	28.0	26.5	25.0	26.0	25.0	23.0	24.0
16	27.5	25.5	26.5	29.5	27.5	28.5	27.5	25.5	26.0	24.5	23.5	24.0
17	28.5	26.5	27.0	30.5	28.0	29.0	28.5	25.5	26.5	25.0	23.0	23.5
18	28.5	26.5	27.5	31.5	28.0	29.5	27.5	26.0	26.5	25.5	22.5	24.0
19	28.5	27.0	27.5	31.0	29.0	29.5	30.0	26.5	27.5	26.0	23.0	24.5
20	27.5	25.5	26.5	32.5	28.5	29.5	29.5	27.0	28.0	26.0	23.5	24.5
21	25.5	24.0	24.5	32.0	28.5	30.0	29.5	26.0	28.0	24.5	23.5	24.0
22	27.0	23.5	25.0	30.0	27.5	28.5	29.0	27.0	27.5	23.0	20.0	21.5
23	29.0	24.0	26.0	29.0	26.0	28.0	28.0	26.5	27.5	21.0	18.5	20.0
24	28.5	24.5	26.0	30.0	27.0	28.0	29.0	26.5	27.5	20.5	18.0	19.5
25	27.5	25.0	26.0	28.5	26.5	27.5	28.5	26.5	27.5	21.0	18.0	19.5
26	28.0	24.0	26.0	29.5	26.5	28.0	28.5	26.0	27.5	20.5	18.5	19.5
27	28.5	25.5	26.5	29.5	26.5	28.0	28.0	26.5	27.0	21.0	19.0	20.0
28	28.0	26.0	27.0	29.0	27.0	28.0	27.5	27.0	27.5	21.0	19.0	20.0
29	27.0	23.5	25.5	29.0	27.0	28.0	28.5	26.5	27.5	20.5	18.5	19.5
30	26.5	25.0	26.0	29.0	27.0	28.0	28.5	26.5	27.5	19.5	17.5	18.5
31	---	---	---	30.0	27.5	28.5	27.5	26.5	27.0	---	---	---
MONTH	29.0	18.5	24.5	32.5	24.0	28.0	31.5	24.0	27.5	30.0	17.5	24.5

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. WDR MD-DE-79-1: 1979.

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

REMARKS.--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.--35 years, 35.7 ft³/s (1.011 m³/s), 19.95 in/yr (507 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 discharge, 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)
Mar. 21	1815	1380 39.1	4.79 1.460	Apr. 16	0445	1430 40.5	4.86 1.481
Mar. 28	0545	1220 34.6	4.55 1.387	May 23	0930	1070 30.3	4.31 1.314
Apr. 10	1815	*1480 41.9	4.93 1.503	June 21	0630	1070 30.3	4.31 1.314

Minimum daily discharge, 4.9 ft³/s (0.14 m³/s) Sept. 11.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.2	6.8	22	12	20	28	31	30	26	21	9.0	7.2
2	6.4	7.4	32	12	57	84	29	28	25	21	9.6	7.0
3	6.6	7.0	19	12	307	32	194	28	23	19	8.7	6.7
4	6.6	14	17	11	48	24	49	33	28	17	8.5	6.2
5	6.8	85	15	12	26	22	35	30	24	19	8.5	6.2
6	6.5	15	14	21	22	21	31	26	21	17	9.3	6.1
7	6.7	10	12	16	41	35	31	24	22	16	9.0	5.8
8	7.2	9.4	11	13	46	76	55	24	20	15	8.2	5.5
9	5.9	9.1	11	12	32	73	116	24	18	15	7.9	5.4
10	6.3	8.6	10	22	24	202	738	22	18	14	7.6	5.2
11	6.5	8.5	11	82	14	62	156	21	17	13	11	4.9
12	7.3	8.7	13	26	17	42	59	21	17	13	22	9.6
13	6.5	40	13	18	23	32	41	20	16	13	10	8.5
14	8.1	18	12	15	26	26	35	20	15	12	9.1	6.6
15	7.7	12	12	19	28	24	142	31	15	12	8.9	6.1
16	7.3	9.9	281	23	29	22	790	261	14	11	8.6	5.8
17	6.0	9.4	61	18	35	21	80	198	14	11	8.3	6.0
18	6.9	9.4	24	15	55	118	50	38	13	11	8.8	5.9
19	5.7	9.0	19	14	79	339	42	29	26	11	9.5	5.8
20	6.7	9.2	18	14	65	56	57	35	109	11	8.2	5.5
21	13	9.1	16	14	70	640	49	120	431	11	7.2	6.3
22	11	8.9	14	13	85	149	35	247	46	11	6.5	18
23	5.9	8.5	14	309	80	44	32	488	28	10	9.5	8.0
24	6.9	9.5	14	99	51	34	405	55	24	13	7.8	6.7
25	11	8.1	14	36	33	30	379	36	22	11	7.5	6.5
26	20	8.0	14	26	26	27	71	30	20	10	7.2	6.6
27	12	8.4	13	23	22	134	44	32	19	9.9	7.0	6.6
28	7.1	8.8	14	20	22	504	39	26	19	9.5	7.0	6.4
29	7.7	129	15	18	---	62	34	38	123	9.1	7.3	6.0
30	7.2	27	13	19	---	38	32	48	26	9.0	7.6	6.0
31	7.8	---	12	25	---	34	---	31	---	9.3	7.0	---
TOTAL	244.5	531.7	780	989	1383	3035	3881	2094	1239	404.8	272.3	203.1
MEAN	7.89	17.7	25.2	31.9	49.4	97.9	129	67.5	41.3	13.1	8.78	6.77
MAX	20	129	281	309	307	640	790	488	431	21	22	18
MIN	5.7	6.8	10	11	14	21	29	20	13	9.0	6.5	4.9
CFSM	.33	.73	1.04	1.31	2.03	4.03	5.31	2.78	1.70	.54	.36	.28
IN.	.37	.81	1.19	1.51	2.12	4.65	5.94	3.21	1.90	.62	.42	.31

CAL YR 1982 TOTAL 10883.1 MEAN 29.8 MAX 609 MIN 4.2 CFSM 1.23 IN 16.66
WTR YR 1983 TOTAL 15057.4 MEAN 41.3 MAX 790 MIN 4.9 CFSM 1.70 IN 23.05

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), from topographic map.

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

AVERAGE DISCHARGE.--16 years, 13.1 ft³/s (0.371 m³/s), 19.70 in/yr (500 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 discharge, 1.2 ft³/s (0.034 m³/s) Aug. 2, 1981.

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)
Dec. 16	1015	469 13.3	4.78 1.457	Apr. 10	0930	*1060 30.0	6.32 1.926
Jan. 23	0900	437 12.4	4.67 1.423	Apr. 15	1945	576 16.3	5.11 1.558
Mar. 21	0930	680 19.3	5.40 1.646	Apr. 24	0800	431 12.2	4.65 1.417
Mar. 27	2030	831 23.5	5.79 1.765	May 22	2245	539 15.3	5.00 1.524

Minimum discharge, 1.9 ft³/s (0.054 m³/s) Sept. 11, 12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.8	3.9	8.2	5.3	7.5	12	15	15	12	6.9	3.7	2.7
2	2.6	3.8	8.5	5.2	18	22	15	15	12	6.5	3.9	2.5
3	2.6	3.9	6.2	5.2	56	11	45	14	11	6.0	3.7	2.4
4	2.6	12	6.2	5.0	11	9.5	17	16	14	5.7	3.7	2.3
5	2.6	20	5.6	5.7	8.6	8.9	15	14	13	6.1	3.7	2.3
6	2.7	4.9	5.5	7.3	8.2	8.8	14	13	11	5.7	3.8	2.2
7	3.0	4.4	5.0	5.8	14	13	15	13	11	5.3	3.7	2.1
8	3.0	4.3	4.9	5.4	12	29	24	13	10	5.2	3.3	2.0
9	3.0	4.2	4.8	5.3	9.6	16	23	12	10	5.2	3.1	2.0
10	3.0	4.1	4.6	9.5	7.8	54	229	12	10	5.0	3.0	2.0
11	3.1	4.1	5.0	15	7.0	16	31	11	9.5	4.8	9.1	1.9
12	3.2	4.1	5.3	7.1	6.7	13	20	11	9.1	4.8	5.5	2.2
13	4.0	15	5.0	6.1	7.0	12	17	11	8.7	4.5	3.3	2.7
14	4.5	5.4	4.8	5.9	8.1	11	16	11	8.5	4.4	3.1	2.4
15	3.7	4.8	5.2	7.4	9.4	10	130	18	8.4	4.4	3.0	2.2
16	3.7	4.5	83	7.5	11	9.4	120	77	8.1	4.2	3.0	2.2
17	3.5	4.4	11	6.3	12	9.1	25	27	7.9	4.2	2.9	2.2
18	3.5	4.3	7.4	5.3	18	43	20	15	7.9	4.4	3.1	2.2
19	3.8	4.2	6.6	4.8	20	56	19	13	11	4.4	3.0	2.1
20	3.8	4.2	6.5	4.8	18	15	22	15	31	4.2	2.8	2.0
21	6.2	4.2	6.1	5.2	21	165	18	45	24	4.2	2.6	2.7
22	4.2	4.2	5.8	5.3	23	24	16	74	9.4	4.4	2.6	4.2
23	3.9	4.2	5.8	94	20	15	16	56	7.5	4.1	3.5	2.3
24	3.9	4.1	5.7	16	14	13	114	17	6.9	4.8	2.8	2.3
25	7.0	4.0	5.6	10	11	13	61	15	6.5	4.2	2.7	2.2
26	7.7	4.1	5.8	8.9	9.7	12	23	14	6.2	4.1	2.6	2.3
27	4.5	4.1	5.6	8.1	9.0	131	19	13	6.2	3.9	2.5	2.3
28	4.1	4.5	5.8	7.4	8.9	46	17	12	8.5	3.8	2.5	2.2
29	3.9	39	5.7	7.0	---	19	16	16	24	3.8	2.9	2.2
30	3.9	6.9	5.4	7.7	---	16	15	16	7.3	3.7	2.7	2.3
31	3.9	---	5.3	8.6	---	15	---	13	---	3.7	2.6	---
TOTAL	117.9	199.8	261.9	308.1	386.5	847.7	1149	637	330.6	146.6	104.4	69.6
MEAN	3.80	6.66	8.45	9.94	13.8	27.3	38.3	20.5	11.0	4.73	3.37	2.32
MAX	7.7	39	83	94	56	165	229	77	31	6.9	9.1	4.2
MIN	2.6	3.8	4.6	4.8	6.7	8.8	14	11	6.2	3.7	2.5	1.9
CFSM	.42	.74	.94	1.10	1.53	3.02	4.24	2.27	1.22	.52	.37	.26
IN.	.49	.82	1.08	1.27	1.59	3.49	4.73	2.62	1.36	.60	.43	.29

CAL YR 1982	TOTAL	3542.1	MEAN	9.70	MAX	179	MIN	2.4	CFSM	1.07	IN	14.59
WTR YR 1983	TOTAL	4559.1	MEAN	12.5	MAX	229	MIN	1.9	CFSM	1.38	IN	18.78

SUSQUEHANNA RIVER BASIN

63

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, 1.0 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.--Water-discharge 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. Gage-height telemeter at station.

AVERAGE DISCHARGE.--16 years, 42,180 ft³/s (1,195 m³/s), 21.14 in/yr (537 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 discharge, 144 ft³/s (4.08 m³/s) Mar. 2, 1969, gage height, 6.28 ft (1.914 m).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 273,000 ft³/s (7,730 m³/s) Apr. 17, gage height, 23.31 ft (7.105 m); minimum discharge, 744 ft³/s (21.1 m³/s) Oct. 18, gage height, 7.27 ft (2.216 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15300	3270	25400	19100	22300	32500	63300	101000	47700	60900	7560	7800
2	873	5690	32400	27000	30200	30700	48300	134000	38200	62300	5970	6170
3	7100	13500	35800	31500	35000	30400	51300	161000	36700	42300	12600	5070
4	9480	6240	23400	30200	60600	30800	62600	175000	31400	24900	13600	5040
5	922	8880	10800	25700	107000	21200	59900	160000	21600	33700	12200	5140
6	7420	4570	20800	24400	125000	14000	70600	132000	38900	25000	4940	7680
7	12800	1920	21900	25300	102000	28100	69600	113000	35200	26600	5020	9780
8	10000	17800	21400	7700	79900	35300	70400	92600	39600	29800	8300	6080
9	992	13500	28400	1570	69900	31500	61600	82200	43900	11100	15400	5570
10	870	17000	32000	19100	58300	37300	104000	78400	34000	5000	7260	5030
11	2080	14100	6870	18700	58700	37000	159000	75100	23400	15500	7960	5100
12	9180	10300	1000	25000	28900	35600	156000	72100	19200	17300	5700	5440
13	8900	9070	18000	29000	21300	35300	139000	68900	28900	15100	5140	5080
14	8250	946	17700	28200	22800	51500	116000	52600	25200	15700	5040	5180
15	8410	16700	14900	10500	24000	53700	111000	39900	24300	16000	5210	5260
16	864	16100	19900	2720	26500	49500	174000	56400	25400	5090	6990	4930
17	781	17600	24700	24300	37100	47500	250000	49300	20900	4890	8530	4050
18	9360	11000	21700	16700	34900	45800	237000	55300	12400	8460	11200	3960
19	7020	17000	12200	13200	31500	43100	180000	53900	10400	7240	9650	7250
20	6520	911	32600	16400	26500	42000	142000	45800	34700	15000	5550	6890
21	8790	889	28700	10800	26600	60200	123000	52200	34700	13800	4930	992
22	5130	8990	33600	962	32800	80100	103000	37800	53900	8760	7290	882
23	914	14200	34200	3380	39800	108000	86800	70500	59700	4870	10600	1460
24	855	21400	21900	19300	39900	119000	90200	89500	65800	4940	5770	929
25	8120	6260	947	28000	45900	100000	143000	98900	35500	9060	6170	929
26	13900	11700	5580	26500	37500	67500	196000	80200	24400	11900	6770	937
27	9950	13500	26000	28300	21500	57800	197000	74000	36700	12300	5030	7410
28	5290	10200	30400	27800	34600	65400	165000	62500	25600	11800	5060	10700
29	5560	24100	37300	30200	---	59900	139000	46500	26800	12300	5370	10400
30	864	21500	43600	11300	---	59800	117000	39900	39500	5020	5460	8450
31	877	---	36200	21100	---	59900	---	54000	---	5290	6890	---
TOTAL	187372	338836	720197	603932	1281000	1570400	3685600	2504500	994600	541920	233160	159509
MEAN	6044	11290	23230	19480	45750	50660	122900	80790	33150	17480	7521	5317
MAX	15300	24100	43500	31500	125000	119000	250000	175000	65800	62300	15400	10700
MIN	781	889	947	962	21300	14000	48300	37800	10400	4870	4930	882
CFSM	.22	.42	.86	.72	1.69	1.87	4.54	2.98	1.22	.65	.28	.20
IN.	.26	.47	.99	.83	1.76	2.16	5.06	3.44	1.37	.74	.32	.22
CAL YR 1982 TOTAL	12635852			MEAN 34620	MAX 211000	MIN 781	CFSM 1.28	IN 17.35				
WTR YR 1983 TOTAL	12821026			MEAN 35130	MAX 250000	MIN 781	CFSM 1.30	IN 17.60				

SUSQUEHANNA RIVER BASIN

01578310 SUSQUEHANNA RIVER AT CONOWINGO, MD--Continued
(National stream-quality accounting network station)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1978 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD UNITS)	TEMPER- ATURE, AIR (DEG C)	TEMPER- ATURE (DEG C)	RARO- METRIC PRES- SURE (MM OF HG)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)
DEC 02...	1015	80800	340	7.6	10.5	10.0	766	5.9	10.7	94
FEB 17...	1230	41800	168	7.4	--	4.0	--	4.4	--	--
APR 21...	0930	122000	138	7.7	11.0	7.5	--	28	13.3	--
MAY 26...	1000	75800	178	7.8	20.0	18.5	763	16	9.9	106
JUL 20...	1000	5150	235	7.4	26.0	26.0	765	4.0	3.0	37
SEP 14...	1200	5190	390	7.2	20.5	24.0	763	2.8	6.1	73

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 DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
DEC 02...	140	100	120	67	33	10	13	18	.5	2.3
FEB 17...	K11	220	59	32	16	4.7	6.3	19	.4	.7
APR 21...	530	950	52	30	14	4.0	4.1	14	.3	1.2
MAY 26...	390	300	--	--	--	--	--	--	--	2.0
JUL 20...	<1	66	92	51	25	7.3	6.8	14	.3	1.8
SEP 14...	K2	21	140	83	36	13	14	17	.5	2.7

DATE	ALKA- LINITY LAB (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)
DEC 02...	57	2.8	69	18	.10	1.1	191	181	.26	41700
FEB 17...	27	2.1	31	9.9	<.10	4.9	117	90	.16	13200
APR 21...	22	.8	28	6.7	<.10	5.0	94	77	.13	31000
MAY 26...	35	1.1	27	5.6	<.10	--	86	--	.12	17600
JUL 20...	42	3.2	45	10	.10	3.8	156	125	.21	2170
SEP 14...	61	8.0	83	21	.20	2.4	216	210	.29	3030

DATE	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS NH4)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS TOTAL (MG/L AS P04)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P)	PHOS- PHATE, ORTHO, DIS- SOLVED (MG/L AS P04)
DEC 02...	1.1	.100	.13	.60	.050	.15	.020	.010	.03
FEB 17...	1.4	.150	.19	.40	.040	.12	.020	.010	.03
APR 21...	1.3	.070	.09	.70	.070	.21	.010	<.010	--
MAY 26...	1.3	.070	.09	.50	.070	.21	.010	.010	.03
JUL 20...	1.1	.240	.31	.80	.060	.19	.040	<.010	--
SEP 14...	.78	.210	.27	1.20	.040	.12	.020	<.010	--

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

SUSQUEHANNA RIVER BASIN

65

01578310 SUSQUEHANNA RIVER AT CONOWINGO, MD--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	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)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)
DEC 02...	<10	2	40	<1	<1	--	<3	11	15	2
APR 21...	20	1	31	<1	<1	--	<3	3	67	4
MAY 26...	50	1	--	--	--	<1	--	4	--	1
SEP 14...	10	1	53	<1	<1	<1	<3	1	<3	<1

DATE	LITHIUM DIS- SOLVED (UG/L AS LI)	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)	VANA- DIUM, DIS- SOLVED (UG/L AS V)	ZINC, DIS- SOLVED (UG/L AS ZN)
DEC 02...	18	37	.3	<10	5	<1	<1	190	<6.0	120
APR 21...	<4	78	.2	<10	4	<1	<1	62	<6.0	6
MAY 26...	--	--	--	--	3	<1	<1	--	--	--
SEP 14...	9	460	<.1	<10	2	<1	<1	230	<6.0	<3

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 (PCI/L 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)
DEC 02...	26	5.6	18	3.8	8.0	3.5	7.6	3.5	4.1	.12
MAR 02...	<2.8	.5	--	.3	1.8	.5	1.7	.5	.28	.11
APR 21...	<2.0	2.1	--	1.4	2.3	2.0	2.2	1.9	.05	.15
SEP 14...	<4.6	<.7	--	--	3.2	.8	3.0	.8	.06	.11

DATE	SEDI- MENT, DIS- SOLVED (MG/L)	SEDI- MENT, DIS- SOLVED, CHARGE, SUS- PENDEDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
DEC 02...	27	5890	97
FEB 17...	6	677	79
APR 21...	49	16100	99

DATE	SEDI- MENT, DIS- SOLVED (MG/L)	SEDI- MENT, DIS- SOLVED, CHARGE, SUS- PENDEDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
MAY 26...	29	5940	99
JUL 20...	129	1790	12
SEP 14...	6	84	98

SUSQUEHANNA RIVER BASIN

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).

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 October and April, which are fair. Some regulation at low flow by mills above station. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--57 years, 124 ft³/s (3.512 m³/s), 17.84 in/yr (453 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 discharge, 8 ft³/s (0.23 m³/s) Dec. 16, 1930, Jan. 26, 1939, result of regulation; minimum daily discharge, 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)
Apr. 10	1030	2340 66.3	6.57 2.003	Apr. 15	1830	*3940 112	8.84 2.694

Minimum discharge, 26 ft³/s (0.74 m³/s) Feb. 11, result of freezeup.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	48	45	67	46	59	91	152	220	200	132	72	64
2	46	45	76	44	110	119	145	220	185	127	72	59
3	44	50	62	43	200	97	290	210	176	120	69	57
4	44	70	59	42	100	88	180	220	192	348	72	55
5	56	130	56	46	80	84	158	210	179	179	70	55
6	44	65	54	53	75	81	150	200	167	134	86	54
7	43	54	50	48	76	101	150	198	166	120	72	53
8	42	51	48	46	72	164	172	202	155	115	67	51
9	41	49	47	45	68	173	194	200	147	111	64	49
10	41	46	45	63	68	209	1010	182	143	107	61	48
11	40	45	47	132	52	153	415	176	140	104	98	48
12	40	46	50	73	70	129	307	171	136	101	129	49
13	50	89	48	60	80	113	255	166	133	98	78	64
14	60	70	46	55	80	104	228	165	129	95	71	55
15	46	55	50	59	80	99	1320	181	128	94	68	52
16	44	51	126	61	85	93	1230	425	126	91	66	50
17	42	48	92	55	86	89	280	320	123	88	65	50
18	40	47	65	50	81	217	260	201	131	87	66	49
19	40	46	58	48	87	564	240	189	160	86	67	46
20	40	44	57	46	85	208	250	220	476	85	62	45
21	65	44	54	46	87	366	220	320	272	84	58	50
22	46	44	51	48	103	243	210	410	170	90	70	77
23	44	44	51	198	134	187	200	536	143	83	122	53
24	42	44	52	154	139	165	600	275	135	109	68	51
25	65	42	50	93	111	151	550	231	128	86	64	51
26	85	41	50	77	99	137	320	241	121	82	61	49
27	55	42	48	70	88	287	280	233	120	80	59	49
28	48	44	51	65	85	382	260	197	136	77	58	49
29	46	153	53	62	---	199	240	211	402	75	77	47
30	45	78	48	61	---	172	230	425	146	74	65	51
31	45	---	47	63	---	162	---	224	---	72	61	---
TOTAL	1477	1722	1758	2052	2540	5427	10496	7579	5165	3334	2238	1580
MEAN	47.6	57.4	56.7	66.2	90.7	175	350	244	172	108	72.2	52.7
MAX	85	153	126	198	200	564	1320	536	476	348	129	77
MIN	40	41	45	42	52	81	145	165	120	72	58	45
CFSM	.50	.61	.60	.70	.96	1.85	3.71	2.59	1.82	1.14	.77	.56
IN.	.58	.68	.69	.81	1.00	2.14	4.14	2.99	2.04	1.31	.88	.62
CAL YR 1982 TOTAL	31606			MEAN 86.6	MAX 1960	MIN 36	CFSM .92	IN 12.45				
WTR YR 1983 TOTAL	45368			MEAN 124	MAX 1320	MIN 40	CFSM 1.31	IN 17.88				

BUSH RIVER BASIN

67

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 except those above 50 ft³/s (1.42 m³/s), which are fair. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--16 years, 52.7 ft³/s (1.492 m³/s), 20.57 in/yr (522 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 discharge, 3.0 ft³/s (0.085 m³/s) Jan. 10, 1982, result of freezeup; minimum daily discharge 6.7 ft³/s (0.190 m³/s) Aug. 28, 29, 1981.

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)
Mar. 27	2000	1310 37.1	4.90 1.494	May 22	2245	1010 28.6	4.38 1.335
Apr. 16	0145	*1480 41.9	5.17 1.576	July 4	1545	1190 33.7	4.69 1.430

Minimum discharge, 9.2 ft³/s (0.26 m³/s) Feb. 11, result of freezeup; minimum daily discharge, 13 ft³/s (0.37 m³/s) Sept. 9, 11, 12, 19, 20.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15	18	31	17	22	40	58	78	72	46	25	20
2	15	17	28	17	100	58	60	76	68	46	26	16
3	14	18	27	16	95	41	180	75	65	43	28	16
4	14	25	27	16	46	33	71	79	71	150	31	17
5	14	46	25	19	30	32	59	72	67	75	27	16
6	15	24	24	23	29	32	59	69	62	54	27	16
7	15	21	21	20	30	51	60	68	65	47	26	15
8	15	20	20	18	29	130	100	69	59	45	23	14
9	14	19	20	17	28	80	120	69	55	44	24	13
10	14	19	18	60	24	89	440	65	55	41	20	14
11	14	19	21	61	22	61	130	65	54	39	65	13
12	15	19	22	31	28	49	100	64	53	37	44	13
13	20	48	21	23	30	42	78	63	50	37	28	17
14	22	28	20	21	30	39	72	63	48	35	25	18
15	17	22	24	21	30	38	400	100	49	35	21	15
16	16	20	120	25	34	35	400	240	47	34	23	14
17	15	20	45	21	38	33	120	120	46	33	22	15
18	16	19	28	22	41	170	110	81	60	32	23	14
19	16	18	24	21	43	220	100	74	64	33	22	13
20	16	19	24	20	42	75	100	82	160	32	22	13
21	24	20	21	20	44	200	90	170	140	31	18	24
22	17	19	20	20	59	90	82	200	69	32	19	27
23	16	18	19	140	73	64	80	180	56	30	31	17
24	16	19	19	60	67	55	280	100	51	37	22	15
25	33	16	19	35	51	52	200	78	47	30	21	16
26	32	17	19	28	42	48	120	78	45	29	19	15
27	22	17	19	26	34	300	100	90	45	26	17	15
28	20	19	19	24	33	160	86	73	70	27	17	15
29	18	100	19	24	---	80	83	81	100	26	24	14
30	17	37	18	24	---	64	83	130	51	26	19	18
31	17	---	17	24	---	60	---	80	---	25	19	---
TOTAL	544	741	799	916	1174	2521	4021	2932	1944	1257	778	478
MEAN	17.5	24.7	25.8	29.5	41.9	81.3	134	94.6	64.8	40.5	25.1	15.9
MAX	33	100	120	140	100	300	440	240	160	150	65	27
MIN	14	16	17	16	22	32	58	63	45	25	17	13
CFSM	.50	.71	.74	.85	1.20	2.34	3.85	2.72	1.86	1.16	.72	.46
IN.	.58	.79	.85	.98	1.25	2.69	4.30	3.13	2.08	1.34	.83	.51

CAL YR 1982	TOTAL	11936	MEAN 32.7	MAX 900	MIN 10	CFSM .94	IN 12.76
WTR YR 1983	TOTAL	18105	MEAN 49.6	MAX 440	MIN 13	CFSM 1.43	IN 19.35

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.

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 discharge, 1.9 ft³/s (0.054 m³/s) Aug. 29, 1966; minimum daily discharge, 4.5 ft³/s (0.13 m³/s) Sept. 11, 1966.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	27	28	46	27	33	50	75	121	103	74	38	33
2	26	28	47	27	73	60	70	118	96	71	37	28
3	25	28	40	26	85	52	140	117	93	66	39	27
4	25	63	37	25	54	48	95	126	102	87	39	25
5	25	79	35	28	44	45	82	115	95	75	42	25
6	25	38	33	31	42	44	75	108	89	72	50	24
7	25	32	31	28	43	53	77	104	87	63	39	23
8	25	30	29	27	40	84	87	108	84	60	36	21
9	24	29	29	26	38	92	96	105	80	58	34	21
10	24	28	27	42	34	105	369	99	78	57	32	20
11	24	27	30	75	30	79	171	95	77	56	64	20
12	25	27	30	43	34	68	132	93	74	55	62	22
13	32	43	29	36	40	61	114	91	73	54	42	30
14	38	32	29	34	46	56	107	91	71	52	39	27
15	28	30	29	37	48	54	545	104	71	51	37	23
16	27	28	83	37	48	51	435	194	70	50	35	22
17	26	28	49	32	48	49	244	149	67	48	34	22
18	26	27	38	30	48	92	204	109	76	48	36	22
19	26	27	37	29	52	186	179	108	183	48	34	21
20	26	27	34	30	52	95	174	120	167	47	31	19
21	28	27	32	31	54	163	153	152	134	46	28	26
22	26	27	31	30	63	112	140	165	94	50	28	41
23	26	27	31	90	79	92	132	190	82	45	32	25
24	26	26	31	65	73	82	279	129	77	58	31	24
25	46	25	30	48	61	75	212	115	73	46	29	24
26	46	25	30	42	56	69	166	111	69	44	27	24
27	32	25	29	39	50	136	149	108	67	42	26	24
28	29	28	31	37	48	160	139	100	73	40	26	23
29	28	97	31	35	---	95	131	109	183	39	35	22
30	28	45	28	35	---	85	126	174	80	38	28	27
31	28	---	28	36	---	80	---	110	---	37	29	---
TOTAL	872	1031	1074	1158	1416	2573	5098	3738	2768	1677	1119	735
MEAN	28.1	34.4	34.6	37.4	50.6	83.0	170	121	92.3	54.1	36.1	24.5
MAX	46	97	83	90	85	186	545	194	183	87	64	41
MIN	24	25	27	25	30	44	70	91	67	37	26	19
CFSM	.53	.65	.65	.71	.96	1.57	3.21	2.29	1.75	1.02	.68	.46
IN.	.61	.72	.76	.81	1.00	1.81	3.58	2.63	1.95	1.18	.79	.52
CAL YR 1982	TOTAL	17524	MEAN	48.0	MAX	743	MIN	19	CFSM	.91	IN	12.32
WTR YR 1983	TOTAL	23259	MEAN	63.7	MAX	545	MIN	19	CFSM	1.20	IN	16.36

GUNPOWDER RIVER BASIN

69

01583100 PINEY RUN AT DOVER, MD

LOCATION.--Lat 39°31'15", long 76°46'02", Baltimore County, Hydrologic Unit 02060003, on right bank 400 ft (122 m) downstream from bridge on Maryland Route 128, 0.7 mi (1.1 km) upstream from mouth, and 2.4 mi (3.8 km) southwest of Butler.

DRAINAGE AREA.--12.3 mi² (31.9 km²).

PERIOD OF RECORD.--May 1982 to current year.

GAGE.--Water-stage recorder. Datum of gage is 380 ft (116 m), from topographic map.

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

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 618 ft³/s (17.5 m³/s) Apr. 15, 1983, gage height, 3.87 ft (1.180 m); minimum discharge, 3.4 ft³/s (0.096 m³/s) Feb. 11, 1983, result of freezeup.

EXTREMES FOR CURRENT PERIOD.--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)
May 28, 1982	2245	405 11.5	3.35 1.021	June 1, 1982	1945	*534 15.1	3.68 1.122
Apr. 10, 1983	1000	395 11.2	3.32 1.012	Apr. 15, 1983	1430	*618 17.5	3.87 1.180

May to September 1982: Minimum discharge during period, 3.6 ft³/s (0.10 m³/s) Sept. 17, 18, 19, 20, gage height, 0.85 ft (0.259 m).

Water year 1983: Minimum discharge, 3.4 ft³/s (0.096 m³/s) Feb. 11, gage height, 0.84 ft (0.256 m).

DISCHARGE, IN CUBIC FEET PER SECOND, MAY 1982 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1								---	52	9.7	6.1	4.6
2								---	24	9.1	5.7	5.5
3								---	15	11	6.0	8.4
4								---	16	11	5.7	5.1
5								---	20	9.5	8.0	4.7
6								---	18	9.1	6.4	4.5
7								---	15	8.9	6.1	4.6
8								---	13	8.6	6.4	4.6
9								---	12	8.4	7.0	4.9
10								7.9	11	8.2	9.5	4.9
11								7.9	11	8.1	6.3	4.6
12								8.1	11	8.3	7.4	4.4
13								8.0	63	7.5	6.1	4.2
14								7.7	24	7.5	5.8	4.3
15								7.5	17	7.5	5.5	4.5
16								7.4	15	7.5	5.3	4.4
17								7.3	33	7.1	5.2	3.9
18								7.0	16	6.8	6.0	3.9
19								8.2	14	6.8	5.3	3.9
20								11	13	9.2	5.1	5.2
21								7.7	12	8.0	5.1	5.3
22								7.7	11	6.9	4.8	15
23								8.7	11	7.0	5.2	8.1
24								8.9	10	6.8	6.9	6.2
25								8.2	10	6.3	5.8	5.7
26								7.7	10	6.1	4.9	5.7
27								7.4	10	6.1	4.8	17
28								33	14	7.9	5.0	7.6
29								28	12	6.3	4.4	6.7
30								12	11	6.0	4.4	6.2
31								10	---	6.3	4.6	---
TOTAL								---	524	243.5	180.8	178.6
MEAN								---	17.5	7.85	5.83	5.95
MAX								---	63	11	9.5	17
MIN								---	10	6.0	4.4	3.9
CFSM								---	1.42	.64	.47	.48
IN.								---	1.58	.74	.55	.54

GUNPOWDER RIVER BASIN

01583100 PINEY RUN AT DOVER, MD--Continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.1	6.1	10	6.1	7.2	11	16	23	19	14	7.8	5.9
2	5.8	6.1	9.9	6.1	20	12	16	22	18	13	7.9	5.4
3	5.5	6.1	8.8	6.1	18	11	32	22	18	12	7.9	5.3
4	5.5	26	8.3	5.9	12	10	20	22	19	12	8.6	5.1
5	5.5	16	7.6	6.3	10	9.8	17	21	18	12	16	5.0
6	5.5	8.7	7.3	6.6	9.5	9.8	16	20	17	13	11	4.9
7	5.5	7.4	6.8	6.2	9.5	11	17	19	17	12	8.4	4.8
8	5.2	6.8	6.6	6.0	8.8	35	19	20	16	11	7.5	4.5
9	5.2	6.4	6.5	5.8	8.4	25	22	20	15	11	7.1	4.3
10	5.2	6.1	6.2	13	8.0	22	110	19	15	10	6.7	4.4
11	5.2	6.1	6.6	17	6.5	17	45	18	15	10	9.7	4.2
12	5.2	6.2	6.8	9.8	8.0	16	28	18	14	10	9.4	4.3
13	5.9	8.4	6.4	8.4	9.0	14	24	18	14	9.8	7.7	6.1
14	7.2	6.6	6.5	7.9	9.5	13	22	18	14	9.5	7.2	5.6
15	6.2	6.4	6.4	8.2	9.7	13	140	21	14	9.4	6.9	5.0
16	5.9	6.1	22	8.3	9.7	12	90	45	13	9.1	6.8	4.9
17	5.8	6.0	12	7.2	9.7	11	50	30	13	8.9	6.6	5.0
18	5.8	5.8	9.0	7.2	11	25	34	21	14	8.7	7.1	4.8
19	5.8	5.8	8.0	6.8	11	53	30	22	27	8.8	6.7	4.7
20	6.0	5.8	7.8	6.4	11	22	28	24	26	8.9	6.2	4.4
21	6.2	5.8	7.6	6.3	12	41	27	34	22	10	5.9	5.9
22	6.1	5.8	7.3	6.1	15	24	25	36	17	17	5.8	7.8
23	5.8	5.8	7.1	18	20	20	24	35	15	18	5.9	5.5
24	5.8	6.0	6.9	13	18	18	64	24	14	20	6.1	5.4
25	11	6.1	6.8	9.8	14	16	39	22	13	15	5.9	5.3
26	9.2	6.1	6.7	8.8	12	15	29	21	13	9.3	5.6	5.4
27	6.8	6.1	6.5	8.3	11	43	27	20	12	8.6	5.3	5.5
28	6.3	6.9	6.8	7.9	11	30	25	19	16	8.4	5.4	5.3
29	6.1	22	6.9	7.4	---	21	24	23	29	8.1	5.6	5.1
30	6.1	10	6.4	7.6	---	18	23	24	15	8.0	5.3	7.7
31	6.1	---	6.1	7.6	---	17	---	20	---	7.8	5.4	---
TOTAL	189.5	239.5	244.6	256.1	319.5	615.6	1083	721	502	343.3	225.4	157.5
MEAN	6.11	7.98	7.89	8.26	11.4	19.9	36.1	23.3	16.7	11.1	7.27	5.25
MAX	11	26	22	18	20	53	140	45	29	20	16	7.8
MIN	5.2	5.8	6.1	5.8	6.5	9.8	16	18	12	7.8	5.3	4.2
CFSM	.50	.65	.64	.67	.93	1.62	2.94	1.89	1.36	.90	.59	.43
IN.	.57	.72	.74	.77	.97	1.86	3.28	2.18	1.52	1.04	.68	.48
WTR YR 1983	TOTAL	4897.0	MEAN	13.4	MAX	140	MIN	4.2	CFSM	1.09	IN	14.81

GUNPOWDER RIVER BASIN

71

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--39 years, 69.1 ft³/s (1.957 m³/s), 15.69 in/yr (399 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 discharge, 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)
Apr. 10	1000	1120 31.7	4.36 1.329	June 19	2000	1780 50.4	5.55 1.692
Apr. 15	1730	*2020 57.2	5.93 1.807				

Minimum discharge, 18 ft³/s (0.51 m³/s) Sept. 12, 21.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	28	27	45	30	37	58	85	112	102	72	37	33
2	28	27	47	30	89	67	82	109	95	70	38	28
3	26	28	40	29	98	57	168	107	91	66	36	27
4	25	53	38	28	61	53	101	110	100	65	39	26
5	25	88	35	30	51	51	90	102	95	68	40	25
6	25	37	34	33	49	49	86	98	90	67	65	24
7	25	31	31	30	49	58	87	97	85	62	48	23
8	25	29	30	29	46	182	101	101	83	60	39	21
9	25	28	30	28	43	156	121	97	80	58	36	21
10	24	27	28	46	41	123	563	91	77	57	33	20
11	25	27	31	90	31	94	193	90	76	55	56	20
12	26	27	33	50	36	81	142	88	74	54	63	20
13	30	47	30	42	44	73	122	87	72	53	43	30
14	36	33	30	38	48	68	112	86	70	51	39	30
15	30	31	30	40	50	65	688	103	70	50	37	25
16	29	31	100	41	50	62	439	256	70	48	35	22
17	28	30	60	36	50	60	197	172	67	47	34	22
18	28	29	44	34	52	103	166	113	72	46	36	22
19	28	29	40	32	57	248	148	107	334	46	34	21
20	27	28	39	34	57	112	143	123	291	48	32	20
21	27	29	36	34	58	193	131	164	221	45	29	26
22	26	28	34	33	68	125	121	184	111	45	28	45
23	26	28	33	83	90	99	117	231	92	42	32	26
24	26	28	33	70	87	90	339	130	84	47	30	24
25	41	27	32	52	71	84	221	115	79	42	28	24
26	43	28	33	46	65	78	154	108	74	41	27	24
27	30	27	32	43	59	183	138	103	70	39	26	24
28	28	30	34	41	56	184	128	96	72	40	26	23
29	27	97	34	39	---	109	121	107	119	38	34	22
30	27	48	31	39	---	95	116	207	76	37	30	36
31	27	---	30	39	---	90	---	112	---	37	28	---
TOTAL	871	1057	1157	1269	1593	3150	5420	3806	3092	1596	1138	754
MEAN	28.1	35.2	37.3	40.9	56.9	102	181	123	103	51.5	36.7	25.1
MAX	43	97	100	90	98	248	688	256	334	72	65	45
MIN	24	27	28	28	31	49	82	86	67	37	26	20
CFSM	.47	.59	.62	.68	.95	1.71	3.03	2.06	1.72	.86	.61	.42
IN.	.54	.66	.72	.79	.99	1.96	3.37	2.37	1.92	.99	.71	.47

CAL YR 1982	TOTAL	19646	MEAN 53.8	MAX 1110	MIN 21	CFSM .90	IN 12.22
WTR YR 1983	TOTAL	24903	MEAN 68.2	MAX 688	MIN 20	CFSM 1.14	IN 15.49

GUNPOWDER RIVER BASIN

01583600 BEAVERDAM RUN AT COCKEYSVILLE, MD

LOCATION.--Lat 39°29'13", long 76°38'42", Baltimore County, Hydrologic Unit 02060003, on left bank 50 ft (15 m) upstream from bridge on Beaverdam Run Lane, 600 ft (183 m) downstream from bridge on Maryland Route 45 at Cockeysville, and 0.45 mi (0.7 km) upstream from mouth.

DRAINAGE AREA.--20.9 mi² (54.1 km²).

PERIOD OF RECORD.--October 1982 to September 1983.

GAGE.--Water-stage recorder. Altitude of gage is 245 ft (75 m), from topographic map. Previously operated as a low-flow site during water years 1955-59 and 1962-64 at site 600 ft (183 m) upstream.

REMARKS.--Records good except those for period of no gage-height record, Oct. 1 to Dec. 15, which are fair. Several observations of water temperature were made during the year.

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)
Mar. 27	1930	709 20.1	5.84 1.780	Apr. 15	1515	*919 26.0	6.69 2.039
Apr. 10	0830	679 19.2	5.71 1.740	June 20	2145	857 24.3	6.45 1.966

Minimum discharge, 8.7 ft³/s (0.25 m³/s) Sept. 8, 19, 20, but may have been less during period of no gage-height record Oct. 1 to Dec. 15.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10	10	16	11	13	31	29	41	40	26	14	12
2	10	10	17	11	96	28	36	38	35	25	15	12
3	9.5	10	15	11	36	20	108	39	35	25	18	12
4	9.0	23	14	11	21	19	37	41	41	28	26	12
5	9.0	50	13	16	19	19	32	38	36	31	19	11
6	9.0	15	13	13	18	25	30	36	33	25	19	11
7	9.0	12	12	12	21	25	38	36	34	22	16	10
8	9.0	11	11	12	16	163	59	43	30	22	14	10
9	9.0	10	11	11	16	63	90	35	28	21	14	10
10	8.8	9.8	10	49	15	67	294	34	28	20	13	10
11	8.8	9.8	11	31	13	37	90	33	28	19	67	11
12	9.5	9.8	13	17	16	30	57	32	28	19	24	12
13	11	25	12	15	19	27	48	31	25	19	18	14
14	14	14	11	14	21	23	42	32	25	18	17	12
15	12	12	13	18	21	23	408	51	25	18	14	12
16	11	11	76	16	24	22	251	166	25	18	14	11
17	10	11	23	13	25	21	87	66	24	17	14	12
18	10	11	17	11	30	92	66	44	68	17	15	11
19	10	10	14	11	26	100	57	48	105	18	14	9.3
20	9.7	10	14	11	25	37	57	43	214	17	14	10
21	9.6	10	14	11	24	99	50	117	117	17	13	27
22	9.4	10	13	12	31	38	48	146	47	17	13	17
23	9.4	10	12	82	40	32	48	111	37	16	13	12
24	9.4	10	11	27	29	28	191	56	34	19	13	12
25	15	10	11	19	26	27	84	47	31	16	12	10
26	17	10	12	17	22	25	54	76	27	15	13	11
27	14	10	12	16	21	166	48	49	26	16	13	11
28	11	12	16	15	19	69	45	40	53	14	12	11
29	10	60	12	14	---	40	43	62	56	14	12	11
30	10	18	11	16	---	34	41	94	29	14	12	28
31	10	---	11	13	---	33	---	45	---	14	12	---
TOTAL	323.1	444.4	471	556	703	1463	2568	1770	1364	597	517	374.3
MEAN	10.4	14.8	15.2	17.9	25.1	47.2	85.6	57.1	45.5	19.3	16.7	12.5
MAX	17	60	76	82	96	166	408	166	214	31	67	28
MIN	8.8	9.8	10	11	13	19	29	31	24	14	12	9.3
CFSM	.50	.71	.73	.86	1.20	2.26	4.10	2.73	2.18	.92	.80	.60
IN.	.58	.79	.84	.99	1.25	2.60	4.57	3.15	2.43	1.06	.92	.67

WTR YR 1983 TOTAL 11150.8 MEAN 30.6 MAX 408 MIN 8.8 CFSM 1.46 IN 19.85

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.

AVERAGE DISCHARGE.--8 years, 11.8 ft³/s (0.334 m³/s), 17.05 in/yr (433 mm/yr).

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

Minimum discharge, 2.5 ft³/s (0.071 m³/s) Feb. 11, gage height, 0.94 ft (0.287 m), result of freezeup; minimum daily discharge, 3.1 ft³/s (0.088 m³/s) Oct. 10-12, 18-20.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.6	3.6	6.3	4.4	5.7	10	14	18	16	12	6.9	4.9
2	3.4	3.5	6.0	4.3	34	12	15	18	15	11	7.2	4.6
3	3.2	3.4	5.3	4.3	15	9.3	52	18	15	11	6.6	4.5
4	3.2	6.0	5.1	4.3	9.6	8.8	17	19	17	75	7.1	4.4
5	3.2	9.3	4.6	4.6	8.0	8.3	15	17	16	24	6.7	4.3
6	3.2	4.5	4.5	5.0	7.6	8.6	14	16	16	16	7.2	4.1
7	3.2	4.3	4.3	4.5	7.9	11	15	16	16	13	6.5	4.1
8	3.2	4.0	4.1	4.3	7.6	55	24	16	13	12	6.2	3.8
9	3.2	3.8	4.0	4.3	7.0	21	29	16	12	11	5.9	3.8
10	3.1	3.8	3.8	9.4	6.6	29	130	15	12	10	5.6	3.8
11	3.1	3.8	4.0	10	5.7	16	34	14	12	10	10	3.6
12	3.1	3.8	4.3	6.7	7.0	13	22	14	12	10	8.7	3.7
13	4.3	7.2	4.0	5.8	7.5	12	19	14	11	9.6	6.8	4.3
14	4.6	4.6	3.9	5.3	7.5	11	18	13	11	9.3	6.3	4.4
15	3.4	4.2	4.2	6.0	7.5	11	120	24	11	9.2	6.0	4.0
16	3.3	4.0	24	5.9	7.9	10	98	74	11	8.9	5.7	3.8
17	3.2	3.8	8.4	5.0	8.2	9.8	29	26	10	8.6	5.8	4.1
18	3.1	3.6	6.5	4.7	9.5	41	25	18	10	8.6	6.3	3.8
19	3.1	3.6	5.9	4.6	10	40	22	18	11	8.5	6.0	3.6
20	3.1	3.5	5.9	4.4	9.9	16	23	18	50	8.3	5.4	3.4
21	4.6	3.4	5.4	4.3	11	55	20	50	29	8.2	5.0	5.8
22	3.4	3.4	5.1	4.5	14	18	19	66	14	8.5	5.5	6.0
23	3.3	3.4	4.8	29	21	15	18	42	12	7.8	5.6	4.0
24	3.2	3.4	4.8	9.8	14	14	102	22	12	8.6	5.3	4.0
25	7.4	3.2	4.8	7.6	12	13	56	19	11	7.7	5.0	3.8
26	5.8	3.2	4.8	7.0	10	12	26	18	11	7.4	4.8	3.8
27	4.1	3.2	4.5	6.5	9.1	93	22	19	11	7.1	4.8	3.8
28	3.8	4.0	4.8	6.2	8.9	34	21	16	18	7.0	4.9	3.8
29	3.5	17	4.9	5.7	---	18	20	19	33	6.8	6.0	3.8
30	3.4	6.3	4.5	5.8	---	16	19	26	12	6.8	5.0	6.4
31	3.5	---	4.5	6.0	---	15	---	17	---	6.7	4.8	---
TOTAL	112.8	138.8	172.0	200.2	289.7	655.8	1058	716	460	368.6	189.6	126.2
MEAN	3.64	4.63	5.55	6.46	10.3	21.2	35.3	23.1	15.3	11.9	6.12	4.21
MAX	7.4	17	24	29	34	93	130	74	50	75	10	6.4
MIN	3.1	3.2	3.8	4.3	5.7	8.3	14	13	10	6.7	4.8	3.4
CFSM	.39	.49	.59	.69	1.10	2.26	3.76	2.46	1.63	1.27	.65	.45
IN.	.45	.55	.68	.79	1.15	2.60	4.19	2.83	1.82	1.46	.75	.50
CAL YR 1982	TOTAL	2610.7	MEAN	7.15	MAX	170	MIN	2.8	CFSM	.76	IN	10.33
WTR YR 1983	TOTAL	4487.7	MEAN	12								

GUNPOWDER RIVER BASIN

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, 1.0 mi (1.6 km) southwest of White Marsh, and 3.0 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). WDR MD-DE-79-1: 1965-66(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. 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.--24 years, 11.4 ft³/s (0.323 m³/s), 20.34 in/yr (517 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 discharge, 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)
Feb. 2	1600	805 22.8	4.57 1.393	Apr. 15	1830	845 23.9	4.70 1.433
Mar. 8	0445	906 25.7	4.93 1.503	Apr. 16	0045	990 28.0	5.31 1.618
Mar. 27	1945	1910 54.1	9.44 2.877	May 22	2215	1360 38.5	7.12 2.170
Apr. 3	0200	944 26.7	5.09 1.551	July 4	1515	*2300 65.1	10.20 3.109
Apr. 10	0715	944 26.7	5.09 1.551				

Minimum discharge, 0.38 ft³/s (0.011 m³/s) Feb. 11, result of freezeup.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.3	2.0	17	2.3	3.1	12	8.6	6.3	6.4	4.5	1.7	1.4
2	1.1	2.0	5.3	2.1	94	11	11	6.1	5.4	3.6	1.9	1.0
3	1.1	2.0	3.5	2.1	19	5.3	115	5.8	5.1	3.1	1.7	1.0
4	1.1	20	3.5	1.8	5.3	4.9	13	6.9	6.5	233	1.8	.91
5	1.1	15	3.1	4.8	4.3	4.6	8.9	5.6	5.3	23	3.5	.91
6	1.3	3.0	2.8	4.3	3.1	12	7.6	5.3	4.7	9.0	3.1	1.0
7	1.3	2.3	2.3	2.1	11	20	10	5.0	6.4	5.0	1.6	.80
8	1.3	2.1	2.1	1.9	4.8	249	42	6.4	4.1	4.2	1.4	.59
9	1.2	2.2	2.1	1.9	3.9	44	63	5.2	3.7	3.9	1.3	.69
10	1.1	2.1	2.0	41	2.8	58	231	4.7	3.7	3.5	1.0	.69
11	1.0	2.1	3.2	14	2.0	15	46	4.6	3.7	3.2	3.2	.59
12	1.4	2.5	5.0	4.3	6.8	9.0	17	4.5	3.6	3.2	4.4	.80
13	15	29	3.8	3.1	7.8	7.3	12	4.4	3.5	2.9	1.4	2.7
14	5.8	3.2	2.8	2.8	8.4	6.5	9.5	4.6	3.4	2.9	1.2	1.9
15	2.2	2.3	3.8	7.5	13	6.1	199	27	3.5	2.6	1.0	.91
16	2.7	2.0	57	4.8	22	5.4	148	124	3.4	2.4	1.0	.80
17	1.7	1.9	8.1	3.5	27	5.4	20	19	3.4	2.1	1.0	.91
18	1.7	1.8	3.9	2.1	47	124	14	8.6	3.9	2.1	1.7	.80
19	1.7	1.9	3.8	2.1	32	70	11	12	6.7	1.9	1.0	.80
20	1.7	1.8	3.8	2.1	21	15	10	9.9	59	1.9	.91	.80
21	9.7	1.9	3.0	2.4	18	141	7.6	58	30	2.0	.80	4.6
22	1.8	1.9	2.8	2.8	17	20	7.0	166	6.2	3.0	1.5	7.2
23	1.8	1.9	2.9	71	29	11	7.9	57	4.3	1.8	3.6	1.6
24	1.8	1.8	2.8	12	11	7.9	174	14	3.8	3.2	1.4	1.2
25	36	1.6	2.9	5.3	5.9	6.7	65	9.3	3.9	1.8	1.1	1.2
26	6.9	1.6	2.9	3.9	5.8	5.9	15	8.7	3.6	1.8	1.0	1.2
27	2.7	1.5	2.9	3.5	5.2	261	10	12	3.5	1.7	1.0	1.3
28	2.1	9.9	3.1	3.1	5.0	61	8.6	5.9	15	1.8	1.5	1.2
29	2.0	58	3.1	3.1	---	17	7.7	26	54	1.6	1.8	1.2
30	2.2	5.0	2.6	5.3	---	11	6.9	36	6.0	1.6	1.9	9.3
31	2.1	---	2.4	3.5	---	9.0	---	8.1	---	1.6	1.3	---
TOTAL	115.9	186.3	170.3	226.5	435.2	1236.0	1306.3	676.9	275.7	339.9	52.71	50.00
MEAN	3.74	6.21	5.49	7.31	15.5	39.9	43.5	21.8	9.19	11.0	1.70	1.67
MAX	36	58	57	71	94	261	231	166	59	233	4.4	9.3
MIN	1.0	1.5	2.0	1.8	2.0	4.6	6.9	4.4	3.4	1.6	.80	.59
CFSM	.49	.82	.72	.96	2.04	5.24	5.72	2.87	1.21	1.45	.22	.22
IN.	.57	.91	.83	1.11	2.13	6.04	6.38	3.31	1.35	1.66	.26	.24

CAL YR 1982 TOTAL 3311.71 MEAN 9.07 MAX 190 MIN .89 CFSM 1.19 IN 16.19
WTR YR 1983 TOTAL 5071.71 MEAN 13.9 MAX 261 MIN .59 CFSM 1.83 IN 24.79

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. Diurnal fluctuation (occasionally extensive) caused by ready-mixed concrete plant above station. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--24 years (water years 1958-64, 1967-83), 2.62 ft³/s (0.074 m³/s), 16.70 in/yr (424 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)
Mar. 27	1830	355 10.1	3.70 1.128	June 19	1915	312 8.84	3.53 1.076
Apr. 10	0630	322 9.12	3.57 1.088	June 28	2245	616 17.4	4.55 1.387
May 15	1545	*1170 33.1	5.82 1.774				

Minimum discharge, 0.11 ft³/s (0.003 m³/s) Feb. 11, gage height, 0.73 ft (0.223 m), result of freezeup; minimum daily discharge, 0.24 ft³/s (0.007 m³/s) Sept. 10.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.34	.32	4.3	.39	.53	5.7	2.0	2.2	1.9	1.3	.72	.33
2	.40	.33	.61	.39	19	2.2	8.1	2.2	1.7	1.2	.53	.29
3	.47	.31	.54	.38	1.8	1.2	13	2.1	1.7	1.1	.53	.30
4	.26	8.7	.53	.36	.91	1.0	2.5	2.4	2.8	6.6	.50	.29
5	.25	1.4	.45	1.6	.74	.95	2.1	2.0	1.8	2.0	1.5	.41
6	.26	.83	.42	.59	.87	5.5	2.0	1.8	2.3	1.2	.78	.56
7	.31	.36	.37	.40	3.2	2.9	3.7	1.8	2.3	.98	.50	.32
8	.40	.49	.38	.38	.87	46	9.2	2.7	1.5	.94	.48	.25
9	.26	.70	.36	.38	.70	8.1	16	1.7	1.3	.93	.45	.26
10	.25	.34	.36	12	.64	7.2	34	1.6	1.2	.89	.70	.24
11	.30	.45	.88	1.4	.30	2.4	8.2	1.6	1.2	.83	7.0	.32
12	.25	.65	1.1	.59	1.0	1.9	3.4	1.5	1.2	.85	.98	.64
13	5.0	6.4	.74	.50	1.2	2.3	2.8	1.5	1.1	.77	.52	1.9
14	.77	.62	.54	.48	1.2	1.5	2.5	1.5	1.1	.79	.55	1.0
15	.77	.66	1.2	2.3	2.8	1.4	39	21	1.2	.83	.56	.93
16	8.9	.42	15	1.4	3.7	1.3	13	29	1.1	.73	.48	.96
17	4.0	.73	.83	.52	4.1	1.3	4.0	3.7	1.1	.69	.45	.31
18	.41	.34	.60	.43	4.9	22	3.2	2.3	8.1	.71	1.3	.28
19	.30	.33	.75	.43	2.9	10	2.9	6.3	11	.70	.46	.25
20	.36	.41	.61	.41	2.3	2.3	3.1	2.6	18	.68	.42	.26
21	4.6	.48	.48	.45	2.6	20	2.5	11	4.4	1.9	.40	9.7
22	1.6	.32	.47	.60	2.9	2.6	2.4	18	1.8	.77	.65	1.1
23	2.1	.51	.60	19	4.9	2.1	4.9	4.8	1.4	.77	.53	.31
24	.31	.81	.47	1.2	1.9	1.9	30	2.5	1.3	1.1	.44	.31
25	11	.28	.46	.77	1.4	1.7	6.6	2.2	1.2	.68	.40	.30
26	1.2	.29	.59	.68	1.1	1.6	3.0	4.3	1.1	.56	.38	.31
27	.42	.29	.68	.63	1.1	37	2.7	3.7	1.1	.58	.38	.31
28	.32	7.9	.87	.58	1.0	5.0	2.5	1.9	17	.54	.40	.30
29	.34	11	.60	.56	---	2.6	2.4	9.6	4.0	.55	.90	.28
30	.34	.57	.40	1.3	---	2.3	2.3	3.9	1.4	.65	.35	4.0
31	.33	---	.40	.58	---	2.1	---	2.0	---	.75	.35	---
TOTAL	46.82	47.24	36.59	51.68	70.56	206.05	234.0	155.4	98.3	33.57	24.59	27.02
MEAN	1.51	1.57	1.18	1.67	2.52	6.65	7.80	5.01	3.28	1.08	.79	.90
MAX	11	11	15	19	19	46	39	29	18	6.6	7.0	9.7
MIN	.25	.28	.36	.36	.30	.95	2.0	1.5	1.1	.54	.35	.24
CFSM	.71	.74	.55	.78	1.18	3.12	3.66	2.35	1.54	.51	.37	.42
IN.	.82	.82	.64	.90	1.23	3.60	4.08	2.71	1.72	.59	.43	.47

CAL YR 1982 TOTAL 663.14 MEAN 1.82 MAX 26 MIN .16 CFSM .85 IN 11.58
WTR YR 1983 TOTAL 1031.82 MEAN 2.83 MAX 46 MIN .24 CFSM 1.33 IN 18.01

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.--23 years (water years 1960-72, 1974-83), 6.75 ft³/s (0.191 m³/s), 20.55 in/yr (522 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 discharge, 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)
Feb. 2	1530	709 20.1	3.43 1.045	Apr. 16	0015	827 23.4	3.61 1.100
Mar. 8	0515	734 20.8	3.47 1.058	May 22	2145	1770 50.1	4.85 1.478
Mar. 27	1900	1860 52.7	4.95 1.509	June 28	2400	995 28.2	3.84 1.170
Apr. 3	0130	939 26.6	3.76 1.146	July 4	1500	*2000 56.6	5.10 1.554
Apr. 10	0630	715 20.2	3.44 1.049				

Minimum daily discharge, 0.11 ft³/s (0.003 m³/s) Sept. 10, 11.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.60	.65	9.1	.92	1.4	8.4	3.4	2.7	2.7	1.3	.42	.18
2	.52	.63	2.3	.92	.79	5.9	8.0	2.6	2.4	1.2	.45	.16
3	.54	.64	1.5	.91	11	2.5	78	2.5	2.1	1.0	.39	.15
4	.54	18	1.4	.86	3.1	2.1	6.3	2.8	2.5	111	.40	.16
5	.46	5.0	1.2	3.0	2.0	1.9	4.1	2.3	2.1	3.9	.40	.15
6	.51	1.0	1.1	2.2	1.9	7.6	3.6	2.1	2.0	1.8	1.2	.16
7	.52	.84	.93	1.1	8.7	9.8	5.8	1.9	3.3	1.3	.42	.14
8	.50	.76	1.4	.93	3.2	169	26	2.7	1.7	1.2	.32	.13
9	.48	.73	.87	.92	2.2	29	41	2.1	1.5	1.1	.28	.12
10	.42	.70	.80	20	1.7	37	149	1.8	1.4	.98	.22	.11
11	.41	.68	1.3	6.7	.78	7.8	26	1.7	1.4	.88	3.5	.11
12	.51	1.2	2.6	1.9	2.0	4.5	8.5	1.8	1.4	.88	2.2	.12
13	7.4	18	1.5	1.4	2.7	3.3	5.5	1.6	1.3	.84	.46	1.0
14	2.2	1.2	1.2	1.2	2.7	2.9	4.3	1.5	1.2	.71	.38	.75
15	.78	.89	1.9	3.7	7.3	2.7	145	12	1.2	.67	.33	.20
16	1.3	.79	47	2.5	15	2.3	81	62	1.2	.66	.27	.16
17	.47	.77	3.2	1.8	19	2.1	9.5	7.5	1.1	.63	.26	.15
18	.48	.74	1.7	1.1	30	78	6.5	2.9	1.7	.65	1.0	.15
19	.46	.74	1.6	.88	18	31	5.3	5.2	4.5	.62	.40	.13
20	.49	.70	1.8	.77	11	6.7	5.0	4.2	27	.64	.21	.13
21	5.4	.72	1.3	.94	9.9	103	3.5	33	11	.99	.16	7.9
22	.65	.73	1.0	1.0	8.9	9.0	3.2	145	1.8	1.5	.20	3.5
23	.53	.72	1.1	50	17	4.7	3.7	23	1.3	.50	.92	.36
24	.51	.69	1.2	6.5	7.3	3.7	111	5.0	1.2	1.2	.40	.23
25	22	.65	1.1	2.7	4.9	3.0	28	3.4	1.1	.48	.19	.20
26	2.6	.65	1.2	1.9	3.5	2.7	7.0	3.7	.94	.43	.17	.21
27	.94	.64	1.1	1.6	2.9	189	4.4	5.5	.88	.44	.17	.25
28	.75	6.8	1.3	1.5	2.7	22	3.9	2.5	22	.41	.32	.20
29	.69	37	1.4	1.4	---	7.4	3.5	17	31	.38	.85	.19
30	.69	1.9	1.1	2.6	---	4.8	3.0	21	1.6	.36	.71	3.6
31	.65	---	.94	1.8	---	3.8	---	3.5	---	.37	.21	---
TOTAL	55.00	105.16	97.14	125.65	279.78	767.6	793.0	386.5	136.52	139.02	17.81	21.00
MEAN	1.77	3.51	3.13	4.05	9.99	24.8	26.4	12.5	4.55	4.48	.57	.70
MAX	22	37	47	50	79	189	140	145	31	111	3.5	7.9
MIN	.41	.63	.80	.77	.78	1.9	3.0	1.5	.88	.36	.16	.11
CFSM	.40	.79	.70	.91	2.24	5.56	5.92	2.80	1.02	1.00	.13	.16
IN.	.46	.88	.81	1.05	2.33	6.40	6.61	3.22	1.14	1.16	.15	.18

CAL YR 1982 TOTAL 2063.67 MEAN 5.65 MAX 145 MIN .18 CFSM 1.27 IN 17.21
WTR YR 1983 TOTAL 2924.18 MEAN 8.01 MAX 189 MIN .11 CFSM 1.80 IN 24.39

BACK RIVER BASIN

77

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. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--25 years, 2.57 ft³/s (0.073 m³/s), 17.72 in/yr (450 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)
Mar. 8	0530	231 6.54	3.32 1.012	May 22	2230	293 8.30	3.76 1.146
Mar. 27	2000	433 12.3	4.62 1.408	June 28	2345	171 4.84	2.85 0.869
Apr. 10	0645	175 4.96	2.88 0.878	July 4	1545	*434 12.3	4.63 1.411
Apr. 16	0030	180 5.10	2.92 0.890				

Minimum discharge, 0.25 ft³/s (0.007 m³/s) Aug. 21.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.41	1.2	3.5	.50	.76	4.5	1.0	.95	1.1	.78	.35	.32
2	.41	1.1	1.2	.50	28	3.8	3.0	.85	.92	.72	.35	.34
3	.41	1.2	.75	.47	6.1	1.4	24	.96	.83	.72	.37	.35
4	.41	8.2	.70	.43	1.6	1.4	2.7	1.1	.92	.44	.35	.35
5	.48	5.5	.60	1.3	.89	1.0	1.8	.85	.79	5.1	.49	.35
6	.56	1.0	.58	.76	.97	2.5	1.3	.85	1.8	1.9	.46	.38
7	.56	.71	.55	.57	4.1	3.8	2.5	.85	1.8	1.8	.40	.38
8	.50	.50	.60	.50	1.8	59	4.5	.87	.79	1.0	.35	.35
9	.50	.56	.73	.50	1.2	12	14	.81	.72	.72	.35	.35
10	.50	.52	.50	10	.89	12	50	.83	.72	.50	.35	.35
11	.50	.50	.65	4.1	1.0	2.7	10	.86	.72	.85	2.5	.35
12	.60	.55	1.0	1.1	1.2	1.5	3.5	.78	.72	.50	.66	.38
13	5.5	13	.89	.71	1.3	1.1	1.8	.72	.72	.46	.39	1.0
14	1.3	.72	.74	.60	1.5	.99	1.5	.72	.72	.41	.35	.38
15	1.5	.50	1.0	1.5	1.7	1.2	43	4.1	.72	.41	.36	.34
16	1.2	.50	16	.92	3.5	1.4	32	23	.72	.41	.38	.35
17	.85	.50	1.8	.62	7.3	.89	2.7	4.1	.72	.41	.35	.35
18	.85	.50	.76	.53	15	29	1.8	1.6	.72	.41	.52	.35
19	.94	.50	.74	.50	8.7	14	1.7	2.1	1.2	.48	.36	.35
20	.94	.50	.91	.50	5.5	2.1	1.5	1.5	11	.47	.33	.36
21	3.3	.50	.65	.50	4.5	36	1.1	8.2	5.1	1.7	.30	3.3
22	.76	.50	.61	.51	4.1	4.1	.99	44	1.6	.72	.51	1.0
23	.72	.56	.63	22	7.3	2.0	2.1	16	1.2	.41	.41	.35
24	.81	.60	.62	3.8	3.0	1.2	40	2.5	.72	.45	.34	.35
25	17	.60	.60	1.6	1.7	1.0	10	1.6	.69	.41	.31	.35
26	3.3	.60	.58	1.0	1.0	.87	3.0	1.6	.60	.42	.30	.35
27	.99	.60	.56	.81	.86	57	1.6	2.1	.80	.41	.30	.38
28	.85	3.0	.56	.72	1.0	11	1.4	1.0	7.9	.41	.33	.35
29	.85	15	.64	.65	---	2.7	1.3	6.6	8.1	.39	1.2	.35
30	.85	1.1	.50	1.4	---	1.6	1.1	5.9	1.1	.38	.35	1.5
31	.85	---	.63	.98	---	1.5	---	1.7	---	.37	.30	---
TOTAL	49.20	61.32	40.78	60.58	116.47	275.25	266.89	139.60	56.16	68.12	14.67	16.01
MEAN	1.59	2.04	1.32	1.95	4.16	8.88	8.90	4.50	1.87	2.20	.47	.53
MAX	17	15	16	22	28	59	50	44	11	44	2.5	3.3
MIN	.41	.50	.50	.43	.76	.87	.99	.72	.60	.37	.30	.32
CFSM	.81	1.04	.67	.99	2.11	4.51	4.52	2.28	.95	1.12	.24	.27
IN.	.93	1.16	.77	1.14	2.20	5.19	5.04	2.63	1.06	1.29	.28	.30

CAL YR 1982 TOTAL 791.18 MEAN 2.17 MAX 48 MIN .37 CFSM 1.10 IN 14.93
WTR YR 1983 TOTAL 1165.05 MEAN 3.19 MAX 59 MIN .30 CFSM 1.62 IN 21.99

PATAPSCO RIVER BASIN

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). WDR MD-DE-79-1: 1973-78(P).

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.--34 years, 3.51 ft³/s (0.099 m³/s), 14.49 in/yr (368 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 discharge, 0.22 ft³/s (0.006 m³/s) Jan. 30, 1981.

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)
Apr. 10	0730	126 3.57	3.03 0.924	Aug. 5	1845	89 2.52	2.82 0.860
Apr. 15	1245	*167 4.73	3.22 0.981				

Minimum daily discharge, 0.53 ft³/s (0.015 m³/s) Nov. 26.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.1	.96	1.9	1.4	1.4	1.8	2.1	5.3	4.0	2.0	1.8	1.4
2	1.2	1.0	1.7	1.0	7.0	2.0	2.0	5.1	3.8	2.8	1.1	1.7
3	1.4	1.2	1.5	.94	3.8	1.5	7.9	5.1	3.8	2.6	1.8	1.1
4	1.4	2.5	1.2	1.4	1.8	1.1	2.0	5.7	4.1	2.5	.82	1.1
5	1.3	2.4	.95	1.2	1.7	1.9	2.3	4.9	3.8	3.0	1.1	.96
6	1.4	1.7	.63	1.1	1.4	1.6	2.0	4.6	3.5	3.0	6.0	1.1
7	1.4	.94	1.5	1.4	1.3	1.5	2.7	4.5	3.5	1.7	2.6	1.5
8	1.1	1.5	1.5	1.2	1.4	9.8	3.8	5.0	3.3	2.5	1.6	.73
9	1.3	1.4	1.0	.94	1.9	6.2	11	4.6	2.3	2.0	2.1	1.5
10	1.3	1.0	1.3	3.9	.96	6.9	41	4.4	2.1	.88	1.2	.90
11	1.4	1.1	1.0	3.1	1.1	2.4	11	4.2	2.7	1.6	2.1	.92
12	1.2	1.2	.76	1.4	1.5	2.6	5.9	4.1	3.0	1.7	2.3	1.5
13	1.8	2.7	1.4	1.2	1.2	2.1	4.7	4.0	2.9	2.3	1.7	1.7
14	1.4	.94	1.4	1.2	.69	.99	3.9	3.9	2.8	2.3	1.2	.84
15	1.4	1.1	1.6	1.4	1.5	1.6	48	4.9	2.8	2.3	1.9	.97
16	1.0	1.0	6.0	1.3	1.6	1.6	15	12	2.8	2.2	1.9	1.4
17	1.4	1.2	1.8	1.1	2.0	1.4	9.4	6.2	2.8	2.2	.96	1.1
18	1.3	1.1	1.4	1.2	2.2	5.7	8.2	4.5	2.8	1.9	1.4	.90
19	1.4	.98	1.7	1.2	2.0	10	7.4	4.6	4.4	2.3	1.9	1.3
20	1.5	1.1	1.2	1.0	2.0	4.2	7.2	4.2	5.3	2.2	1.8	1.2
21	1.8	.82	1.3	1.2	1.7	10	6.4	9.3	4.7	1.6	1.7	1.6
22	1.5	1.0	1.1	1.5	3.1	4.3	5.8	8.0	3.3	2.0	1.3	1.5
23	1.5	1.4	1.2	3.0	5.3	2.1	5.6	6.8	2.7	1.5	1.7	1.4
24	1.4	.89	1.1	2.5	3.3	2.1	21	2.8	2.8	2.1	1.4	1.4
25	2.9	1.0	1.6	1.6	2.7	1.6	9.6	3.0	2.0	2.0	1.3	.93
26	1.5	.53	.81	1.4	2.0	2.0	5.1	3.4	2.5	1.3	1.7	1.1
27	1.2	.60	1.1	1.3	1.7	10	4.8	4.5	2.3	1.8	1.6	1.4
28	.99	1.6	1.1	1.3	1.6	6.4	5.1	4.3	5.9	1.3	1.1	1.2
29	.95	7.1	1.2	1.3	---	3.2	5.7	4.8	4.8	1.9	2.6	1.2
30	1.4	1.4	1.1	1.4	---	2.9	5.5	4.4	2.3	1.8	1.4	1.1
31	1.3	---	.79	1.1	---	2.3	---	4.2	---	1.3	1.7	---
TOTAL	43.14	43.36	43.84	46.18	59.85	113.79	273.0	157.3	99.8	62.58	64.68	36.65
MEAN	1.39	1.45	1.41	1.49	2.14	3.67	9.10	5.07	3.33	2.02	2.09	1.22
MAX	2.9	7.1	6.0	3.9	7.0	10	48	12	5.9	3.0	11	1.7
MIN	.95	.53	.63	.94	.69	.99	2.0	2.8	2.0	.88	.82	.73
CFSM	.42	.44	.43	.45	.65	1.12	2.77	1.54	1.01	.61	.64	.37
IN.	.49	.49	.50	.52	.68	1.29	3.09	1.78	1.13	.71	.73	.41

CAL YR 1982 TOTAL 845.50 MEAN 2.32 MAX 54 MIN .53 CFSM .71 IN 9.56
WTR YR 1983 TOTAL 1044.17 MEAN 2.86 MAX 48 MIN .53 CFSM .87 IN 11.80

PATAPSCO RIVER BASIN

79

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 2.34 ft³/s (0.066 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.--38 years, 64.2 ft³/s (1.818 m³/s), 15.40 in/yr (391 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 discharge, 1.3 ft³/s (0.037 m³/s) Sept. 17, 1983, result of regulation; minimum daily discharge, 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)
Apr. 10	0245	1180 33.4	4.41 1.344	Apr. 15	1500	*2590 73.3	6.90 2.103
Apr. 10	0930	2130 60.3	6.24 1.902	Aug. 5	2045	1180 33.4	4.41 1.344

Minimum discharge, 1.3 ft³/s (0.037 m³/s) Sept. 17, gage height, 1.08 ft (0.329 m), result of regulation.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20	19	38	21	25	49	78	103	80	43	20	22
2	19	18	41	21	87	65	78	100	74	42	20	19
3	19	18	30	19	90	50	142	99	73	39	19	18
4	18	59	28	18	47	45	86	110	77	38	23	17
5	17	68	26	20	36	42	76	95	75	39	174	17
6	17	27	24	23	34	41	76	87	67	46	122	16
7	17	23	22	21	34	53	74	83	65	36	49	16
8	17	20	21	19	33	144	96	90	61	33	32	14
9	16	19	21	19	30	127	126	90	57	33	26	14
10	16	18	19	53	28	143	860	79	55	33	24	14
11	16	18	21	87	13	95	221	76	53	31	39	14
12	17	18	23	37	20	79	164	73	52	30	49	13
13	23	32	18	29	39	67	136	69	49	30	29	25
14	33	23	18	26	35	60	120	68	47	28	27	18
15	21	20	20	29	33	56	925	89	46	27	24	15
16	20	18	105	32	40	49	420	196	47	28	23	15
17	19	17	48	25	41	47	209	142	43	27	23	14
18	18	17	31	20	50	99	179	88	53	26	25	14
19	18	18	28	18	53	257	158	88	73	25	24	14
20	19	17	27	19	52	114	147	115	80	25	23	12
21	25	18	26	19	55	203	133	163	96	26	22	17
22	21	18	24	21	76	132	125	160	58	26	20	29
23	20	18	24	50	112	103	112	163	47	24	21	16
24	19	18	24	65	98	93	313	112	44	29	21	16
25	47	17	23	38	72	85	206	98	42	24	21	16
26	38	17	24	32	60	79	148	96	39	24	21	15
27	23	16	23	30	49	196	133	97	38	22	19	15
28	21	20	25	28	47	169	125	85	39	22	19	15
29	20	127	24	26	---	103	117	98	114	21	20	14
30	21	38	22	27	---	90	110	91	49	19	25	22
31	20	---	21	29	---	82	---	83	---	20	20	---
TOTAL	655	794	869	921	1389	3017	5893	3186	1793	916	1024	496
MEAN	21.1	26.5	28.0	29.7	49.6	97.3	196	103	59.8	29.5	33.0	16.5
MAX	47	127	105	87	112	257	925	196	114	46	174	29
MIN	16	16	18	18	13	41	74	68	38	19	19	12
CFSM	.37	.47	.50	.53	.88	1.72	3.46	1.82	1.06	.52	.58	.29
IN.	.43	.52	.57	.61	.91	1.98	3.87	2.09	1.18	.60	.67	.33

CAL YR 1982	TOTAL	15797	MEAN 43.3	MAX 984	MIN 12	CFSM .77	IN 10.38
WTR YR 1983	TOTAL	20953	MEAN 57.4	MAX 925	MIN 12	CFSM 1.01	IN 13.77

PATAPSCO RIVER BASIN

01586210 BEAVER RUN NEAR FINKSBURG, MD

LOCATION.--Lat 39°29'22", long 76°54'12", Carroll County, Hydrologic Unit 02060003, on downstream center line of bridge pier on Hughes Road, 0.25 mi (0.4 km) northwest of intersection of Hughes Road and Maryland Route 91, and 0.75 mi (1.2 km) southwest of Finksburg.

DRAINAGE AREA.--14.0 mi² (36.3 km²).

PERIOD OF RECORD.--October 1982 to September 1983.

GAGE.--Water-stage recorder. Datum of gage is 439.12 ft (133.844 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except those for period of no gage-height record, Oct. 1 to Jan. 7, which are fair. Several observations of water temperature were made during the year.

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)
Apr. 10	0730	510 14.4	3.33 1.015	Apr. 15	1445	*573 16.2	3.49 1.064

Minimum discharge, 2.0 ft³/s (0.057 m³/s) Sept. 12, but may have been less during period of no gage-height record Oct. 1 to Jan. 7.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.0	5.5	11	6.5	7.1	16	22	31	21	12	4.8	4.7
2	5.5	5.0	12	6.5	25	20	21	30	20	11	4.9	3.9
3	5.5	5.0	10	6.0	21	17	38	29	18	11	4.6	3.6
4	5.5	10	8.5	5.5	14	16	23	30	20	10	4.8	3.4
5	5.0	20	7.5	6.0	12	15	21	27	18	11	23	3.4
6	5.0	8.0	7.0	7.0	11	14	20	25	17	10	13	3.2
7	5.0	6.5	6.8	6.5	11	16	21	24	16	9.4	7.7	2.9
8	5.0	6.0	6.6	5.9	10	41	25	25	16	9.1	6.5	2.5
9	4.8	5.5	6.0	5.7	9.6	31	35	25	15	8.9	5.9	2.5
10	4.8	5.5	6.0	15	9.1	35	175	24	14	8.6	5.4	2.4
11	4.8	5.5	6.4	19	4.2	24	58	23	14	8.2	10	2.3
12	5.0	6.0	6.8	11	8.0	21	43	22	13	8.1	9.8	2.5
13	7.0	9.0	6.0	8.4	9.0	19	37	21	13	7.7	7.0	4.8
14	9.5	7.5	5.5	7.7	9.5	17	34	21	12	7.3	6.2	4.2
15	6.5	6.0	6.5	8.1	10	17	204	27	13	7.1	5.8	3.3
16	6.0	5.0	25	8.8	12	15	96	60	14	7.1	5.5	3.1
17	5.5	5.0	12	7.4	12	14	64	37	13	6.7	5.3	3.1
18	5.0	5.0	10	6.0	13	34	54	27	18	6.4	5.3	2.9
19	5.0	5.0	8.5	6.2	14	64	47	29	22	6.4	5.2	2.7
20	6.0	5.0	8.0	5.8	14	29	44	32	22	6.5	4.7	2.4
21	7.0	5.5	7.5	5.8	15	54	39	50	23	6.9	4.2	4.3
22	6.5	5.5	7.4	6.1	19	32	36	49	17	6.6	4.0	7.4
23	6.0	5.5	7.2	15	26	27	33	47	14	5.9	4.1	3.9
24	5.5	5.5	7.2	15	22	24	90	35	13	6.9	4.4	3.7
25	14	5.0	7.0	11	18	23	61	31	12	6.1	4.2	3.6
26	10	5.0	7.2	9.5	16	21	44	29	11	5.9	3.8	3.7
27	7.0	5.0	7.0	8.6	14	55	40	29	11	5.5	3.6	4.0
28	6.5	5.5	7.5	8.1	14	39	37	26	12	5.2	3.6	4.1
29	6.0	35	7.0	7.3	---	28	34	28	21	5.0	4.0	4.0
30	6.0	11	6.5	7.4	---	25	33	27	13	4.9	4.2	7.0
31	6.0	---	6.5	7.9	---	23	---	25	---	4.9	3.8	---
TOTAL	192.9	232.5	254.1	260.7	379.5	826	1529	945	476	236.3	189.3	109.5
MEAN	6.22	7.75	8.20	8.41	13.6	26.6	51.0	30.5	15.9	7.62	6.11	3.65
MAX	14	35	25	19	26	64	204	60	23	12	23	7.4
MIN	4.8	5.0	5.5	5.5	4.2	14	20	21	11	4.9	3.6	2.3
CFSM	.44	.55	.59	.60	.97	1.90	3.64	2.18	1.14	.54	.44	.26
IN.	.51	.62	.68	.69	1.01	2.19	4.06	2.51	1.26	.63	.50	.29

WTR YR 1983 TOTAL 5630.8 MEAN 15.4 MAX 204 MIN 2.3 CFSM 1.10 IN 14.96

01586610 MORGAN RUN NEAR LOUISVILLE, MD

LOCATION.--Lat 39°27'07", long 76°57'20", Carroll County, Hydrologic Unit 02060003, on right downstream wingwall of bridge on London Bridge Road, 1.4 mi (2.3 km) southwest of Gamber, and 1.65 mi (2.7 km) south of the intersection of Maryland Route 32, and 1.7 mi (2.7 km) west of Louisville.

DRAINAGE AREA.--28.0 mi² (72.5 km²).

PERIOD OF RECORD.--October 1982 to September 1983.

GAGE.--Water-stage recorder. Altitude of gage is 430 ft (131 m), from topographic map.

REMARKS.--Records good except those for period of no gage-height record, Oct. 1 to Dec. 8, and Jan. 13 to Feb. 14, which are fair. Several observations of water temperature were made during the year.

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)
Apr. 10	0815	940 26.6	4.76 1.451	Apr. 15	1545	*1210 34.3	5.17 1.576

Minimum discharge, 6.2 ft³/s (0.176 m³/s) Sept. 20, 21, but may have been less during period of no gage-height record Oct. 1 to Dec. 8, and Jan. 13 to Feb. 14.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	9.5	20	12	15	35	63	72	46	27	13	10
2	10	9.0	22	11	48	46	60	69	44	26	13	9.2
3	10	9.0	16	11	50	37	93	67	43	24	12	8.7
4	9.5	30	15	11	30	33	65	67	44	24	13	8.4
5	9.0	35	14	11	22	30	59	61	42	24	55	8.4
6	9.0	16	13	13	20	28	57	56	40	24	31	8.1
7	9.0	12	12	12	19	33	59	54	39	22	17	7.6
8	9.0	11	11	11	18	87	69	55	37	21	14	7.2
9	8.5	10	12	11	17	76	91	53	36	21	13	7.2
10	8.0	10	11	34	16	85	398	49	35	20	12	7.1
11	8.0	10	12	41	9.0	60	140	47	34	20	32	7.0
12	8.0	12	13	22	17	50	100	46	33	19	20	7.0
13	10	17	11	18	19	44	85	45	31	19	14	8.7
14	17	12	11	16	20	40	76	44	31	18	13	8.9
15	11	10	12	17	24	36	432	55	35	18	13	7.9
16	10	9.5	56	19	26	32	218	123	33	17	12	7.4
17	9.5	9.0	25	15	25	30	145	82	30	17	11	7.5
18	9.0	9.0	18	12	27	70	121	58	32	16	12	7.3
19	9.0	9.5	16	11	31	180	106	60	41	16	11	7.0
20	10	9.0	16	11	31	80	97	65	44	16	11	6.6
21	13	9.5	15	11	30	150	85	100	53	17	10	9.0
22	11	9.5	14	12	42	93	78	93	35	16	9.8	12
23	10	9.5	13	30	60	79	74	95	31	15	10	8.1
24	10	9.5	13	38	54	71	206	70	30	16	10	7.9
25	24	9.0	13	26	44	65	157	62	28	15	10	7.9
26	20	9.0	13	20	36	59	109	57	27	14	9.4	8.0
27	14	9.0	13	18	31	126	95	56	25	14	9.0	8.0
28	11	14	14	16	31	106	87	51	27	13	9.3	7.7
29	10	65	14	15	---	79	80	56	43	13	9.8	7.5
30	11	20	12	16	---	70	75	53	29	13	9.3	11
31	10	---	12	17	---	67	---	48	---	13	9.0	---
TOTAL	338.5	422.5	482	538	812.0	2077	3580	1969	1078	568	447.6	244.3
MEAN	10.9	14.1	15.5	17.4	29.0	67.0	119	63.5	35.9	18.3	14.4	8.14
MAX	24	65	56	41	60	180	432	123	53	27	55	12
MIN	8.0	9.0	11	11	9.0	28	57	44	25	13	9.0	6.6
CFSM	.39	.50	.55	.62	1.04	2.39	4.25	2.27	1.28	.65	.51	.29
IN.	.45	.56	.64	.71	1.08	2.76	4.76	2.62	1.43	.75	.59	.32

WTR YR 1983 TOTAL 12556.9 MEAN 34.4 MAX 432 MIN 6.6 CFSM 1.23 IN 16.68

PATAPSCO RIVER BASIN

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. 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 discharge, 6 ft³/s (0.17 m³/s) Sept. 6, 1944; minimum daily discharge, 9.6 ft³/s (0.27 m³/s) Aug. 12, 1963.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4,450 ft³/s (126 m³/s) Apr. 15, gage height, 6.06 ft (1.847 m); minimum daily discharge, 28 ft³/s (0.79 m³/s) Sept. 29.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	40	49	81	51	58	116	179	227	200	128	55	43
2	38	51	83	50	140	155	171	219	190	124	58	42
3	38	50	74	49	194	120	448	212	180	120	55	40
4	38	81	73	48	97	107	217	217	199	114	53	36
5	39	166	68	49	77	100	187	201	238	111	102	36
6	37	64	66	54	74	97	176	189	190	109	159	45
7	38	53	61	50	79	113	176	182	193	93	73	51
8	39	50	59	48	76	1270	236	188	164	97	62	40
9	39	48	57	47	69	501	286	205	148	96	57	33
10	38	47	57	65	66	358	1720	175	137	87	52	33
11	39	46	59	137	61	237	562	168	136	84	56	33
12	41	47	66	80	60	196	354	164	132	85	89	36
13	47	151	60	65	93	172	282	159	128	85	63	57
14	62	136	50	61	89	156	251	155	120	81	57	47
15	50	124	48	62	82	146	1720	199	120	80	54	36
16	44	112	229	63	92	129	1210	770	136	77	53	33
17	41	52	130	56	98	120	501	552	117	77	51	32
18	42	48	77	55	113	295	396	252	113	75	55	32
19	45	48	65	50	125	940	328	226	308	71	53	30
20	45	48	64	50	120	277	298	292	561	68	48	29
21	56	48	62	52	127	508	269	470	623	71	44	40
22	48	49	58	51	157	309	248	640	204	67	42	65
23	47	48	56	132	215	229	236	920	156	65	43	36
24	46	47	56	130	210	202	934	329	136	70	47	31
25	87	46	53	81	151	185	596	269	128	65	45	30
26	119	45	55	71	127	169	359	248	120	62	43	30
27	66	45	55	66	107	544	300	239	117	58	42	30
28	54	51	57	63	102	550	275	209	124	57	43	29
29	51	246	58	60	---	247	253	228	205	55	43	28
30	51	101	53	59	---	207	240	274	132	55	43	41
31	49	---	51	62	---	191	---	208	---	55	42	---
TOTAL	1514	2197	2141	2017	3059	8946	13408	8986	5655	2542	1782	1124
MEAN	48.8	73.2	69.1	65.1	109	289	447	290	189	82.0	57.5	37.5
MAX	119	246	229	137	215	1270	1720	920	623	128	159	65
MIN	37	45	48	47	58	97	171	155	113	55	42	28
(#)	29870	28860	28430	25620	26000	30330	40090	43270	43270	42770	40130	38410
(#)	117	108	221	139	109	146	111	198	228	229	193	191
CAL YR 1982	TOTAL	35024	MEAN	96.0	MAX	1750	MIN	31	+ 137			
WTR YR 1983	TOTAL	53371	MEAN	146	MAX	1720	MIN	28	+ 166			

* Month-end contents, in millions of gallons in Liberty Reservoir, contents on Sept. 30, 1982: 31,460,000,000 gal (119.1 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

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01589000 PATAPSCO RIVER AT HOLLOFIELD, MD--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1969-74, 1976 to September 1983 (discontinued).

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD 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)
DEC 28...	0930	75	188	7.8	10.0	7.5	--	60	18	16
FEB 25...	1245	209	175	7.5	7.0	5.0	15.1	52	20	14
JUL 26...	1000	43	180	7.6	23.5	22.0	8.9	62	18	17

DATE	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY LAB (MG/L AS CACO3)	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)
DEC 28...	4.9	9.5	25	.6	2.2	42	1.3	12	16	.10
FEB 25...	4.2	9.1	26	.6	3.2	32	2.0	15	16	.20
JUL 26...	4.8	8.7	23	.5	2.3	44	2.1	11	14	.20

DATE	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 DIS- SOLVED (MG/L AS N)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P)	PHOS- PHATE, ORTHO, DIS- SOLVED (MG/L AS PO4)	IRON, DIS- SOLVED (UG/L AS FE)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)
DEC 28...	9.6	123	96	.17	24.9	2.2	.120	.37	86	52
FEB 25...	8.7	103	90	.14	58.1	2.1	.090	.28	100	59
JUL 26...	11	111	96	.15	12.9	.40	.010	.03	59	89

PATAPSCO RIVER BASIN

01589100 EAST BRANCH HERBERT RUN AT ARBUTUS, MD

LOCATION.--Lat 39°14'24", long 76°41'33", Baltimore County, Hydrologic Unit 02060003, on left bank 50 ft (15 m) upstream from 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.

REVISED RECORDS.--WDR MD-DE-81: 1979.

GAGE.--Water-stage recorder and V-notch sharp-crested weir. Altitude of gage is 45 ft (14 m), from topographic map. Prior to August 1981 at site 100 ft (30 m) downstream at same datum.

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

AVERAGE DISCHARGE.--26 years, 3.31 ft³/s (0.094 m³/s), 18.20 in/yr (462 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,460 ft³/s (69.7 m³/s) Sept. 6, 1979, gage height, 13.7 ft (4.18 m), present site, from floodmarks, from rating curve extended above 280 ft³/s (7.93 m³/s) on basis of culvert measurement at gage height 5.0 ft (1.52 m), present site, discharge, 580 ft³/s (16.4 m³/s) and culvert and flow-over-road measurement of peak flow at gage height 13.7 ft (4.18 m) present site, from floodmarks; minimum daily discharge, 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)
Mar. 27	1815	526 14.9	4.88 1.487	June 6	2130	430 12.2	4.39 1.338
Apr. 10	0630	415 11.8	4.31 1.314	June 19	1945	*562 15.9	5.06 1.542
May 22	2130	423 12.0	4.35 1.326				

Minimum daily discharge, 0.40 ft³/s (0.011 m³/s) Oct. 10, 23, 24, Nov. 17.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.51	.46	4.1	.51	.66	6.7	2.3	2.5	2.2	1.3	.84	.73
2	.51	.50	.88	.51	21	2.7	6.9	2.3	1.9	1.3	.84	.79
3	.51	.62	.62	.51	2.5	1.2	30	2.1	2.1	1.2	.85	.86
4	.52	6.4	.62	.51	1.1	1.2	3.2	2.7	2.5	23	.71	.68
5	.48	1.7	.62	1.5	.99	1.1	2.6	1.9	1.8	2.6	2.1	.73
6	.45	.56	.62	.89	1.4	5.5	2.0	1.9	17	1.7	1.0	.99
7	.46	.51	.51	.60	4.8	5.9	4.4	1.7	4.7	1.5	.70	.93
8	.46	.53	.46	.46	1.2	51	10	2.3	2.0	1.3	.62	.62
9	.49	.62	.46	.45	.93	9.2	22	1.6	1.6	1.2	.62	.62
10	.40	.62	.46	7.4	.78	7.3	44	1.5	1.5	1.1	.67	.62
11	.42	.62	.85	3.3	.51	3.2	12	1.5	1.4	.99	1.8	.61
12	.51	.71	1.9	.77	1.9	2.1	4.0	1.5	1.3	.99	1.0	1.5
13	2.7	6.4	.74	.62	1.8	1.9	3.0	1.5	1.3	.99	.71	3.1
14	.69	.43	.54	.57	2.4	2.1	2.6	1.5	1.3	.99	.62	.73
15	.91	.41	.83	1.0	6.2	1.7	90	7.1	1.3	.99	.62	.56
16	.85	.41	21	1.0	9.5	1.7	20	31	1.3	.94	.62	.66
17	.48	.40	1.3	.53	9.6	1.7	4.4	3.5	1.2	.89	.62	.51
18	.55	.45	.78	.49	11	40	3.4	2.1	1.2	.87	1.5	.51
19	.62	.47	.91	.47	6.1	13	2.6	5.0	27	.92	.62	.51
20	.63	.46	.80	.48	3.9	3.8	3.0	2.6	31	1.0	.59	.53
21	2.5	.46	.69	.51	3.5	32	2.4	12	8.6	.94	.46	8.5
22	.42	.46	.69	.55	3.3	5.0	2.0	34	3.3	.83	1.9	1.4
23	.40	.46	.77	19	5.9	3.3	8.0	7.9	2.4	1.2	1.1	.58
24	.40	.60	.53	1.8	2.3	2.6	50	3.5	2.1	1.2	.77	.62
25	11	.99	.51	1.0	1.8	2.4	6.1	2.9	1.7	.67	.62	.62
26	.81	.99	.59	.88	1.4	2.0	3.3	6.2	1.5	.73	.62	.62
27	.48	.99	.75	.74	1.4	59	2.7	4.6	1.5	.73	.80	.67
28	.49	7.2	.79	.73	1.5	7.9	2.5	2.3	4.4	.73	1.0	.73
29	.47	14	.95	.66	---	3.6	2.8	11	2.9	.86	.84	.73
30	.48	.80	.55	1.3	---	2.8	2.6	5.3	1.4	.84	.81	3.7
31	.46	---	.51	.70	---	2.5	---	2.4	---	.84	.73	---
TOTAL	31.06	50.23	46.33	50.44	109.37	286.1	354.8	169.9	135.4	55.34	27.30	34.96
MEAN	1.00	1.67	1.49	1.63	3.91	9.23	11.8	5.48	4.51	1.79	.88	1.17
MAX	11	14	21	19	21	59	90	34	31	23	2.1	8.5
MIN	.40	.40	.46	.45	.51	1.1	2.0	1.5	1.2	.67	.46	.51
CFSM	.41	.68	.60	.66	1.58	3.74	4.78	2.22	1.83	.73	.36	.47
IN.	.47	.76	.70	.76	1.65	4.31	5.34	2.56	2.04	.83	.41	.53

CAL YR 1982 TOTAL 847.94 MEAN 2.32 MAX 43 MIN .32 CFSM .94 IN 12.77
WTR YR 1983 TOTAL 1351.23 MEAN 3.70 MAX 90 MIN .40 CFSM 1.50 IN 20.34

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.--26 years, 38.6 ft³/s (1.093 m³/s), 16.13 in/yr (410 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 discharge, 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)
Mar. 8	0600	1470 41.6	6.03 1.838	May 22	2130	1240 35.1	5.55 1.692
Mar. 27	1900	1450 41.1	6.00 1.829	June 19	1945	1600 45.3	6.30 1.920
Apr. 10	0815	1090 30.9	5.21 1.588	June 20	2345	*1620 45.9	6.34 1.932
Apr. 15	1845	1450 41.1	5.99 1.826				

Minimum discharge, 7.5 ft³/s (0.21 m³/s) Sept. 19, 20, 21.

REVISIONS.--The peak discharges for water years 1981-82 and the annual maximum (*) for water year 1982 have been revised as shown in the following table. They supersede figures published in the reports for 1981 and 1982.

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)
1981	Feb. 23, 1981	1545	1020 28.9	4.72 1.439	1982	Jan. 4, 1982	1130	772 21.9	4.39 1.338
	June 14, 1981	0145	*2460 69.7	7.80 2.377		Feb. 3, 1982	1330	1030 29.2	5.05 1.539
	June 25, 1981	2000	1550 43.9	6.20 1.890		June 13, 1982	1315	1380 39.1	5.84 1.780

PATAPSCO RIVER BASIN

01589300 GWYNNS FALLS AT VILLA NOVA, MD--Continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	12	35	16	18	44	37	44	41	28	16	12
2	10	12	28	15	170	51	43	43	38	27	16	11
3	9.8	12	21	15	65	32	234	42	36	26	14	11
4	9.6	72	21	14	31	28	51	47	47	25	18	12
5	9.4	51	19	18	24	27	42	41	40	26	64	11
6	9.5	18	17	20	23	30	39	38	34	25	49	10
7	9.9	16	16	15	29	41	43	38	37	23	22	9.8
8	10	14	16	14	25	563	91	48	32	22	17	9.2
9	10	14	15	13	21	132	142	45	30	22	16	8.6
10	10	13	14	52	20	97	534	38	29	22	15	9.2
11	11	13	16	56	17	50	117	36	28	21	72	9.8
12	11	13	20	24	22	40	63	35	28	21	51	19
13	21	51	18	19	26	35	51	35	27	20	22	22
14	22	18	17	18	30	33	46	33	26	19	18	16
15	12	15	17	22	33	31	646	64	26	20	16	11
16	11	14	174	23	39	29	291	309	28	20	15	9.8
17	11	13	39	20	43	28	74	102	25	18	15	9.8
18	11	13	25	18	59	183	62	47	25	18	21	10
19	11	13	22	17	55	246	53	57	175	18	16	8.6
20	11	13	21	17	48	55	52	64	266	18	15	8.6
21	22	13	19	16	51	202	48	199	260	18	15	36
22	12	13	18	16	69	59	45	243	46	18	13	33
23	11	13	17	125	93	42	45	261	36	16	15	12
24	11	12	18	51	56	37	379	56	31	19	14	10
25	64	12	17	29	40	35	136	45	29	16	13	10
26	33	12	18	24	34	33	63	57	27	17	13	11
27	17	12	18	22	29	356	53	54	26	16	13	11
28	14	29	21	20	28	140	49	39	52	15	12	10
29	13	152	20	19	---	52	46	62	123	16	13	9.8
30	13	28	16	20	---	42	45	177	33	15	12	33
31	12	---	16	21	---	39	---	48	---	15	13	---
TOTAL	453.2	706	769	789	1198	2812	3620	2447	1681	620	654	404.2
MEAN	14.6	23.5	24.8	25.5	42.8	90.7	121	78.9	56.0	20.0	21.1	13.5
MAX	64	152	174	125	170	563	646	309	266	28	72	36
MIN	9.4	12	14	13	17	27	37	33	25	15	12	8.6
CFSM	.45	.72	.76	.79	1.32	2.79	3.72	2.43	1.72	.62	.65	.42
IN.	.52	.81	.88	.90	1.37	3.22	4.14	2.80	1.92	.71	.75	.46
CAL YR 1982	TOTAL	11898.8	MEAN	32.6	MAX	730	MIN	6.2	CFSM	1.00	IN	13.62
WTR YR 1983	TOTAL	16153.4	MEAN	44.3	MAX	646	MIN	8.6	CFSM	1.36	IN	18.49

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.

REVISED RECORDS.--WDR MD-DE-80-1: 1979(m).

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 310 ft (94 m), from topographic map.

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

AVERAGE DISCHARGE.--24 years, 7.86 ft³/s (0.223 m³/s), 19.34 in/yr (491 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 discharge, 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 4*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Mar. 8	0445	889 25.2	4.74 1.445	May 22	2145	1350 38.2	6.10 1.859
Mar. 18	2145	739 20.9	4.24 1.292	May 29	2330	1030 29.2	5.20 1.585
Mar. 27	1845	*1490 42.2	6.45 1.966	June 19	2015	1230 34.8	5.79 1.765
Apr. 10	0630	901 25.5	4.78 1.457	June 20	2200	801 22.7	4.45 1.356
Apr. 15	1400	1080 30.6	5.35 1.631	June 28	2315	913 25.9	4.82 1.469
May 15	1545	970 27.5	5.00 1.524				

Minimum discharge, 0.29 ft³/s (0.008 m³/s) Feb. 11, gage height, 0.62 ft (0.189), result of freezeup.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.3	.69	9.9	1.4	1.5	20	3.7	2.7	3.0	2.4	1.2	.85
2	.91	.76	2.2	1.4	81	8.3	21	2.8	2.6	2.4	1.2	.76
3	.72	.87	1.8	1.4	6.8	3.5	72	2.7	2.8	2.3	1.1	.55
4	.70	33	1.8	1.4	2.8	3.0	4.8	4.2	4.0	9.2	1.2	.49
5	.92	4.5	1.5	3.7	2.1	2.9	3.7	2.1	2.6	3.1	13	.47
6	.90	1.9	1.4	1.8	2.6	13	3.2	1.9	14	2.1	3.1	.47
7	.87	1.0	1.2	1.3	8.7	8.8	8.0	1.8	7.1	1.9	1.2	.46
8	.85	1.0	1.3	1.1	2.9	192	31	2.7	2.3	1.9	1.1	.45
9	.76	1.0	1.2	1.0	2.2	23	79	1.9	2.1	2.0	1.1	.49
10	.77	.90	1.1	32	1.9	17	153	1.7	1.9	1.6	.89	.39
11	.63	.87	2.6	6.1	1.1	5.7	26	1.8	1.9	1.6	15	.38
12	.76	.95	3.8	2.1	4.7	4.2	6.1	1.8	1.8	1.6	3.3	.93
13	9.8	17	2.6	1.6	3.7	3.5	4.5	1.8	1.8	1.6	1.1	5.1
14	2.2	1.1	2.3	1.6	5.3	3.1	4.0	1.8	1.8	1.7	.95	1.0
15	1.3	.92	3.8	3.9	9.0	3.0	239	53	1.8	1.7	.88	.53
16	1.7	.91	64	4.2	16	2.8	40	106	1.7	1.5	1.0	.57
17	.70	1.0	3.2	1.7	19	2.8	7.5	7.7	1.7	1.4	1.1	.43
18	.69	.84	2.1	1.3	25	114	5.2	3.3	3.2	1.5	4.5	.42
19	.80	.79	2.3	1.4	16	40	4.2	16	40	1.6	1.0	.49
20	.84	.86	2.1	1.4	12	6.3	4.7	5.6	113	1.5	.79	.59
21	12	1.0	1.6	1.4	11	78	3.3	45	22	1.5	.72	20
22	.85	.87	1.5	1.4	12	7.4	2.8	108	4.3	1.4	.79	3.4
23	1.0	.80	2.2	60	21	4.8	8.0	18	3.5	1.2	.99	.75
24	.98	1.2	1.6	5.2	6.4	4.0	123	4.6	3.1	2.8	.90	.72
25	35	.76	1.5	2.6	4.4	3.6	13	3.5	2.7	1.2	.89	.63
26	3.1	.76	2.0	2.1	3.3	3.2	4.7	13	2.4	1.3	.86	.58
27	1.1	.73	2.4	1.9	2.9	196	3.9	9.6	2.4	1.4	.65	.60
28	.88	27	2.8	1.6	2.8	15	3.3	2.7	38	1.1	1.3	.53
29	.81	48	1.9	1.8	---	5.5	3.1	54	10	1.1	.85	.49
30	.77	2.0	1.5	3.0	---	4.4	2.8	21	2.7	.97	.80	13
31	.69	---	1.4	1.7	---	3.9	---	4.0	---	1.0	.80	---
TOTAL	85.30	153.98	132.6	154.5	288.1	802.7	888.5	506.7	342.2	59.57	64.26	56.52
MEAN	2.75	5.13	4.28	4.98	10.3	25.9	29.6	16.3	11.4	1.92	2.07	1.88
MAX	35	48	64	60	81	196	239	108	113	9.2	15	20
MIN	.63	.69	1.1	1.0	1.1	2.8	2.8	1.7	1.7	.97	.65	.38
CFSM	.50	.93	.78	.90	1.87	4.69	5.36	2.95	2.07	.35	.38	.34
IN.	.57	1.04	.89	1.04	1.94	5.41	5.99	3.41	2.31	.40	.43	.38

CAL YR 1982 TOTAL 2373.27 MEAN 6.50 MAX 136 MIN .47 CFSM 1.18 IN 15.99
WTR YR 1983 TOTAL 3534.93 MEAN 9.68 MAX 239 MIN .38 CFSM 1.75 IN 23.82

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.--19 years (water years 1943-52, 1975-83), 9.48 ft³/s (0.268 m³/s), 18.60 in/yr (472 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, 1.1 ft³/s (0.031 m³/s), gage height, 1.71 ft (0.521 m) Feb. 11, 1983, result of freezeup.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 170 ft³/s (4.81 m³/s) June 20, gage height, 3.44 ft (1.049 m), no peak above base of 185 ft³/s (5.2 m³/s); minimum discharge, 1.1 ft³/s (0.031 m³/s) Feb. 11, gage height, 1.71 ft (0.521 m), result of freezeup.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.1	3.1	8.9	3.8	3.8	14	9.8	11	9.3	7.3	2.9	3.3
2	3.1	3.1	8.9	3.8	12	22	9.8	10	8.5	6.7	3.0	3.1
3	3.0	3.1	5.4	3.8	16	9.8	34	10	7.6	5.7	2.8	3.1
4	2.6	4.0	4.8	3.6	5.6	7.5	16	11	12	36	2.9	2.8
5	2.6	16	4.2	5.2	4.1	6.6	11	9.3	15	37	2.9	2.8
6	2.6	5.2	5.5	7.0	4.3	6.7	11	8.6	9.9	12	3.1	2.8
7	2.8	3.6	4.0	4.3	6.5	11	11	8.4	52	7.5	3.1	2.8
8	2.8	3.5	3.8	3.8	6.3	19	15	8.3	18	6.2	2.8	2.8
9	2.8	3.5	3.8	3.8	4.9	18	19	8.2	10	5.1	2.8	2.6
10	2.6	3.5	3.7	7.9	4.3	27	76	7.1	8.4	4.6	2.7	2.6
11	2.7	3.3	4.0	13	2.2	14	54	7.0	7.3	4.2	2.8	2.6
12	2.7	3.5	4.7	5.3	3.0	9.8	33	6.8	6.7	4.3	4.1	2.5
13	3.1	18	4.1	4.1	4.0	8.0	21	6.5	6.3	3.9	3.1	4.5
14	3.8	9.6	3.9	4.2	5.0	7.4	16	6.5	6.1	3.8	2.8	4.7
15	3.0	4.1	4.7	4.8	7.0	6.9	28	8.2	5.0	3.7	2.8	3.1
16	3.2	3.8	24	4.1	9.2	6.2	88	35	4.6	3.6	2.8	2.8
17	2.9	3.7	15	3.8	9.8	6.0	35	32	4.2	3.5	2.8	2.8
18	2.8	3.8	6.1	3.6	11	24	23	12	4.0	3.5	2.8	2.8
19	2.8	3.6	4.9	3.2	13	51	19	9.3	4.7	3.5	2.8	2.8
20	2.9	3.5	5.8	3.2	12	20	16	9.9	62	3.5	2.7	2.8
21	3.4	3.5	4.5	3.3	13	37	14	15	64	3.5	2.5	3.8
22	3.1	3.5	4.1	3.6	16	37	13	23	32	3.4	2.5	10
23	3.0	3.5	4.0	19	23	19	13	22	15	3.1	2.8	3.2
24	3.1	3.5	3.9	12	21	13	44	31	9.7	3.4	3.1	3.1
25	14	3.3	3.8	6.2	14	11	33	16	7.7	3.1	2.8	2.9
26	32	3.4	4.1	4.7	10	9.7	21	13	6.2	3.1	2.6	2.9
27	6.5	3.5	3.8	4.4	8.1	17	17	26	5.6	3.1	2.6	2.9
28	3.6	4.6	4.0	4.2	7.9	41	14	11	6.7	3.0	6.7	2.8
29	3.5	33	5.1	3.9	---	17	13	18	33	2.8	5.8	2.8
30	3.3	14	4.2	4.1	---	12	12	19	11	2.8	7.6	5.9
31	3.1	---	3.8	4.0	---	11	---	12	---	2.8	3.5	---
TOTAL	136.5	181.3	175.5	165.7	257.0	519.6	739.6	431.1	452.5	199.7	101.0	100.4
MEAN	4.40	6.04	5.66	5.35	9.18	16.8	24.7	13.9	15.1	6.44	3.26	3.35
MAX	32	33	24	19	23	51	88	35	64	37	7.6	10
MIN	2.6	3.1	3.7	3.2	2.2	6.0	9.8	6.5	4.0	2.8	2.5	2.5
CFSM	.64	.87	.82	.77	1.33	2.43	3.57	2.01	2.18	.93	.47	.48
IN.	.73	.97	.94	.89	1.38	2.79	3.98	2.32	2.43	1.07	.54	.54

CAL YR 1982 TOTAL 2269.4 MEAN 6.22 MAX 65 MIN 1.9 CFSM .90 IN 12.20
WTR YR 1983 TOTAL 3459.9 MEAN 9.48 MAX 88 MIN 2.2 CFSM 1.37 IN 18.60

RHODE RIVER BASIN

01590720 RHODE RIVER NEAR SOUTH RIVER, MD

LOCATION.--Lat 38°53'10", long 76°32'30", Anne Arundel County, Hydrologic Unit 02060004, at end of 100 ft (30 m) pier located on Smithsonian Institution property, 1.5 mi (2.4 km) southeast of South River.

DRAINAGE AREA.--18.0 mi² (46.6 km²).

PERIOD OF RECORD.--Water years 1971 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1980 to current year.

pH: October 1980 to current year.

WATER TEMPERATURES: October 1980 to current year.

DISSOLVED OXYGEN: October 1980 to current year.

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

REMARKS.--Interruptions in record were due to malfunctions of the recording instruments. Records of daily maximum and minimum and weekly mean for salinity, pH, water temperature, dissolved oxygen, tide and solar radiation prior to January 1979 are published in USGS Water Resources Investigation Reports 74-10, 77-20, and 79-109. All records are on file at the Smithsonian's Chesapeake Bay Center for Environmental Studies including the period January 1979 thru September 1980.

EXTREMES FOR PERIOD OF RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 27,900 micromhos Feb. 15, 1981; minimum, 3,900 micromhos July 11, 15, 1972.

pH: Maximum, 10.2 units May 18 and July 13, 1977; minimum, 6.7 units June 6, 1983.

WATER TEMPERATURES: Maximum, 33.2°C July 19, 1977; minimum 0.0°C on many days during winter periods.

DISSOLVED OXYGEN: Maximum, 20.0 mg/L Feb. 22, 1980; minimum, 0.0 mg/L Aug. 4, 5, 1973, and July 14, 18, 1981, June 6, 13, July 5, 7, 14, 16, 17, 19-27, Aug. 10.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum, 25,100 micromhos Nov. 9; minimum, 5,500 micromhos May 22.

pH: Maximum, 9.9 units May 11, 13; minimum, 6.7 units June 6.

WATER TEMPERATURES: Maximum, 31.5°C Aug. 3, 8; minimum, 0.0°C Feb. 11-13.

DISSOLVED OXYGEN: Maximum, 19.5 mg/L Mar. 4; minimum, 0.0 mg/L June 6, 13, July 5, 7, 14, 16, 17, 19-27, Aug. 10.

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			DECEMBER			JANUARY			
1	21000	20600	20900	23100	22800	23000	23800	22200	23400	23400	23200	23300
2	21100	20800	21000	23200	22800	23000	23900	23300	23700	23300	23000	23100
3	21100	20900	21000	23300	22800	23100	23800	22400	23200	23200	23000	23000
4	21100	21000	21100	23400	23000	23200	23600	22500	23200	23000	22600	22900
5	21200	21100	21100	23400	22900	23100	23600	22600	23200	23400	22700	22900
6	21200	21100	21100	23200	23000	23200	23500	22800	23100	22800	22600	22700
7	22100	21000	21500	24100	23000	23300	23900	23100	23600	22600	21900	22300
8	22200	22000	22100	25000	23500	24300	23800	22800	23400	22500	22200	22300
9	22400	22100	22300	25100	23900	24400	24800	23400	24100	22400	22100	22300
10	22400	22200	22300	24000	23700	23800	24000	23300	23800	22200	22000	22100
11	22500	22200	22300	24300	23800	24000	24000	23700	23900	22600	21900	22100
12	22700	22400	22500	24300	23800	24000	23800	23000	23400	22300	21900	22100
13	22800	22400	22600	23900	23300	23600	23800	23600	23700	22000	21700	21900
14	22900	22600	22800	23400	22900	23300	23800	23500	23700	21800	21300	21600
15	23000	22700	22800	24000	23200	23600	23900	23500	23700	22000	21700	21900
16	23200	22800	23000	23600	23300	23500	23700	23200	23500	21900	21600	21700
17	23100	22900	23000	24300	23500	23800	23600	23300	23500	23000	21700	22000
18	23200	23000	23100	24300	23500	24000	23400	23200	23300	24800	22600	24200
19	23400	23200	23300	24100	23500	23700	23900	23300	23600	24200	22900	23900
20	23500	23400	23400	24200	23500	23700	24500	23600	23900	23400	22900	23200
21	23700	22900	23400	24400	23800	24100	23900	23600	23800	24000	22900	23900
22	23300	23000	23200	24500	24000	24300	23700	23300	23600	24200	23500	23700
23	23200	23000	23100	24300	23600	24100	23500	23000	23300	24500	23600	23900
24	23300	23100	23200	24500	24000	24300	23800	22500	23400	24800	24100	24400
25	23400	22800	23100	24300	23800	24100	23500	23000	23300	24700	24200	24500
26	22900	22600	22700	24100	23800	24000	23700	23100	23400	24800	24100	24500
27	23500	22600	23000	24100	24000	24000	23500	23000	23200	24400	23600	24000
28	23700	22700	23200	24100	23600	24000	23400	22000	23100	23900	23500	23700
29	23600	22400	22900	24100	21900	23800	23500	23000	23300	24000	23500	23800
30	23100	22700	22900	24100	22900	23700	23700	23000	23500	23900	22900	23500
31	23100	22800	22900	---	---	---	23300	22800	23100	23900	23600	23700
MONTH	23700	20600	22500	25100	21900	23700	24800	22000	23500	24800	21300	23100

RHODE RIVER BASIN

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01590720 RHODE RIVER NEAR SOUTH RIVER, MD--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY			MARCH			APRIL			MAY			
1	23900	23400	23700	20800	20200	20400	19500	19000	19300	10800	9990	10500
2	23900	22400	23400	21300	20200	20900	19400	17900	18700	10700	10000	10400
3	24400	22700	23700	23200	21200	21800	18100	17300	17700	10700	10100	10400
4	24500	23600	24000	23300	21600	22400	17800	17300	17600	10800	10400	10600
5	23700	23300	23500	22700	20600	21000	17800	17100	17400	10700	10300	10500
6	23400	22900	23200	22600	20000	21000	17600	16500	16900	10800	9990	10500
7	24900	22900	23800	22700	20300	21500	17700	16300	16700	10700	9970	10200
8	24200	23800	24000	21000	18700	19200	16400	13700	15300	9980	9960	9960
9	24300	23800	24000	21800	18500	19300	13600	9940	11800	9960	9940	9950
10	24600	23500	23900	22200	20800	21500	13600	9930	11900	9940	9940	9940
11	23500	22500	22900	21400	20600	21100	14000	12400	13300	9940	9920	9930
12	22900	22400	22700	21000	19500	20100	15300	13500	14300	9940	9920	9930
13	22900	22700	22800	20200	19800	20000	15000	12000	13800	9930	9910	9920
14	23000	22600	22800	20100	18900	19700	12900	10300	11800	9920	9890	9910
15	22900	22200	22700	20500	19800	20100	13500	10800	12000	9910	9870	9890
16	22400	21100	21700	21200	19500	20300	13000	11400	12100	9890	9860	9870
17	21100	20500	20800	20500	19500	20000	12300	10400	11900	9870	6800	7250
18	22000	19400	20800	20400	19700	19900	12500	11600	12100	7400	6400	7020
19	21300	19900	20500	22600	19500	21400	12200	11300	11800	7100	6700	6900
20	20400	20000	20200	22600	20800	22100	11400	11100	11300	7100	6400	6820
21	20400	19900	20100	21600	19600	20900	15200	11300	12300	7300	6500	7010
22	20200	19700	20000	22200	20500	21400	15600	12100	14100	7200	5500	6510
23	20500	19300	19900	20700	20000	20300	13500	11000	12200	7600	6200	6710
24	21600	19300	20500	20300	20000	20100	13100	11100	11700	8500	6600	7570
25	21400	19600	20300	21400	19600	20500	13300	12000	12600	8300	6800	7450
26	21800	19500	20800	21400	20300	21000	12200	11900	12000	7500	7000	7260
27	21300	20400	20900	21300	18900	20200	12200	11400	11900	7500	6800	7130
28	21100	20400	20800	20700	20100	20500	12000	11100	11600	7100	6600	6920
29	---	---	---	20600	19900	20300	11800	9960	11300	7400	6300	7080
30	---	---	---	20400	19100	19800	11400	10200	10800	7300	6800	7040
31	---	---	---	19900	18900	19400	---	---	---	7300	6800	7080
MONTH	24900	19300	22100	23300	18500	20600	19500	9930	13600	10800	5500	8650
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
JUNE			JULY			AUGUST			SEPTEMBER			
1	7500	7000	7200	8900	8300	8480	15500	15100	15300	18500	18300	18400
2	7300	6500	6940	9300	8600	8750	15800	15300	15600	18500	18300	18500
3	7100	6700	6930	8900	8600	8740	15900	15600	15700	18500	18300	18400
4	7100	6300	6940	8800	8300	8720	16100	15800	16000	18600	18400	18500
5	7300	6700	6920	9200	8800	8900	16400	16100	16300	18800	18600	18600
6	8200	7000	7520	9600	8600	9030	16500	16300	16400	18900	18500	18700
7	8200	6900	7660	9700	8900	9200	16900	16500	16700	18800	18400	18600
8	7700	7300	7480	9500	8700	9200	16900	16700	16800	19100	18600	18800
9	7700	7400	7500	9600	9400	9510	17500	16900	17200	19200	18800	19000
10	7800	7400	7610	9600	9300	9430	17400	17100	17200	19500	19000	19300
11	7900	7600	7800	9900	9400	9610	17400	17200	17300	19200	18900	19100
12	8100	7800	7920	10100	9600	9870	17500	17200	17400	19700	19000	19400
13	8200	7800	7990	10300	10000	10100	17400	17200	17300	19600	19100	19400
14	8100	7900	8000	10600	10100	10300	17500	17200	17300	19600	19200	19300
15	9910	7700	7910	11300	10300	10800	17500	17400	17400	19800	19400	19600
16	8200	7800	8050	12000	11300	11800	17700	17400	17500	19900	19600	19700
17	8200	7900	8070	11900	11700	11800	17800	17500	17700	20000	19700	19800
18	8300	7900	8130	12400	11700	12000	18100	17600	17800	19900	19600	19800
19	8300	7700	8160	12200	11700	12000	18100	17800	17900	20000	19800	19900
20	8300	7800	8040	12200	11700	12000	18300	18000	18100	20100	19800	20000
21	8100	7600	7790	14200	12200	12700	18500	18300	18400	20000	19700	19900
22	7900	7400	7550	13900	12800	13300	18600	18300	18500	20100	19400	19800
23	8400	7200	7840	13900	13200	13300	18400	18200	18300	20100	19900	20000
24	8700	7700	8280	13900	13400	13700	18300	18200	18200	20000	19800	19900
25	8700	8300	8430	14400	13700	13900	18300	18200	18200	20400	20000	20200
26	8600	8200	8360	14800	13800	13900	18300	18100	18200	20900	20300	20600
27	8700	8400	8530	15000	14400	14700	18400	18100	18300	21000	20500	20800
28	8700	8500	8560	15100	14700	14900	18300	18200	18300	21000	20700	20900
29	8500	8300	8400	15100	14900	15000	18300	18100	18200	21100	20700	20900
30	8600	8400	8510	15200	14900	15100	18600	17900	18300	20900	20400	20600
31	---	---	---	15100	14900	15100	18500	18300	18400	---	---	---
MONTH	9910	6300	7830	15200	8300	11500	18600	15100	17400	21100	18300	19500

RHODE RIVER BASIN

01590720 RHODE RIVER NEAR SOUTH RIVER, MD--Continued

PM (STANDARD UNITS). WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			DECEMBER			JANUARY			
1	8.4	7.9	8.1	8.7	8.6	8.7	8.5	8.3	8.4	8.5	8.1	8.3
2	8.2	7.7	8.0	8.6	8.5	8.6	8.4	8.0	8.2	8.5	8.2	8.4
3	8.2	7.8	8.0	8.7	8.4	8.6	8.5	7.9	8.2	8.6	8.3	8.4
4	8.2	7.7	7.9	8.6	8.5	8.5	8.4	8.0	8.2	8.6	8.4	8.5
5	8.2	7.7	7.9	8.6	8.4	8.5	8.4	8.1	8.3	8.6	8.5	8.5
6	8.4	7.8	8.1	8.6	8.4	8.5	8.4	8.1	8.3	8.6	8.5	8.5
7	8.4	8.0	8.2	8.6	8.4	8.5	8.4	7.8	8.1	8.6	8.5	8.6
8	8.3	8.1	8.2	8.7	8.3	8.5	8.4	7.9	8.2	8.7	8.4	8.6
9	8.2	7.8	8.0	8.8	8.3	8.6	8.3	7.6	8.1	8.7	8.5	8.6
10	8.2	7.8	8.0	8.8	8.6	8.7	8.4	8.1	8.3	8.6	8.5	8.5
11	8.2	7.9	8.1	8.8	8.6	8.7	8.3	8.2	8.3	8.5	8.4	8.5
12	8.3	7.9	8.1	8.7	8.5	8.6	8.5	8.0	8.3	8.5	8.3	8.4
13	8.2	7.9	8.0	8.6	8.4	8.5	8.6	8.4	8.5	8.6	8.4	8.5
14	8.0	7.7	7.8	8.6	8.4	8.5	8.5	8.4	8.5	8.7	8.5	8.6
15	8.1	7.7	7.9	8.5	8.3	8.5	8.6	8.4	8.5	8.6	8.4	8.5
16	8.1	7.8	8.0	8.6	8.5	8.5	8.5	8.4	8.4	8.6	8.4	8.5
17	8.4	8.0	8.2	8.6	8.5	8.6	8.6	8.3	8.5	8.5	8.4	8.5
18	8.4	8.2	8.3	8.7	8.3	8.5	8.6	8.3	8.5	8.4	8.1	8.3
19	8.4	8.1	8.3	8.6	8.4	8.6	8.6	8.2	8.3	8.6	8.1	8.5
20	8.4	8.2	8.3	8.6	8.4	8.5	8.4	8.2	8.3	8.7	8.5	8.5
21	8.5	8.1	8.3	8.5	8.3	8.4	8.4	8.3	8.4	9.1	8.5	8.7
22	8.6	8.2	8.4	8.6	8.2	8.4	8.5	8.3	8.4	8.8	8.5	8.6
23	8.6	8.4	8.5	8.7	8.4	8.5	8.5	8.4	8.4	8.6	8.4	8.5
24	8.6	8.4	8.5	8.6	8.2	8.5	8.5	8.1	8.4	8.5	8.2	8.4
25	8.5	8.4	8.4	8.7	8.5	8.6	8.5	8.3	8.4	8.4	8.2	8.3
26	8.6	8.2	8.4	8.7	8.6	8.6	8.4	8.2	8.3	8.8	8.2	8.4
27	8.6	8.3	8.5	8.8	8.6	8.7	8.4	8.2	8.3	8.6	8.4	8.5
28	8.7	8.3	8.5	8.7	8.6	8.6	8.4	8.0	8.3	8.7	8.4	8.5
29	8.7	8.5	8.6	8.6	8.5	8.6	8.3	7.7	8.0	8.7	8.4	8.5
30	8.7	8.5	8.6	8.7	8.3	8.5	8.3	7.4	7.8	8.5	8.4	8.5
31	8.7	8.6	8.6	---	---	---	8.4	8.1	8.3	8.6	8.4	8.5
MONTH	8.7	7.7	8.2	8.8	8.2	8.6	8.6	7.4	8.3	9.1	8.1	8.5
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY			MARCH			APRIL			MAY			
1	8.6	8.5	8.6	8.8	8.5	8.6	9.0	8.6	8.8	9.7	9.4	9.5
2	8.5	8.4	8.5	8.6	8.4	8.5	9.1	8.8	9.0	9.7	9.3	9.5
3	8.5	8.3	8.4	8.6	8.3	8.4	9.1	8.9	9.0	9.6	9.2	9.5
4	8.5	8.2	8.4	9.0	8.3	8.6	9.1	8.9	9.0	9.7	9.2	9.4
5	8.8	8.4	8.6	8.7	8.4	8.5	9.2	8.9	9.0	9.8	9.0	9.4
6	8.6	8.5	8.5	8.5	8.3	8.5	9.5	8.8	9.2	9.8	8.9	9.4
7	8.5	8.4	8.4	8.5	8.1	8.4	9.4	8.9	9.2	9.8	9.5	9.7
8	8.6	8.3	8.5	8.4	8.1	8.3	9.4	9.0	9.3	9.7	9.4	9.6
9	8.6	8.4	8.5	8.3	8.0	8.2	9.4	8.8	9.2	9.6	9.3	9.4
10	8.6	8.3	8.5	8.4	7.9	8.2	9.1	8.6	9.0	9.8	9.4	9.5
11	8.5	8.3	8.4	8.4	8.1	8.3	9.1	8.4	8.8	9.9	9.4	9.7
12	8.4	8.1	8.3	8.4	8.0	8.2	8.7	7.7	8.2	9.8	9.4	9.6
13	8.5	8.3	8.4	8.4	8.0	8.2	9.3	7.7	8.8	9.9	9.3	9.6
14	8.5	8.3	8.4	8.5	8.2	8.3	9.3	8.9	9.1	9.8	9.3	9.6
15	8.4	8.3	8.3	8.7	8.1	8.3	9.2	9.1	9.1	9.7	8.9	9.4
16	8.3	8.2	8.3	8.6	8.2	8.5	9.3	8.8	9.0	9.3	8.6	9.0
17	8.3	8.2	8.2	8.7	8.5	8.6	9.4	8.6	8.9	9.5	7.9	8.9
18	8.7	8.2	8.3	8.5	8.4	8.4	9.3	8.7	9.0	9.6	8.8	9.3
19	8.5	8.3	8.3	8.3	8.1	8.2	9.4	8.7	9.1	9.3	8.9	9.1
20	8.4	8.3	8.4	8.5	7.9	8.2	9.5	9.2	9.3	9.3	8.4	8.8
21	8.5	8.4	8.4	8.4	8.1	8.2	9.4	7.9	9.1	9.2	7.4	8.5
22	8.6	8.4	8.5	8.5	7.9	8.2	9.2	7.7	8.5	8.9	7.3	8.0
23	8.6	8.4	8.5	8.6	8.2	8.4	9.6	8.8	9.3	9.1	7.2	8.2
24	8.6	8.3	8.5	8.9	8.4	8.6	9.5	8.9	9.3	8.6	7.1	7.6
25	8.8	8.5	8.6	8.7	8.5	8.6	9.2	8.7	9.0	8.8	7.1	8.0
26	8.7	8.5	8.6	8.7	8.3	8.5	9.3	9.0	9.2	8.8	8.1	8.5
27	8.6	8.5	8.6	8.6	8.3	8.5	9.5	9.1	9.3	8.9	7.4	8.2
28	8.9	8.5	8.6	8.4	8.2	8.3	9.8	9.2	9.5	8.5	7.6	8.0
29	---	---	---	8.6	8.1	8.4	9.8	9.2	9.6	8.4	7.0	7.5
30	---	---	---	8.9	8.4	8.6	9.8	9.5	9.6	8.7	7.0	7.9
31	---	---	---	8.8	8.5	8.7	---	---	---	8.4	6.9	7.4
MONTH	8.9	8.1	8.5	9.0	7.9	8.4	9.8	7.7	9.1	9.9	6.9	8.9

RHODE RIVER BASIN

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01590720 RHODE RIVER NEAR SOUTH RIVER, MD--Continued

PH (STANDARD UNITS), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	8.1	6.8	7.4	9.0	7.4	8.5	7.5	7.1	7.3	8.4	7.3	7.7
2	8.3	7.2	7.8	9.1	7.7	8.6	8.0	7.2	7.4	8.4	7.4	7.8
3	8.4	7.3	7.7	8.9	8.3	8.5	8.1	7.3	7.6	8.6	7.3	7.8
4	8.8	7.0	7.9	8.5	7.4	8.0	8.4	7.5	7.9	8.0	7.4	7.7
5	9.0	7.4	8.4	8.4	7.1	7.6	8.5	7.7	8.0	7.9	7.2	7.4
6	8.9	6.7	7.6	7.9	7.0	7.4	8.4	7.3	7.9	8.5	7.2	7.7
7	8.9	6.8	7.9	8.6	7.0	7.7	8.5	7.4	8.0	8.0	7.3	7.5
8	8.8	7.7	8.4	8.7	7.4	8.0	8.5	7.5	8.0	8.3	7.3	7.6
9	8.8	8.0	8.4	8.6	7.0	7.8	8.2	7.2	7.7	8.5	7.4	7.8
10	9.2	7.2	8.4	8.8	7.3	8.1	8.3	7.2	7.7	8.2	7.6	7.9
11	9.1	7.8	8.7	9.0	7.5	8.4	8.4	7.5	7.9	8.1	7.5	7.7
12	9.0	6.9	8.1	8.9	7.2	8.2	8.2	7.6	7.9	8.1	7.3	7.6
13	8.7	6.9	7.6	8.6	7.1	7.6	8.2	7.5	7.8	7.7	7.2	7.4
14	8.3	7.2	7.6	9.0	7.0	7.9	8.3	7.6	7.9	7.8	7.2	7.4
15	9.2	9.0	9.1	8.7	7.3	8.1	8.5	7.7	8.1	8.2	7.3	7.7
16	9.1	8.2	8.8	8.0	7.0	7.3	8.6	7.8	8.2	8.4	7.7	8.0
17	9.2	6.9	8.7	8.2	7.0	7.5	---	---	---	8.3	7.8	8.0
18	9.0	8.3	8.7	8.5	7.2	7.8	---	---	---	8.2	7.4	7.7
19	8.6	7.7	8.1	8.5	7.1	7.5	---	---	---	8.1	7.6	7.8
20	8.1	7.1	7.5	8.8	7.1	7.8	---	---	---	8.3	7.4	7.9
21	7.9	7.0	7.5	7.9	7.1	7.5	---	---	---	7.9	7.6	7.8
22	9.2	7.1	8.1	8.3	7.1	7.6	---	---	---	8.1	7.4	7.8
23	9.4	7.3	8.5	8.6	7.1	8.0	---	---	---	8.1	7.8	7.9
24	8.9	7.0	7.9	8.1	7.2	7.5	---	---	---	8.2	7.7	7.9
25	8.9	7.0	8.0	7.6	7.3	7.4	---	---	---	8.2	7.7	7.9
26	9.0	7.6	8.5	7.6	7.4	7.5	---	---	---	8.2	7.5	7.9
27	9.0	7.7	8.5	8.0	7.5	7.7	---	---	---	8.4	7.8	8.1
28	8.8	7.0	8.2	8.2	7.6	7.8	---	---	---	8.3	7.8	8.1
29	8.9	7.1	8.0	7.4	7.1	7.3	---	---	---	8.2	7.9	8.1
30	8.9	7.8	8.4	7.4	7.1	7.2	8.6	7.3	8.1	8.0	7.7	7.8
31	---	---	---	7.3	7.1	7.2	8.0	7.4	7.7	---	---	---
MONTH	9.4	6.7	8.2	9.1	7.0	7.8	8.6	7.1	7.8	8.6	7.2	7.8

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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

RHODE RIVER BASIN

01590720 RHODE RIVER NEAR SOUTH RIVER, MD--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY			MARCH			APRIL			MAY			
1	4.5	3.5	4.5	6.5	6.0	6.5	9.5	8.0	9.0	20.5	18.0	19.0
2	5.5	4.5	4.5	7.0	6.0	6.5	10.0	9.0	9.5	20.0	19.0	19.5
3	5.5	4.5	5.0	7.5	6.0	6.5	11.0	9.0	10.0	20.5	19.5	20.0
4	5.0	3.5	4.5	8.0	6.5	7.0	11.0	9.5	10.0	20.5	19.0	19.5
5	3.5	2.5	3.0	10.0	7.0	8.0	11.5	10.5	11.0	20.0	18.5	19.0
6	3.0	2.0	2.5	10.0	8.5	9.5	11.5	11.0	11.5	20.0	18.0	19.0
7	2.5	1.5	2.0	10.0	8.5	9.5	11.5	11.0	11.5	20.0	19.0	19.5
8	2.5	2.0	2.0	10.0	9.0	9.5	12.0	11.5	11.5	19.0	18.0	18.5
9	2.5	1.5	2.0	9.0	8.5	9.0	12.0	11.5	12.0	19.0	18.0	18.5
10	2.5	2.0	2.5	8.5	8.0	8.5	11.5	10.5	11.0	18.5	17.5	18.0
11	2.0	.0	1.0	8.0	7.5	8.0	11.5	10.5	11.0	19.5	17.5	18.0
12	.5	.0	.5	8.0	6.0	7.0	11.5	10.0	10.5	---	---	---
13	1.0	.0	.5	7.5	6.0	6.5	13.0	10.0	11.5	---	---	---
14	1.5	1.0	1.0	8.5	6.5	7.0	13.5	11.5	12.5	---	---	---
15	2.0	1.0	1.5	9.5	7.5	8.0	13.0	12.5	13.0	---	---	---
16	2.5	1.5	1.5	9.5	7.5	8.5	13.0	12.0	12.5	---	---	---
17	2.5	2.0	2.5	9.0	7.5	8.0	13.5	12.0	12.5	---	---	---
18	4.0	2.5	3.0	9.0	8.0	8.0	12.0	11.0	11.5	---	---	---
19	4.5	3.5	4.0	9.0	8.0	8.5	12.0	9.5	11.0	---	---	---
20	5.0	4.0	4.5	10.5	8.0	9.0	9.5	8.5	9.0	---	---	---
21	6.0	5.0	5.5	11.0	10.0	10.5	10.0	8.5	9.0	---	---	---
22	7.0	6.0	6.0	9.5	9.0	9.5	11.5	9.0	9.5	---	---	---
23	7.0	6.0	6.5	9.0	8.0	8.5	13.0	11.0	12.0	---	---	---
24	7.0	5.0	6.0	8.0	7.0	7.5	12.5	11.0	12.0	---	---	---
25	6.5	6.0	6.5	7.5	6.0	7.0	11.0	10.0	10.5	---	---	---
26	6.0	5.0	5.5	8.0	6.5	7.5	11.5	10.0	10.5	---	---	---
27	6.0	5.0	5.5	8.0	7.5	7.5	14.5	11.0	12.0	---	---	---
28	6.5	5.5	6.0	7.5	7.0	7.5	18.0	12.5	15.0	---	---	---
29	---	---	---	8.5	7.0	7.5	18.5	15.0	16.5	---	---	---
30	---	---	---	9.5	8.0	8.5	19.5	17.5	18.0	---	---	---
31	---	---	---	9.0	8.0	8.5	---	---	---	---	---	---
MONTH	7.0	.0	3.5	11.0	6.0	8.0	19.5	8.0	11.5	20.5	17.5	19.0
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
JUNE			JULY			AUGUST			SEPTEMBER			
1	---	---	---	26.5	21.5	24.5	30.0	28.5	29.0	29.0	27.0	27.5
2	---	---	---	29.0	25.5	27.0	30.5	28.0	29.0	28.5	27.0	28.0
3	---	---	---	30.5	27.5	29.0	31.5	29.0	30.0	28.5	27.0	27.5
4	---	---	---	31.0	28.0	29.5	30.0	29.0	29.5	28.0	27.0	27.5
5	---	---	---	28.5	27.5	28.0	30.5	29.0	29.5	29.0	27.5	27.5
6	---	---	---	28.0	27.0	27.5	30.5	29.0	29.5	30.0	28.0	28.5
7	---	---	---	28.0	26.0	27.0	31.0	29.0	30.0	29.5	28.0	28.5
8	---	---	---	28.5	26.0	27.0	31.5	29.5	30.5	29.0	27.5	28.0
9	---	---	---	27.5	26.5	27.0	30.5	29.5	30.0	28.5	27.0	27.5
10	---	---	---	28.0	26.0	27.0	30.0	28.5	29.5	28.0	27.0	27.5
11	---	---	---	28.5	26.5	27.0	30.5	29.0	29.5	28.5	27.0	27.5
12	---	---	---	27.5	26.5	27.0	29.5	27.5	28.5	28.5	27.5	27.5
13	---	---	---	27.5	26.5	27.0	27.5	25.0	26.0	28.0	25.5	27.0
14	---	---	---	29.5	26.5	27.5	26.0	24.5	25.0	25.5	24.0	24.5
15	---	---	---	28.5	27.0	28.0	26.5	24.5	25.5	24.5	23.0	23.5
16	31.0	27.5	29.5	28.0	26.5	27.5	27.5	25.0	26.0	23.5	22.5	23.0
17	31.0	28.5	29.5	29.0	27.5	28.0	27.5	25.5	26.5	24.0	22.5	23.0
18	30.0	28.5	29.5	29.0	28.0	28.5	27.0	26.5	26.5	24.5	23.0	23.5
19	29.0	28.0	28.5	30.5	28.0	29.0	29.0	26.0	27.0	25.0	23.5	24.0
20	28.5	27.0	28.0	31.0	28.5	29.5	28.5	27.0	27.5	25.5	24.0	24.5
21	27.0	25.5	26.5	29.5	27.0	29.0	29.5	27.5	28.0	24.5	23.5	24.0
22	27.0	24.5	25.5	28.5	27.5	28.0	29.0	27.5	28.5	23.5	21.5	22.5
23	27.5	24.0	25.5	28.0	26.5	27.5	28.5	28.0	28.0	21.5	20.0	20.5
24	26.0	24.5	25.5	28.5	27.0	27.5	29.0	27.5	28.0	20.0	19.0	19.5
25	27.0	25.5	26.5	28.0	27.0	27.5	29.0	27.5	28.5	20.5	18.5	19.5
26	28.5	26.0	27.0	28.5	26.5	27.5	29.5	27.5	28.5	20.5	19.0	20.0
27	29.5	27.0	27.5	30.0	27.0	28.5	29.0	27.5	28.0	21.0	19.0	20.0
28	29.0	27.5	28.0	29.5	27.5	28.5	28.5	28.0	28.0	21.5	20.0	20.5
29	28.0	26.0	27.0	29.5	27.5	28.5	29.5	27.5	28.0	20.5	19.0	20.0
30	26.5	11.5	21.0	29.5	27.5	28.5	30.5	27.5	28.5	19.0	18.0	18.5
31	---	---	---	30.5	28.5	29.0	29.0	28.0	28.0	---	---	---
MONTH	31.0	11.5	27.0	31.0	21.5	28.0	31.5	24.5	28.0	30.0	18.0	24.5

01590720 RHODE RIVER NEAR SOUTH RIVER, MD--Continued

OXYGEN, DISSOLVED (DO), MG/L, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			DECEMBER			JANUARY			
1	9.4	6.2	7.4	12.8	11.3	12.1	10.0	7.6	9.2	11.8	9.6	10.8
2	8.3	5.3	7.0	12.1	10.9	11.4	9.0	6.4	7.8	11.8	9.2	11.1
3	8.2	5.9	7.0	11.2	9.8	10.5	9.7	6.0	8.2	12.3	10.6	11.5
4	8.3	5.7	6.9	9.9	9.1	9.6	9.3	7.2	8.4	12.8	11.1	11.8
5	8.3	5.6	6.7	9.5	8.0	8.8	9.4	7.5	8.6	12.0	11.1	11.6
6	9.4	6.3	7.6	9.8	7.6	8.9	9.5	7.9	8.8	13.3	11.1	12.1
7	9.3	7.0	8.3	10.0	7.7	8.8	9.5	6.1	7.6	13.2	12.2	12.7
8	8.5	7.1	7.7	11.0	7.3	9.5	10.8	6.5	9.0	13.5	11.7	12.8
9	7.6	5.3	6.8	11.8	8.0	10.3	9.0	5.6	7.6	13.7	12.1	12.9
10	8.1	5.7	6.7	11.3	9.9	10.6	9.3	7.6	8.6	12.7	11.8	12.1
11	8.5	6.3	7.3	11.2	10.0	10.5	9.0	8.2	8.6	12.3	11.5	11.9
12	8.7	6.5	7.4	10.5	9.1	10.0	10.4	7.3	8.9	12.4	10.7	11.8
13	7.9	6.2	6.9	10.2	8.8	9.5	10.5	9.3	9.8	12.4	11.0	11.9
14	6.8	5.6	6.7	10.2	8.6	9.5	10.4	9.7	10.1	13.1	11.4	12.1
15	8.3	6.1	7.2	10.4	8.4	9.7	11.0	9.5	10.3	12.1	11.3	11.8
16	8.4	6.5	7.5	10.6	9.4	10.1	11.7	10.1	10.4	12.2	11.3	11.8
17	9.3	7.2	8.3	10.9	9.3	10.1	13.0	10.5	11.6	12.2	11.3	11.8
18	9.4	8.0	8.8	11.6	8.5	10.2	12.9	10.9	11.7	12.0	9.9	11.5
19	10.0	8.0	9.0	11.3	9.9	10.6	12.9	10.3	11.1	13.5	11.1	11.9
20	9.8	8.6	9.2	11.3	9.7	10.4	11.5	10.6	11.2	14.4	11.8	12.7
21	11.0	7.7	9.2	11.2	9.5	10.2	12.0	11.0	11.5	16.8	13.0	14.8
22	11.8	8.5	9.9	11.6	8.8	10.2	12.6	11.2	11.9	15.8	13.0	13.9
23	11.2	9.1	10.0	12.6	10.3	11.3	12.9	11.6	12.4	13.7	12.6	13.1
24	10.5	8.9	9.8	12.1	8.0	10.5	13.1	10.9	12.4	13.5	11.3	12.3
25	9.6	8.9	9.2	11.4	9.4	10.3	13.2	9.4	12.3	13.0	11.1	12.1
26	11.4	8.1	9.5	11.2	9.1	10.4	12.7	11.2	11.9	16.5	11.5	13.2
27	11.3	8.9	10.2	11.4	9.9	10.5	12.1	11.0	11.6	14.9	13.1	13.7
28	12.8	8.9	11.1	10.3	9.4	10.0	12.4	9.9	11.3	15.4	12.6	13.7
29	13.0	10.9	12.0	10.1	8.8	9.6	11.5	8.8	10.2	15.7	12.7	13.7
30	13.1	10.7	12.1	10.8	7.5	9.3	10.3	6.9	8.5	13.8	13.1	13.5
31	13.1	11.4	12.2	---	---	---	11.5	9.0	10.5	14.2	10.2	13.0
MONTH	13.1	5.3	8.6	12.8	7.3	10.1	13.2	5.6	10.1	16.8	9.2	12.4
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY			MARCH			APRIL			MAY			
1	13.8	12.4	13.6	16.1	12.5	13.9	15.6	12.4	14.0	12.5	9.7	11.1
2	13.5	12.0	12.9	14.1	11.9	12.6	15.8	13.3	14.5	11.7	8.4	10.3
3	13.1	11.4	12.1	14.5	11.4	12.6	14.3	12.7	13.4	11.1	8.1	10.0
4	12.8	11.1	11.8	19.5	12.4	14.3	14.5	12.6	13.4	11.1	7.6	9.1
5	15.5	10.4	13.1	14.8	11.6	12.5	15.0	12.3	13.6	12.7	5.7	8.6
6	13.8	11.2	12.7	12.2	10.4	11.4	16.5	11.8	15.1	13.1	5.2	9.6
7	12.7	10.7	12.0	12.0	9.4	11.2	16.6	11.6	14.2	13.1	9.7	11.2
8	13.0	11.6	12.3	11.1	9.4	10.3	16.9	12.5	15.5	11.3	8.7	9.9
9	13.4	11.7	12.6	10.8	9.0	10.1	16.7	11.0	13.6	10.2	7.4	9.0
10	15.1	11.1	12.9	10.8	8.6	9.9	11.6	10.1	10.8	11.8	8.5	9.6
11	14.0	12.2	12.7	10.9	9.4	10.3	11.1	8.6	9.9	13.4	9.3	11.3
12	13.5	11.0	12.7	11.5	9.1	10.2	9.9	6.8	8.4	12.5	8.8	10.6
13	14.4	12.8	13.3	11.9	9.9	10.9	14.6	7.1	11.5	13.1	8.2	10.7
14	14.6	11.2	13.1	12.0	10.5	11.3	13.5	11.2	12.5	13.1	8.5	10.7
15	13.5	12.4	12.7	13.8	10.3	11.4	12.7	10.9	11.8	11.1	5.3	9.1
16	13.3	11.7	12.7	14.0	10.8	12.2	13.5	10.0	11.3	8.0	4.5	6.8
17	13.1	11.7	12.9	12.5	11.0	11.9	13.8	8.6	10.5	11.3	3.9	7.6
18	17.4	11.8	13.5	10.9	10.3	10.5	13.8	9.6	11.2	12.8	5.6	9.3
19	14.4	12.3	13.7	10.9	10.1	10.4	13.4	9.5	11.7	9.5	7.0	8.4
20	14.5	13.1	14.0	12.4	9.2	10.6	12.4	10.5	11.5	10.7	6.0	7.7
21	15.3	12.7	14.4	11.4	10.4	10.9	13.2	8.3	11.2	9.6	2.1	6.1
22	16.2	14.6	15.3	12.0	9.2	10.7	13.1	8.1	10.4	8.5	2.4	5.1
23	16.7	14.6	15.5	12.5	10.2	11.4	15.8	12.0	13.9	9.5	1.1	5.7
24	16.4	13.6	15.3	14.8	11.3	12.5	13.2	10.4	11.6	7.1	.7	3.2
25	17.4	15.0	15.9	12.9	11.0	12.1	12.2	9.1	10.5	9.2	.7	5.4
26	16.2	13.9	14.9	14.0	10.6	12.1	13.2	10.3	11.7	9.3	6.1	7.7
27	14.8	13.6	14.1	12.5	11.0	11.8	14.7	11.1	12.6	9.7	4.7	7.1
28	17.8	13.7	14.8	11.1	10.4	10.7	16.6	12.3	14.4	8.4	5.5	6.6
29	---	---	---	12.7	10.0	11.3	15.7	11.1	13.8	7.9	1.8	4.7
30	---	---	---	15.2	11.2	12.8	13.9	11.3	12.8	9.9	2.4	6.5
31	---	---	---	14.2	12.2	13.3	---	---	---	8.8	1.4	5.1
MONTH	17.8	10.4	13.5	19.5	8.6	11.6	16.9	6.8	12.4	13.4	.7	8.2

RHODE RIVER BASIN

01590720 RHODE RIVER NEAR SOUTH RIVER, MD--Continued

OXYGEN, DISSOLVED (DO), MG/L, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	7.7	1.3	4.8	11.2	3.7	8.2	4.3	.5	2.5	8.3	1.3	3.7
2	8.4	5.1	6.9	13.6	4.0	8.5	6.5	1.0	3.3	9.1	2.2	4.7
3	8.0	4.9	6.1	10.9	6.2	7.8	6.2	2.2	4.1	9.0	1.8	4.7
4	9.8	3.1	6.5	8.5	2.7	5.6	7.9	2.9	5.4	4.7	2.4	3.5
5	9.6	4.3	7.6	6.6	.0	3.8	8.3	3.8	5.9	4.3	1.1	2.4
6	9.2	.0	4.4	5.4	.2	2.7	8.2	1.7	5.2	8.9	1.3	3.9
7	10.7	1.7	6.3	9.1	.0	4.7	9.2	2.7	5.7	5.1	1.3	2.9
8	9.3	5.4	7.6	9.6	3.6	6.0	8.9	2.6	5.9	8.7	1.6	4.1
9	8.9	5.0	6.6	8.8	.7	5.4	6.4	.1	3.7	10.1	2.7	5.4
10	10.1	2.0	7.1	10.4	3.2	6.7	7.7	.0	3.7	7.3	3.4	5.3
11	10.1	3.6	7.2	11.4	3.9	7.5	8.9	2.7	5.8	6.4	2.7	4.1
12	9.5	.2	4.8	10.5	1.7	6.3	7.0	3.4	5.1	6.3	2.2	3.5
13	7.4	.0	3.3	8.6	.8	4.0	6.6	2.6	4.5	4.1	1.7	3.0
14	5.2	2.0	3.2	9.7	.0	4.7	6.8	3.5	5.1	6.2	1.9	3.5
15	10.4	9.4	9.8	7.4	2.0	5.2	6.5	3.1	5.1	9.1	3.5	5.7
16	10.7	5.0	8.5	3.3	.0	1.4	9.3	2.6	5.9	10.3	5.7	7.7
17	11.0	4.7	8.0	3.0	.0	1.4	8.4	4.0	6.3	9.2	6.1	7.0
18	10.2	6.0	7.4	6.6	.4	3.2	6.1	2.0	4.5	8.6	3.8	5.8
19	8.7	4.6	6.1	5.5	.0	2.1	8.9	1.7	4.7	7.8	4.4	5.6
20	7.7	1.2	4.5	10.3	.0	3.9	5.2	1.5	3.1	8.5	3.7	6.1
21	6.4	2.3	5.0	4.9	.0	2.4	5.0	1.6	3.1	6.4	5.0	5.7
22	14.0	2.3	7.9	7.0	.0	3.0	7.9	1.4	4.7	7.3	3.8	5.6
23	17.2	3.2	9.9	7.7	.0	5.0	4.9	2.0	3.4	7.6	5.8	6.5
24	10.8	.2	5.9	4.3	.0	1.7	5.7	1.5	3.1	8.4	5.3	6.6
25	12.3	.4	6.8	2.7	.0	.7	5.1	2.4	3.6	8.5	5.6	6.8
26	13.6	5.0	9.5	2.7	.0	1.1	6.3	1.9	3.5	7.9	4.6	6.4
27	11.5	4.6	8.6	4.7	.0	2.1	4.8	1.8	3.2	10.0	6.0	7.4
28	9.3	.1	6.1	5.1	.2	2.0	3.0	1.2	1.9	9.0	6.4	7.8
29	9.9	1.4	5.2	3.2	1.0	2.1	2.6	.5	1.4	8.7	6.8	7.6
30	10.7	4.4	7.3	2.0	.7	1.3	8.4	.5	3.9	7.4	5.9	6.7
31	---	---	---	1.4	.3	.8	5.6	1.8	3.7	---	---	---
MONTH	17.2	.0	6.6	13.6	.0	3.9	9.3	.0	4.2	10.3	1.1	5.3

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.

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 discharge, 0.20 ft³/s (0.006 m³/s) Sept. 10, 11, 12, 1966, gage height, 1.66 ft (0.506 m).

Date	Time	Discharge (ft ³ /s) (m ³ /s)		Gage height (ft) (m)		Date	Time	Discharge (ft ³ /s) (m ³ /s)		Gage height (ft) (m)	
Mar. 8	1100	1280	36.2	6.58	2.006	May 22	2400	823	23.3	5.56	1.695
Apr. 10	1030	897	25.4	5.75	1.753	June 21	0330	*2010	56.9	7.76	2.365
Apr. 15	1900	1350	38.2	6.71	2.045						

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.9	10	24	14	16	42	60	76	64	34	14	11
2	8.5	11	23	14	17	60	57	74	60	32	15	10
3	8.1	11	19	14	46	45	110	71	58	30	13	9.4
4	7.9	24	18	13	28	39	69	72	70	29	13	9.0
5	8.1	32	17	13	22	35	61	65	67	29	33	8.9
6	8.1	15	16	15	21	33	58	61	66	29	29	8.5
7	8.1	13	14	14	23	40	60	58	107	27	17	8.0
8	7.8	12	13	13	23	411	80	63	62	26	15	7.6
9	7.6	12	13	13	20	150	96	63	54	25	14	7.4
10	7.6	11	12	26	19	133	444	55	51	25	13	7.3
11	7.4	11	13	43	13	89	156	53	48	24	15	7.1
12	7.6	11	15	24	21	74	113	51	46	24	18	12
13	9.3	31	13	19	32	64	95	49	43	23	16	15
14	13	17	12	18	28	57	86	48	42	22	15	12
15	9.6	14	13	17	27	53	502	82	42	21	14	10
16	9.2	12	73	17	29	47	246	260	40	21	13	9.5
17	8.0	12	36	16	29	44	152	140	38	20	12	9.5
18	8.0	12	24	15	32	71	128	85	68	19	12	9.4
19	8.1	11	20	13	37	166	112	83	74	20	12	9.0
20	8.5	11	20	12	38	79	109	97	143	20	11	8.7
21	9.6	11	18	12	41	152	91	110	500	27	10	11
22	9.1	11	17	13	57	98	84	183	79	20	10	17
23	8.6	11	16	27	87	77	80	240	53	18	11	11
24	8.5	11	16	33	77	68	265	109	45	19	12	10
25	29	11	15	23	57	62	168	91	41	18	11	10
26	28	10	16	20	48	56	117	89	37	17	11	10
27	14	10	16	19	40	134	102	86	35	16	10	10
28	12	13	16	18	38	126	94	74	34	15	11	9.5
29	11	81	17	17	---	79	87	80	38	14	11	9.1
30	10	28	15	17	---	69	81	76	35	14	11	14
31	10	---	14	17	---	64	---	68	---	14	10	---
TOTAL	319.2	490	584	559	986	2717	3954	2812	2140	692	432	300.9
MEAN	10.3	16.3	18.8	18.0	35.2	87.6	132	90.7	71.3	22.3	13.9	10.0
MAX	29	81	73	43	87	411	502	260	500	34	33	17
MIN	7.4	10	12	12	13	33	57	48	34	14	10	7.1
CFSM	.30	.47	.54	.52	1.01	2.52	3.79	2.61	2.05	.64	.40	.29
IN.	.34	.52	.62	.60	1.05	2.90	4.23	3.01	2.29	.74	.46	.32
CAL YR 1982	TOTAL	10085.2		MEAN 27.6	MAX 484	MIN 4.8	CFSM .79	IN 10.78				
WTR YR 1983	TOTAL	15986.1		MEAN 43.8	MAX 502	MIN 7.1	CFSM 1.26	IN 17.09				

PATUXENT RIVER BASIN

01591400 CATTAIL CREEK AT ROXBURY MILLS ROAD AT ROXBURY MILLS, MD

LOCATION.--Lat 39°15'27", long 77°03'13", Howard County, Hydrologic Unit 02060006, on right bank at upstream side of bridge on Roxbury Mill Road, 1.3 mi (2.1 km) upstream from mouth.

DRAINAGE AREA.--22.9 mi² (59.3 km²).

PERIOD OF RECORD.--June 1978 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 400 ft (122 m), from topographic map.

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

AVERAGE DISCHARGE.--5 years, 26.3 ft³/s (0.745 m³/s), 15.60 in/yr (396 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,000 ft³/s (113 m³/s) Sept. 6, 1979, gage height, 11.69 ft (3.563 m), from rating curve extended above 1,800 ft³/s (51.0 m³/s) on basis of contracted-opening and flow-over-road measurement of peak flow; minimum discharge recorded, 4.1 ft³/s (0.12 m³/s) part or all of each day Aug. 24-28, 1981, Sept. 17-20, 1982, but may have been less during period of no gage-height record Aug. 28 to Oct. 15, 1981.

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)
Mar. 8	1000	*2230 63.2	6.55 1.996	Apr. 15	1900	2200 62.3	6.52 1.987
Mar. 19	0050	507 14.4	3.85 1.173	May 16	1745	597 16.9	4.08 1.244
Mar. 27	2045	618 17.5	4.13 1.259	May 22	2330	1730 49.0	5.97 1.820
Apr. 10	0845	1630 46.2	5.85 1.783	June 21	0030	1060 30.0	5.00 1.524

Minimum daily discharge, 5.0 ft³/s (0.14 m³/s) Oct. 8-12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.0	6.9	16	11	12	21	29	35	33	23	11	8.5
2	6.0	6.5	16	11	29	26	28	34	31	22	11	7.7
3	5.6	6.5	14	11	28	20	59	34	30	21	11	7.6
4	5.4	24	13	10	18	18	33	35	37	20	11	7.4
5	5.4	24	12	11	15	17	31	32	41	21	18	7.5
6	5.4	11	12	12	15	17	29	30	32	20	18	6.8
7	5.2	9.5	11	11	16	19	31	30	40	19	13	6.3
8	5.0	8.8	10	11	16	558	42	33	30	18	12	6.0
9	5.0	8.3	10	10	15	68	63	33	28	18	11	5.8
10	5.0	8.1	9.6	17	14	63	523	30	27	18	10	5.7
11	5.0	7.8	10	23	9.6	38	70	29	26	17	11	6.1
12	5.0	8.1	11	15	14	32	47	28	25	17	14	7.9
13	5.9	17	10	13	17	29	41	27	24	16	12	11
14	7.3	10	9.5	12	17	27	38	27	23	15	11	9.1
15	5.8	9.5	10	13	17	25	776	48	24	15	10	7.6
16	5.6	8.7	53	12	18	24	117	197	25	15	9.7	7.2
17	5.3	8.2	22	12	18	23	58	62	22	14	9.4	7.3
18	5.3	8.1	15	12	21	55	51	39	31	14	9.4	6.9
19	5.3	8.1	14	11	23	109	46	43	34	14	9.3	7.0
20	5.4	8.1	14	10	22	36	43	51	160	15	8.6	6.4
21	6.3	8.1	13	10	24	75	40	86	160	18	7.9	8.2
22	6.0	8.1	12	11	31	40	38	221	37	14	7.8	12
23	5.8	8.1	13	23	44	32	37	216	30	13	8.6	7.6
24	5.6	8.1	13	19	36	30	168	47	28	14	9.5	7.6
25	18	8.1	12	15	27	28	75	40	26	13	8.7	7.6
26	17	8.1	13	14	23	27	48	41	24	13	8.1	7.6
27	8.9	7.8	12	13	20	115	43	41	24	12	7.7	7.6
28	7.4	9.5	13	13	19	63	40	35	23	12	8.5	7.3
29	7.3	54	13	12	---	36	38	40	26	11	9.3	7.0
30	7.0	17	12	13	---	32	37	38	24	11	8.1	12
31	7.0	---	12	13	---	30	---	34	---	11	7.7	---
TOTAL	206.2	344.1	430.1	404	578.6	1733	2719	1716	1125	494	322.3	230.3
MEAN	6.65	11.5	13.9	13.0	20.7	55.9	90.6	55.4	37.5	15.9	10.4	7.68
MAX	18	54	53	23	44	558	776	221	160	23	18	12
MIN	5.0	6.5	9.5	10	9.6	17	28	27	22	11	7.7	5.7
CFSM	.29	.50	.61	.57	.90	2.44	3.96	2.42	1.64	.69	.45	.34
IN.	.33	.56	.70	.66	.94	2.82	4.42	2.79	1.83	.80	.52	.37

CAL YR 1982 TOTAL 6106.0 MEAN 16.7 MAX 412 MIN 4.1 CFSM .73 IN 9.92
WTR YR 1983 TOTAL 10302.6 MEAN 28.2 MAX 776 MIN 5.0 CFSM 1.23 IN 16.74

PATUXENT RIVER BASIN

99

01591610 PATUXENT RIVER BELOW BRIGHTON DAM NEAR BRIGHTON, MD

LOCATION.--Lat 39°11'31", long 77°00'16", Montgomery County, Hydrologic Unit 02060006, on right bank at Brighton Dam, 500 ft (150 m) downstream from Triadelphia Reservoir, 1.3 mi (2.1 km) east of Brighton, and 92 mi (148 km) upstream from mouth.

DRAINAGE AREA.--78.6 mi² (204 km²).

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

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 310 ft (94 m) from topographic map. June 1978 to October 1980, nonrecording gage 300 ft (91 m) upstream on left bank at different datum.

REMARKS.--Records good. Flow completely regulated by Triadelphia Reservoir, 500 ft (150 m) upstream, usable capacity, 6,200,000,000 gal (23.47 hm³); no dead storage. Several observations of water temperature were made during the year.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,020 ft³/s (28.9 m³/s) Apr. 1, 1983, gage height, 5.10 ft (1.554 m); minimum discharge, 1.3 ft³/s (0.037 m³/s) Nov. 22, 23, 1982, gage height, 0.80 ft (0.244 m); minimum daily discharge, 2.1 ft³/s (0.059 m³/s) Jan. 27, 28, 1983.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 22, 1972, reached a discharge of 17,800 ft³/s (504 m³/s). Data furnished by Washington Suburban Sanitary Commission.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,020 ft³/s (28.9 m³/s) Apr. 1, gage height, 5.10 ft (1.554 m); minimum discharge, 1.3 ft³/s (0.037 m³/s) Nov. 22, 23, gage height, 0.80 ft (0.244 m); minimum daily discharge, 2.1 ft³/s (0.059 m³/s) Jan. 27, 28.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	27	22	32	20	7.2	18	407	29	472	129	68	14
2	27	24	42	20	5.9	5.4	356	28	209	70	68	14
3	27	26	58	20	7.5	8.2	11	81	11	70	68	14
4	28	32	56	53	4.4	11	21	24	13	69	68	14
5	53	84	50	40	5.0	11	69	168	29	68	69	14
6	106	95	30	8.4	7.5	11	106	253	165	68	68	14
7	106	33	30	8.4	36	11	174	252	129	68	68	14
8	106	31	20	8.4	63	12	292	253	313	68	68	14
9	106	31	7.7	8.4	31	12	245	137	218	75	68	22
10	104	24	8.8	8.4	35	84	8.4	79	66	77	68	54
11	58	22	8.6	8.4	88	109	75	92	67	77	69	53
12	31	27	20	8.8	104	76	395	113	76	79	70	77
13	31	33	18	8.3	104	76	565	114	107	79	68	102
14	31	47	13	7.0	84	76	343	114	109	42	68	101
15	30	47	14	7.7	77	90	148	58	56	44	68	101
16	31	47	11	8.1	30	104	622	26	57	50	67	101
17	31	37	10	7.8	2.8	102	571	347	70	48	68	101
18	30	32	10	7.9	29	101	554	526	71	48	68	101
19	30	19	10	7.8	103	50	510	227	108	50	68	101
20	13	16	10	7.8	104	8.4	273	191	129	54	68	101
21	8.9	30	11	7.8	66	8.6	42	117	330	61	68	101
22	8.8	11	129	8.3	63	222	83	9.6	418	53	68	98
23	8.8	16	298	8.5	103	135	96	190	406	65	57	78
24	8.8	33	255	7.7	64	21	96	374	249	65	53	36
25	8.9	47	124	5.9	68	123	239	504	51	67	12	37
26	72	45	26	4.2	104	132	448	230	51	62	12	37
27	74	37	71	2.1	103	67	539	89	53	70	12	38
28	30	33	105	2.1	45	179	367	90	50	68	11	24
29	31	32	77	6.4	---	180	150	11	50	68	11	9.0
30	30	32	23	8.1	---	77	29	11	117	68	12	11
31	30	---	23	6.9	---	108	---	193	---	68	10	---
TOTAL	1317.2	1045	1601.1	342.6	1544.3	2228.6	7834.4	4930.6	4250	2048	1689	1596.0
MEAN	42.5	34.8	51.6	11.1	55.2	71.9	261	159	142	66.1	54.5	53.2
MAX	106	95	298	53	104	222	622	526	472	129	70	102
MIN	8.8	11	7.7	2.1	2.8	5.4	8.4	9.6	11	42	10	9.0
(#)	3240	3380	3300	3940	4300	6190	6040	6480	6310	5950	5610	5070

CAL YR 1982 TOTAL 21631.2 MEAN 59.3 MAX 349 MTN 6.6
WTR YR 1983 TOTAL 30427.0 MEAN 83.4 MAX 422 MTN 2.1

* Month-end contents, in millions of gallons, in Triadelphia Reservoir (contents on Sept. 30, 1982, 3,910,000,000 gal (14.80 hm³)). Records furnished by Washington Suburban Sanitary Commission.

PATUXENT RIVER BASIN

01591700 HAWLINGS RIVER NEAR SANDY SPRING, MD

LOCATION.--Lat 39°10'29", long 77°01'22", Montgomery County, Hydrologic Unit 02060006, on right bank at downstream side of bridge on State Highway 650, 1.0 mi (1.6 km) upstream from mouth, and 1.7 mi (2.7 km) north of Sandy Spring.

DRAINAGE AREA.--27.0 mi² (69.9 km²).

PERIOD OF RECORD.--June 1978 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 320 ft (98 m), from topographic map.

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

AVERAGE DISCHARGE.--5 years, 32.3 ft³/s (0.923 m³/s), 16.25 in/yr (413 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,300 ft³/s (122 m³/s) Sept. 6, 1979, gage height, 8.80 ft (2.682 m), from rating curve extended above 1,200 ft³/s (34.0 m³/s) on basis of contracted-opening and flow-over-road measurement of peak flow; minimum discharge, 0.75 ft³/s (0.021 m³/s) Jan. 30, 1981, result of freezeup.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 700 ft³/s (19 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. 10	0730	925 26.2	5.10 1.554	May 22	2400	1010 28.6	5.32 1.622
Apr. 16	0030	977 27.7	5.24 1.597	June 21	0630	*1260 35.7	5.95 1.814

Minimum daily discharge, 4.4 ft³/s (0.12 m³/s) Sept. 9, 10.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.4	7.0	21	12	13	28	31	35	32	23	9.3	6.4
2	4.7	6.8	22	12	42	36	30	33	30	22	10	6.2
3	4.7	6.8	17	12	42	26	100	33	29	20	8.8	5.6
4	4.7	48	16	11	22	23	39	34	32	19	9.0	5.2
5	5.6	43	14	12	17	21	34	31	31	20	34	5.1
6	9.0	14	14	13	17	21	31	30	64	20	38	5.1
7	5.8	11	12	12	19	25	33	29	141	18	15	4.7
8	5.0	9.4	11	12	19	176	45	30	39	17	11	4.6
9	4.8	8.8	11	12	17	90	81	31	32	17	9.4	4.4
10	4.8	8.6	11	19	16	80	512	28	31	17	8.2	4.4
11	4.8	8.1	11	35	10	43	110	27	28	16	12	4.6
12	4.8	8.1	13	20	15	34	57	26	26	15	21	5.5
13	6.0	18	11	16	19	31	44	28	24	15	12	14
14	7.5	13	10	14	19	29	40	25	23	14	9.3	12
15	5.6	11	12	14	19	28	412	35	23	14	8.2	7.8
16	5.4	9.4	114	14	23	26	264	250	23	14	7.7	6.1
17	5.2	9.2	35	13	27	25	67	92	21	13	7.1	5.6
18	5.2	9.0	22	11	32	64	54	41	29	13	7.1	5.6
19	5.2	8.5	18	10	36	131	46	43	68	13	7.1	5.3
20	5.5	8.1	17	9.8	35	42	42	62	98	13	6.7	5.1
21	6.5	8.1	16	10	39	97	39	73	467	15	6.0	10
22	5.8	8.1	15	11	54	50	37	156	52	13	5.2	22
23	5.6	8.1	14	34	78	35	36	381	34	13	14	8.5
24	5.5	8.1	14	27	54	31	205	59	31	14	12	6.0
25	36	8.1	15	19	36	29	86	43	30	13	8.4	5.8
26	26	8.1	14	17	30	27	52	39	24	13	7.2	5.8
27	12	8.1	14	16	25	149	44	41	23	12	6.5	5.8
28	8.5	11	15	15	24	110	40	35	23	11	6.1	6.0
29	7.9	103	15	14	---	43	38	40	26	10	7.2	5.5
30	7.0	26	13	14	---	35	36	39	24	9.8	7.1	20
31	7.0	---	12	14	---	33	---	34	---	9.2	6.2	---
TOTAL	237.5	462.5	569	474.8	799	1618	2685	1883	1558	466.0	336.8	218.7
MEAN	7.66	15.4	18.4	15.3	28.5	52.2	89.5	60.7	51.9	15.0	10.9	7.29
MAX	36	103	114	35	78	176	512	381	467	23	38	22
MIN	4.7	6.8	10	9.8	10	21	30	25	21	9.2	5.2	4.4
CFSM	.28	.57	.68	.57	1.06	1.93	3.32	2.25	1.92	.56	.40	.27
IN.	.33	.64	.78	.65	1.10	2.23	3.70	2.59	2.15	.64	.46	.30
CAL YR 1982	TOTAL	8296.9	MEAN	22.7	MAX	593	MIN	3.4	CFSM	.84	IN	11.43
WTR YR 1983	TOTAL	11308.3	MEAN	31.0	MAX	512	MIN	4.4	CFSM	1.15	IN	15.58

PATUXENT RIVER BASIN

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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.

REVISED RECORDS.--WDR MD-DE-78-1: 1976(M).

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 except those for period of doubtful gage-height record, Apr. 15-18, which are fair. 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, 11,800,000,000 gal (44.66 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 discharge, 0.10 ft³/s (0.003 m³/s) Sept. 25, 1964, (valve closed for repair); minimum daily discharge, 1.1 ft³/s (0.031 m³/s) June 26, 1956.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,620 ft³/s (45.9 m³/s) Apr. 16, gage height, 8.40 ft (2.560 m), from data furnished by the Washington Suburban Sanitary Commission; minimum daily discharge, 15 ft³/s (0.42 m³/s) Aug. 12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17	18	17	17	17	18	426	17	424	82	19	19
2	17	18	17	17	17	19	388	17	424	26	19	19
3	17	18	17	17	17	19	18	227	16	26	19	19
4	17	17	17	17	17	19	273	17	17	27	20	19
5	17	17	17	17	17	19	18	118	17	26	19	19
6	17	17	18	17	17	19	17	261	118	26	17	19
7	17	17	17	17	17	18	139	292	192	117	17	19
8	17	17	18	17	17	18	416	289	560	154	17	19
9	17	17	17	17	17	18	429	109	360	25	17	19
10	18	17	17	17	17	18	18	17	18	25	17	19
11	18	17	17	17	17	18	242	17	18	25	17	19
12	18	17	17	17	17	19	664	49	18	25	15	19
13	17	17	17	17	17	19	746	112	18	25	16	19
14	17	17	17	17	17	20	513	195	160	24	16	19
15	18	17	17	17	17	19	300	104	18	24	17	19
16	18	17	17	17	17	19	1580	16	18	24	17	19
17	18	17	17	17	17	19	1620	387	18	24	17	19
18	18	17	17	17	18	19	1430	617	18	24	17	19
19	18	17	17	17	18	19	675	469	18	24	17	20
20	18	17	17	17	19	19	210	375	19	24	17	19
21	18	17	17	17	19	19	17	280	483	22	18	18
22	18	17	17	17	19	198	17	16	1010	22	18	18
23	18	17	17	17	19	304	18	349	1010	22	18	19
24	18	17	17	17	29	18	18	758	581	21	18	19
25	18	17	17	17	18	46	240	1020	26	21	18	19
26	18	17	17	17	18	151	738	648	26	18	18	19
27	18	17	17	17	18	51	1000	196	26	20	18	19
28	18	17	17	17	18	134	818	124	26	21	18	19
29	18	17	17	17	---	444	307	17	27	20	19	19
30	18	17	17	17	---	469	17	17	26	19	19	19
31	18	---	17	17	---	53	---	92	---	19	19	---
TOTAL	547	513	529	527	502	2262	13312	7222	5710	1002	548	569
MEAN	17.6	17.1	17.1	17.0	17.9	73.0	444	233	190	32.3	17.7	19.0
MAX	18	18	18	17	29	469	1620	1020	1010	154	20	20
MIN	17	17	17	17	17	18	17	16	16	18	15	18
(+)	7880	7710	7910	7900	9050	11740	11650	12040	11940	11500	11000	10150
(#)	63.7	63.0	56.5	57.0	47.8	55.9	53.9	53.5	57.2	62.5	61.8	56.6
CAL YR 1982	TOTAL	15894	MEAN 43.5	MAX 610	MIN 16	+ 55.8						
WTR YR 1983	TOTAL	33243	MEAN 91.1	MAX 1620	MIN 15	+ 57.5						

+ Combined month-end total contents, millions of gallons, in Triadelphia and T. Howard Duckett Reservoirs, contents on Sept. 30, 1982: 9,270,000,000 gal (35.09 hm³); furnished by Washington Suburban Sanitary Commission.

* Diversions, 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

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. Datum of gage is 259.26 ft (79.022 m), National Geodetic Vertical Datum of 1929. 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---51 years, 42.6 ft³/s (1.206 m³/s), 15.23 in/yr (387 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)
Mar. 8	1130	838 23.7	6.28 1.914	May 23	0100	885 25.1	6.49 1.978
Mar. 19	0100	1220 34.6	7.88 2.402	June 7	0230	955 27.0	6.80 2.073
Mar. 27	2130	1380 39.1	8.39 2.557	June 20	1130	2410 68.3	10.45 3.185
Apr. 10	1000	1110 31.4	7.44 2.268	June 21	0030	*2780 78.7	10.93 3.331
Apr. 16	0100	1690 47.9	9.19 2.801				

Minimum discharge, 5.5 ft³/s (0.16 m³/s) Sept. 12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.5	9.7	33	14	16	36	42	43	44	32	12	12
2	8.7	11	25	14	123	70	44	42	40	31	13	10
3	8.0	9.3	19	13	90	36	327	41	37	29	12	9.4
4	8.1	37	17	13	31	30	77	43	42	28	12	8.9
5	8.1	44	16	14	23	29	57	38	55	31	150	8.8
6	8.3	17	15	16	22	29	51	36	67	28	76	8.4
7	8.7	13	13	14	30	46	59	35	322	25	21	8.3
8	8.6	12	12	14	27	540	146	38	50	24	17	7.3
9	8.4	11	12	14	22	156	198	38	38	23	15	7.3
10	7.9	10	12	28	20	96	739	34	34	22	13	7.2
11	7.9	10	13	40	15	51	241	34	32	21	15	6.8
12	8.0	10	15	21	21	40	103	33	30	21	26	8.2
13	13	36	13	17	23	34	68	32	29	20	16	23
14	17	16	12	16	24	32	58	32	28	19	14	19
15	10	13	13	17	28	30	604	106	27	19	13	12
16	11	11	237	17	42	28	685	353	27	18	12	10
17	9.2	11	48	15	51	27	110	159	26	17	12	9.2
18	7.9	11	24	14	72	194	81	52	31	17	12	8.7
19	8.5	11	20	13	74	553	64	53	57	17	12	8.1
20	8.7	11	20	13	65	66	58	77	1030	17	10	7.6
21	18	11	18	13	70	293	52	131	1250	21	9.7	21
22	11	11	16	13	85	93	48	175	87	17	19	39
23	9.5	11	16	105	110	51	48	451	52	15	24	14
24	8.9	11	16	48	60	43	396	75	43	19	16	11
25	82	9.7	16	26	44	39	173	52	39	16	13	9.9
26	40	9.7	16	21	34	36	71	57	34	15	11	9.2
27	17	9.7	16	19	30	336	56	81	32	14	10	9.0
28	13	19	17	18	30	413	50	45	32	13	13	8.4
29	11	208	17	17	---	70	46	71	38	13	13	8.2
30	10	30	15	18	---	51	44	141	32	13	11	23
31	9.7	---	14	18	---	45	---	53	---	12	12	---
TOTAL	415.6	644.1	766	653	1282	3592	4796	2651	3685	627	634.7	352.9
MEAN	13.4	21.5	24.7	21.1	45.8	116	160	85.5	123	20.2	20.5	11.8
MAX	82	208	237	105	123	553	739	451	1250	32	150	39
MIN	7.9	9.3	12	13	15	27	42	32	26	12	9.7	6.8
CFSM	.35	.57	.65	.56	1.21	3.05	4.21	2.25	3.24	.53	.54	.31
IN.	.41	.63	.75	.64	1.25	3.52	4.69	2.60	3.61	.61	.62	.35

CAL YR 1982 TOTAL 10609.3 MEAN 29.1 MAX 591 MIN 5.4 CFSM .77 IN 10.39
WTR YR 1983 TOTAL 20099.3 MEAN 55.1 MAX 1250 MIN 6.8 CFSM 1.45 IN 19.68

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. Flow regulated by T. Howard Duckett Reservoir, usable capacity 5,600,000,000 gal (21.20 hm³), 21 mi (34 km) above station. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--6 years, 404 ft³/s (11.44 m³/s), 15.76 in/yr (400 mm/yr), unadjusted.

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 discharge observed, 32 ft³/s (0.91 m³/s); minimum daily discharge, 61 ft³/s (1.73 m³/s) Sept. 14, 15, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 5,750 ft³/s (163 m³/s) June 21, gage height, 14.28 ft (4.353 m); minimum daily discharge, 89 ft³/s (2.52 m³/s) Oct. 10, 11.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	103	110	272	143	150	259	460	348	800	216	111	115
2	99	110	315	138	197	551	623	308	700	252	115	110
3	94	111	215	138	641	367	1270	294	500	199	114	106
4	93	115	183	133	327	266	889	457	333	434	120	103
5	94	295	170	132	213	229	629	292	435	400	123	100
6	92	216	164	162	186	208	399	387	311	240	567	100
7	97	140	153	150	203	302	351	488	1790	190	222	99
8	94	126	143	139	237	722	547	512	1120	254	142	95
9	93	121	136	131	192	1760	917	535	732	276	125	93
10	89	118	132	149	171	825	2320	306	560	172	117	94
11	89	113	132	317	144	554	3430	230	268	159	113	93
12	92	120	149	231	134	378	1600	220	234	159	148	90
13	99	323	158	169	195	303	1160	253	207	153	137	111
14	125	277	142	151	217	266	1090	324	194	148	123	167
15	116	160	147	147	211	248	1050	404	300	143	116	122
16	107	135	418	146	267	230	3730	869	183	142	111	106
17	100	126	903	142	353	217	3180	2050	168	138	107	102
18	94	121	303	128	421	359	1890	1100	159	132	108	101
19	96	118	207	112	519	1870	1660	820	246	134	108	101
20	93	129	193	118	466	1440	1220	800	1180	137	103	98
21	103	135	180	122	412	842	628	700	4280	154	101	100
22	117	130	164	152	470	1580	390	1200	3630	142	96	223
23	104	121	154	313	590	703	352	3000	1320	130	135	150
24	98	120	154	461	700	658	964	1250	1150	131	143	111
25	222	115	150	261	459	370	1880	1000	877	132	116	105
26	688	113	149	193	328	346	974	600	288	127	108	101
27	246	111	150	172	262	470	894	500	237	122	104	101
28	148	116	152	160	234	2070	1130	600	224	116	166	99
29	127	640	159	152	---	1240	1100	420	339	117	132	99
30	118	640	158	149	---	769	670	550	243	113	118	117
31	114	---	144	158	---	772	---	1500	---	113	112	---
TOTAL	4044	5325	6349	5369	8899	21174	37396	22317	23008	5475	4261	3312
MEAN	130	178	205	173	318	683	1247	720	767	177	137	110
MAX	688	640	903	461	700	2070	3730	3000	4280	434	567	223
MIN	89	110	132	112	134	208	351	220	159	113	96	90
CFSM	.37	.51	.59	.50	.91	1.96	3.58	2.07	2.20	.51	.39	.32
IN.	.43	.57	.68	.57	.95	2.26	4.00	2.39	2.46	.59	.46	.35

CAL YR 1982 TOTAL 88326 MEAN 242 MAX 2790 MIN 81 CFSM .70 IN 9.44
WTR YR 1983 TOTAL 146929 MEAN 403 MAX 4280 MIN 89 CFSM 1.16 IN 15.71

PATUXENT RIVER BASIN

01594440 PATUXENT RIVER NEAR BOWIE, MD--Continued
(National stream-quality accounting network station)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1978 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD UNITS)	TEMPER- ATURE, AIR (DEG C)	TEMPER- ATURE (DEG C)	BARO- METRIC PRES- SURE (MM OF HG)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)
DEC 01...	1300	248	218	7.0	12.5	10.0	766	24	9.2	81
FEB 09...	1215	188	725	7.1	2.0	4.0	--	4.1	12.3	--
APR 20...	1300	1190	139	7.5	5.5	7.5	--	15	11.1	--
MAY 25...	1215	920	142	7.3	20.0	16.0	--	16	9.1	--
JUL 19...	1215	131	280	7.2	25.0	24.5	766	7.1	5.3	63
AUG 26...	1130	106	300	7.1	26.0	22.0	751	12	5.9	69

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 DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
DEC 01...	830	14000	54	26	16	3.3	14	34	.9	4.3
FEB 09...	2000	--	74	37	22	4.7	110	75	5.8	3.9
APR 20...	27	240	38	17	10	3.1	8.3	31	.6	2.1
MAY 25...	490	2300	40	17	11	3.1	8.3	29	.6	2.6
JUL 19...	140	250	71	25	22	4.0	19	35	1.0	4.0
AUG 26...	--	--	82	32	26	4.0	22	35	1.1	4.4

DATE	ALKA- LINITY LAB (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)
DEC 01...	28	5.4	24	22	.20	8.9	126	112	.17	84.4
FEB 09...	37	5.7	22	160	.20	10	390	358	.53	198
APR 20...	21	1.3	16	13	<.10	6.4	89	72	.12	286
MAY 25...	23	2.2	11	10	.10	7.0	64	68	.09	159
JUL 19...	47	5.7	20	26	.30	10	165	136	.22	58.4
AUG 26...	50	7.7	24	27	.30	9.5	173	150	.24	49.5

DATE	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS NH4)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS TOTAL (MG/L AS PO4)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P)	PHOS- PHATE, ORTHO, DIS- SOLVED (MG/L AS PO4)
DEC 01...	2.1	.510	.66	1.20	.460	1.4	.220	.250	.77
FEB 09...	2.4	1.20	1.5	.20	.090	.28	.330	.340	1.0
APR 20...	1.3	.180	.23	.50	.130	.40	.070	.060	.18
MAY 25...	1.4	.210	.27	.70	.210	.64	.130	.130	.40
JUL 19...	3.6	.370	.48	1.10	.760	2.3	.620	.640	2.0
AUG 26...	2.7	.440	.57	1.40	.850	2.6	.670	.680	2.1

PATUXENT RIVER BASIN

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01594440 PATUXENT RIVER NEAR BOWIE, MD--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	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)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)
DEC 01...	<10	1	33	<1	<1	--	<3	6	230	1
APR 20...	40	1	36	1	1	<1	3	3	250	5
MAY 25...	40	1	35	1	1	<1	3	6	230	<1
AUG 26...	<10	2	36	<1	<1	<1	<3	3	38	2

DATE	LITHIUM DIS- SOLVED (UG/L AS LI)	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)	VANA- DIUM, DIS- SOLVED (UG/L AS V)	ZINC, DIS- SOLVED (UG/L AS ZN)
DEC 01...	5	160	.6	<10	4	<1	<1	65	<6.0	89
APR 20...	4	59	--	10	3	<1	<1	59	6.0	12
MAY 25...	4	71	<.1	10	1	<1	<1	51	6.0	26
AUG 26...	5	110	<.1	<10	6	<1	<1	83	<6.0	8

DATE	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
DEC 01...	153	102	60
FEB 09...	15	7.6	73
APR 20...	22	71	98

DATE	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
MAY 25...	33	82	96
JUL 19...	16	5.7	99
AUG 26...	17	4.9	99

LOCATION.--Lat 39°14'38", long 79°25'41", Garrett County, Hydrologic Unit 02070002, on left bank at downstream side of bridge (abandoned) on Dobbin Road, 0.6 mi (1.0 km) south of intersection of Kempton Road, 1.2 mi (1.9 km) from mouth, and 3.0 mi (4.8 km) southwest of Wilson.

WATER-DISCHARGE RECORDS

REMARKS.--Water-discharge records good except those for January, which are fair. Natural flow of stream affected by inflow from deep coal mine dewatering process.

EXTREMES FOR CURRENT YEAR--Maximum discharge, 199 ft³/s (5.64 m³/s) May 16, gage height, 3.12 ft (0.951 m), no other peaks above base of 170 ft³/s (4.8 m³/s); minimum discharge, 2.4 ft³/s (0.068 m³/s) Sept. 19, 20, and 28.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.0	3.9	54	21	18	24	27	26	24	8.6	4.1	8.0
2	4.4	3.9	44	19	26	26	25	35	22	7.7	3.9	5.4
3	3.9	3.9	34	17	41	29	30	51	21	6.6	3.7	4.2
4	3.7	11	28	15	32	39	28	92	27	6.6	3.7	3.6
5	3.7	12	24	14	27	44	27	68	23	6.6	3.4	3.4
6	3.7	8.4	21	13	22	40	33	48	19	5.9	3.9	3.6
7	3.3	7.4	18	13	21	33	41	37	17	5.2	3.4	3.4
8	3.8	6.9	16	12	18	46	46	34	15	5.2	3.3	3.0
9	5.2	6.1	16	11	16	44	40	30	14	5.0	3.9	2.8
10	5.2	5.9	14	11	14	36	72	26	14	4.6	3.3	2.7
11	4.8	5.9	14	12	13	31	64	22	12	4.4	8.6	2.7
12	4.2	6.6	12	11	13	27	53	20	11	4.4	7.7	2.7
13	8.0	11	11	10	12	25	44	18	10	4.6	4.8	5.0
14	7.4	8.9	10	10	12	25	37	17	9.8	5.4	4.4	3.6
15	5.9	8.2	10	11	12	24	64	28	9.9	5.9	3.9	3.3
16	6.6	7.8	40	9.0	13	21	50	123	9.9	4.6	3.9	2.8
17	5.4	8.4	25	8.5	17	20	42	104	13	4.6	3.9	3.0
18	4.9	7.9	21	8.0	17	21	35	62	11	5.4	4.1	2.7
19	4.4	7.6	19	8.5	18	50	30	48	9.5	4.6	3.9	2.5
20	5.0	7.6	19	9.0	19	47	28	42	8.8	11	3.4	3.3
21	8.9	7.9	16	10	26	88	26	49	32	14	3.1	5.0
22	6.6	16	15	11	37	67	23	76	16	15	3.1	4.8
23	5.9	16	29	12	49	47	22	97	13	12	3.4	4.2
24	5.0	26	45	13	47	37	107	67	11	20	3.4	3.3
25	5.0	21	62	11	38	30	95	47	10	9.6	3.3	2.7
26	4.8	18	55	9.0	30	26	61	36	8.7	7.2	3.7	2.7
27	4.4	16	50	8.8	26	41	42	30	8.1	6.1	3.9	2.7
28	4.4	29	42	9.8	24	46	35	25	8.6	5.4	6.4	3.3
29	4.4	79	34	9.4	---	38	30	24	12	4.6	3.4	3.6
30	4.2	41	28	16	---	33	29	45	10	4.6	3.1	4.1
31	4.2	---	24	23	---	30	---	26	---	4.4	7.4	---
TOTAL	156.3	419.2	850	375.0	658	1135	1286	1453	430.3	219.8	129.4	108.1
MEAN	5.04	14.0	27.4	12.1	23.5	36.6	42.9	46.9	14.3	7.09	4.17	3.60
MAX	8.9	79	62	23	49	88	107	123	32	20	8.6	8.0
MIN	3.3	3.9	10	8.0	12	20	22	17	8.1	4.4	3.1	2.5
CFSM	.61	1.70	3.33	1.47	2.86	4.45	5.21	5.70	1.74	.86	.51	.44
IN.	.71	1.89	3.84	1.69	2.97	5.13	5.81	6.57	1.94	.99	.58	.49
CAL YR 1982	TOTAL	8164.8	MEAN	22.4	MAX	160	MIN	3.3	CFSM	2.72	IN	36.90
WTR YR 1983	TOTAL	7220.1	MEAN	19.8	MAX	123	MIN	2.5	CFSM	2.41	IN	32.6

POTOMAC RIVER BASIN

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01594930 LAUREL RUN AT DOBBIN ROAD NEAR WILSON, MD--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1981 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1980 to current year.

WATER TEMPERATURES: October 1980 to current year.

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

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD 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)	ACIDITY (MG/L AS H)	ACIDITY (MG/L AS CAC03)	CALCIUM DIS- SOLVED (MG/L AS CA)
AUG 03...	1125	3.8	902	3.3	28.0	19.9	15	7.8	210	2.5	124	54

DATE	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY LAB (MG/L AS CAC03)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)
AUG 03...	18	5.7	6	.2	2.4	<1.0	330	2.3	4.10	23	533

DATE	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	PHOS- PHORUS, TOTAL (MG/L AS P)	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	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)	CARBON, ORGANIC TOTAL (MG/L AS C)
AUG 03...	.72	5.5	<.010	9100	5800	0	6100	1600	0	1600	1.3

POTOMAC RIVER BASIN

01594930 LAUREL RUN AT DOBBIN ROAD NEAR WILSON, MD--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	876	840	865									
2	903	869	891									
3	915	890	906									
4	916	899	908									
5	918	899	907									
6	925	897	912									
7	941	917	929									
8	952	929	939									
9	945	838	907									
10	831	775	805									
11	798	769	781									
12	830	796	815									
13	828	662	766									
14	689	654	669									
15	734	689	710									
16	735	697	717									
17	720	693	702									
18	745	717	733									
19	759	717	744									
20	773	736	755									
21	712	581	622									
22	662	586	628									
23	714	659	689									
24	716	675	697									
25	---	---	---									
26	---	---	---									
27	---	---	---									
28	---	---	---									
29	---	---	---									
30	---	---	---									
31	---	---	---									
MONTH	952	581	792									
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1				---	---	---	370	328	347	378	354	366
2				---	---	---	380	338	364	381	322	354
3				---	---	---	342	313	320	342	277	320
4				---	---	---	324	314	317	277	223	239
5				---	---	---	391	323	350	265	228	244
6				---	---	---	392	317	365	318	266	287
7				---	---	---	327	306	320	350	317	328
8				---	---	---	311	289	303	351	313	335
9				---	---	---	291	276	288	367	316	337
10				---	---	---	276	206	218	414	366	380
11				338	---	---	217	210	213	473	414	435
12				358	334	347	246	217	229	522	468	485
13				379	356	370	291	241	261	553	480	511
14				383	369	375	318	289	303	557	510	533
15				400	371	379	317	230	259	510	357	428
16				430	391	401	264	233	246	354	171	235
17				432	412	421	273	262	266	243	182	211
18				429	396	413	300	273	284	277	246	260
19				401	248	283	311	300	305	283	276	280
20				277	247	257	326	306	313	313	279	293
21				273	184	219	393	329	358	327	306	318
22				230	193	212	426	393	410	306	275	299
23				257	228	242	442	412	428	275	259	264
24				283	255	267	390	181	250	281	266	272
25				311	282	293	234	180	204	304	283	289
26				330	306	315	282	234	257	331	304	314
27				331	264	298	302	276	284	366	331	341
28				263	255	257	332	298	309	391	336	380
29				295	256	272	363	332	343	413	397	403
30				334	294	314	378	359	366	415	356	373
31				326	309	314	---	---	---	383	369	373
MONTH				432	184	312	442	180	303	557	171	338

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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

POTOMAC RIVER BASIN

01594930 LAUREL RUN AT DOBBIN ROAD NEAR WILSON, MD--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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

01594934 SOUTH FORK SAND RUN NEAR WILSON, MD

LOCATION.--Lat 39°15'29", long 79°25'07", Garrett County, Hydrologic Unit 02070002, on right bank 0.1 mi (0.2 km) downstream from a retention pond, just off Old Wilson Road, 0.4 mi (0.6 km) west of mouth, and 1.4 mi (2.3 km) west of Wilson.

DRAINAGE AREA.--1.55 mi² (4.01 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--February to August 1980, October 1980 to current year.

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 2,540 ft (774.192 m) from topographic map.

REMARKS.--Water-discharge records fair. Natural flow of stream affected by inflow from deep coal mine dewatering process and operation of a retention pond located 0.1 mi (0.2 km) upstream since September 1980.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 282 ft³/s (7.99 m³/s) Aug. 18, 1980, gage height, 4.65 ft (1.417 m), minimum discharge recorded, 0.01 ft³/s (<0.001 m³/s) Aug. 20, 1981, gage height, 0.74 ft (0.226 m).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 67 ft³/s (1.90 m³/s) May 16, gage height, 2.60 ft (0.792 m), no peak above base of 90 ft³/s (2.5 m³/s); minimum discharge, 0.04 ft³/s (0.001 m³/s) Oct. 6, 27, July 9, 10, 11, gage height, 0.74 ft (0.226 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.2	1.2	9.6	2.4	3.2	2.9	4.6	4.0	5.1	2.3	2.1	3.6
2	.26	1.1	6.9	2.0	4.3	3.6	2.6	7.9	4.5	1.2	1.7	1.5
3	.15	.94	5.4	1.7	5.9	4.2	4.1	14	3.4	.34	.73	.41
4	.72	.93	3.0	2.0	4.0	6.4	5.5	29	6.8	.25	1.4	.22
5	.11	1.6	2.4	2.0	2.7	4.6	2.9	15	4.9	.84	2.1	1.2
6	.13	.59	2.1	2.1	2.2	3.7	4.8	7.5	4.2	1.9	1.6	2.3
7	.39	.33	3.1	1.8	2.7	3.7	7.8	3.9	2.5	2.8	.21	2.5
8	1.2	1.2	1.7	.99	2.9	6.6	11	3.7	1.7	1.9	1.5	.47
9	.15	1.1	2.3	.76	2.5	7.1	6.4	4.1	1.4	.19	2.2	.95
10	.25	1.3	1.5	1.9	1.9	4.7	16	4.8	2.9	.05	3.8	.32
11	.85	.39	1.1	1.5	2.3	4.8	12	4.5	1.7	1.2	2.4	.14
12	.31	2.4	.85	1.7	1.4	3.7	11	3.4	.73	.77	3.4	2.3
13	.83	1.3	1.7	.88	1.1	4.1	7.4	4.0	1.9	1.4	.44	4.6
14	1.8	.49	1.5	1.5	2.6	3.1	7.0	2.0	2.6	2.0	.21	3.2
15	1.8	.70	1.8	.95	2.9	2.5	14	3.0	.98	1.8	.98	.22
16	.65	.16	8.4	.60	2.1	3.8	6.9	31	2.2	.80	4.8	1.6
17	.35	.42	3.6	1.3	4.1	2.5	5.0	19	3.6	.14	1.3	.46
18	.64	1.8	2.2	.89	3.9	4.3	5.4	8.6	1.7	1.1	1.0	.20
19	.55	1.2	2.0	.80	3.4	12	6.4	6.8	1.7	2.0	1.5	1.9
20	.55	.42	2.7	.38	3.5	8.1	4.6	7.8	2.2	1.1	2.0	2.7
21	.88	.43	2.5	.60	5.5	20	3.9	11	5.7	3.4	.17	1.5
22	.27	3.9	2.0	.71	7.8	11	4.4	23	2.7	5.4	2.2	.55
23	.28	3.7	5.5	.67	8.9	7.6	3.2	19	2.7	1.5	2.5	3.2
24	.21	5.1	7.9	2.2	8.7	4.5	28	9.7	2.4	2.3	1.1	.80
25	1.2	2.4	9.4	1.8	5.7	4.8	22	6.9	1.1	1.8	.83	.18
26	.18	1.6	7.9	1.7	3.7	2.8	8.4	5.7	.29	3.8	3.2	1.5
27	.74	1.6	7.5	1.6	3.1	6.4	9.0	3.8	1.2	1.7	.74	1.3
28	.19	4.9	7.6	2.7	3.6	9.3	5.8	2.7	2.4	.75	.51	1.1
29	.14	14	7.4	1.2	---	8.5	4.1	2.8	4.3	1.8	.66	1.1
30	.14	5.0	3.5	3.3	---	4.6	6.1	10	2.8	1.1	.69	1.9
31	.13	---	2.8	5.1	---	4.7	---	5.8	---	.14	1.9	---
TOTAL	17.25	62.20	127.85	49.73	106.6	180.6	240.3	284.4	82.30	47.77	49.87	43.92
MEAN	.56	2.07	4.12	1.60	3.81	5.83	8.01	9.17	2.74	1.54	1.61	1.46
MAX	1.8	14	9.6	5.1	8.9	20	28	31	6.8	5.4	4.8	4.6
MIN	.11	.16	.85	.38	1.1	2.5	2.6	2.0	.29	.05	.17	.14
CFSM	.36	1.34	2.66	1.03	2.46	3.76	5.17	5.92	1.77	.99	1.04	.94
IN.	.41	1.49	3.07	1.19	2.56	4.33	5.76	6.82	1.97	1.15	1.20	1.05

CAL YR 1982 TOTAL 1256.77 MEAN 3.44 MAX 28 MIN .03 CFSM 2.22 IN 30.14
WTR YR 1983 TOTAL 1292.79 MEAN 3.54 MAX 31 MIN .05 CFSM 2.28 IN 31.01

POTOMAC RIVER BASIN

01594934 SOUTH FORK SAND RUN NEAR WILSON, MD--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1981 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1980 to current year.

WATER TEMPERATURES: October 1980 to current year.

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

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

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE (water year 1983): Maximum, >2,000 micromhos Nov. 10-14, 18-20, July 26 to Sept. 12, 1983; minimum, 180 micromhos Dec. 28, 1982.

WATER TEMPERATURES (water years 1982-83): Maximum, 29.5°C July 25, 1982; minimum, 0.0°C on many days during winter periods.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum, >2,000 micromhos Nov. 10-14, 18-20, July 26 to Sept. 12; minimum, 180 micromhos Dec. 28.

WATER TEMPERATURES: Maximum, 28.0°C July 3, 20; minimum, 0.5°C Feb. 8, 11, 13, 14.

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD 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)
AUG 02...	1510	.33	2030	7.0	26.0	26.1	10	6.7	1200	1230	440	34
DATE	SODIUM, DIS- SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINEITY LAB (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 CONSTITUENTS, DIS- SOLVED (MG/L)
AUG 02...	17	3	.2	5.5	13	2.5	1300	4.0	.60	.9	1020	1810
DATE	SOLIDS, DIS- SOLVED (TONS. PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	PHOS- PHORUS, TOTAL (MG/L AS P)	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, SUS- PENDE RECOVERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	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)	CARBON, ORGANIC TOTAL (MG/L AS C)	
AUG 02...	1.4	.91	<.010	200	200	140	60	460	0	470	1.0	

01594934 SOUTH FORK SAND RUN NEAR WILSON, MD--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			DECEMBER			JANUARY			
1	1710	1460	1560	1770	1520	1670	987	581	771	---	---	---
2	1790	1660	1750	1860	1740	1800	897	525	703	---	---	---
3	1800	1760	1780	1930	1800	1870	1090	606	819	---	---	---
4	1790	1730	1760	1900	1350	1660	990	570	767	---	---	---
5	1780	1690	1750	1460	1280	1330	570	410	482	---	---	---
6	1830	1650	1740	1350	1230	1300	676	394	465	---	---	---
7	1880	1800	1840	1280	966	1190	1080	684	836	---	---	---
8	1950	1880	1920	1340	894	1120	1160	966	1040	---	---	---
9	1960	1600	1800	1660	1370	1470	1250	976	1160	---	---	---
10	1730	1240	1640	>2000	1560	---	1310	1050	1180	---	---	---
11	1930	1580	1710	>2000	1850	---	1120	714	905	---	---	---
12	1870	1620	1760	>2000	1910	---	712	468	600	---	---	---
13	1870	1250	1730	>2000	>2000	>2000	1410	418	838	---	---	---
14	1800	1570	1710	>2000	1350	---	1530	1020	1340	---	---	---
15	1870	1810	1850	1840	1350	1680	1610	1060	1360	---	---	---
16	1850	1820	1830	1830	1760	1790	1490	835	1090	---	---	---
17	1840	1790	1820	1870	1590	1780	829	619	718	---	---	---
18	1770	1410	1670	>2000	1610	---	787	545	663	---	---	---
19	1810	1750	1780	>2000	>2000	>2000	531	369	445	---	---	---
20	1810	1450	1760	>2000	1820	---	995	355	533	---	---	---
21	1730	1490	1590	1890	1280	1500	1170	953	1100	---	---	---
22	1480	1370	1420	1450	1060	1220	1180	665	865	---	---	---
23	1460	1290	1380	1460	841	1110	1200	857	1050	---	---	---
24	1560	1340	1440	1470	1100	1260	802	388	532	---	---	---
25	1640	1280	1450	1360	757	1030	372	252	298	1520	---	---
26	1510	1380	1450	925	691	801	246	202	223	1610	1010	1360
27	1670	1440	1530	925	723	802	206	192	197	1660	1090	1460
28	1760	1620	1690	739	547	635	746	180	325	1770	1190	1570
29	1770	1710	1750	1000	671	816	---	---	---	1740	740	1190
30	1770	1660	1720	899	687	774	---	---	---	710	348	520
31	1730	1460	1640	---	---	---	---	---	---	1150	284	674
MONTH	1960	1240	1680	>2000	547	1360	1610	180	761	1770	284	1130
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY			MARCH			APRIL			MAY			
1	958	568	741	636	372	457	1040	643	882	721	473	573
2	980	444	644	475	343	410	937	461	676	797	463	626
3	924	430	655	641	363	439	475	313	373	929	699	769
4	926	408	656	842	652	762	1050	307	619	747	595	669
5	670	250	428	689	333	530	954	646	745	780	600	662
6	---	---	---	376	218	290	828	496	630	792	662	742
7	---	---	---	623	191	403	824	440	580	658	442	557
8	1230	530	899	706	556	633	970	674	879	434	372	402
9	1270	564	951	716	514	664	809	439	596	694	394	467
10	1430	616	980	519	391	443	573	393	481	1240	775	1000
11	1520	749	1230	816	576	740	803	359	568	1360	1150	1230
12	1300	826	1010	805	713	752	856	708	776	1470	1260	1350
13	813	626	720	896	706	832	884	554	692	1500	1180	1400
14	1530	445	898	781	567	684	898	692	807	1500	1030	1280
15	1650	1250	1560	683	567	609	796	600	667	1060	695	868
16	1470	657	1090	1180	612	986	697	457	566	993	609	778
17	1400	562	968	1260	961	1150	443	335	367	796	648	712
18	1220	563	866	1290	1110	1210	615	299	359	952	822	882
19	980	501	689	1170	481	753	991	671	882	930	700	811
20	496	378	421	468	260	362	982	928	951	888	628	727
21	939	329	591	712	230	520	964	792	870	932	552	762
22	1010	666	847	713	641	674	1200	928	1030	632	388	521
23	923	459	683	746	688	716	1270	800	1100	766	646	714
24	968	746	916	665	459	572	833	581	693	847	703	748
25	827	462	638	734	382	587	647	483	573	925	755	845
26	661	337	492	651	461	530	601	391	443	909	715	794
27	322	216	259	517	291	351	972	622	773	981	867	924
28	761	193	443	724	310	465	952	736	825	953	757	890
29	---	---	---	867	743	817	946	604	748	755	545	637
30	---	---	---	782	514	644	1040	722	876	803	555	625
31	---	---	---	998	430	703	---	---	---	1100	822	960
MONTH	1650	193	780	1290	191	635	1270	299	701	1500	372	804

POTOMAC RIVER BASIN

01594934 SOUTH FORK SAND RUN NEAR WILSON, MD--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	1210	1010	1100	1680	1610	1660	>2000	>2000	>2000	>2000	>2000	>2000
2	1220	1130	1180	1690	1620	1660	>2000	>2000	>2000	>2000	>2000	>2000
3	1300	1080	1190	1620	1550	1600	>2000	>2000	>2000	>2000	>2000	>2000
4	1330	946	1160	1580	1500	1550	>2000	>2000	>2000	>2000	>2000	>2000
5	948	668	786	1550	1490	1520	>2000	>2000	>2000	>2000	>2000	>2000
6	1100	665	877	1670	1530	1570	>2000	>2000	>2000	>2000	>2000	>2000
7	1270	1060	1110	1770	1690	1730	>2000	>2000	>2000	>2000	1980	---
8	1400	1280	1370	1800	1740	1770	>2000	>2000	>2000	>2000	>2000	>2000
9	1450	1370	1420	1800	1570	1680	>2000	1990	>2000	>2000	>2000	>2000
10	1520	1450	1470	1580	861	1180	>2000	>2000	>2000	>2000	>2000	>2000
11	1530	1460	1500	1840	639	1180	>2000	>2000	>2000	>2000	>2000	>2000
12	1450	1320	1380	1880	1850	1860	>2000	>2000	>2000	>2000	>2000	>2000
13	1480	1210	1340	1910	1840	1870	>2000	>2000	>2000	1990	1890	1960
14	1650	1490	1580	1920	1890	1910	>2000	>2000	>2000	1960	1940	1950
15	1680	1570	1650	1920	1860	1900	>2000	>2000	>2000	1960	1940	1950
16	1720	1650	1680	1920	1900	1910	>2000	>2000	>2000	1940	1920	1930
17	1750	1450	1640	1920	1750	1870	>2000	>2000	>2000	1930	1890	1920
18	1410	1020	1180	1890	1800	1860	>2000	>2000	>2000	1920	1890	1900
19	988	680	774	1910	1880	1890	>2000	>2000	>2000	1910	1880	1900
20	1520	684	903	1960	1720	1910	>2000	>2000	>2000	1900	1850	1880
21	1590	1380	1510	1920	1450	1700	>2000	>2000	>2000	1850	1800	1830
22	1540	1260	1450	1950	1860	1890	>2000	>2000	>2000	1830	1810	1830
23	1630	1490	1550	1960	1460	1860	>2000	>2000	>2000	1920	1820	1850
24	1650	1590	1630	1570	1130	1300	>2000	>2000	>2000	1920	1900	1910
25	1670	1640	1660	1530	1100	1200	>2000	>2000	>2000	1910	1900	1910
26	1640	1580	1620	>2000	1530	---	>2000	>2000	>2000	1910	1880	1900
27	1640	1530	1580	>2000	>2000	>2000	>2000	>2000	>2000	1910	1890	1900
28	1670	1590	1650	>2000	>2000	>2000	>2000	>2000	>2000	1930	1900	1910
29	1680	1520	1600	>2000	>2000	>2000	>2000	>2000	>2000	1950	1920	1930
30	1650	1290	1490	>2000	>2000	>2000	>2000	>2000	>2000	1960	1930	1940
31	---	---	---	>2000	>2000	>2000	>2000	1380	---	---	---	---
MONTH	1750	665	1370	>2000	639	1730	>2000	1380	>2000	>2000	1800	1940

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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

01594934 SOUTH FORK SAND RUN NEAR WILSON, MD--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY			MARCH			APRIL			MAY			
1	2.5	1.5	2.0	4.5	3.5	4.0	9.0	4.5	6.5	15.0	13.0	14.0
2	3.5	2.0	2.5	4.5	3.5	4.0	7.5	6.0	6.5	15.5	13.0	14.0
3	3.0	2.0	2.5	5.5	3.0	4.5	6.5	5.0	6.0	14.5	12.5	13.5
4	2.5	1.0	1.5	7.5	4.5	5.5	6.0	4.5	5.0	12.0	11.0	11.5
5	1.5	1.0	1.0	7.0	4.5	6.0	7.0	4.5	6.0	12.5	9.5	11.0
6	1.5	1.0	1.5	7.5	6.5	7.0	7.5	6.5	7.0	15.5	9.5	12.5
7	3.0	1.0	1.5	8.0	6.0	7.0	9.5	6.5	8.0	16.0	10.5	13.5
8	3.5	.5	1.5	9.0	7.0	8.0	9.5	8.5	9.0	14.5	10.5	13.0
9	4.0	1.0	1.5	7.0	6.0	6.5	10.0	9.0	9.5	12.5	8.5	10.5
10	4.0	1.0	2.0	6.5	5.0	5.5	9.0	7.5	8.0	13.5	9.0	11.0
11	4.5	.5	2.0	5.5	5.0	5.0	8.0	6.5	7.0	15.0	9.0	12.0
12	2.0	1.0	1.5	4.5	3.0	3.5	8.5	5.5	6.5	17.0	11.0	13.5
13	1.5	.5	1.0	4.5	3.0	3.5	8.0	5.0	6.5	17.5	12.0	14.5
14	2.0	.5	1.0	5.5	2.5	4.5	8.5	7.5	8.0	17.5	14.0	15.5
15	4.0	2.0	2.5	7.5	4.5	5.5	8.5	7.5	8.5	17.0	15.5	16.0
16	4.0	1.5	2.5	7.0	4.5	5.5	8.5	6.5	7.5	15.5	10.5	12.5
17	3.5	1.5	2.5	6.5	4.0	5.5	6.5	4.5	5.5	12.5	8.5	10.5
18	3.5	1.5	2.5	6.0	4.5	5.5	6.0	3.5	4.5	14.5	9.5	12.0
19	3.5	1.5	2.5	6.0	5.5	5.5	6.0	4.5	5.5	13.0	11.5	12.0
20	3.0	2.0	2.5	6.0	5.0	5.5	5.0	2.5	4.0	15.5	11.0	13.0
21	4.5	2.0	3.5	6.5	4.5	5.5	6.0	2.0	4.5	14.0	13.0	13.5
22	4.5	3.0	4.0	5.0	3.5	4.0	8.5	4.5	6.5	14.0	11.5	13.0
23	4.5	3.5	4.0	4.5	2.0	3.0	9.0	5.5	7.0	14.0	12.0	13.0
24	5.0	4.0	4.5	4.5	2.0	3.0	7.5	6.5	7.0	14.5	12.5	13.5
25	4.5	3.0	4.0	5.0	2.0	3.5	7.0	5.5	6.5	16.0	12.0	14.0
26	3.5	2.5	3.0	5.5	2.5	4.0	9.0	5.0	7.0	15.0	12.5	13.5
27	3.5	2.0	2.5	5.0	3.0	4.0	11.5	7.5	9.5	15.5	12.0	13.5
28	4.5	2.0	3.5	4.5	4.0	4.5	15.0	9.5	12.5	14.0	12.5	13.5
29	---	---	---	5.0	4.0	4.5	13.5	12.5	13.0	16.0	12.5	14.0
30	---	---	---	5.0	3.0	4.0	15.5	12.0	13.5	17.0	13.0	15.0
31	---	---	---	5.5	3.5	4.5	---	---	---	16.0	12.5	14.5
MONTH	5.0	.5	2.5	9.0	2.0	5.0	15.5	2.0	7.5	17.5	8.5	13.0
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
JUNE			JULY			AUGUST			SEPTEMBER			
1	14.0	13.0	13.5	23.5	20.0	21.5	24.0	19.5	22.0	23.0	20.0	21.5
2	15.0	11.5	13.5	26.0	19.5	23.0	25.5	21.0	23.0	21.5	19.5	20.5
3	14.0	12.0	13.5	28.0	21.5	24.0	24.5	19.5	22.5	25.0	18.5	21.5
4	16.5	13.5	14.5	26.0	20.5	23.5	25.0	20.5	23.0	22.5	19.5	21.0
5	20.5	12.5	16.5	23.5	21.0	22.0	24.0	22.0	22.5	23.0	19.5	21.0
6	20.0	14.5	17.5	22.0	19.0	20.5	24.0	21.5	22.5	23.5	20.5	21.5
7	19.0	11.5	16.5	23.0	18.5	20.5	27.0	21.0	23.5	22.0	20.5	21.0
8	19.5	11.5	16.5	23.0	17.5	20.5	25.5	20.0	22.5	25.5	19.0	21.5
9	20.5	15.5	17.5	26.0	17.0	21.0	24.5	21.5	23.0	23.5	17.0	20.5
10	21.0	14.5	18.0	27.5	19.0	23.0	24.5	21.0	22.5	25.0	18.5	21.5
11	21.5	11.0	18.0	24.5	16.5	21.0	22.5	21.0	21.5	25.5	19.0	22.0
12	23.0	17.0	20.0	24.5	19.5	22.0	21.0	19.5	20.5	23.0	20.0	21.5
13	22.5	13.5	19.5	26.0	20.5	22.5	23.0	18.5	20.5	21.0	19.5	20.0
14	21.5	15.5	19.0	24.5	20.0	22.0	24.5	17.5	20.5	20.0	18.0	19.0
15	22.5	17.5	20.0	25.0	19.5	22.0	23.5	17.0	20.0	22.5	16.0	18.5
16	22.0	18.0	19.5	25.0	21.0	22.5	23.0	19.5	21.0	18.5	15.5	17.5
17	20.5	18.5	19.0	27.5	21.0	23.0	21.5	19.0	20.5	20.0	17.0	18.0
18	21.5	17.0	19.0	25.0	21.0	22.5	21.0	20.5	21.0	23.0	15.0	18.5
19	23.0	18.0	20.5	25.5	22.0	23.5	25.5	20.5	22.5	22.0	16.5	19.5
20	21.5	19.0	20.0	28.0	22.5	24.0	25.0	20.5	22.5	21.5	18.0	20.0
21	19.0	17.5	18.0	25.0	22.0	23.0	27.5	21.0	24.0	20.0	16.5	19.0
22	20.0	17.0	18.5	24.5	21.5	22.5	24.0	20.0	22.5	17.0	13.0	15.0
23	24.0	17.0	20.0	23.0	20.5	21.5	23.0	21.5	22.0	14.5	12.5	14.0
24	23.0	18.0	20.5	24.0	20.0	22.0	23.0	20.5	21.5	17.0	12.5	14.5
25	24.5	18.5	21.5	23.0	20.5	21.5	23.0	20.5	22.0	18.0	11.0	14.0
26	27.0	18.0	22.5	24.0	19.5	21.5	24.5	21.0	22.5	15.0	12.0	13.5
27	25.5	19.5	22.5	24.5	19.5	22.0	25.0	21.0	22.5	16.0	13.0	14.5
28	23.0	21.5	22.5	25.0	20.0	22.5	25.0	22.0	23.0	15.5	13.0	14.0
29	21.5	19.0	20.5	25.0	20.0	22.5	25.0	22.0	23.0	18.0	12.5	14.5
30	22.5	19.0	20.5	26.5	20.5	23.5	25.5	20.5	23.0	14.0	12.5	13.5
31	---	---	---	27.5	20.5	23.5	22.0	19.5	21.5	---	---	---
MONTH	27.0	11.0	18.5	28.0	16.5	22.5	27.5	17.0	22.0	25.5	11.0	18.5

POTOMAC RIVER BASIN

01594936 NORTH FORK SAND RUN NEAR WILSON, MD

LOCATION.--Lat 39°15'34", long 79°24'35", Garrett County, Hydrologic Unit 02070002, on right bank, 0.1 mi (0.2 km) northwest of Wilson-Cqrunna Road, 0.1 mi (0.2 km) upstream from mouth and 0.8 mi (1.3 km) northwest of Wilson.

DRAINAGE AREA.--1.91 mi² (4.95 km²).

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder and steel weir plate. Altitude of gage is 2,515 ft (767 m), from topographic map.

REMARKS.--Water-discharge records good except those below 0.5 ft³/s (0.014 m³/s), which are fair.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 248 ft³/s (7.023 m³/s) Aug. 18, 1980, gage height, 5.75 ft (1.753 m); minimum discharge, 0.09 ft³/s (0.003 m³/s) Aug. 22, 1983, gage height, 1.54 ft (0.469 m).

EXTREMES FOR CURRENT PERIOD.--Peak discharges above base of 40 ft³/s (1.1 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)
Dec. 23, 1981	0945	52 1.47	3.47 1.058	Mar. 16, 1982	1930	56 1.59	3.55 1.082
Jan. 23, 1982	1200	41 1.16	3.25 0.991	July 3, 1982	1715	*83 2.35	4.00 1.219
Feb. 3, 1982	1030	42 1.19	3.26 0.994	July 8, 1982	0730	51 1.44	3.45 1.052
Mar. 11, 1982	2245	63 1.78	3.67 1.119				
Mar. 21, 1983	1030	42 1.19	3.26 0.994	May 16, 1983	1630	*54 1.53	3.50 1.067

Water year 1982: Minimum discharge, 0.17 ft³/s (0.005 m³/s) Sept. 13, 14, 1982, gage height, 1.65 ft (0.503 m).

Water year 1983: Minimum discharge, 0.09 ft³/s (0.003 m³/s) Aug. 22, 1983, gage height, 1.54 ft (0.469 m).

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.94	2.6	5.4	4.2	22	3.8	6.4	1.7	3.1	2.9	1.0	.83
2	1.3	2.1	5.7	3.6	11	3.7	5.4	1.6	3.2	2.6	.94	.94
3	1.0	2.0	4.6	3.4	26	3.6	8.3	1.6	3.2	27	.90	1.0
4	.91	1.8	4.1	20	21	3.5	8.4	1.7	3.1	19	.71	.65
5	.84	2.2	3.8	14	13	4.3	6.5	1.8	8.7	7.0	.80	.47
6	1.2	3.3	3.4	8.7	9.3	3.7	8.6	1.7	7.1	4.7	.81	.31
7	1.1	3.1	3.1	17	6.9	4.6	7.2	1.8	6.7	3.7	.75	.26
8	.94	2.6	6.6	9.9	5.8	3.9	6.5	1.7	5.6	13	.62	.34
9	.84	2.4	5.4	7.3	6.9	3.7	6.7	1.5	4.9	5.6	1.4	.38
10	.77	2.1	4.6	5.8	5.8	3.9	5.8	1.4	8.6	4.3	.93	.32
11	.69	2.0	4.2	4.3	4.7	12	5.3	1.4	14	3.7	.96	.25
12	.69	1.9	3.9	3.4	3.9	25	5.7	1.5	6.9	3.2	.99	.20
13	.65	1.7	3.5	2.7	3.5	17	8.3	1.5	15	2.7	.79	.17
14	.63	1.7	3.7	2.3	3.2	12	7.5	1.4	8.2	2.1	.72	.20
15	.63	1.6	2.9	2.1	3.5	9.5	6.1	1.4	5.6	1.9	.58	.84
16	.66	1.6	2.6	2.0	7.3	26	5.3	1.4	4.5	1.7	.47	.45
17	.59	1.5	2.4	1.9	11	31	5.1	1.4	5.9	1.6	.55	.32
18	1.0	1.4	2.3	1.8	7.8	17	5.1	1.4	4.0	1.5	.62	.27
19	1.1	1.6	2.2	1.7	11	12	4.2	1.4	3.4	1.5	.54	.25
20	1.0	1.6	2.1	1.6	10	24	3.9	1.6	3.0	2.8	.57	.20
21	.90	1.7	1.9	1.8	15	23	3.6	1.3	2.5	2.1	1.2	.21
22	.83	1.8	10	1.9	9.0	17	3.3	1.5	2.3	1.7	.56	1.3
23	.91	1.8	34	26	7.6	12	3.0	1.5	3.0	1.4	.73	.71
24	.88	1.9	17	15	7.1	9.5	2.8	1.4	3.4	1.2	.78	.41
25	.76	1.8	10	8.1	6.2	7.8	2.2	1.3	3.2	1.0	.75	.41
26	2.4	2.0	7.2	5.4	4.9	9.0	2.0	1.9	3.0	.90	.69	1.1
27	12	5.4	5.8	4.7	4.5	7.0	2.1	2.5	3.0	.93	.66	2.2
28	7.3	3.8	5.0	4.1	4.1	6.0	2.0	2.9	2.7	1.9	.66	1.3
29	4.7	3.3	4.9	3.6	---	5.9	1.8	2.7	3.6	1.4	.41	1.1
30	3.7	2.9	3.9	4.2	---	5.9	1.7	3.2	3.3	1.2	.31	.87
31	3.1	---	3.4	13	---	6.6	---	3.8	---	1.2	.36	---
TOTAL	54.96	67.2	179.6	205.5	252.0	333.9	150.8	54.9	154.7	127.43	22.76	18.26
MEAN	1.77	2.24	5.79	6.63	9.00	10.8	5.03	1.77	5.16	4.11	.73	.61
MAX	12	5.4	34	26	26	31	8.6	3.8	15	27	1.4	2.2
MIN	.59	1.4	1.9	1.6	3.2	3.5	1.7	1.3	2.3	.90	.31	.17
CFSM	.93	1.17	3.03	3.47	4.71	5.65	2.63	.93	2.70	2.15	.38	.32
IN.	1.07	1.31	3.50	4.00	4.91	6.50	2.94	1.07	3.01	2.48	.44	.36

CAL YR 1981 TOTAL 1819.69 MEAN 4.99 MAX 47 MIN .34 CFSM 2.61 IN 35.42
WTR YR 1982 TOTAL 1622.01 MEAN 4.44 MAX 34 MIN .17 CFSM 2.33 IN 31.57

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DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.68	.29	9.2	3.7	3.2	4.9	4.9	5.3	4.2	1.1	.20	1.0
2	.56	.31	7.7	3.3	3.6	5.5	4.5	6.0	3.7	.89	.16	.57
3	.35	.37	5.6	2.9	4.8	6.2	5.5	9.0	3.6	.73	.17	.39
4	.28	1.5	4.6	2.3	4.0	8.2	4.8	18	4.3	.64	.13	.30
5	.29	1.6	3.8	2.1	3.4	8.4	4.4	11	3.7	.70	.14	.32
6	.22	1.2	3.4	2.4	2.9	7.2	6.0	7.8	3.1	.61	.20	.30
7	.22	.94	2.9	2.4	2.6	6.1	6.0	6.2	2.6	.53	.21	.26
8	.41	.74	2.4	1.9	2.3	9.3	9.4	5.8	2.1	.46	.17	.23
9	.65	.64	2.1	1.7	2.1	8.8	8.4	5.4	2.0	.41	.17	.21
10	.88	.60	1.9	1.7	1.9	6.7	18	4.6	1.9	.37	.17	.19
11	.68	.60	1.7	1.9	1.7	5.7	13	4.1	1.8	.33	.35	.16
12	.62	1.2	1.6	1.7	1.7	4.9	10	3.7	1.6	.32	.51	.14
13	1.3	1.5	1.5	1.4	1.8	4.6	7.8	3.5	1.4	.30	.46	.62
14	1.2	1.2	1.6	1.5	1.9	4.4	6.4	3.2	1.3	.26	.37	.64
15	1.1	.96	1.7	1.6	2.0	4.0	14	4.2	1.3	.25	.23	.40
16	1.1	.79	7.1	1.4	2.2	3.7	9.1	28	1.2	.23	.20	.37
17	.80	.72	4.6	1.3	2.8	3.6	7.4	18	1.5	.22	.14	.40
18	.60	.74	3.5	1.2	3.1	4.1	6.3	10	1.4	.25	.18	.38
19	.47	.69	3.1	1.1	3.2	15	5.7	8.7	1.9	.24	.17	.31
20	.49	.69	3.0	1.0	3.6	10	5.0	7.7	1.7	.39	.15	.23
21	1.2	.80	2.9	1.0	5.2	22	4.3	10	3.6	1.1	.15	.23
22	.95	3.3	2.4	1.1	8.0	14	3.9	21	2.1	1.9	.09	.31
23	.71	3.3	4.2	1.2	11	9.6	3.8	21	1.6	1.1	.15	.27
24	.49	3.9	7.6	1.3	10	7.3	27	13	1.4	2.2	.54	.24
25	.40	3.0	11	1.4	7.7	6.1	19	8.9	1.3	1.3	.29	.22
26	.44	2.1	8.7	1.3	5.9	5.1	11	6.7	1.1	.89	.19	.20
27	.42	2.0	8.2	1.3	4.9	9.3	7.8	5.4	.99	.55	.41	.18
28	.47	5.1	7.0	1.2	4.7	9.3	6.2	4.6	1.0	.45	.72	.16
29	.32	13	5.9	1.3	---	7.2	5.4	4.5	1.5	.36	.47	.15
30	.28	6.1	4.9	2.6	---	6.0	5.6	9.5	1.3	.31	.60	.18
31	.29	---	4.2	3.7	---	5.5	---	4.7	---	.24	1.2	---
TOTAL	18.87	59.88	140.0	55.9	112.2	232.7	252.6	279.5	62.19	19.63	9.29	9.56
MEAN	.61	2.00	4.52	1.80	4.01	7.51	8.42	9.02	2.07	.63	.30	.32
MAX	1.3	13	11	3.7	11	22	27	28	4.3	2.2	1.2	1.0
MIN	.22	.29	1.5	1.0	1.7	3.6	3.8	3.2	.99	.22	.09	.14
CFSM	.32	1.05	2.37	.94	2.10	3.93	4.41	4.72	1.08	.33	.16	.17
IN.	.37	1.17	2.73	1.09	2.18	4.53	4.92	5.44	1.21	.38	.18	.19
CAL YR 1982	TOTAL	1539.00	MEAN	4.22	MAX	31	MIN	.17	CFSM	2.21	IN	29.96
WTR YR 1983	TOTAL	1252.32	MEAN	3.43	MAX	28	MIN	.09	CFSM	1.80	IN	24.38

01594936 NORTH FORK SAND RUN NEAR WILSON, MD--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1981 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1980 to current year.

WATER TEMPERATURES: October 1980 to current year.

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

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

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE (water years 1982-83): Maximum, 846 micromhos Nov. 14, 1982; minimum, 68 micromhos Mar. 17, 1982.

WATER TEMPERATURES (water years 1982-83): Maximum, 25.5°C July 20, 1983; minimum, 0.0°C on many days during winter periods.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum, 846 micromhos Nov. 14; minimum, 82 micromhos May 16.

WATER TEMPERATURES: Maximum, 25.5°C July 20; minimum, 0.0°C on many days during winter periods.

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD 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)
AUG 02...	1600	.19	552	7.2	24.0	23.9	25	7.2	270	258	80	17
DATE	SODIUM, DIS- SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LITY LAB (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)
AUG 02...	2.1	2	.0	1.6	12	1.5	250	1.5	<.10	4.6	392	365
DATE	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	PHOS- PHORUS, TOTAL (MG/L AS P)	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	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)	CARBON, ORGANIC TOTAL (MG/L AS C)	
AUG 02...	.53	.20	<.010	<100	750	680	71	1000	0	1000	4.6	

01594936 NORTH FORK SAND RUN NEAR WILSON, MD--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			DECEMBER			JANUARY			
1	568	472	536	545	529	536	160	128	145	177	135	155
2	589	536	571	539	511	528	169	135	144	137	111	122
3	622	569	592	513	491	500	205	167	174	116	91	105
4	631	611	621	566	415	486	224	209	219	116	90	94
5	629	612	624	580	427	502	142	178	191	271	139	239
6	611	579	595	414	322	352	185	155	168	334	292	314
7	593	558	580	324	288	307	224	193	215	347	312	326
8	613	572	592	307	280	292	302	222	279	405	356	387
9	668	576	622	292	281	284	323	305	316	362	276	318
10	822	655	720	316	285	300	360	313	345	274	211	237
11	791	752	774	403	317	366	356	335	348	381	214	334
12	771	676	714	648	403	482	331	272	298	387	354	377
13	673	564	604	816	590	749	270	221	248	438	350	405
14	578	536	558	846	779	823	307	218	268	427	367	408
15	593	566	586	775	669	712	373	299	342	469	362	432
16	767	600	699	690	614	652	355	258	288	453	322	388
17	801	775	793	648	523	590	295	268	274	318	252	281
18	798	738	770	521	410	473	317	300	311	427	252	367
19	737	630	681	500	423	472	298	258	279	462	391	433
20	641	509	606	565	484	531	256	210	230	439	363	395
21	532	462	490	552	502	537	382	229	316	454	346	407
22	488	430	464	518	216	356	386	357	376	476	419	451
23	436	376	413	229	191	206	389	309	360	468	340	411
24	410	340	367	225	196	211	302	196	246	336	252	290
25	382	330	351	246	221	236	193	140	161	397	249	347
26	334	320	326	219	191	206	139	120	130	468	367	429
27	346	327	334	190	167	176	119	112	115	521	442	486
28	396	347	373	166	120	147	155	110	120	576	490	534
29	478	390	429	145	107	117	236	160	223	679	580	633
30	523	480	503	160	141	149	241	219	228	663	329	549
31	537	524	530	---	---	---	219	176	197	315	218	256
MONTH	822	320	562	846	107	409	389	110	244	679	90	352
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY			MARCH			APRIL			MAY			
1	336	276	319	285	255	276	313	263	295	271	257	267
2	345	297	326	268	226	248	294	226	264	256	217	236
3	326	278	299	223	198	209	221	154	183	217	193	211
4	300	276	289	218	197	208	234	135	169	190	148	159
5	304	270	290	207	186	197	261	240	253	177	158	167
6	271	244	258	184	170	176	250	166	212	211	179	193
7	244	227	235	167	165	166	172	135	148	211	196	203
8	304	242	289	182	165	175	209	175	190	196	153	176
9	354	297	339	193	175	181	208	182	200	186	134	148
10	392	346	379	202	194	200	177	107	120	272	195	238
11	420	382	407	212	196	201	161	105	129	323	275	304
12	445	398	426	231	211	221	204	165	185	363	328	355
13	396	327	359	263	226	254	207	194	200	461	364	415
14	326	301	310	260	236	246	236	209	226	473	432	461
15	458	311	387	237	195	215	245	126	174	423	255	346
16	567	509	550	235	193	209	170	159	165	248	82	133
17	507	469	496	297	237	280	161	140	150	144	97	118
18	468	423	454	328	297	315	164	131	139	202	145	166
19	428	374	413	310	158	200	259	170	218	254	203	232
20	367	268	320	156	137	146	276	262	270	244	217	226
21	263	223	242	140	108	125	284	249	269	258	145	214
22	298	250	280	198	143	169	313	254	285	159	86	133
23	282	240	255	238	199	220	350	316	339	126	96	110
24	272	238	256	252	233	242	319	103	149	151	128	138
25	286	271	278	273	231	246	135	108	123	192	152	166
26	291	282	289	273	218	247	156	134	139	214	194	198
27	280	251	267	215	124	165	203	155	176	234	216	221
28	255	239	245	---	---	---	245	206	229	238	218	230
29	---	---	---	---	---	---	248	237	244	217	186	205
30	---	---	---	---	---	---	266	238	250	173	109	126
31	---	---	---	258	227	239	---	---	---	183	145	150
MONTH	567	223	331	328	108	213	350	103	203	473	82	214

POTOMAC RIVER BASIN

01594936 NORTH FORK SAND RUN NEAR WILSON, MD--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	200	183	191	420	400	412	550	522	535	403	383	394
2	267	207	247	397	371	383	564	544	550	461	407	440
3	285	262	275	417	392	409	605	566	583	485	459	473
4	270	234	261	410	372	389	613	602	606	564	486	528
5	230	186	206	370	326	340	608	602	606	597	564	578
6	210	176	187	327	294	302	644	606	625	595	564	584
7	228	213	221	316	292	302	655	646	650	628	600	615
8	249	214	238	361	317	342	659	649	654	645	629	637
9	465	244	359	380	350	366	656	603	638	668	633	653
10	543	471	519	399	367	385	667	608	642	693	660	681
11	597	545	571	411	387	400	701	451	623	700	684	690
12	553	486	519	413	400	406	619	480	585	704	629	682
13	482	402	441	403	389	396	620	605	611	653	499	594
14	416	361	383	423	403	412	638	616	631	602	536	562
15	458	411	427	446	424	435	642	632	638	595	543	566
16	576	454	497	469	446	457	650	632	641	630	598	615
17	570	483	542	477	451	472	655	643	649	620	589	606
18	549	497	524	502	444	471	676	645	656	610	598	607
19	534	307	424	521	504	514	770	686	726	616	609	612
20	303	248	272	514	295	485	791	761	775	642	616	628
21	311	236	264	448	246	386	769	752	761	667	581	635
22	315	268	304	354	296	310	760	735	753	733	616	692
23	369	318	349	311	288	306	759	600	716	716	661	693
24	436	368	396	265	239	255	765	720	749	732	660	700
25	493	437	455	262	252	257	730	688	705	732	708	719
26	498	456	484	277	251	264	687	667	678	713	706	709
27	451	389	418	321	278	306	719	520	669	725	713	716
28	382	337	355	384	323	363	682	521	638	742	727	733
29	393	346	381	440	392	424	657	637	643	777	743	759
30	420	378	391	481	446	465	701	557	640	799	757	789
31	---	---	---	520	484	501	534	343	433	---	---	---
MONTH	597	176	370	521	239	384	791	343	645	799	383	630

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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

POTOMAC RIVER BASIN

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01594936 NORTH FORK SAND RUN NEAR WILSON, MD--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY			MARCH			APRIL			MAY			
1	2.5	1.0	1.5	5.5	2.5	3.5	9.5	3.5	6.0	13.5	11.5	12.5
2	3.0	2.0	2.5	6.0	2.5	4.0	7.5	5.0	6.0	14.5	11.0	12.5
3	2.5	1.0	2.0	7.0	2.5	4.5	7.0	5.0	5.5	13.0	11.5	12.5
4	1.0	.5	.5	8.0	3.0	5.0	5.0	4.0	4.5	11.5	9.5	10.5
5	1.0	.5	.5	8.5	4.0	6.0	7.5	4.0	6.0	13.5	8.5	10.5
6	1.5	.5	1.0	7.5	6.0	6.5	7.5	6.5	7.0	14.5	7.0	10.5
7	1.5	.5	1.0	9.5	5.5	7.5	10.0	6.5	8.0	16.0	8.5	12.0
8	.5	.5	.5	8.0	6.0	7.0	9.0	8.0	8.5	12.5	9.0	11.5
9	1.0	.5	.5	6.5	6.0	6.0	9.5	8.0	8.5	12.5	7.0	9.5
10	1.0	.5	1.0	5.5	4.0	4.5	9.5	6.5	8.0	13.0	6.5	9.5
11	.5	.5	.5	3.5	2.0	3.0	7.0	5.0	6.0	14.5	6.5	10.5
12	.5	.5	.5	2.5	1.0	2.0	9.0	5.0	6.5	15.5	8.0	12.0
13	.5	.5	.5	5.5	.5	2.5	9.0	4.5	6.5	16.5	9.0	13.0
14	.5	.5	.5	6.5	2.0	4.0	9.0	6.5	7.5	16.5	11.5	14.0
15	.5	.5	.5	9.0	4.0	6.0	9.0	7.0	8.0	15.0	13.5	14.0
16	1.0	.5	.5	7.0	4.0	5.5	8.5	5.0	6.5	13.5	8.0	10.5
17	2.0	1.0	1.5	5.0	3.5	4.0	6.0	4.0	5.0	12.5	7.0	9.5
18	3.0	1.5	2.5	5.5	3.5	4.5	7.0	3.0	4.5	14.0	7.5	10.5
19	3.0	1.0	2.5	5.5	4.5	5.0	4.5	2.5	3.0	11.0	10.0	10.5
20	3.5	1.0	2.5	8.5	4.0	6.0	5.5	1.0	3.0	15.0	10.0	12.5
21	4.5	1.5	2.5	6.5	3.0	5.5	8.5	2.0	5.0	12.5	11.5	12.0
22	5.0	2.0	3.5	3.5	1.5	2.5	11.0	5.0	8.0	13.0	11.0	12.0
23	4.0	2.5	3.5	4.5	1.0	2.5	9.0	5.5	7.5	14.5	11.0	12.5
24	5.0	2.5	3.5	4.0	1.0	2.5	7.5	5.5	6.5	13.5	10.5	11.5
25	3.0	1.5	2.5	6.0	1.5	3.5	8.5	4.5	6.0	15.5	8.5	11.5
26	3.0	1.0	1.5	6.5	1.0	3.5	12.0	4.5	8.0	14.5	10.0	12.0
27	3.5	.0	1.5	4.5	3.5	4.0	14.5	7.5	10.5	15.0	8.5	11.5
28	4.5	1.0	2.5	---	---	---	16.0	8.5	12.0	13.0	8.5	11.0
29	---	---	---	---	---	---	12.5	11.0	12.0	15.5	11.0	13.0
30	---	---	---	---	---	---	14.5	10.5	12.5	16.5	11.5	14.0
31	---	---	---	5.0	3.0	4.0	---	---	---	15.0	12.0	13.0
MONTH	5.0	.0	1.5	9.5	.5	4.5	16.0	1.0	7.0	16.5	6.5	11.5
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
JUNE			JULY			AUGUST			SEPTEMBER			
1	12.5	10.5	11.5	20.5	17.5	19.0	22.0	18.5	20.0	19.5	16.0	17.5
2	14.0	10.5	12.0	23.5	18.0	21.0	23.0	18.0	20.5	19.0	15.5	17.0
3	12.5	10.5	12.0	23.0	19.5	21.5	23.5	17.0	20.0	19.5	15.5	17.5
4	15.0	12.0	13.0	22.5	19.0	20.5	22.0	17.0	19.5	19.0	16.0	17.5
5	18.0	11.0	14.5	20.5	19.5	20.0	22.5	19.0	20.5	20.5	16.5	18.5
6	19.0	12.5	15.5	19.5	17.0	18.0	22.5	18.0	20.0	20.5	17.5	19.0
7	18.0	14.5	16.5	19.5	13.5	16.5	23.5	18.5	21.0	21.0	18.5	19.5
8	18.5	12.5	15.5	20.5	13.5	17.0	23.5	17.5	20.5	20.0	15.0	17.5
9	17.5	12.0	15.0	20.5	15.0	17.5	22.0	18.0	20.0	19.5	14.0	16.5
10	19.0	13.5	16.5	22.0	16.5	18.5	22.0	16.0	18.5	19.5	13.5	16.5
11	19.5	13.5	17.0	21.0	14.0	17.5	20.0	17.0	18.0	20.5	15.0	17.5
12	19.5	15.0	17.5	20.5	15.0	17.5	17.5	16.5	17.5	20.0	17.0	18.5
13	19.5	15.5	18.0	23.0	17.5	19.5	19.0	15.0	16.5	18.0	16.0	17.0
14	19.5	16.0	18.0	22.5	16.0	19.0	19.5	14.5	16.5	17.0	14.5	15.5
15	19.5	16.0	18.0	23.0	16.5	19.5	19.0	13.5	16.5	16.5	12.0	14.0
16	19.0	15.5	17.5	23.5	19.0	21.0	20.5	14.5	17.5	14.5	12.0	13.5
17	18.0	16.0	17.0	25.0	20.0	22.0	19.5	15.5	17.5	16.5	13.0	14.5
18	18.5	15.5	16.5	22.5	19.0	20.5	19.5	18.0	19.0	17.0	11.5	14.0
19	19.5	16.0	17.5	24.0	19.0	21.0	23.0	18.5	20.0	19.0	14.0	16.0
20	19.0	16.5	18.0	25.5	19.5	22.0	24.0	18.0	21.0	19.5	14.5	17.0
21	18.0	15.0	16.0	23.5	18.5	20.5	24.0	18.5	21.0	17.0	14.0	16.0
22	18.5	14.5	16.0	23.0	19.5	21.0	23.5	17.5	20.0	13.5	9.5	11.5
23	20.5	15.0	18.0	21.0	19.5	20.5	21.0	19.5	20.0	10.5	7.5	8.5
24	21.5	16.5	19.0	22.5	18.5	20.5	21.5	19.0	20.0	11.0	6.0	8.0
25	21.0	17.0	19.5	21.0	18.5	19.5	22.0	18.5	20.0	11.5	6.5	9.0
26	21.0	16.0	19.0	21.0	17.0	19.0	22.5	18.0	20.0	11.5	8.0	9.5
27	22.5	17.5	20.0	22.0	16.5	19.0	22.5	18.0	20.0	12.5	8.0	10.0
28	21.5	19.5	20.5	23.0	18.0	20.0	21.0	19.0	20.0	13.5	9.5	11.0
29	20.0	17.0	18.5	23.0	18.0	20.5	22.0	19.0	20.0	13.5	9.5	11.5
30	20.0	16.5	18.0	23.0	19.0	21.0	20.5	16.5	19.0	10.5	7.5	8.5
31	---	---	---	23.5	19.0	21.0	19.0	17.0	18.0	---	---	---
MONTH	22.5	10.5	16.5	25.5	13.5	19.5	24.0	13.5	19.5	21.0	6.0	14.5

01595000 NORTH BRANCH POTOMAC RIVER AT STEYER, MD

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

DRAINAGE AREA.--73.0 mi² (189.1 km²).

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

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

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

AVERAGE DISCHARGE.--27 years, 172 ft³/s (4.871 m³/s), 32.00 in/yr (813 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,900 ft³/s (195 m³/s) July 3, 1978, gage height, 10.30 ft (3.139 m), from rating curve extended above 3,000 ft³/s (85.0 m³/s) on basis of slope-area measurement of peak flow; minimum discharge, 2.9 ft³/s (0.082 m³/s) Sept. 10, 1965, gage height, 2.03 ft (0.619 m).

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,540 ft³/s (43.6 m³/s) Mar. 21, gage height, 5.44 ft (1.658 m), no peak above base of 2,200 ft³/s (62 m³/s); minimum discharge, 5.4 ft³/s (0.15 m³/s) Sept. 9, 10, 11, gage height, 2.08 ft (0.634 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	31	16	249	149	217	175	180	176	148	47	29	51
2	28	18	431	128	223	200	180	214	135	43	30	28
3	26	17	267	119	274	220	410	299	128	37	28	20
4	25	60	211	90	196	280	290	614	166	30	28	13
5	22	113	180	105	145	340	270	397	150	29	28	11
6	17	64	154	102	134	290	260	283	115	30	28	7.8
7	19	52	137	95	110	230	320	226	105	30	28	9.6
8	25	42	122	84	102	326	350	140	93	28	25	11
9	29	35	110	68	92	373	390	130	82	23	25	6.2
10	43	30	98	67	78	270	620	110	75	20	32	6.2
11	41	33	80	78	68	225	400	100	62	15	40	6.2
12	32	32	68	78	72	193	320	88	54	15	75	7.8
13	38	50	60	62	78	166	260	82	49	16	38	34
14	55	48	75	70	82	161	220	78	52	20	28	28
15	33	40	130	73	88	150	390	110	52	20	18	26
16	39	37	240	50	90	136	290	880	65	20	17	20
17	36	34	198	44	120	122	250	740	97	18	25	19
18	30	32	146	41	136	155	210	390	108	28	25	18
19	23	31	143	42	131	569	203	290	76	21	28	16
20	21	28	120	43	139	247	183	270	58	61	26	13
21	50	33	118	45	202	720	165	270	197	123	21	15
22	37	60	128	49	300	490	147	470	152	124	12	17
23	30	192	198	54	394	340	137	640	100	56	15	19
24	25	137	330	61	363	270	1230	431	78	129	26	17
25	24	170	348	66	278	200	764	308	67	60	18	16
26	25	123	299	62	220	170	418	242	54	45	17	15
27	22	108	300	60	180	220	300	200	43	37	18	14
28	21	104	270	58	180	360	236	165	42	29	25	14
29	18	623	229	56	---	270	204	157	66	26	17	13
30	17	372	189	156	---	210	201	320	66	32	11	13
31	21	---	164	281	---	200	---	176	---	32	21	---
TOTAL	903	2734	5792	2536	4692	8278	9798	8996	2735	1244	802	504.8
MEAN	29.1	91.1	187	81.8	168	267	327	290	91.2	40.1	25.9	16.8
MAX	55	623	431	281	394	720	1230	880	197	129	75	51
MIN	17	16	60	41	68	122	137	78	42	15	11	6.2
CFSM	.40	1.25	2.56	1.12	2.30	3.66	4.48	3.97	1.25	.55	.36	.23
IN.	.46	1.39	2.95	1.29	2.39	4.22	4.99	4.58	1.39	.63	.41	.26

CAL YR 1982 TOTAL 60145.1 MEAN 165 MAX 1280 MIN 7.7 CFSM 2.26 IN 30.65
WTR YR 1983 TOTAL 49014.8 MEAN 134 MAX 1230 MIN 6.2 CFSM 1.84 IN 24.98

01595200 STONY RIVER NEAR MT. STORM, WV

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

DRAINAGE AREA.--48.8 mi² (126.4 km²).

WATER-DISCHARGE RECORDS

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

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

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

AVERAGE DISCHARGE.--22 years, 99.3 ft³/s (2.812 m³/s), 27.6 in/yr (702 mm/yr), unadjusted.

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,450 ft³/s (69.4 m³/s) Apr. 25, gage height, 7.65 ft (2.332 m); minimum recorded discharge, 2.7 ft³/s (0.076 m³/s), Sept. 19, 20, 26, 27, gage height, 1.83 ft (0.558 m), but may have been less during period of no gage-height record, Sept. 12, 13.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	40	36	177	53	52	135	135	222	58	18	4.6	9.4
2	32	31	197	50	74	127	165	254	54	15	4.6	5.7
3	31	32	172	43	110	124	300	307	53	14	4.2	5.9
4	26	57	170	36	87	147	335	363	65	14	4.0	6.2
5	25	53	180	33	78	165	356	300	58	13	4.4	5.9
6	25	44	212	32	71	162	314	195	51	10	4.8	5.7
7	19	46	155	31	67	165	304	40	51	9.1	4.0	5.0
8	20	45	111	28	65	212	325	38	48	8.0	3.7	4.0
9	23	41	94	28	62	225	314	39	43	7.7	4.2	3.9
10	38	34	74	29	58	202	367	32	38	6.4	4.8	4.8
11	30	25	64	35	60	202	293	28	34	7.5	5.0	3.1
12	20	27	57	30	62	210	257	27	32	6.7	9.8	3.8
13	23	31	51	28	65	182	200	27	30	5.4	6.4	15
14	36	25	42	28	67	170	153	28	25	5.7	6.2	5.7
15	29	18	40	26	73	147	205	43	23	5.2	5.9	4.4
16	44	21	82	23	79	131	205	356	33	6.2	5.7	5.1
17	39	20	67	20	82	120	202	275	51	7.0	6.4	5.2
18	34	20	55	19	82	172	185	245	50	12	6.4	3.4
19	32	18	54	19	81	514	155	230	42	6.7	6.4	3.1
20	31	18	55	19	76	426	129	212	44	22	5.4	3.0
21	33	19	55	20	95	466	87	222	52	34	4.8	4.2
22	36	61	57	23	122	370	53	284	50	28	4.2	5.9
23	32	70	87	27	180	260	48	388	43	13	4.4	5.6
24	30	67	122	32	137	141	660	328	38	19	7.2	4.6
25	30	61	118	34	118	143	735	272	33	11	5.4	3.8
26	31	51	486	34	103	98	311	195	29	9.4	5.2	2.8
27	32	38	64	38	131	141	328	100	23	7.5	4.8	3.4
28	36	73	71	38	143	202	290	70	20	5.9	8.4	3.5
29	34	222	61	38	---	162	266	70	22	6.4	6.2	4.4
30	33	127	54	45	---	147	257	90	21	6.7	4.0	6.2
31	38	---	53	55	---	143	---	64	---	6.2	5.7	---
TOTAL	962	1431	3337	998	2480	6211	7934	5344	1214	346.7	167.2	152.7
MEAN	31.0	47.7	108	32.2	88.6	200	264	172	40.5	11.2	5.39	5.09
MAX	44	222	486	55	180	514	735	388	65	34	9.8	15
MIN	19	18	40	19	52	98	48	27	20	5.2	3.7	2.8
(†)	1309	1405	1197	1133	1112	1137	1197	1268	1252	1315	1297	1263

CAL YR 1982 TOTAL 41196.0 MEAN 113 MAX 1330 MIN 6.4
WTR YR 1983 TOTAL 30577.6 MEAN 83.8 MAX 735 MIN 2.8

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

POTOMAC RIVER BASIN

01595200 STONY RIVER NEAR MOUNT STORM, WV--Continued

WATER-QUALITY RECORDS

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

PERIOD OF DAILY RECORD.--

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

INSTRUMENTATION.--Temperature recorder since December 1961.

EXTREMES FOR PERIOD OF DAILY RECORD.--

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

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum, 24.0°C July 20; minimum, 2.0°C Jan. 19-25, Feb. 11, 12.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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

01595200 STONY RIVER NEAR MOUNT STORM, WV--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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

POTOMAC RIVER BASIN

01595500 NORTH BRANCH POTOMAC RIVER AT KITZMILLER, MD

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

DRAINAGE AREA.--225 mi² (583 km²).

WATER-DISCHARGE RECORDS

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

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

REMARKS.--Water-discharge records good. Regulation at low flow by Stony River Reservoir, 30 mi (48 km) above station (see station 01595200). Gage-height telemeter at station.

AVERAGE DISCHARGE.--34 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 discharge, 4.6 ft³/s (0.13 m³/s) Oct. 3-7, 1953, gage height, 1.45 ft (0.442 m), site and datum then in use.

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

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Apr. 24	1315	*6190 175	7.96 2.426	May 16	1915	5250 149	7.60 2.316
Apr. 25	0900	4320 122	7.20 2.195				

Minimum discharge, 16 ft³/s (0.45 m³/s) Sept. 20, 21, gage height, 2.17 ft (0.661 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	95	79	775	303	315	531	592	644	376	92	50	82
2	88	78	816	271	329	604	572	670	336	82	46	60
3	81	75	610	249	621	644	1210	847	309	71	43	41
4	78	125	522	195	466	798	907	1460	394	65	39	37
5	73	274	471	181	372	937	854	1050	370	67	43	32
6	67	155	462	197	332	802	824	828	282	72	60	29
7	65	130	400	188	302	722	984	530	248	66	50	28
8	63	119	304	175	266	904	1060	458	227	60	44	28
9	68	109	271	152	265	1170	1150	455	195	53	39	26
10	87	96	230	145	242	863	1790	368	177	50	43	20
11	99	89	215	178	193	734	1310	318	155	41	52	21
12	90	84	198	175	205	680	1090	287	139	38	116	22
13	90	103	150	137	275	583	866	262	126	38	78	42
14	137	107	150	146	269	549	711	256	122	35	56	79
15	98	87	167	152	256	500	1140	381	122	37	46	42
16	92	80	549	115	253	437	970	2460	165	35	35	31
17	102	82	436	110	318	389	819	2040	187	39	37	30
18	92	76	301	106	363	520	723	1110	261	77	43	31
19	88	77	284	108	366	2010	623	905	205	56	47	23
20	83	76	268	110	381	1370	545	880	164	105	46	18
21	107	93	247	115	501	1950	467	881	347	393	43	21
22	107	247	231	127	787	1460	380	1430	334	232	33	32
23	92	409	327	138	1060	1020	330	1890	216	116	52	34
24	82	296	681	161	1010	766	4090	1200	167	195	60	30
25	81	292	636	176	783	628	2790	930	142	131	52	26
26	84	220	997	164	620	532	1310	748	124	86	41	21
27	80	194	550	159	532	705	1060	538	95	72	38	19
28	80	276	532	154	540	1020	876	440	85	59	38	19
29	78	1410	461	148	---	828	761	405	103	51	52	19
30	76	651	378	169	---	686	737	731	113	50	37	26
31	82	---	327	399	---	647	---	458	---	51	34	---
TOTAL	2685	6189	12946	5303	12222	25989	31541	25860	6286	2615	1493	969
MEAN	86.6	206	418	171	437	838	1051	834	210	84.4	48.2	32.3
MAX	137	1410	997	399	1060	2010	4090	2460	394	393	116	82
MIN	63	75	150	106	193	389	330	256	85	35	33	18

CAL YR 1982	TOTAL	163551	MEAN 448	MAX 4220	MIN 22	CFSM 1.99	IN 27.04
WTR YR 1983	TOTAL	134098	MEAN 367	MAX 4090	MIN 18	CFSM 1.63	IN 22.17

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

WATER-QUALITY RECORDS

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

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1980 to current year.

pH: October 1980 to current year.

WATER TEMPERATURES: August 1961 to current year.

DISSOLVED OXYGEN: October 1980 to current year.

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

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

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE (water year 1983): Maximum, 1,470 micromhos Aug. 11, 1983; minimum, 96 micromhos Apr. 24, 1983.

pH (water year 1983): Maximum, 6.7 units Feb. 21, 22, May 22, 23, Aug. 23, 1983; minimum, 4.4 units Aug. 29-31, 1983.

WATER TEMPERATURES (water years 1961-79, 1982-83): Maximum, 32.0°C Aug. 15, 16, 18, 1965; minimum, 0.0°C on many days during winter periods.

DISSOLVED OXYGEN (water year 1983): Maximum, 14.6 mg/L Nov. 16, 1982; minimum, 7.5 mg/L July 13, Sept. 5, 6, 1983.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum, 1,470 micromhos Aug. 11; minimum, 96 micromhos Apr. 24.

pH: Maximum, 6.7 units Feb. 21, 22, May 22, 23, Aug. 23; minimum, 4.4 units Aug. 29-31.

WATER TEMPERATURES: Maximum, 30.0°C July 21; minimum, 0.0°C on many days during winter periods.

DISSOLVED OXYGEN: Maximum, 14.6 mg/L Nov. 16; minimum, 7.5 mg/L July 13, Sept. 5, 6.

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	---	---	---	454	414	431	228	208	223	---	---	---
2	818	718	773	532	432	481	222	192	207	---	---	---
3	906	766	831	500	460	476	235	222	229	---	---	---
4	894	814	861	471	401	450	259	235	252	---	---	---
5	1000	882	942	422	312	375	272	252	263	---	---	---
6	999	909	956	353	303	324	266	226	251	---	---	---
7	887	837	868	394	324	361	239	209	222	---	---	---
8	915	855	884	435	365	395	283	239	263	---	---	---
9	1030	903	964	386	346	367	316	280	300	---	---	---
10	1020	891	940	447	397	425	310	260	280	---	---	---
11	909	799	862	398	368	380	333	293	317	---	---	---
12	799	747	770	549	369	482	297	265	280	---	---	---
13	757	685	720	500	440	465	290	270	278	---	---	---
14	685	592	647	461	211	293	294	274	285	---	---	---
15	592	480	533	292	202	261	387	307	334	---	---	---
16	480	438	451	253	233	243	391	261	338	---	---	---
17	506	416	454	384	234	332	274	264	269	---	---	---
18	494	404	456	455	375	424	298	277	287	---	---	---
19	404	362	377	456	356	389	321	290	305	---	---	---
20	490	370	440	407	347	372	305	225	275	---	---	---
21	478	378	424	398	358	378	298	218	250	572	522	551
22	455	345	418	---	---	---	332	300	322	564	504	538
23	373	323	347	---	---	---	375	295	338	505	405	450
24	361	281	325	324	274	298	359	249	287	417	317	365
25	369	339	352	307	267	281	262	242	246	349	279	305
26	387	307	347	301	271	289	246	203	232	381	301	351
27	405	355	382	324	304	314	269	229	247	392	362	377
28	413	303	358	328	288	314	303	269	287	444	404	434
29	401	321	352	288	161	183	336	303	324	446	386	422
30	448	348	393	215	185	205	---	---	---	418	318	385
31	466	416	435	---	---	---	---	---	---	320	200	248
MONTH	1030	281	595	549	161	357	391	192	276	572	200	402

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

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY			MARCH			APRIL			MAY			
1	241	191	213	219	189	202	253	213	235	---	---	---
2	273	253	264	210	190	195	232	211	226	---	---	---
3	285	230	249	190	174	183	196	162	171	---	---	---
4	260	230	247	189	175	182	167	153	157	---	---	---
5	282	260	272	175	147	159	184	154	168	---	---	---
6	273	204	239	147	131	135	200	184	191	---	---	---
7	204	185	191	146	134	142	197	183	188	---	---	---
8	238	185	200	154	144	151	207	186	191	---	---	---
9	310	238	281	158	141	147	202	179	191	---	---	---
10	350	310	322	169	158	165	194	152	164	---	---	---
11	---	---	---	170	162	166	172	159	165	---	---	---
12	---	---	---	178	169	173	182	162	171	---	---	---
13	---	---	---	177	167	172	196	179	186	---	---	---
14	---	---	---	169	156	161	215	196	206	---	---	---
15	---	---	---	198	162	180	219	165	192	---	---	---
16	---	---	---	212	196	206	196	164	180	---	---	---
17	301	271	288	236	216	230	201	186	194	140	99	119
18	263	233	248	243	213	236	214	191	203	163	137	147
19	284	254	267	206	127	147	198	185	193	171	160	165
20	256	186	223	134	126	130	226	198	211	189	167	176
21	187	147	172	135	113	123	250	220	235	204	189	195
22	169	149	163	138	115	126	287	245	269	188	128	167
23	170	150	163	166	140	150	309	272	292	154	131	141
24	181	151	162	181	161	168	295	96	150	164	154	158
25	183	173	182	199	182	190	147	104	124	190	153	167
26	204	184	195	217	188	203	170	147	160	216	180	195
27	226	206	213	223	179	211	197	170	185	247	213	230
28	207	187	195	173	160	164	---	---	---	273	245	256
29	---	---	---	195	171	180	---	---	---	289	248	265
30	---	---	---	197	183	190	---	---	---	270	208	236
31	---	---	---	211	197	203	---	---	---	238	209	220
MONTH	350	147	225	243	113	173	309	96	193	289	99	189
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
JUNE			JULY			AUGUST			SEPTEMBER			
1	246	218	230	502	467	494	1180	1030	1100	1140	1010	1070
2	260	208	234	520	451	484	1310	1130	1220	1050	1020	1040
3	305	237	270	579	497	536	1260	1190	1220	1030	979	998
4	300	247	279	571	508	538	1240	1210	1230	1040	994	1030
5	277	237	258	577	534	550	1270	1180	1250	1040	928	980
6	347	260	306	537	495	518	1180	1000	1080	---	---	---
7	360	325	342	520	452	486	1300	1130	1240	---	---	---
8	385	353	368	556	434	496	1330	1300	1320	---	---	---
9	400	348	373	639	517	577	1350	1310	1330	---	---	---
10	441	387	411	712	614	658	1440	1340	1370	---	---	---
11	439	378	408	711	601	655	1470	1280	1400	---	---	---
12	457	399	433	703	589	649	1280	1030	1220	---	---	---
13	471	431	453	730	642	676	980	790	837	1290	1210	1250
14	470	426	447	693	585	639	1000	860	941	1300	1040	1150
15	527	433	478	720	602	660	1080	1000	1050	1040	1000	1020
16	535	325	472	786	667	723	1110	1080	1100	1110	1030	1080
17	461	323	406	825	723	773	1130	1100	1120	1140	1110	1130
18	505	305	407	736	577	664	1130	1050	1090	1210	1130	1180
19	373	310	349	787	707	737	1300	1080	1200	1240	1210	1220
20	382	355	368	794	224	700	1380	1300	1340	1230	1190	1210
21	357	262	321	---	---	---	1400	1350	1370	1190	1160	1180
22	322	255	280	---	---	---	1440	1400	1430	1190	1090	1160
23	390	317	356	534	484	506	1440	957	1240	1150	1070	1110
24	475	388	432	571	461	502	1140	889	1020	1210	1160	1190
25	540	458	498	488	458	476	1180	1070	1140	1260	1210	1240
26	583	488	535	515	455	485	1120	1070	1090	1270	1250	1260
27	597	532	564	612	502	558	1190	1110	1150	1270	1240	1250
28	559	492	525	749	609	682	1280	1200	1240	1260	1240	1250
29	527	449	472	846	716	777	1370	1300	1340	1310	1260	1280
30	572	502	542	902	792	847	1380	1250	1310	1310	1110	1220
31	---	---	---	1020	849	933	1270	1130	1210	---	---	---
MONTH	597	208	394	1020	224	620	1470	790	1200	1310	928	1150

POTOMAC RIVER BASIN

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

PH (STANDARD UNITS), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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

POTOMAC RIVER BASIN

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

PH (STANDARD UNITS), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	18.5	---	---	16.0	11.5	13.5	9.0	7.5	8.0	3.0	1.5	2.5
2	19.5	14.5	16.5	16.0	11.5	14.0	11.0	9.0	10.0	3.0	2.0	2.5
3	19.5	14.0	17.0	15.0	11.5	13.5	11.5	10.5	11.0	3.0	1.0	2.0
4	19.0	15.5	17.5	14.0	10.5	12.5	12.5	10.0	11.5	1.0	.5	.5
5	20.0	16.5	18.0	12.0	7.0	9.5	12.5	10.5	11.5	1.0	.5	.5
6	20.5	16.5	18.5	8.0	4.5	6.5	12.5	10.5	12.0	1.0	.5	.5
7	19.5	16.5	18.0	7.0	3.0	5.0	10.5	7.0	9.0	2.5	.5	1.0
8	19.5	16.5	17.5	8.0	3.5	5.5	7.0	5.0	6.0	2.0	.5	1.0
9	17.0	15.5	16.5	10.0	6.0	8.0	5.0	3.0	4.5	1.5	.5	1.0
10	16.0	14.0	15.0	10.5	8.5	9.0	3.0	1.0	2.0	2.5	1.0	2.0
11	14.5	13.5	14.0	9.5	7.0	8.0	4.0	3.0	3.5	3.5	2.5	3.0
12	16.5	13.5	14.5	11.0	7.5	9.0	3.0	.5	2.0	2.5	.5	1.5
13	14.5	13.0	14.0	9.5	5.0	6.5	.5	.5	.5	.5	.5	.5
14	13.0	11.5	12.0	5.0	3.5	4.5	.5	.5	.5	1.5	.5	1.0
15	13.5	10.5	12.0	4.5	2.0	3.5	1.5	.5	1.0	1.0	.5	.5
16	12.0	8.5	10.5	4.0	.5	2.0	4.0	1.5	2.0	.5	.5	.5
17	10.0	7.0	8.5	5.0	1.0	3.0	3.5	1.0	2.5	.5	.5	.5
18	10.5	5.5	8.0	6.5	4.0	5.0	1.0	.5	.5	.5	.5	.5
19	12.0	6.5	9.5	8.5	5.5	7.0	1.0	.0	.5	.5	.5	.5
20	12.5	8.0	10.5	8.0	7.5	8.0	1.5	.5	1.0	.5	.5	.5
21	11.0	8.5	9.5	9.5	8.0	8.5	1.0	.5	.5	.5	.5	.5
22	9.5	7.0	8.0	---	---	---	2.0	.5	1.0	.5	.5	.5
23	8.0	4.5	6.0	11.0	---	---	3.0	1.0	2.0	.5	.5	.5
24	7.5	4.0	6.0	10.5	6.5	9.0	4.5	3.0	4.0	.5	.5	.5
25	7.0	6.0	6.5	6.5	4.0	5.0	7.0	4.5	5.5	.5	.5	.5
26	9.5	5.0	7.0	6.0	3.5	5.0	12.0	7.0	9.5	.5	.5	.5
27	10.0	5.0	7.5	5.0	3.5	4.5	10.5	7.0	7.5	.5	.5	.5
28	10.5	5.5	8.0	4.5	3.0	3.5	9.0	6.5	7.5	.5	.5	.5
29	11.0	6.0	8.5	7.5	4.5	6.5	9.0	5.5	7.5	.5	.5	.5
30	13.0	8.0	10.5	8.5	7.0	7.5	5.5	2.5	4.0	.5	.5	.5
31	15.0	10.0	12.5	---	---	---	3.0	1.5	2.0	.5	.5	.5
MONTH	20.5	4.0	12.0	16.0	.5	7.5	12.5	.0	5.0	3.5	.5	1.0

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

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY			MARCH			APRIL			MAY			
1	.5	.5	.5	6.5	4.0	5.0	9.0	4.5	6.5	---	---	---
2	1.5	.5	1.0	6.5	4.0	5.5	7.5	6.5	7.0	---	---	---
3	2.0	1.5	1.5	7.5	4.0	5.5	7.5	6.0	7.0	---	---	---
4	1.0	.5	.5	8.5	4.5	6.5	7.0	6.5	6.5	---	---	---
5	1.0	.5	.5	9.0	6.0	7.5	10.0	6.5	8.5	---	---	---
6	1.0	.5	.5	8.0	7.0	7.5	10.0	9.5	9.5	---	---	---
7	1.5	.5	1.0	10.5	7.5	9.0	11.0	9.0	10.0	---	---	---
8	1.0	.5	.5	10.0	7.0	8.5	11.0	10.5	11.0	---	---	---
9	2.0	.5	.5	7.5	7.0	7.0	11.0	9.5	10.0	---	---	---
10	1.5	.5	1.0	7.5	6.0	6.5	10.0	8.0	9.0	---	---	---
11	---	---	---	5.5	4.5	5.0	9.0	7.0	8.0	---	---	---
12	---	---	---	5.0	3.5	4.5	9.5	6.5	8.0	---	---	---
13	---	---	---	6.5	3.0	4.5	9.0	6.5	8.0	---	---	---
14	---	---	---	7.5	5.0	6.5	9.5	8.5	9.0	---	---	---
15	---	---	---	10.0	6.5	8.0	9.5	8.5	9.0	---	---	---
16	4.5	---	---	8.5	6.5	7.5	9.0	6.5	8.0	---	---	---
17	4.5	2.0	3.0	6.5	5.0	5.5	7.5	6.0	6.5	12.5	8.5	10.5
18	4.5	2.0	3.0	7.0	5.0	6.5	7.5	5.0	6.0	13.5	9.5	12.0
19	4.5	1.5	3.0	8.0	6.5	7.0	6.0	4.5	5.0	13.5	12.0	12.5
20	5.0	1.5	3.0	9.5	6.5	8.0	6.5	3.0	4.5	15.5	11.5	13.5
21	5.5	2.5	4.0	9.5	6.0	8.0	9.0	4.0	6.5	15.0	14.0	14.0
22	5.5	3.0	4.0	6.0	4.0	4.5	11.0	6.5	8.5	14.5	13.5	14.0
23	5.0	4.0	4.5	5.5	2.5	4.0	10.0	7.0	8.5	16.0	13.0	14.5
24	4.5	3.0	4.0	4.0	2.5	3.5	9.0	6.0	7.5	14.5	13.0	14.0
25	4.0	2.5	3.5	5.5	2.0	3.5	9.5	6.0	8.0	15.5	11.5	13.5
26	3.0	1.0	2.0	6.5	2.5	4.5	11.0	6.0	9.0	16.5	13.0	14.5
27	3.5	.5	2.0	5.0	4.0	4.5	14.0	9.0	11.0	15.0	11.0	13.0
28	5.0	2.0	3.5	5.0	4.0	4.5	---	---	---	14.5	11.0	13.0
29	---	---	---	5.5	3.5	4.5	---	---	---	15.5	13.0	14.0
30	---	---	---	5.5	2.5	4.0	---	---	---	16.5	13.5	15.0
31	---	---	---	5.0	4.0	4.5	---	---	---	16.0	14.0	14.5
MONTH	5.5	.5	2.0	10.5	2.0	6.0	14.0	3.0	8.0	16.5	8.5	13.5
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
JUNE			JULY			AUGUST			SEPTEMBER			
1	14.0	12.5	13.0	24.5	18.5	21.0	27.0	22.0	24.5	24.5	19.0	21.5
2	15.5	11.5	13.5	27.0	19.5	23.0	27.5	21.0	24.5	23.5	18.5	21.0
3	14.5	12.5	13.5	27.5	20.5	24.0	28.5	20.5	24.5	25.0	19.0	22.0
4	16.0	13.5	14.5	26.5	21.0	24.0	27.5	20.5	24.0	23.5	21.0	22.5
5	19.0	13.5	16.0	24.5	21.0	22.5	27.5	22.0	24.0	23.5	21.5	22.5
6	20.5	15.0	17.5	22.0	18.5	20.5	27.5	21.0	24.0	24.0	22.0	23.0
7	20.0	16.5	18.0	24.5	15.5	20.0	28.5	21.5	24.5	24.0	22.5	23.0
8	20.5	15.0	17.5	25.5	16.0	21.0	29.0	21.0	25.0	24.0	22.0	23.0
9	20.0	14.0	17.0	25.0	17.5	21.5	28.5	21.5	24.5	24.0	22.0	23.0
10	21.0	15.0	18.0	26.5	19.0	22.5	27.0	19.5	23.5	24.0	22.5	23.5
11	21.5	15.5	18.5	26.5	17.0	22.0	23.5	20.0	21.5	24.5	23.0	23.5
12	23.5	16.5	20.0	27.0	18.0	22.5	21.0	18.5	20.0	24.0	22.5	23.0
13	23.5	17.0	20.5	28.5	21.0	24.5	22.0	17.0	19.5	22.0	18.5	20.5
14	25.0	18.0	21.5	27.0	19.0	23.0	24.0	16.5	20.0	21.0	17.0	19.0
15	22.5	18.5	20.5	29.0	20.0	24.5	24.5	16.5	20.5	20.5	14.5	17.5
16	23.0	17.5	19.5	29.0	23.0	26.0	26.5	17.5	22.0	17.5	14.5	16.0
17	20.5	17.0	18.5	29.0	22.5	25.5	25.5	19.0	22.5	20.5	14.5	17.5
18	20.5	17.5	18.5	27.0	21.5	24.0	24.5	21.5	23.0	22.5	14.0	18.0
19	21.5	17.5	19.0	28.5	21.5	24.5	27.5	21.0	24.0	24.5	16.5	20.0
20	21.5	18.5	20.0	29.5	22.0	25.0	29.0	21.5	25.0	25.0	17.5	21.0
21	19.0	17.0	18.0	30.0	22.5	27.5	28.0	21.0	24.5	20.5	16.0	18.5
22	20.0	16.5	18.0	---	---	---	28.5	20.0	24.0	15.5	12.5	14.0
23	23.5	16.5	20.0	24.0	20.0	22.0	24.5	22.0	23.0	13.5	9.5	11.5
24	24.5	18.0	21.5	25.0	21.0	22.5	22.0	21.0	21.5	16.0	8.0	11.5
25	25.0	19.0	22.0	23.5	20.0	21.5	25.0	20.5	22.5	16.5	8.5	12.5
26	25.5	17.5	21.5	26.0	19.0	22.5	28.0	20.5	24.0	15.5	11.0	13.0
27	27.0	18.5	23.0	26.5	18.5	22.5	27.5	21.5	24.0	18.5	10.5	14.0
28	24.0	21.5	22.5	28.0	20.0	24.0	27.0	22.0	24.0	18.0	12.0	14.5
29	22.0	19.0	20.0	28.5	21.0	24.5	27.0	22.0	24.0	18.0	12.0	15.0
30	20.0	18.5	19.0	29.0	22.0	25.5	27.5	19.5	23.5	13.5	10.0	11.5
31	---	---	---	28.5	22.0	25.5	23.0	20.5	21.5	---	---	---
MONTH	27.0	11.5	18.5	30.0	15.5	23.5	29.0	16.5	23.0	25.0	8.0	18.5

POTOMAC RIVER BASIN

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

OXYGEN, DISSOLVED (DO), MG/L, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			DECEMBER			JANUARY			
1	---	---	---	11.1	10.1	10.5	12.1	11.7	12.0	13.5	13.1	13.3
2	10.5	9.0	9.7	11.2	10.0	10.6	11.7	11.2	11.5	13.5	13.0	13.3
3	10.2	8.7	9.3	11.1	8.6	9.3	11.4	11.1	11.3	13.7	13.2	13.4
4	9.4	8.6	9.0	12.1	9.0	9.8	11.4	10.8	11.1	14.2	13.9	14.1
5	9.2	8.3	8.7	13.2	10.1	11.3	11.3	10.7	11.0	14.2	13.8	14.0
6	9.1	8.1	8.6	12.3	11.6	12.0	11.4	10.7	11.0	14.1	13.8	13.9
7	8.9	8.1	8.4	13.0	11.9	12.5	12.6	11.4	12.0	14.0	13.4	13.7
8	8.8	8.0	8.4	13.0	11.7	12.4	13.3	12.7	12.9	14.0	13.8	13.9
9	8.8	8.3	8.5	12.7	11.3	12.1	13.7	13.0	13.2	14.1	13.7	13.9
10	9.0	8.5	8.8	12.3	11.4	11.9	14.3	13.6	13.9	14.0	13.4	13.7
11	9.2	8.9	9.1	12.6	11.4	11.9	13.6	13.3	13.4	13.5	13.1	13.3
12	9.3	8.7	9.0	12.0	10.7	11.4	14.4	13.5	13.9	14.2	13.4	13.8
13	9.3	9.0	9.1	13.6	11.8	12.8	14.5	14.3	14.4	14.3	14.1	14.2
14	9.7	9.2	9.5	13.8	13.1	13.3	14.5	14.2	14.4	14.3	13.8	14.1
15	9.9	9.2	9.5	14.1	13.3	13.6	14.4	13.7	14.1	14.1	13.8	14.0
16	10.2	9.5	9.9	14.6	13.5	14.1	13.7	13.2	13.4	14.2	14.0	14.0
17	10.8	10.2	10.5	14.3	13.2	13.7	13.9	13.2	13.5	14.2	13.9	14.0
18	11.3	10.2	10.7	13.4	12.7	13.1	14.2	13.9	14.1	14.1	14.0	14.0
19	11.1	9.9	10.4	13.0	12.1	12.5	14.1	13.7	13.9	14.1	13.9	14.0
20	10.9	9.8	10.3	12.3	12.2	12.3	13.7	13.5	13.7	14.1	13.8	14.0
21	10.7	10.1	10.5	12.2	11.6	11.9	13.9	13.7	13.8	14.0	13.7	13.8
22	11.2	10.7	10.9	---	---	---	13.9	13.5	13.7	13.9	13.5	13.7
23	11.9	11.2	11.5	---	---	---	13.7	13.0	13.3	13.7	13.3	13.5
24	12.1	11.2	11.6	12.5	11.0	11.5	13.1	12.7	12.9	13.6	13.4	13.5
25	11.7	11.3	11.5	13.2	12.4	13.0	12.7	12.0	12.4	13.6	13.5	13.5
26	12.0	11.0	11.4	13.3	12.6	13.0	12.0	11.0	11.5	13.7	13.5	13.6
27	12.0	10.9	11.5	13.4	12.8	13.0	12.2	11.5	12.1	13.7	13.5	13.6
28	12.1	10.9	11.4	13.6	12.9	13.3	12.2	11.5	11.9	13.7	13.5	13.6
29	12.0	10.8	11.4	12.9	11.9	12.2	12.5	11.6	11.9	13.8	13.5	13.6
30	11.7	10.6	11.1	12.3	11.8	12.0	13.1	12.6	12.9	13.6	13.4	13.5
31	11.3	10.2	10.8	---	---	---	13.6	13.1	13.3	13.8	13.6	13.7
MONTH	12.1	8.0	10.0	14.6	8.6	12.2	14.5	10.7	12.9	14.3	13.0	13.8
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY			MARCH			APRIL			MAY			
1	13.9	13.6	13.7	13.2	12.6	12.9	12.7	11.5	12.1	---	---	---
2	13.8	13.2	13.4	13.3	12.5	12.9	12.1	11.8	11.9	---	---	---
3	13.6	13.4	13.5	13.3	12.3	12.8	12.2	11.8	12.0	---	---	---
4	14.0	13.6	13.9	13.2	12.0	12.6	12.2	12.1	12.2	---	---	---
5	14.0	13.8	13.9	12.8	11.9	12.3	12.2	11.3	11.7	---	---	---
6	13.8	13.4	13.6	12.4	12.1	12.3	11.5	11.3	11.4	---	---	---
7	13.4	13.1	13.2	12.3	11.4	11.8	11.5	10.9	11.2	---	---	---
8	13.4	13.2	13.3	12.3	11.4	11.9	11.1	11.0	11.0	---	---	---
9	13.3	12.9	13.1	12.4	12.2	12.3	11.4	11.0	11.3	---	---	---
10	13.2	12.7	12.9	12.6	12.2	12.3	11.8	11.2	11.5	---	---	---
11	---	---	---	12.9	12.6	12.8	12.0	11.4	11.8	---	---	---
12	---	---	---	13.2	12.9	13.0	12.2	11.4	11.8	---	---	---
13	---	---	---	13.4	12.4	12.9	12.2	11.5	11.7	---	---	---
14	---	---	---	12.9	12.0	12.4	11.7	11.3	11.5	---	---	---
15	---	---	---	12.4	11.4	11.9	11.7	11.3	11.4	---	---	---
16	---	---	---	12.5	11.9	12.2	12.2	11.5	11.8	---	---	---
17	13.1	12.4	12.8	12.8	12.4	12.7	12.3	11.9	12.1	11.8	10.7	11.2
18	13.2	12.4	12.8	12.8	11.7	12.3	12.5	11.7	12.1	11.4	10.2	10.8
19	13.4	12.5	12.9	11.9	11.5	11.7	12.6	12.1	12.3	10.6	10.3	10.5
20	13.4	12.5	13.0	12.0	11.0	11.5	12.9	12.0	12.5	10.7	9.6	10.1
21	13.3	12.4	12.9	12.1	11.1	11.5	12.7	11.4	12.1	10.1	9.8	9.9
22	13.2	12.4	12.8	12.8	12.2	12.6	12.2	11.0	11.6	10.1	9.8	10.0
23	12.8	12.5	12.7	13.3	12.5	12.9	12.0	11.2	11.6	10.3	9.6	10.0
24	13.2	12.7	12.9	13.2	12.7	13.0	12.5	11.5	12.0	10.3	9.8	10.1
25	13.3	12.9	13.1	13.5	12.4	12.9	12.6	11.5	12.1	10.7	9.7	10.2
26	13.9	13.4	13.7	13.5	12.2	12.8	12.7	11.3	11.9	10.2	9.5	9.8
27	14.2	13.4	13.8	12.9	12.5	12.7	11.9	10.7	11.3	10.7	9.8	10.2
28	13.7	12.9	13.3	12.7	12.5	12.6	---	---	---	10.8	9.9	10.3
29	---	---	---	13.0	12.6	12.8	---	---	---	10.2	9.6	9.9
30	---	---	---	13.5	12.5	12.9	---	---	---	10.1	9.4	9.7
31	---	---	---	12.8	12.5	12.6	---	---	---	10.0	9.6	9.8
MONTH	14.2	12.4	13.2	13.5	11.0	12.5	12.9	10.7	11.8	11.8	9.4	10.2

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

OXYGEN, DISSOLVED (DO), MG/L, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	10.3	10.0	10.2	9.1	8.0	8.6	8.8	7.8	8.2	11.6	8.1	9.7
2	10.6	9.6	10.1	8.8	7.5	8.2	9.1	7.8	8.3	10.0	9.0	9.5
3	10.2	9.8	9.9	8.6	7.5	8.0	9.2	7.7	8.3	9.2	7.7	8.5
4	9.9	9.3	9.7	8.6	7.6	8.1	9.2	7.8	8.3	8.3	7.6	8.0
5	10.0	8.9	9.4	8.5	7.9	8.3	8.9	7.9	8.3	8.0	7.5	7.8
6	9.7	8.6	9.1	9.1	8.5	8.8	9.0	7.8	8.3	8.0	7.5	7.8
7	9.3	8.7	9.0	9.9	8.1	9.0	8.9	7.7	8.2	8.0	7.8	7.9
8	9.7	8.7	9.1	9.8	8.0	8.8	9.1	7.6	8.2	8.3	7.8	8.0
9	9.9	8.8	9.3	9.5	8.0	8.6	8.9	7.6	8.1	8.4	8.0	8.2
10	9.7	8.6	9.1	9.2	7.8	8.5	9.4	7.9	8.5	8.4	8.0	8.2
11	9.6	8.6	9.1	9.6	7.8	8.6	9.2	8.3	8.7	8.4	8.0	8.2
12	9.4	8.2	8.8	9.5	7.9	8.6	9.2	8.7	9.0	8.5	7.9	8.2
13	9.3	8.2	8.7	8.9	7.5	8.1	9.7	8.8	9.1	9.0	8.1	8.7
14	9.1	8.0	8.5	9.3	7.9	8.5	9.9	8.4	9.0	9.5	8.8	9.1
15	9.1	8.3	8.6	9.2	7.6	8.2	9.9	8.3	9.0	10.0	8.8	9.3
16	9.2	8.3	8.8	9.9	7.8	9.0	9.8	8.0	8.7	10.1	9.3	9.6
17	9.4	8.7	9.0	10.2	9.0	9.5	9.6	8.0	8.6	9.9	8.7	9.3
18	9.2	8.8	9.0	9.8	8.0	8.8	8.9	8.1	8.4	10.2	8.5	9.2
19	9.3	8.7	9.0	9.1	7.9	8.4	9.2	7.8	8.4	9.7	8.1	8.8
20	9.1	8.6	8.9	9.1	7.6	8.3	9.1	7.6	8.2	9.4	8.0	8.6
21	9.5	8.9	9.2	---	---	---	9.3	7.9	8.4	9.5	8.5	9.0
22	9.6	9.0	9.3	---	---	---	9.5	7.9	8.6	10.5	9.5	10.0
23	9.6	8.4	9.0	9.2	8.4	8.8	9.1	8.2	8.7	11.3	10.2	10.7
24	9.3	8.2	8.7	8.9	8.2	8.6	9.5	9.0	9.2	11.8	9.7	10.7
25	9.0	8.1	8.6	9.2	8.4	8.8	9.7	8.6	9.1	11.6	9.5	10.5
26	9.3	8.0	8.7	9.4	7.9	8.7	9.9	8.3	9.0	10.9	9.7	10.3
27	9.1	7.7	8.4	9.5	7.9	8.7	9.7	8.5	8.9	11.0	9.1	10.0
28	8.6	8.0	8.3	9.2	7.7	8.4	9.6	8.5	9.0	10.7	9.3	9.9
29	9.0	8.4	8.7	9.1	7.6	8.3	9.6	8.7	9.1	10.6	9.2	9.9
30	9.2	8.9	9.1	8.8	7.6	8.1	10.3	8.7	9.3	11.1	10.1	10.6
31	---	---	---	8.8	7.6	8.1	10.1	9.1	9.7	---	---	---
MONTH	10.6	7.7	9.0	10.2	7.5	8.5	10.3	7.6	8.7	11.8	7.5	9.1

POTOMAC RIVER BASIN

01595800 NORTH BRANCH POTOMAC RIVER AT BARNUM, WV

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

DRAINAGE AREA.--266 mi² (689 km²).

WATER-DISCHARGE RECORDS

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

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

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

AVERAGE DISCHARGE.--17 years, 532 ft³/s (15.07 m³/s), 27.16 in/yr (690 mm/yr), adjusted for storage since October 1981.

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 5,620 ft³/s (159 m³/s) Apr. 24, gage height, 7.64 ft (2.329 m); minimum discharge, 1.4 ft³/s (0.040 m³/s) Oct. 27, gage height, 1.79 ft (0.546 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	252	250	242	777	299	308	822	758	612	273	332	181
2	252	249	256	772	291	292	821	799	518	273	204	181
3	252	249	256	571	285	761	826	1050	480	272	195	181
4	252	250	256	323	272	975	882	1880	482	271	188	181
5	252	237	256	273	266	286	994	1650	480	271	187	180
6	250	222	434	272	266	283	993	1130	478	263	186	178
7	248	222	441	273	266	255	1150	624	476	261	186	178
8	247	222	258	289	266	258	1290	486	475	247	185	178
9	245	222	256	288	266	270	1570	611	475	237	177	179
10	246	222	256	289	270	270	1950	487	452	237	183	183
11	245	221	256	288	276	266	2020	436	407	217	186	183
12	224	219	256	288	273	266	1400	476	407	201	184	182
13	246	219	245	288	273	266	1150	446	405	201	183	184
14	244	219	243	288	273	298	890	447	344	201	183	183
15	459	219	259	288	285	322	1460	448	306	201	183	183
16	425	219	257	288	297	322	1400	1530	291	201	183	183
17	242	227	252	288	300	324	922	2100	300	201	183	183
18	242	226	252	288	314	332	887	2280	272	201	183	183
19	242	213	252	287	327	361	887	1460	271	201	182	437
20	242	214	250	283	327	344	887	1110	267	371	182	263
21	242	213	664	281	330	1340	759	1010	266	386	182	182
22	242	217	870	282	333	2110	529	1550	266	198	181	177
23	242	215	299	281	321	1290	510	2600	269	195	183	181
24	242	215	299	281	310	742	2620	1530	274	194	182	181
25	249	215	299	281	311	546	4410	1030	274	194	181	181
26	256	215	301	281	311	577	1400	901	273	193	181	181
27	221	216	479	281	310	584	1070	761	273	233	181	181
28	255	220	705	281	319	732	1080	621	273	196	181	181
29	395	221	780	281	---	833	977	519	275	198	488	180
30	501	219	782	282	---	833	960	598	273	198	539	183
31	252	---	779	281	---	833	---	670	---	198	178	---
TOTAL	8404	6707	11690	10094	8237	17479	37516	31998	10914	7184	6512	5772
MEAN	271	224	377	326	294	564	1251	1032	364	232	210	192
MAX	501	250	870	777	333	2110	4410	2600	612	386	539	437
MIN	221	213	242	272	266	255	510	436	266	193	177	177
(*)	58240	58000	63660	53660	65390	93170	97880	96920	90130	81450	71870	62800
CAL YR 1982	TOTAL	169098	MEAN	463	MAX	4910	MIN	38				
WTR YR 1983	TOTAL	162507	MEAN	445	MAX	4410	MIN	177				

* Monthend contents, in acre-feet, in Bloomington Lake (contents on Sept. 30, 1982, 70,270 acre-feet).
Records furnished by Corps of Engineers.

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

WATER-QUALITY RECORDS

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

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1980 to current year.

pH: October 1980 to current year.

WATER TEMPERATURES: October 1980 to current year.

DISSOLVED OXYGEN: October 1980 to current year.

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

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

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE (water years 1982-83): Maximum, 525 micromhos Oct. 20, 21, 1981; minimum, 172 micromhos Mar. 24, 1982.

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

WATER TEMPERATURES (water years 1982-83): Maximum, 22.0°C Aug. 19, Sept. 9, 1982; minimum 0.5°C on several days during Jan. 1982.

DISSOLVED OXYGEN (water year 1983): Maximum, 14.6 mg/L Jan. 24, 1983; minimum, 8.1 mg/L June 25, 26, 1983.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum, 439 micromhos Sept. 27; minimum, 212 micromhos Apr. 28, 29.

pH: Maximum, 7.0 units Oct. 20, 25, 30, 31, Nov. 1, 2; minimum, 5.7 units Aug. 1.

WATER TEMPERATURES: Maximum, 21.0°C July 27; minimum, 3.0°C Jan. 29.

DISSOLVED OXYGEN: Maximum, 14.6 mg/L Jan. 24; minimum, 8.1 mg/L June 25, 26.

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	310	302	305	318	303	312	414	365	390	349	328	335
2	314	297	306	322	299	312	414	411	413	357	331	335
3	323	313	320	323	305	310	412	406	411	355	341	348
4	324	312	318	315	307	311	408	374	386	353	341	349
5	323	315	320	343	284	320	396	375	384	355	350	352
6	322	310	315	311	281	298	383	338	364	364	352	356
7	314	303	310	322	304	312	358	343	353	364	362	363
8	316	307	312	322	300	310	358	350	354	363	362	362
9	324	313	319	349	298	324	365	349	357	362	357	360
10	331	323	328	356	339	346	367	349	351	357	351	353
11	338	327	334	355	325	339	351	348	350	357	351	354
12	330	318	323	340	314	326	357	344	349	354	349	351
13	354	335	346	335	317	328	361	349	357	358	354	356
14	351	337	341	355	328	345	362	346	349	360	357	358
15	351	341	344	344	317	328	361	348	354	361	357	359
16	365	336	350	353	307	322	366	360	363	361	357	358
17	356	333	344	359	289	327	365	358	362	---	---	---
18	351	334	342	312	302	308	360	357	358	---	---	---
19	361	338	344	312	307	309	360	359	360	---	---	---
20	364	344	354	318	309	314	361	358	360	---	---	---
21	358	328	340	321	317	320	360	355	358	379	376	377
22	339	333	337	339	321	330	363	355	359	377	373	376
23	343	336	338	347	338	342	363	362	363	389	376	381
24	345	341	343	352	342	348	363	361	362	401	391	398
25	349	312	332	354	342	346	362	361	362	408	402	405
26	325	310	315	361	341	349	363	362	362	410	406	408
27	323	314	319	366	352	359	364	359	360	410	408	410
28	329	321	324	373	364	367	369	339	353	409	406	407
29	333	327	329	378	365	372	340	324	332	407	402	405
30	346	318	336	367	361	363	340	329	334	403	397	400
31	329	304	321	---	---	---	362	323	336	403	397	400
MONTH	365	297	329	378	281	330	414	323	361	410	328	371

POTOMAC RIVER BASIN

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

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	412	399	406	---	---	---	---	---	---	216	213	215
2	407	402	404	---	---	---	---	---	---	217	214	215
3	396	348	377	336	328	332	---	---	---	245	212	224
4	349	338	340	337	328	332	---	---	---	256	242	250
5	340	331	333	334	330	332	---	---	---	256	226	244
6	331	322	323	338	333	336	---	---	---	240	214	227
7	317	314	315	335	328	332	248	258	263	221	213	217
8	314	307	308	---	---	---	248	257	259	223	218	220
9	305	299	302	---	---	---	272	270	271	222	215	218
10	---	---	---	---	---	---	285	270	279	221	217	220
11	---	---	---	---	---	---	285	270	279	226	216	221
12	---	---	---	---	---	---	270	249	260	222	218	220
13	---	---	---	---	---	---	254	222	244	226	222	223
14	---	---	---	---	---	---	223	219	221	228	221	224
15	---	---	---	---	---	---	276	219	251	227	223	225
16	---	---	---	---	---	---	278	227	250	252	219	233
17	356	347	349	---	---	---	228	219	224	263	230	243
18	358	343	351	---	---	---	228	219	224	247	238	242
19	344	342	343	256	243	247	229	225	227	260	234	239
20	---	---	---	247	245	246	227	224	225	235	225	232
21	---	---	---	301	240	265	230	227	229	237	225	229
22	---	---	---	315	271	286	233	230	232	242	230	235
23	---	---	---	272	225	255	238	232	233	237	233	235
24	---	---	---	255	225	231	248	220	254	239	226	232
25	---	---	---	231	228	229	247	261	274	233	219	226
26	---	---	---	228	227	228	242	222	241	226	220	224
27	---	---	---	235	228	232	239	221	230	228	221	224
28	---	---	---	232	226	228	235	212	226	227	221	225
29	---	---	---	---	---	---	225	212	220	229	218	222
30	---	---	---	---	---	---	224	214	221	227	219	223
31	---	---	---	---	---	---	---	---	---	223	216	220
MONTH	412	299	346	338	225	274	288	212	243	263	212	227
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	221	217	219	258	252	256	324	293	302	302	296	298
2	222	218	220	257	251	255	313	293	304	303	295	298
3	224	221	223	259	254	257	310	299	305	315	295	311
4	228	222	225	262	254	258	310	297	303	320	311	315
5	225	221	223	266	257	262	---	---	---	323	312	318
6	225	220	222	264	254	259	---	---	---	326	315	320
7	227	221	225	265	254	260	---	---	---	327	314	322
8	229	223	225	267	261	264	---	---	---	326	308	317
9	230	225	227	269	260	265	---	---	---	313	304	308
10	234	228	231	277	259	269	---	---	---	318	303	309
11	230	224	227	276	270	272	---	---	---	319	305	313
12	230	227	228	276	267	272	303	286	294	323	310	316
13	232	227	229	280	270	275	295	283	287	323	301	313
14	235	226	230	279	273	276	298	283	288	319	288	302
15	234	232	233	279	264	272	293	285	288	320	306	313
16	243	233	236	275	259	267	290	285	288	341	310	324
17	251	233	238	282	263	271	290	285	288	339	315	328
18	249	236	241	276	267	272	288	281	285	343	323	334
19	245	238	241	283	273	277	291	284	287	349	324	335
20	248	238	242	285	274	279	290	284	288	369	336	354
21	275	238	249	295	273	284	293	285	290	381	349	364
22	278	260	272	294	287	290	293	286	289	381	353	366
23	268	253	258	297	285	292	298	281	289	381	368	375
24	257	249	253	296	283	289	297	287	291	394	379	389
25	269	250	258	311	289	298	297	290	293	417	395	408
26	266	256	261	310	301	306	299	287	292	427	416	421
27	269	260	264	318	289	302	294	284	290	439	384	414
28	263	235	249	307	286	298	295	287	291	410	393	401
29	261	229	247	298	284	290	306	280	295	414	399	407
30	259	251	255	304	294	300	301	293	296	420	404	415
31	---	---	---	304	293	300	301	293	297	---	---	---
MONTH	278	217	238	318	251	277	324	280	293	439	288	344

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

PH (STANDARD UNITS), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY			MARCH			APRIL			MAY			
1	6.8	6.4	6.6	---	---	---	---	---	---	6.2	6.2	6.2
2	---	---	---	---	---	---	---	---	---	6.2	6.1	6.2
3	---	---	---	6.5	6.2	6.3	---	---	---	6.2	6.1	6.1
4	---	---	---	6.8	6.3	6.5	---	---	---	6.2	6.1	6.1
5	---	---	---	6.8	6.6	6.7	---	---	---	6.1	6.0	6.0
6	---	---	---	6.8	6.6	6.7	---	---	---	6.0	6.0	6.0
7	---	---	---	6.9	6.6	6.7	6.6	6.3	6.5	6.1	5.9	6.0
8	---	---	---	---	---	---	6.4	6.3	6.3	6.1	6.0	6.1
9	---	---	---	---	---	---	6.4	6.3	6.4	6.1	5.9	6.0
10	---	---	---	---	---	---	6.5	6.4	6.4	6.1	6.0	6.0
11	---	---	---	---	---	---	6.5	6.3	6.4	6.2	6.1	6.1
12	---	---	---	---	---	---	6.4	6.2	6.3	6.2	6.1	6.1
13	---	---	---	---	---	---	6.3	6.2	6.3	6.2	6.2	6.2
14	---	---	---	---	---	---	6.3	6.2	6.3	6.3	6.1	6.2
15	---	---	---	---	---	---	6.5	6.3	6.4	6.3	6.2	6.2
16	---	---	---	---	---	---	6.5	6.3	6.4	6.6	6.1	6.3
17	6.6	6.2	6.3	---	---	---	6.4	6.3	6.4	6.3	6.0	6.1
18	6.9	6.2	6.6	6.6	6.5	6.6	6.4	6.3	6.3	6.1	6.0	6.0
19	6.6	6.2	6.4	6.7	6.5	6.6	6.4	6.4	6.4	6.2	6.1	6.1
20	---	---	---	6.6	6.4	6.4	6.4	6.4	6.4	6.2	6.1	6.1
21	---	---	---	6.6	6.3	6.4	6.5	6.3	6.4	6.2	6.0	6.1
22	---	---	---	6.5	6.2	6.3	6.5	6.4	6.5	6.3	6.0	6.1
23	---	---	---	6.3	6.2	6.2	6.6	6.4	6.5	6.1	6.0	6.0
24	---	---	---	6.3	6.1	6.2	6.8	6.4	6.6	6.2	6.0	6.1
25	---	---	---	6.4	6.2	6.3	6.4	6.3	6.3	6.3	6.1	6.2
26	---	---	---	6.3	6.2	6.3	6.4	6.3	6.3	6.2	6.2	6.2
27	---	---	---	6.3	6.1	6.2	6.4	6.3	6.3	6.3	6.2	6.2
28	---	---	---	6.1	6.0	6.1	6.3	6.3	6.3	6.3	6.2	6.3
29	---	---	---	---	---	---	6.3	6.2	6.2	6.5	6.3	6.4
30	---	---	---	---	---	---	6.3	6.2	6.2	6.5	6.3	6.3
31	---	---	---	---	---	---	---	---	---	6.3	6.2	6.3
MONTH	6.9	6.2	6.5	6.9	6.0	6.4	6.8	6.2	6.4	6.6	5.9	6.1

POTOMAC RIVER BASIN

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

PH (STANDARD UNITS), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	6.4	6.2	6.3	6.8	6.6	6.7	6.1	5.7	6.0	6.4	6.3	6.3
2	6.5	6.3	6.4	6.6	6.5	6.6	6.1	6.0	6.0	6.4	6.3	6.3
3	6.5	6.4	6.4	6.6	6.5	6.6	6.3	6.0	6.1	6.4	6.3	6.3
4	6.5	6.4	6.5	6.6	6.5	6.5	6.3	6.2	6.2	6.4	6.3	6.3
5	6.5	6.4	6.5	6.5	6.4	6.5	6.2	6.2	6.2	6.4	6.3	6.3
6	6.5	6.4	6.4	6.5	6.4	6.4	---	---	---	6.4	6.3	6.4
7	6.5	6.4	6.5	6.4	6.3	6.4	---	---	---	6.4	6.3	6.3
8	6.5	6.4	6.4	6.4	6.3	6.3	---	---	---	6.4	6.3	6.4
9	6.5	6.4	6.5	6.4	6.3	6.3	---	---	---	6.4	6.3	6.3
10	6.5	6.4	6.5	6.3	6.2	6.3	---	---	---	6.4	6.3	6.4
11	6.5	6.4	6.4	6.4	6.2	6.3	---	6.2	---	6.4	6.3	6.3
12	6.5	6.4	6.4	6.4	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3
13	6.5	6.4	6.4	6.3	6.2	6.3	6.3	6.2	6.3	6.4	6.3	6.3
14	6.5	6.4	6.5	6.3	6.2	6.3	6.3	6.2	6.3	6.4	6.3	6.3
15	6.5	6.5	6.5	6.3	6.2	6.3	6.3	6.2	6.3	6.4	6.3	6.3
16	6.6	6.5	6.5	6.3	6.2	6.3	6.3	6.2	6.3	6.3	6.3	6.3
17	6.7	6.5	6.5	6.3	6.2	6.2	6.3	6.2	6.3	6.3	6.3	6.3
18	6.6	6.5	6.5	6.3	6.1	6.2	6.4	6.2	6.3	6.3	6.3	6.3
19	6.6	6.5	6.5	6.4	6.1	6.3	6.4	6.3	6.4	6.3	6.0	6.1
20	6.6	6.4	6.5	6.3	5.9	6.2	6.4	6.3	6.4	6.2	6.0	6.1
21	6.5	6.4	6.5	6.3	5.9	6.1	6.4	6.3	6.3	6.3	6.2	6.2
22	6.4	6.3	6.4	6.3	6.2	6.2	6.4	6.3	6.4	6.3	6.2	6.3
23	6.4	6.4	6.4	6.3	6.2	6.2	6.4	6.2	6.3	6.3	6.2	6.2
24	6.5	6.4	6.4	6.2	6.1	6.2	6.3	6.2	6.3	6.2	6.2	6.2
25	6.4	6.4	6.4	6.2	6.0	6.1	6.4	6.3	6.3	6.2	6.2	6.2
26	6.6	6.4	6.4	6.1	6.0	6.1	6.4	6.3	6.4	6.3	6.2	6.2
27	6.6	6.4	6.5	6.2	5.8	6.1	6.4	6.2	6.3	6.4	6.2	6.3
28	6.7	6.4	6.5	6.3	6.0	6.1	6.4	6.3	6.3	6.3	6.3	6.3
29	6.8	6.5	6.7	6.2	6.1	6.1	6.4	6.0	6.2	6.3	6.3	6.3
30	6.8	6.7	6.7	6.2	6.0	6.1	6.3	6.0	6.1	6.4	6.2	6.3
31	---	---	---	6.2	6.1	6.1	6.4	6.3	6.3	---	---	---
MONTH	6.8	6.2	6.5	6.8	5.8	6.3	6.4	5.7	6.3	6.4	6.0	6.3

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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

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

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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

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

POTOMAC RIVER BASIN

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

OXYGEN, DISSOLVED (DO), MG/L, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			DECEMBER			JANUARY			
1	9.5	8.9	9.3	10.9	10.6	10.8	11.1	10.4	10.8	10.4	10.2	10.3
2	9.4	9.1	9.3	11.1	10.6	10.9	10.6	10.4	10.5	10.5	10.3	10.4
3	9.5	9.0	9.3	11.1	10.7	10.9	10.5	10.4	10.4	10.6	10.4	10.5
4	9.5	9.3	9.3	10.9	10.8	10.8	10.5	10.2	10.4	10.9	10.6	10.7
5	9.6	9.2	9.4	11.2	10.7	11.0	10.5	10.2	10.4	11.0	10.8	10.8
6	9.7	9.5	9.5	11.4	10.9	11.1	11.0	10.3	10.6	11.1	10.8	11.0
7	9.7	9.5	9.6	11.1	10.7	10.9	11.2	10.7	11.1	11.3	11.0	11.1
8	9.7	9.5	9.6	11.0	10.5	10.8	11.2	11.0	11.1	11.5	11.2	11.5
9	9.7	9.5	9.6	11.0	10.5	10.8	11.3	11.1	11.2	11.7	11.4	11.7
10	9.8	9.5	9.6	10.8	10.5	10.7	11.4	11.1	11.3	11.9	11.7	11.9
11	9.6	9.4	9.5	10.7	10.5	10.6	11.2	11.1	11.1	12.0	11.9	12.0
12	9.7	9.4	9.5	10.7	10.1	10.5	11.4	11.2	11.3	12.5	12.0	12.4
13	9.6	9.4	9.5	10.8	10.6	10.7	11.5	11.2	11.4	12.7	12.4	12.6
14	9.6	9.4	9.5	10.7	10.5	10.6	11.5	11.3	11.4	12.8	12.5	12.7
15	9.6	9.4	9.5	10.9	10.7	10.8	11.5	11.1	11.3	12.7	12.4	12.6
16	9.9	9.5	9.7	11.0	10.7	10.9	11.4	11.2	11.3	---	---	---
17	10.1	9.8	10.0	11.2	10.7	10.9	11.6	11.3	11.5	---	---	---
18	10.2	9.8	10.0	11.3	11.1	11.2	11.7	11.4	11.6	---	---	---
19	10.1	9.7	10.0	11.3	11.2	11.2	11.7	11.4	11.5	---	---	---
20	10.0	9.7	9.8	11.3	11.2	11.3	11.6	11.4	11.5	---	---	---
21	10.2	9.9	10.1	11.3	11.1	11.2	12.3	11.6	11.9	13.2	12.9	13.1
22	10.4	10.2	10.3	11.2	11.0	11.1	12.4	11.8	12.0	13.6	13.2	13.4
23	10.5	10.2	10.4	11.4	11.0	11.1	11.9	11.7	11.8	14.2	13.6	13.9
24	10.6	10.3	10.4	11.5	11.0	11.2	11.9	11.7	11.8	14.6	14.2	14.4
25	10.7	10.3	10.4	11.6	11.3	11.4	11.9	11.8	11.8	14.5	13.9	14.2
26	10.7	10.4	10.6	11.4	11.1	11.2	11.8	11.5	11.7	14.0	13.0	13.5
27	10.8	10.2	10.6	11.3	11.2	11.3	12.0	11.8	11.9	13.0	12.2	12.6
28	10.8	10.4	10.6	11.3	11.0	11.2	12.0	11.8	11.9	12.2	11.8	12.0
29	10.8	10.4	10.6	11.1	10.8	10.9	12.0	10.8	11.6	12.0	11.6	11.8
30	10.9	10.6	10.7	11.2	11.0	11.1	11.0	10.3	10.7	12.1	11.7	11.9
31	10.9	10.5	10.7	---	---	---	10.6	10.2	10.4	12.5	12.0	12.2
MONTH	10.9	8.9	9.9	11.6	10.1	11.0	12.4	10.2	11.3	14.6	10.2	12.1
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY			MARCH			APRIL			MAY			
1	12.7	12.2	12.5	---	---	---	---	---	---	11.9	11.7	11.8
2	12.2	11.5	11.8	---	---	---	---	---	---	11.8	11.6	11.7
3	11.7	11.4	11.6	12.9	11.9	12.5	---	---	---	---	---	---
4	11.9	11.6	11.8	12.5	11.7	12.1	---	---	---	---	---	---
5	11.9	11.7	11.8	11.7	11.2	11.5	---	---	---	13.7	11.3	12.6
6	11.9	11.8	11.8	11.9	11.6	11.7	---	---	---	12.5	10.6	11.6
7	12.0	11.7	11.8	11.7	11.2	11.5	12.9	12.7	12.8	11.2	10.0	10.6
8	12.0	11.7	11.9	---	---	---	13.0	12.7	12.8	10.8	10.4	10.6
9	12.1	11.8	11.9	---	---	---	13.2	13.0	13.1	11.0	10.5	10.8
10	---	---	---	---	---	---	13.5	13.0	13.3	11.1	10.3	10.7
11	---	---	---	---	---	---	13.5	12.8	13.2	10.8	9.9	10.5
12	---	---	---	---	---	---	13.0	12.6	12.8	10.8	10.0	10.4
13	---	---	---	---	---	---	12.7	12.1	12.5	10.4	10.0	10.2
14	---	---	---	---	---	---	12.3	12.0	12.2	10.3	10.0	10.2
15	---	---	---	---	---	---	13.3	12.1	12.8	10.1	9.8	10.0
16	---	---	---	---	---	---	13.3	12.2	12.7	13.1	10.1	11.1
17	12.7	12.0	12.3	---	---	---	12.3	12.1	12.2	13.2	9.8	11.7
18	13.2	12.2	12.4	---	---	---	12.5	12.2	12.4	12.6	11.4	12.1
19	12.6	12.0	12.2	11.8	11.4	11.5	12.7	12.5	12.6	11.7	10.5	11.0
20	---	---	---	11.4	11.0	11.2	12.6	12.5	12.5	10.7	9.7	10.3
21	---	---	---	12.4	10.8	11.5	12.6	12.1	12.4	11.2	9.8	10.0
22	---	---	---	12.7	12.1	12.3	12.3	12.1	12.2	11.5	10.2	10.8
23	---	---	---	12.4	11.7	12.1	12.3	11.8	12.1	12.2	11.3	11.8
24	---	---	---	11.9	11.4	11.7	14.2	11.9	13.0	11.7	10.1	10.7
25	---	---	---	11.4	11.3	11.4	14.3	12.9	13.8	10.4	9.4	9.8
26	---	---	---	11.5	11.3	11.4	13.1	11.9	12.5	9.8	9.4	9.6
27	---	---	---	11.4	11.3	11.3	12.3	12.0	12.1	9.8	9.3	9.6
28	---	---	---	11.5	11.3	11.5	12.3	11.7	12.1	9.7	9.2	9.5
29	---	---	---	---	---	---	12.1	11.8	12.0	9.4	9.0	9.2
30	---	---	---	---	---	---	12.1	11.7	12.0	9.5	9.2	9.3
31	---	---	---	---	---	---	---	---	---	9.6	9.4	9.5
MONTH	13.2	11.4	12.0	12.9	10.8	11.7	14.3	11.7	12.6	13.7	9.0	10.6

POTOMAC RIVER BASIN

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

OXYGEN, DISSOLVED (DO), MG/L, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	9.7	9.5	9.6	9.1	8.7	8.9	9.0	8.6	8.8	9.1	8.6	8.9
2	9.7	9.3	9.5	9.0	8.7	8.9	9.0	8.6	8.9	9.2	8.8	9.0
3	9.4	9.1	9.2	9.0	8.7	8.9	9.0	8.5	8.8	9.2	8.8	9.0
4	9.2	8.9	9.0	9.0	8.6	8.8	9.0	8.6	8.8	9.1	8.9	9.0
5	9.3	8.9	9.1	8.9	8.6	8.8	---	---	---	9.1	8.8	9.0
6	9.3	8.8	9.0	9.1	8.8	8.9	---	---	---	9.1	8.7	8.9
7	9.2	8.8	9.0	9.2	8.4	8.9	---	---	---	9.1	8.8	9.0
8	9.2	8.8	9.0	8.8	8.3	8.6	---	---	---	9.3	8.9	9.1
9	9.2	9.0	9.1	8.8	8.3	8.5	---	---	---	9.5	9.0	9.3
10	9.4	8.9	9.2	8.9	8.4	8.7	---	---	---	9.6	9.1	9.4
11	9.6	9.1	9.3	9.0	8.6	8.9	---	---	---	9.5	9.1	9.3
12	9.5	9.1	9.3	9.1	8.6	8.9	9.2	8.7	8.9	9.6	9.0	9.4
13	9.3	9.1	9.3	9.1	8.6	8.9	9.3	9.0	9.2	9.7	9.1	9.3
14	9.3	9.0	9.2	9.2	8.7	9.0	9.4	9.0	9.2	9.5	9.2	9.4
15	9.2	9.0	9.1	9.2	8.9	9.0	9.4	8.9	9.2	9.6	9.2	9.4
16	9.3	8.9	9.1	9.4	8.9	9.2	9.3	8.9	9.2	9.6	9.3	9.5
17	9.2	9.0	9.2	9.4	8.9	9.2	9.3	9.0	9.2	9.6	9.2	9.4
18	9.3	9.1	9.2	9.5	9.0	9.3	9.3	9.1	9.2	9.7	9.3	9.5
19	9.3	9.1	9.2	9.6	9.0	9.3	9.4	8.9	9.2	10.0	9.6	9.8
20	9.3	9.1	9.2	9.4	8.9	9.2	9.4	8.8	9.2	10.0	9.4	9.7
21	9.3	9.3	9.3	9.4	8.9	9.1	9.3	8.9	9.2	9.9	9.6	9.7
22	9.4	9.1	9.2	9.4	8.9	9.2	9.3	8.7	9.0	10.1	9.8	10.0
23	9.3	8.9	9.2	9.5	8.7	9.2	9.0	8.9	8.9	10.4	10.0	10.2
24	9.3	8.8	9.1	8.8	8.4	8.7	9.0	8.8	8.9	10.2	9.9	10.1
25	9.0	8.1	8.6	8.9	8.6	8.8	8.9	8.7	8.8	10.3	9.8	10.1
26	8.5	8.1	8.3	8.9	8.5	8.8	8.9	8.5	8.7	10.1	9.8	9.9
27	8.8	8.3	8.5	9.0	8.2	8.7	8.8	8.5	8.7	10.3	9.9	10.1
28	9.4	8.6	9.0	9.2	8.8	9.0	8.8	8.5	8.7	10.3	10.0	10.2
29	9.4	9.0	9.2	9.2	8.8	9.0	9.3	8.7	9.0	10.3	9.9	10.1
30	9.1	9.0	9.0	9.1	8.6	8.9	9.4	8.6	9.0	10.1	9.9	10.0
31	---	---	---	9.0	8.6	8.8	8.8	8.7	8.8	---	---	---
MONTH	9.7	8.1	9.1	9.6	8.2	8.9	9.4	8.5	9.0	10.4	8.6	9.5

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).

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 January, which are fair. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--35 years, 75.0 ft³/s (2.124 m³/s), 20.74 in/yr (527 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 discharge, 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)
Apr. 24	1345	*1230 34.8	3.87 1.180	May 22	2015	1230 34.8	3.87 1.180

Minimum discharge, 1.8 ft³/s (0.051 m³/s) Sept. 12, gage height, 1.07 ft (0.326 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.3	4.1	63	32	130	77	136	85	51	15	3.4	11
2	4.7	4.1	60	28	69	81	151	88	45	13	3.6	6.2
3	4.4	4.4	49	25	101	89	402	97	42	12	3.1	4.7
4	4.1	8.9	41	22	105	120	303	123	82	11	2.7	3.9
5	4.1	16	34	21	88	169	202	131	86	9.9	3.7	3.7
6	4.1	8.8	33	20	75	157	154	117	73	9.5	5.1	3.7
7	4.1	6.3	27	19	65	163	134	98	62	8.9	4.5	3.2
8	4.1	5.6	22	18	52	185	306	85	49	7.9	3.2	2.7
9	4.1	5.3	20	15	50	293	489	70	38	7.2	2.6	2.3
10	4.1	5.0	21	16	45	242	545	57	31	7.2	2.3	2.0
11	4.4	4.7	18	23	21	173	424	49	26	6.3	2.9	2.0
12	4.4	4.7	17	23	32	133	260	43	22	5.9	7.4	2.0
13	5.9	5.0	13	23	34	104	171	38	19	5.9	5.7	10
14	8.6	5.0	21	23	36	87	132	37	18	5.7	4.2	9.3
15	6.3	4.7	31	21	40	73	202	55	16	5.2	3.2	5.6
16	5.6	4.4	63	16	42	60	221	206	14	4.9	2.8	4.6
17	5.6	4.4	69	15	51	52	185	372	22	4.7	2.3	4.6
18	5.3	5.0	47	14	60	73	145	223	37	4.7	3.8	4.1
19	4.7	5.0	42	13	59	368	115	163	56	4.9	3.7	3.7
20	4.7	5.6	37	13	77	347	92	170	126	8.3	3.1	3.4
21	5.6	8.4	29	14	111	396	74	170	131	9.0	2.3	4.4
22	5.6	27	24	16	202	386	62	408	98	12	2.9	5.4
23	5.0	36	27	20	278	261	55	593	66	6.6	7.3	4.7
24	4.7	23	49	25	268	169	782	344	47	14	5.2	4.1
25	4.4	18	52	30	188	127	587	223	34	8.7	4.1	3.6
26	4.4	15	53	23	132	98	334	148	26	6.5	3.7	3.4
27	4.4	14	51	20	102	106	205	106	21	5.5	3.3	3.2
28	4.1	19	52	18	84	138	142	82	18	4.9	4.5	3.2
29	4.1	151	49	17	---	175	112	73	18	4.4	4.0	3.3
30	4.1	82	42	50	---	171	103	86	17	4.0	3.1	4.2
31	4.1	---	37	109	---	154	---	62	---	3.7	4.1	---
TOTAL	149.1	510.4	1193	742	2597	5227	7225	4602	1391	237.4	117.8	132.2
MEAN	4.81	17.0	38.5	23.9	92.8	169	241	148	46.4	7.66	3.80	4.41
MAX	8.6	151	69	109	278	396	782	593	131	15	7.4	11
MIN	4.1	4.1	13	13	21	52	55	37	14	3.7	2.3	2.0
CFSM	.10	.35	.78	.49	1.89	3.44	4.91	3.01	.95	.16	.08	.09
IN.	.11	.39	.90	.56	1.97	3.96	5.47	3.49	1.05	.18	.09	.10

CAL YR 1982 TOTAL 25444.2 MEAN 69.7 MAX 846 MIN 2.0 CFSM 1.42 IN 19.28
WTR YR 1983 TOTAL 24123.9 MEAN 66.1 MAX 782 MIN 2.0 CFSM 1.35 IN 18.28

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).

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.--35 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 discharge, 0.35 ft³/s (0.010 m³/s) Oct. 27, 1966, gage height, 0.57 ft (0.174 m); minimum daily discharge, 0.6 ft³/s (0.017 m³/s) July 27-31, Aug. 5, 6, 9, 10, 1951.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,990 ft³/s (84.7 m³/s) Apr. 24, gage height, 5.25 ft (1.600 m); minimum discharge, 6.4 ft³/s (0.18 m³/s) Sept. 28, gage height, 0.79 ft (0.241 m); minimum daily discharge 20 ft³/s (0.57 m³/s) Feb. 20.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	50	48	73	89	61	72	219	178	104	54	68	48
2	50	48	94	89	53	93	220	165	104	54	52	48
3	50	49	98	89	53	272	223	206	104	54	52	48
4	50	50	98	89	54	384	280	231	104	54	52	48
5	50	48	97	89	57	330	312	284	163	54	52	48
6	50	48	179	89	55	301	312	316	219	53	52	48
7	50	48	212	89	55	335	312	317	218	53	52	48
8	51	48	162	88	55	356	314	316	147	60	52	48
9	51	48	244	87	57	555	757	221	104	64	52	47
10	51	48	189	80	57	583	977	125	72	64	52	47
11	50	48	117	76	58	361	874	89	53	64	52	47
12	50	48	92	76	58	288	555	79	53	64	52	48
13	50	48	204	76	59	285	380	70	53	55	52	48
14	50	48	271	76	57	167	318	56	54	63	51	47
15	75	48	268	76	56	97	324	57	53	63	51	47
16	69	47	267	75	55	96	414	549	53	63	51	47
17	50	47	204	74	55	96	396	1020	54	63	51	47
18	49	47	90	74	34	97	333	663	53	63	51	47
19	49	48	90	48	21	106	313	460	53	63	51	109
20	50	49	193	44	20	106	310	298	71	146	51	63
21	50	48	254	50	21	460	224	555	102	148	51	47
22	50	50	151	50	22	828	104	488	102	62	51	47
23	49	50	89	50	35	288	103	1630	102	61	51	47
24	49	49	89	50	43	178	1250	1090	101	62	51	47
25	50	48	89	50	42	309	1880	460	101	61	51	46
26	49	48	89	50	41	306	928	106	101	61	51	46
27	57	48	90	50	41	308	388	186	70	61	51	46
28	45	49	90	50	41	250	223	212	48	61	51	47
29	68	51	197	50	---	216	222	174	49	61	134	46
30	76	50	152	50	---	218	211	165	54	61	165	46
31	48	---	89	50	---	219	---	127	---	61	49	---
TOTAL	1636	1452	4621	2123	1316	8560	13676	10893	2719	2031	1805	1493
MEAN	52.8	48.4	149	68.5	47.0	276	456	351	90.6	65.5	58.2	49.8
MAX	76	51	271	89	61	828	1880	1630	219	148	165	109
MIN	45	47	73	44	20	72	103	56	48	53	49	46
(#)	12430	11500	6990	5500	13120	18250	19830	19520	19290	16120	12940	10350

CAL YR 1982 TOTAL 52830 MEAN 145 MAX 1540 MIN 21
WTR YR 1983 TOTAL 52325 MEAN 143 MAX 1880 MIN 20

* Monthend contents, in acre-feet, in Savage River Reservoir (contents on Sept. 30, 1982, 15,160 acre-feet).
Records furnished by Corps of Engineers.

POTOMAC RIVER BASIN

01598500 NORTH BRANCH POTOMAC RIVER AT LUKE, MD

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

DRAINAGE AREA.--404 mi² (1,046 km²).

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

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

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

REMARKS.--Records good. Flow regulated prior to July 1981 by Stony River Reservoir, 45 mi (72 km) above station (see station 01595200), since December 1950 by Savage River Reservoir, 5 mi (8 km) above station (see station 01597500), and since July 1981 by Bloomington Lake, 9 mi (14 km) above station (see station 01595800). Some regulation at low flow by West Virginia Pulp and Paper Company at site used 1899-1906. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--40 years (water years 1900-05, 1950-83), 713 ft³/s (20.19 m³/s), 23.97 in/yr (609 mm/yr), adjusted for storage since October 1949.

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 8,690 ft³/s (246 m³/s) Apr. 24, gage height, 9.18 ft (2.798 m); minimum discharge, 98 ft³/s (2.78 m³/s) Oct. 27, gage height, 1.25 ft (0.381 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	322	315	350	899	398	447	1160	1050	828	337	402	223
2	321	315	401	893	384	462	1160	1000	735	334	253	220
3	320	314	401	715	393	942	1240	1200	640	333	243	219
4	318	322	398	478	373	1520	1280	1960	640	332	233	218
5	318	305	398	400	364	713	1410	2080	640	334	237	219
6	317	284	575	402	362	671	1410	1590	640	326	236	218
7	315	283	778	396	358	680	1520	1100	640	321	233	217
8	315	282	458	414	356	731	1700	800	640	316	231	215
9	315	280	561	413	357	937	2320	958	640	308	224	216
10	317	280	508	407	359	985	3030	769	600	307	229	221
11	315	280	425	401	371	757	3190	629	560	288	232	221
12	291	281	385	398	368	656	2160	644	498	265	231	223
13	321	280	481	395	367	647	1690	600	494	253	228	242
14	316	279	567	394	365	562	1340	584	438	262	226	225
15	524	277	581	395	373	501	1760	600	378	262	226	223
16	568	277	600	391	394	495	2010	1550	363	262	226	221
17	311	284	533	391	408	491	1450	3460	387	262	226	222
18	309	288	385	389	414	531	1340	3120	365	261	227	221
19	308	269	384	369	414	806	1310	2170	354	266	226	523
20	310	276	481	351	418	665	1290	1580	359	467	225	367
21	308	274	834	358	432	1650	1120	1590	412	628	225	225
22	308	301	1150	358	461	3150	723	2130	407	266	226	218
23	308	287	432	359	482	1880	695	4370	405	256	234	220
24	308	277	435	359	473	1080	3730	3070	407	257	227	220
25	313	274	434	358	453	994	7130	1850	404	254	226	218
26	320	275	435	355	433	1010	3090	1190	403	253	225	218
27	296	273	585	355	423	1030	1450	1110	364	291	225	218
28	315	292	820	355	426	1110	1400	850	327	254	229	219
29	434	346	1010	355	---	1180	1300	750	340	257	544	216
30	644	297	994	363	---	1170	1250	850	338	256	812	230
31	316	---	904	369	---	1170	---	900	---	255	223	---
TOTAL	10621	8667	17683	13235	11179	29623	55658	46104	14646	9323	8190	7076
MEAN	343	289	570	427	399	956	1855	1487	488	301	264	236
MAX	644	346	1150	899	482	3150	7130	4370	828	628	812	523
MIN	291	269	350	351	356	447	695	584	327	253	223	215
CAL YR 1982 TOTAL	246416				6500	106	CFSM 1.67	IN 22.69				
WTR YR 1983 TOTAL	232005				7130	215	CFSM 1.57	IN 21.36				

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).

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.--54 years (water years 1930-83), 81.1 ft³/s (2.297 m³/s), 15.21 in/yr (386 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 discharge, 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)
Apr. 24	1500	1840 52.1	7.85 2.393	June 18	1915	*2030 57.5	8.03 2.448

Minimum discharge, 5.9 ft³/s (0.17 m³/s) Feb. 11, result of freezeup; minimum daily discharge, 7.0 ft³/s (0.20 m³/s) Sept. 20.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 to SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.0	8.1	37	20	28	68	128	150	108	40	10	15
2	8.6	8.1	44	19	36	70	147	158	96	34	10	11
3	8.4	8.1	31	18	67	68	384	151	86	30	9.7	9.6
4	8.2	11	25	16	55	71	245	152	124	27	9.4	9.2
5	8.4	13	22	16	42	75	191	135	116	28	20	9.5
6	8.7	10	21	17	38	73	174	119	92	26	30	9.3
7	8.4	9.0	19	16	35	79	171	108	80	24	13	8.5
8	8.4	8.4	16	15	30	129	390	102	72	22	11	8.1
9	8.5	8.1	14	14	28	183	399	96	64	21	9.5	7.9
10	8.8	8.1	13	15	26	145	572	89	58	20	8.9	7.5
11	8.7	8.1	13	26	15	123	397	81	54	18	12	7.2
12	8.9	8.1	13	25	29	103	292	76	49	17	14	7.9
13	13	8.1	12	17	27	85	218	71	45	16	11	31
14	13	8.1	11	17	31	77	174	67	44	15	9.7	14
15	10	7.8	11	18	31	68	282	100	39	15	9.2	9.3
16	10	7.6	57	15	33	60	217	320	36	14	9.0	8.4
17	9.4	7.5	36	13	45	54	181	371	35	13	8.8	8.8
18	8.7	7.5	24	13	58	89	158	232	102	14	11	7.9
19	8.5	7.5	22	12	60	468	141	218	196	13	9.8	7.4
20	8.5	9.8	21	12	65	280	120	266	125	16	8.4	7.0
21	9.4	14	20	11	87	428	102	233	220	19	7.7	10
22	8.7	30	18	12	141	309	88	415	131	22	12	10
23	8.4	32	17	14	179	219	84	561	102	15	18	8.1
24	8.3	19	26	19	163	167	1320	359	70	20	12	7.8
25	8.4	14	23	17	128	138	780	256	58	15	11	7.5
26	8.6	11	21	15	96	114	425	196	52	14	10	7.6
27	8.4	10	23	14	78	134	290	155	46	13	9.8	7.6
28	8.4	16	30	14	70	160	220	135	42	12	10	7.3
29	8.2	107	27	15	---	162	180	136	48	11	9.3	7.2
30	8.1	44	23	20	---	143	165	171	44	11	8.5	13
31	8.1	---	22	34	---	134	---	134	---	10	13	---
TOTAL	277.1	469.0	712	519	1721	4476	8635	5813	2434	585	355.7	290.6
MEAN	8.94	15.6	23.0	16.7	61.5	144	288	188	81.1	18.9	11.5	9.69
MAX	13	107	57	34	179	468	1320	561	220	40	30	31
MIN	8.1	7.5	11	11	15	54	84	67	35	10	7.7	7.0
CFSM	.12	.22	.32	.23	.85	1.99	3.98	2.60	1.12	.26	.16	.13
IN.	.14	.24	.37	.27	.88	2.30	4.44	2.99	1.25	.30	.18	.15
CAL YR 1982	TOTAL	28756.1	MEAN	78.8	MAX	1040	MIN	7.5	CFSM	1.09	IN	14.78
WTR YR 1983	TOTAL	26287.4	MEAN	72.0	MAX	1320	MIN	7.0	CFSM	.99	IN	13.51

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. Some regulation at low flow by Stony River Reservoir, 66 mi (106 km) above station (see station 01595200) prior to July 1981. Low-flow regulation since December 1950 by Savage River Reservoir, 25 mi (40 km) above station (see station 01597500). Flow regulated by Bloomington Lake, 29 mi (47 km) above station (see station 01595800) since July 1981.

AVERAGE DISCHARGE.--45 years, 890 ft³/s (25.20 m³/s), 20.28 in/yr (515 mm/yr), adjusted for storage since October 1981.

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

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 11,500 ft³/s (326 m³/s) Apr. 25, gage height, 12.46 ft (3.798 m); minimum discharge, 195 ft³/s (5.52 m³/s) Oct. 28, gage height 2.16 ft (0.658 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	376	328	393	979	416	592	157n	1480	1080	409	348	266
2	324	327	515	972	450	618	152n	1420	958	400	362	244
3	321	327	480	968	533	732	204n	1590	859	380	273	237
4	322	341	460	609	510	1960	188n	2280	992	380	259	236
5	322	344	449	416	456	967	195n	2460	934	380	259	244
6	322	306	442	430	448	833	189n	1970	991	380	292	238
7	320	297	1050	420	436	858	194n	1470	963	360	263	234
8	321	297	422	435	422	923	240n	1180	902	359	254	233
9	322	296	594	440	409	1350	320n	1150	772	344	250	233
10	326	296	568	440	408	1460	438n	1020	743	342	238	235
11	326	295	485	445	420	1160	437n	772	602	337	252	238
12	323	297	410	445	388	958	303n	792	576	298	267	240
13	322	299	431	430	392	896	239n	734	561	292	252	301
14	343	297	588	416	396	820	186n	716	541	281	246	279
15	370	295	607	420	400	679	222n	795	437	288	243	250
16	762	295	705	420	464	646	269n	1680	421	286	242	244
17	332	294	679	408	553	625	197n	4690	421	285	243	249
18	318	310	453	412	712	674	180n	3660	582	287	247	244
19	317	293	427	400	726	2020	170n	2730	870	286	245	364
20	318	298	456	360	708	1650	163n	2240	572	296	239	574
21	319	308	617	364	706	2150	154n	2090	878	921	238	261
22	316	347	1550	372	845	4190	101n	2770	710	338	240	255
23	314	400	522	380	942	2710	927	5030	604	290	278	237
24	314	330	478	392	919	1570	521n	3810	552	297	272	237
25	313	311	475	388	794	1370	959n	2490	515	285	253	236
26	330	303	474	384	690	1330	396n	1620	494	281	247	234
27	335	300	539	376	621	1430	238n	1470	473	281	249	235
28	295	319	854	372	595	1640	207n	1310	401	312	260	235
29	324	569	1050	368	---	1790	177n	1170	453	278	251	233
30	741	417	1140	376	---	1680	178n	1250	418	279	1170	245
31	382	---	987	408	---	1620	---	1210	---	276	296	---
TOTAL	10990	9736	19300	14445	15759	41901	76667	59049	20275	10508	9028	7791
MEAN	355	325	623	466	563	1352	2556	1905	676	339	291	260
MAX	762	569	1550	979	942	4190	959n	5030	1080	921	1170	574
MIN	295	293	393	360	388	592	927	716	401	276	238	233
CAL YR 1982	TOTAL	319984	MEAN 877	MAX 8790	MIN 169	CFSM 1.47	IN 19.97					
WTR YR 1983	TOTAL	295449	MEAN 809	MAX 9590	MIN 233	CFSM 1.36	IN 18.44					

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WATER-QUALITY RECORDS

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

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1980 to current year.

pH: October 1980 to current year.

WATER TEMPERATURES: October 1980 to current year.

DISSOLVED OXYGEN: October 1980 to current year.

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

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

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE (water years 1982-83): Maximum, 1,240 micromhos Oct. 20, 1982; minimum, 160 micromhos July 5, 1982.

pH (water years 1982-83): Maximum, 8.6 units June 27, 1982; minimum, 6.4 units Oct. 30, 31, 1982.

WATER TEMPERATURES (water years 1982-83): Maximum, 28.5°C Aug. 20, 21, 1983; minimum, 0.5°C on many days during winter periods.

DISSOLVED OXYGEN (water year 1983): Maximum, 14.5 mg/L Nov. 28, 1982; minimum, 6.9 mg/L June 28, 29, 1983.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum, 898 micromhos Sept. 19; minimum, 202 micromhos Apr. 24.

pH: Maximum, 8.4 units Sept. 10; minimum, 6.4 units Oct. 30, 31.

WATER TEMPERATURES: Maximum, 28.5°C Aug. 20, 21; minimum, 0.5°C Jan. 20, Feb. 11-13.

DISSOLVED OXYGEN: Maximum, 14.5 mg/L Nov. 28; minimum, 6.9 mg/L June 28, 29.

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	---	---	---	---	---	---	702	632	679	429	379	409
2	---	---	---	---	---	---	672	522	575	440	420	431
3	---	---	---	---	---	---	543	523	562	450	430	443
4	---	---	---	---	---	---	623	583	601	531	450	500
5	---	---	---	---	---	---	613	603	612	622	522	570
6	645	625	637	---	---	---	623	603	612	634	614	623
7	656	626	641	---	---	---	624	374	447	635	595	618
8	647	617	634	---	---	---	594	374	466	626	616	618
9	638	618	628	---	---	---	584	474	523	627	607	612
10	649	638	640	---	---	---	474	424	444	609	599	605
11	660	640	648	---	---	---	475	425	456	620	590	608
12	671	641	659	---	---	---	575	475	514	621	581	594
13	732	622	653	---	---	---	605	575	595	582	563	570
14	653	563	619	---	---	---	505	435	493	584	504	525
15	654	624	641	---	---	---	475	435	448	555	495	523
16	674	464	523	---	---	---	476	426	448	606	555	588
17	615	455	512	---	---	---	476	436	457	627	606	620
18	616	586	599	---	---	---	586	436	483	629	609	617
19	637	597	624	---	---	---	596	576	586	640	600	622
20	648	628	640	---	---	---	617	577	600	759	639	675
21	649	569	607	---	---	---	587	437	492	767	627	693
22	600	580	588	---	---	---	457	377	393	636	616	623
23	631	591	614	720	650	675	547	397	492	624	614	619
24	652	612	634	690	640	658	608	567	591	653	623	641
25	673	643	660	701	671	686	578	558	564	641	631	633
26	704	624	662	721	691	706	548	518	546	640	630	633
27	685	585	622	731	701	714	548	518	531	629	609	621
28	636	546	578	711	681	698	549	489	498	657	607	625
29	657	607	639	672	562	637	489	429	457	666	636	645
30	658	428	523	622	532	567	429	369	378	636	614	618
31	569	429	456	---	---	---	419	379	401	621	600	612
MONTH	732	428	611	731	532	668	702	369	514	767	379	591

POTOMAC RIVER BASIN

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

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	604	593	698	519	499	511	318	309	315	355	331	343
2	630	540	587	509	469	491	334	318	328	365	341	352
3	651	541	579	513	470	487	326	294	310	363	321	340
4	551	541	542	406	335	344	308	302	306	328	295	311
5	572	532	554	370	331	343	310	295	305	321	294	298
6	583	543	561	362	329	349	315	308	311	316	291	301
7	593	573	586	401	362	384	319	297	311	315	303	307
8	574	524	563	404	367	378	304	277	290	348	313	335
9	625	574	597	377	301	345	284	249	262	367	340	350
10	625	605	614	292	267	278	252	242	248	393	360	375
11	606	516	569	297	269	286	266	251	257	435	393	420
12	577	547	569	317	278	304	276	265	270	432	367	394
13	607	567	591	349	312	337	299	276	285	---	369	---
14	618	568	593	371	349	365	305	289	295	---	---	---
15	629	599	605	439	364	415	312	275	294	463	444	455
16	639	609	619	456	437	443	312	294	298	448	235	388
17	610	560	593	447	395	412	311	286	291	235	223	228
18	560	511	526	441	409	425	306	290	297	255	225	249
19	521	451	502	415	270	323	317	305	313	279	252	259
20	502	462	481	308	273	291	318	308	314	291	268	278
21	483	473	483	317	251	302	325	314	318	306	244	286
22	504	424	469	279	251	273	396	330	361	302	233	266
23	434	414	423	314	254	272	410	395	404	292	207	238
24	425	405	414	339	310	327	395	202	279	241	227	232
25	436	425	434	322	298	316	246	221	237	276	241	252
26	496	446	471	322	313	317	256	240	247	348	276	322
27	477	457	470	324	308	315	298	252	272	348	336	343
28	508	488	501	318	306	313	311	298	307	350	335	345
29	---	---	---	307	300	304	326	311	319	368	344	361
30	---	---	---	305	298	301	338	320	333	376	352	364
31	---	---	---	309	303	307	---	---	---	353	343	349
MONTH	651	405	543	519	251	350	410	202	299	463	207	322
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	381	352	372	638	613	627	692	658	673	682	440	636
2	371	352	361	638	603	619	713	456	546	716	672	704
3	406	369	389	622	595	607	686	551	660	742	704	716
4	418	395	403	614	594	604	690	676	683	741	703	716
5	402	391	397	620	568	586	725	675	692	704	654	681
6	391	369	377	613	578	595	741	717	732	661	430	580
7	383	334	370	628	593	613	717	675	687	430	360	386
8	346	318	331	641	607	629	725	701	716	570	381	488
9	420	326	384	638	628	634	767	715	742	570	542	558
10	426	417	422	632	606	623	824	767	778	628	527	559
11	470	415	446	603	591	598	830	681	770	683	620	638
12	481	463	472	686	600	637	696	627	659	733	683	707
13	497	459	473	691	622	664	783	700	747	798	733	768
14	505	470	490	746	683	710	782	725	748	754	710	731
15	531	464	493	739	680	697	774	741	755	789	754	771
16	521	503	513	683	648	663	764	719	740	827	789	811
17	598	521	566	712	639	672	736	717	727	831	778	806
18	---	---	---	710	700	704	782	736	759	819	770	787
19	---	---	---	---	---	---	785	746	764	898	819	845
20	---	---	---	---	---	---	786	761	775	886	436	540
21	---	---	---	---	---	---	776	695	734	738	554	587
22	---	---	---	---	---	---	716	692	707	794	738	788
23	---	---	---	---	---	---	773	700	722	823	793	810
24	---	---	---	---	---	---	771	666	697	817	798	808
25	529	476	499	---	---	---	720	683	704	824	807	815
26	548	523	536	717	684	700	710	676	691	860	824	839
27	581	544	558	718	674	695	755	707	745	890	838	850
28	615	566	588	695	550	650	758	701	739	893	776	859
29	631	553	601	716	582	696	782	751	765	796	683	768
30	654	575	613	694	637	655	773	339	442	806	681	750
31	---	---	---	684	653	675	440	339	357	---	---	---
MONTH	654	318	463	744	550	648	830	339	699	898	360	710

POTOMAC RIVER BASIN

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

PH (STANDARD UNITS), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			DECEMBER			JANUARY			
1	---	---	---	---	---	---	7.6	7.5	7.6	7.1	7.1	7.1
2	---	---	---	---	---	---	7.6	7.5	7.6	7.2	7.1	7.1
3	---	---	---	---	---	---	7.7	7.5	7.6	7.3	7.2	7.2
4	---	---	---	---	---	---	7.5	7.4	7.5	7.3	7.2	7.3
5	---	---	---	---	---	---	7.5	7.5	7.5	7.4	7.2	7.3
6	7.3	7.2	7.2	---	---	---	7.6	7.5	7.5	7.5	7.4	7.5
7	7.2	7.1	7.2	---	---	---	7.5	7.3	7.4	7.5	7.4	7.4
8	7.3	7.2	7.2	---	---	---	7.7	7.4	7.5	7.5	7.4	7.4
9	7.2	7.1	7.2	---	---	---	7.6	7.5	7.6	7.4	7.3	7.4
10	7.2	7.2	7.2	---	---	---	7.5	7.5	7.5	7.4	7.4	7.4
11	7.2	7.1	7.1	---	---	---	7.5	7.4	7.5	7.5	7.3	7.4
12	7.2	7.1	7.1	---	---	---	7.5	7.4	7.4	7.6	7.5	7.5
13	7.2	7.1	7.1	---	---	---	7.5	7.4	7.4	7.6	7.5	7.6
14	7.1	7.0	7.0	---	---	---	7.4	7.4	7.4	7.5	7.4	7.5
15	7.2	7.0	7.1	---	---	---	7.5	7.4	7.5	7.6	7.3	7.5
16	7.0	6.7	6.8	---	---	---	7.5	7.4	7.5	7.6	7.5	7.5
17	7.0	6.7	6.9	---	---	---	7.5	7.5	7.5	7.6	7.5	7.5
18	7.1	6.9	7.0	---	---	---	7.5	7.4	7.5	7.5	7.4	7.5
19	7.1	6.9	7.0	---	---	---	7.5	7.4	7.5	7.4	7.3	7.4
20	7.1	6.9	7.0	---	---	---	7.5	7.4	7.5	8.2	7.4	7.5
21	6.9	6.9	6.9	---	---	---	7.5	7.4	7.4	8.2	7.2	7.4
22	7.0	6.8	6.9	---	---	---	7.4	7.1	7.1	7.3	7.2	7.2
23	7.0	6.7	6.9	7.5	7.1	7.2	7.4	7.1	7.3	7.3	7.2	7.3
24	7.1	6.7	6.9	7.3	7.1	7.2	7.5	7.4	7.4	7.3	7.2	7.3
25	6.9	6.8	6.9	7.2	6.9	7.1	7.4	7.3	7.4	7.3	7.2	7.2
26	7.2	6.8	7.0	7.1	6.9	7.0	7.4	7.3	7.4	7.3	7.1	7.2
27	7.1	6.8	6.9	7.4	7.1	7.3	7.4	7.3	7.4	7.2	7.0	7.1
28	7.0	6.7	6.8	7.4	7.3	7.4	7.3	7.3	7.3	7.2	7.1	7.2
29	6.9	6.7	6.8	7.4	7.3	7.3	7.3	7.2	7.3	7.4	7.2	7.3
30	6.8	6.4	6.5	7.5	7.3	7.4	7.3	7.2	7.2	7.2	7.0	7.1
31	6.6	6.4	6.5	---	---	---	7.2	7.1	7.2	7.3	7.1	7.2
MONTH	7.3	6.4	7.0	7.5	6.9	7.2	7.7	7.1	7.4	8.2	7.0	7.3

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

POTOMAC RIVER BASIN

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

PH (STANDARD UNITS), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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

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

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	6.0	5.0	6.0	7.0	5.5	6.5	9.0	6.0	7.5	13.0	12.0	12.5
2	6.0	5.5	5.5	8.5	6.5	7.5	9.0	7.0	7.5	13.0	12.0	12.5
3	5.5	5.0	5.5	9.0	7.0	7.5	8.0	7.0	7.5	13.5	12.5	12.5
4	5.0	3.0	4.0	8.0	5.0	6.0	8.0	6.5	7.0	12.5	10.5	11.0
5	3.5	2.5	3.0	8.5	7.0	8.0	8.5	6.5	7.0	11.5	8.5	9.5
6	4.0	3.5	3.5	9.0	7.5	8.0	8.5	7.5	8.0	12.5	9.0	11.0
7	4.5	3.5	4.0	8.5	7.0	7.5	8.5	7.5	8.0	14.5	11.0	12.5
8	4.0	3.5	4.0	8.5	7.5	8.0	8.5	8.0	8.0	15.0	12.5	13.5
9	5.0	3.0	4.0	7.5	6.5	7.0	8.5	7.5	8.0	13.0	11.0	12.0
10	5.0	4.0	4.5	6.5	6.0	6.5	9.0	7.0	8.0	13.0	11.5	12.5
11	4.5	.5	2.0	6.0	6.0	6.0	8.0	7.0	7.5	15.0	12.5	13.5
12	1.5	.5	1.0	6.0	5.5	5.5	9.0	7.0	8.0	15.5	13.5	14.5
13	3.0	.5	1.5	7.0	4.5	6.0	9.0	7.0	8.0	---	---	---
14	3.5	2.0	3.0	8.0	7.0	7.5	9.0	8.0	8.5	---	---	---
15	5.0	2.5	4.0	10.5	7.5	9.0	9.5	8.5	9.5	16.5	15.5	16.0
16	7.0	5.0	6.0	10.0	8.5	9.5	8.5	6.5	7.5	16.0	11.0	14.0
17	7.0	5.5	6.0	8.5	7.0	7.5	8.5	7.0	7.5	12.0	8.0	10.0
18	7.0	5.5	6.0	7.5	6.5	7.0	8.5	6.5	7.5	12.0	8.5	10.5
19	6.5	5.0	6.0	8.5	7.5	8.0	8.5	6.0	7.0	11.0	10.0	10.5
20	6.5	5.5	6.0	9.5	7.5	8.5	8.0	5.5	6.5	14.5	11.5	12.5
21	7.0	5.5	6.0	9.5	7.0	9.0	10.0	7.0	8.5	14.5	13.0	13.5
22	7.5	6.5	7.0	6.5	5.0	5.5	11.0	9.5	10.5	13.5	11.5	12.5
23	7.0	6.0	7.0	6.5	4.5	5.5	11.0	10.0	10.5	13.0	11.5	12.5
24	6.0	5.5	6.0	6.5	5.0	5.5	10.5	7.0	9.0	13.0	11.0	11.5
25	6.0	5.0	5.5	7.0	5.0	6.0	7.5	6.5	7.0	15.0	11.5	13.0
26	5.5	4.0	5.0	7.5	5.5	6.5	11.0	6.5	8.5	16.0	14.0	15.0
27	5.5	3.5	4.5	8.0	5.0	6.0	12.0	9.0	10.5	16.0	13.5	14.5
28	6.5	4.5	5.5	7.0	5.5	6.0	13.5	10.0	11.5	15.5	13.0	14.0
29	---	---	---	7.0	6.0	6.5	13.5	12.0	12.0	15.5	14.5	15.0
30	---	---	---	7.0	5.0	6.0	13.0	11.0	12.0	17.5	15.5	16.5
31	---	---	---	7.0	6.0	6.5	---	---	---	17.5	15.5	16.5
MONTH	7.5	.5	4.5	10.5	4.5	7.0	13.5	5.5	8.5	17.5	8.0	13.0
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	16.0	14.5	15.0	22.0	19.5	20.5	27.0	25.0	26.0	24.0	21.0	22.0
2	16.0	14.0	15.0	24.5	21.0	23.0	25.5	23.0	24.5	24.0	21.5	23.0
3	16.5	15.5	16.0	26.5	23.5	25.0	27.0	23.5	25.0	25.0	22.5	23.5
4	17.0	16.0	16.5	26.0	24.0	25.0	26.5	24.0	25.0	24.5	23.0	24.0
5	19.0	16.5	17.5	25.0	23.0	24.0	25.5	24.5	25.0	25.0	23.0	24.0
6	19.0	18.0	18.5	23.0	21.5	22.0	26.0	23.5	25.0	25.5	23.5	24.0
7	19.0	18.5	19.0	22.5	19.5	21.0	27.5	24.0	25.5	24.5	23.0	23.5
8	18.5	17.5	18.0	23.5	20.0	22.0	28.0	24.5	26.0	24.5	21.5	23.0
9	19.0	18.0	18.5	23.0	21.5	22.5	28.0	25.0	26.0	24.5	21.5	23.0
10	20.0	18.0	19.0	24.0	21.5	22.5	26.5	24.0	25.0	24.5	21.0	23.0
11	21.5	19.0	20.0	24.5	21.5	23.0	25.0	23.0	24.0	25.0	22.5	23.5
12	22.5	19.5	21.0	24.5	21.5	23.0	23.5	21.5	22.5	24.5	23.5	24.0
13	22.5	20.5	21.5	27.0	23.5	25.0	23.0	21.0	22.0	24.0	21.5	23.0
14	23.0	20.5	22.0	26.5	23.5	25.0	23.5	20.5	22.0	22.0	20.0	21.0
15	23.5	21.0	22.5	27.0	23.5	25.0	24.5	20.5	22.5	21.5	19.0	20.0
16	23.5	21.5	22.5	27.5	25.0	26.0	25.5	21.5	23.0	19.5	18.5	19.0
17	23.5	21.5	22.5	27.5	25.5	26.5	25.0	22.5	23.5	20.5	18.0	19.0
18	---	---	---	27.0	24.5	25.5	25.5	24.0	24.5	22.0	18.5	20.0
19	---	---	---	---	---	---	27.0	23.5	25.0	23.5	20.0	21.5
20	---	---	---	---	---	---	28.5	25.0	26.5	23.0	20.0	21.0
21	---	---	---	---	---	---	28.5	25.0	26.5	21.0	19.5	20.5
22	---	---	---	---	---	---	27.5	24.5	25.5	19.5	16.5	18.0
23	---	---	---	---	---	---	25.5	24.5	25.0	16.5	15.0	15.5
24	---	---	---	---	---	---	24.5	24.0	24.0	16.5	14.0	15.0
25	24.0	21.0	22.5	---	---	---	25.5	23.0	24.0	17.5	14.5	15.5
26	23.5	20.5	22.0	25.5	22.5	24.0	26.5	23.0	24.5	17.0	15.5	16.0
27	24.5	21.0	23.0	25.5	22.5	24.0	26.5	24.5	25.5	18.5	15.5	17.0
28	24.5	23.0	23.5	26.5	23.5	25.0	26.5	24.5	25.5	19.5	17.0	18.0
29	24.0	21.0	22.0	27.0	24.0	25.5	26.5	24.5	25.5	20.0	17.5	18.5
30	20.5	19.5	20.0	27.5	25.0	26.0	25.5	19.0	21.5	18.0	16.5	17.0
31	---	---	---	28.0	25.5	26.5	21.0	20.5	20.5	---	---	---
MONTH	24.5	14.0	20.0	28.0	19.5	24.0	28.5	19.0	24.5	25.5	14.0	20.5

POTOMAC RIVER BASIN

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

OXYGEN, DISSOLVED (DO), MG/L, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			DECEMBER			JANUARY			
1	---	---	---	---	---	---	13.7	11.6	13.3	12.0	11.5	11.7
2	---	---	---	---	---	---	11.6	9.1	9.8	11.8	11.4	11.5
3	---	---	---	---	---	---	9.6	9.1	9.3	11.9	11.2	11.5
4	---	---	---	---	---	---	9.1	8.9	9.0	12.4	11.8	12.2
5	---	---	---	---	---	---	9.0	8.7	8.8	12.6	12.3	12.4
6	10.8	10.5	10.6	---	---	---	9.2	8.7	8.9	12.3	11.9	12.2
7	10.9	10.8	10.8	---	---	---	11.0	8.7	10.1	11.9	11.7	11.7
8	10.9	10.5	10.7	---	---	---	11.6	11.0	11.3	11.9	11.6	11.8
9	11.3	10.9	11.1	---	---	---	11.5	11.0	11.2	11.9	11.7	11.8
10	11.6	11.1	11.4	---	---	---	12.2	11.5	12.0	11.7	11.4	11.6
11	11.9	11.6	11.8	---	---	---	11.9	11.3	11.6	11.4	11.1	11.3
12	11.9	11.5	11.7	---	---	---	11.7	11.3	11.5	12.0	11.3	11.6
13	11.7	11.4	11.6	---	---	---	12.5	11.7	12.2	12.9	12.1	12.5
14	12.3	11.7	11.9	---	---	---	12.3	12.0	12.2	12.7	12.2	12.5
15	12.4	10.6	11.9	---	---	---	12.1	11.4	11.8	12.2	11.7	11.9
16	12.0	8.2	9.2	---	---	---	11.3	10.7	10.8	12.4	11.8	12.1
17	12.8	12.0	12.5	---	---	---	11.6	10.8	11.2	12.4	12.2	12.3
18	12.8	12.5	12.7	---	---	---	12.5	11.6	12.1	12.7	12.3	12.5
19	12.8	12.3	12.6	---	---	---	12.1	11.8	11.9	13.0	12.7	12.9
20	12.4	11.7	12.1	---	---	---	11.8	11.6	11.7	13.2	12.5	13.0
21	12.4	11.8	12.0	---	---	---	12.0	11.4	11.7	12.5	12.1	12.2
22	12.8	12.3	12.5	---	---	---	11.8	11.2	11.5	12.5	12.1	12.3
23	13.2	12.7	13.0	12.0	11.5	11.7	11.7	11.3	11.5	12.4	11.9	12.2
24	13.2	12.8	12.9	13.3	11.9	12.4	11.3	11.0	11.1	11.9	11.5	11.6
25	13.0	12.5	12.8	14.4	13.3	14.0	11.0	10.6	10.9	12.0	11.6	11.8
26	12.8	12.2	12.5	14.4	14.0	14.2	10.6	10.1	10.3	12.2	11.7	11.9
27	12.5	12.0	12.3	14.2	13.9	14.0	10.3	10.0	10.2	12.5	11.9	12.2
28	12.7	12.2	12.4	14.5	13.7	14.3	10.6	10.3	10.5	12.4	11.8	12.0
29	12.4	12.0	12.2	---	---	---	11.0	10.2	10.6	12.7	11.8	12.2
30	12.8	12.0	12.5	13.7	12.6	13.5	11.9	11.0	11.5	12.2	11.8	12.0
31	12.7	11.4	12.1	---	---	---	12.1	11.4	11.8	12.3	11.6	11.9
MONTH	13.2	8.2	11.9	14.5	11.5	13.4	13.7	8.7	11.0	13.2	11.1	12.0

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

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

OXYGEN, DISSOLVED (DO), MG/L, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	10.2	9.3	9.8	---	---	---	---	---	---	10.8	9.9	10.4
2	10.6	9.8	10.2	---	---	---	---	---	---	10.3	9.7	10.0
3	10.0	9.3	9.7	9.6	9.2	9.4	11.5	10.5	11.0	10.2	9.5	9.8
4	9.5	9.2	9.4	9.6	9.2	9.3	11.0	10.4	10.7	9.9	9.5	9.7
5	10.1	9.0	9.5	9.7	9.2	9.5	11.1	11.0	11.1	9.8	9.5	9.6
6	10.1	8.6	9.3	10.2	9.8	10.0	11.2	10.7	11.0	9.7	9.2	9.5
7	10.0	8.3	9.1	10.6	10.2	10.4	11.0	10.2	10.7	9.5	9.2	9.4
8	9.9	8.4	9.1	10.9	10.0	10.4	10.5	10.0	10.2	9.5	9.1	9.3
9	9.9	8.2	9.0	10.4	9.9	10.1	10.7	10.3	10.5	9.5	9.1	9.3
10	9.7	8.0	8.8	10.5	9.8	10.1	11.0	10.5	10.7	9.5	9.1	9.3
11	---	---	---	10.6	9.8	10.2	11.3	10.6	10.9	9.2	8.9	9.1
12	---	---	---	10.4	9.7	10.1	11.6	11.3	11.5	9.0	8.7	8.9
13	---	---	---	9.9	9.1	9.5	11.7	11.2	11.5	9.7	8.9	9.2
14	---	---	---	9.6	9.0	9.3	11.5	10.7	11.1	9.9	9.5	9.7
15	---	---	---	9.8	9.1	9.5	11.3	10.5	10.9	10.0	9.6	9.8
16	---	---	---	9.5	9.0	9.3	10.8	10.0	10.4	10.0	9.4	9.9
17	---	---	---	9.6	9.1	9.4	10.6	10.1	10.3	10.0	9.6	9.8
18	---	---	---	9.8	9.4	9.6	10.2	9.8	10.1	9.9	9.3	9.6
19	---	---	---	---	---	---	10.3	9.7	10.0	9.5	7.8	9.2
20	---	---	---	---	---	---	10.2	9.5	9.8	10.1	8.5	9.8
21	---	---	---	---	---	---	10.1	9.5	9.8	10.1	9.6	9.8
22	---	---	---	---	---	---	10.2	9.6	9.9	11.4	10.1	10.6
23	---	---	---	---	---	---	10.4	10.2	10.0	11.8	11.4	11.6
24	---	---	---	---	---	---	10.5	10.0	10.2	11.9	11.3	11.6
25	8.4	7.8	8.1	---	---	---	10.8	10.1	10.4	11.7	11.0	11.4
26	8.4	7.8	8.0	10.6	10.2	10.4	10.6	9.7	10.1	11.4	10.9	11.2
27	8.3	7.4	7.8	10.6	10.1	10.4	10.1	9.7	9.9	11.3	10.7	11.0
28	7.7	6.9	7.3	10.5	10.1	10.3	10.2	9.7	10.0	11.0	10.5	10.8
29	7.4	6.9	7.2	10.2	10.1	10.0	10.2	9.5	9.8	10.9	10.4	10.7
30	8.1	7.3	7.8	10.1	9.8	9.9	---	---	---	11.2	10.8	11.0
31	---	---	---	9.9	9.7	9.8	10.9	10.7	10.8	---	---	---
MONTH	10.6	6.9	8.8	10.9	9.0	9.9	11.7	9.5	10.5	11.9	7.8	10.0

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).

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 1967-82 by the U.S. Geological Survey, and in the water years 1958 and 1959 by the Maryland Geological Survey. Slight diurnal fluctuation at low flow caused by quarry upstream. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--54 years (water years 1930-83), 326 ft³/s (9.232 m³/s), 17.92 in/yr (455 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 discharge, 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)
Apr. 24	1830	3780 107	6.46 1.969	June 21	1115	*10600 300	9.79 2.984
May 22	2230	7680 217	8.52 2.597				

Minimum discharge, 22 ft³/s (0.62 m³/s) Sept. 30, gage height, 1.53 ft (0.466 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	35	28	158	141	194	280	674	542	322	192	43	54
2	33	28	155	127	249	261	741	576	282	170	43	48
3	31	28	122	115	598	242	2100	671	258	148	41	38
4	30	32	108	86	596	241	1490	805	389	132	40	33
5	30	36	96	69	458	283	1010	796	364	121	91	32
6	29	47	91	90	357	286	784	696	309	115	67	30
7	29	37	82	95	292	334	683	585	294	104	64	29
8	29	33	70	87	237	373	993	513	258	95	50	27
9	30	31	64	74	180	643	1770	437	221	89	44	26
10	28	30	55	79	150	642	2240	362	197	85	41	25
11	28	29	58	123	110	548	1900	312	177	81	42	24
12	29	29	57	137	85	459	1260	276	162	76	48	25
13	35	30	38	95	100	385	881	250	150	73	49	40
14	42	29	32	110	110	331	705	232	139	69	45	30
15	45	29	46	114	115	285	922	338	129	66	40	36
16	37	28	185	99	159	243	923	602	120	64	37	30
17	34	27	191	80	203	215	859	1080	115	62	35	29
18	32	27	133	78	295	244	721	880	190	59	34	28
19	31	27	137	76	337	1240	599	732	343	60	34	26
20	30	31	126	74	380	1310	503	856	864	79	32	26
21	30	35	115	76	442	1660	424	786	5730	73	29	31
22	30	66	97	76	605	1660	358	2240	2230	69	27	32
23	30	97	91	87	759	1090	321	4040	989	63	28	31
24	29	70	127	118	765	766	2320	1790	624	63	28	30
25	28	58	126	126	638	599	2740	1100	443	61	28	28
26	29	50	131	112	487	478	1510	793	329	57	27	26
27	28	45	142	104	374	501	990	609	257	54	27	25
28	28	60	188	102	315	631	752	490	214	50	61	24
29	28	312	188	93	---	727	616	474	298	48	39	24
30	28	203	178	116	---	738	612	513	228	47	36	30
31	28	---	156	188	---	719	---	379	---	45	48	---
TOTAL	963	1612	3543	3147	9590	18414	32403	24755	16625	2570	1298	917
MEAN	31.1	53.7	114	102	343	594	1080	799	554	82.9	41.9	30.6
MAX	45	312	191	188	765	1660	2740	4040	5730	192	91	54
MIN	28	27	32	69	85	215	321	232	115	45	27	24
CFSM	.13	.22	.46	.41	1.39	2.41	4.37	3.24	2.24	.34	.17	.12
IN.	.15	.24	.53	.47	1.44	2.77	4.88	3.73	2.50	.39	.20	.14

CAL YR 1982 TOTAL 118708 MEAN 325 MAX 3770 MIN 24 CFSM 1.32 IN 17.88
WTR YR 1983 TOTAL 115837 MEAN 317 MAX 5730 MIN 24 CFSM 1.28 IN 17.45

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 National Weather Service

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

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

REMARKS.--Water-discharge records good. Prior to July 1981 some regulation at low flow by Stony River Reservoir, 79 mi (127 km) above station (see station 01595200). Low-flow regulation since December 1950 by Savage River Reservoir, 39 mi (63 km) above station (see station 01597500). Flow regulated by Bloomington Lake, 43 mi (69 km) above station (see station 01595800) since July 1981. Prior to July 1957, small amount of inflow from industrial wastes and sewage from city of Cumberland from water diverted from Evitts Creek, mouth of which is below station. Diversion to Chesapeake and Ohio Canal prior to 1935. Several observations of water temperature were made during the year. Gage-height telemeter at station.

AVERAGE DISCHARGE.--54 years, 1,261 ft³/s (35.71 m³/s), 19.57 in/yr (497 mm/yr), adjusted for storage since October 1981.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 88,200 ft³/s (2,500 m³/s) Mar. 17, 1936, gage height, 29.1 ft (8.87 m), from rating curve extended above 33,000 ft³/s (935 m³/s) on basis of slope-area measurement of peak flow; minimum discharge (river only), 12 ft³/s (0.34 m³/s) Sept. 22, 1932, gage height, 2.38 ft (0.725 m); minimum daily discharge (including flow in canal), 38 ft³/s (1.08 m³/s) Sept. 24, 1932.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known, 29.2 ft (8.90 m) June 1, 1889, discharge, about 89,000 ft³/s (2,520 m³/s). Flood of Mar. 29, 1924, reached a stage of 28.4 ft (8.66 m), discharge, about 82,000 ft³/s (2,320 m³/s).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 15,100 ft³/s (428 m³/s) Apr. 25, gage height, 13.08 ft (3.987 m); minimum discharge, 250 ft³/s (7.08 m³/s) Oct. 28, gage height, 2.41 ft (0.735 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	462	354	579	1140	662	928	2350	2170	1500	656	332	343
2	362	353	695	1120	741	937	2340	2050	1340	620	500	306
3	358	354	641	1100	1140	912	4100	2330	1200	578	328	287
4	355	371	603	741	1170	2170	3600	3160	1440	553	310	282
5	355	382	576	526	974	1420	3180	3670	1380	536	404	280
6	355	363	564	547	859	1160	2860	2920	1360	536	384	284
7	354	335	1090	548	786	1210	2750	2230	1330	496	355	269
8	353	328	580	542	717	1280	3600	1750	1260	480	318	268
9	355	323	642	534	645	1950	5230	1630	1080	458	304	265
10	355	322	670	557	616	2180	6890	1480	1030	451	290	263
11	362	321	583	598	578	1790	6950	1190	880	444	306	266
12	355	325	501	617	490	1470	4890	1110	816	423	335	273
13	361	327	461	552	560	1310	3630	1050	793	416	315	363
14	401	323	627	561	580	1220	2830	1000	773	401	304	349
15	382	322	672	570	615	1020	3200	1180	657	408	294	292
16	788	319	952	547	660	941	4100	1770	624	404	290	279
17	440	318	942	509	800	884	3100	6490	598	399	289	280
18	353	330	688	515	1080	930	2730	4810	848	396	292	279
19	351	327	601	498	1150	3180	2440	3990	1390	399	291	278
20	351	327	589	450	1160	3270	2230	3470	1590	436	283	664
21	350	344	746	460	1200	3540	2060	3060	6030	984	279	361
22	347	412	1570	471	1470	6230	1500	4690	3310	501	275	297
23	342	538	765	502	1730	4360	1290	9530	1760	389	299	278
24	342	425	633	538	1750	2530	6000	6560	1280	388	328	278
25	342	380	636	549	1510	2090	13800	4180	1030	374	291	278
26	355	360	636	530	1250	1850	7000	2670	890	360	284	273
27	355	349	659	515	1060	1950	3800	2250	803	352	301	268
28	332	394	1020	511	972	2370	3130	1930	682	389	396	268
29	350	890	1220	496	---	2740	2570	1770	793	344	312	264
30	668	707	1360	531	---	2590	2550	1850	719	342	1050	288
31	524	---	1170	645	---	2470	---	1710	---	339	566	---
TOTAL	12115	11523	23671	18520	26925	62882	116700	89650	39186	14252	10905	9023
MEAN	391	384	764	597	962	2028	3890	2892	1306	460	352	301
MAX	788	890	1570	1140	1750	6230	13800	9530	6030	984	1050	664
MIN	332	318	461	450	490	884	1290	1000	598	339	275	263
CAL YR 1982 TOTAL	456980			1252	MAX 11800	MIN 307	CF5M 1.43	IN 19.43				
WTR YR 1983 TOTAL	435352			1193	MAX 13800	MIN 263	CF5M 1.36	IN 18.51				

POTOMAC RIVER BASIN

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

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1965 to September 1983 (discontinued).

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: October 1964 to September 1982.

SUSPENDED SEDIMENT DISCHARGE: October 1964 to September 1982.

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

EXTREMES FOR PERIOD OF DAILY RECORD.--

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

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

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD 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 AS CAC03)	CALCIUM DIS- SOLVED (MG/L AS CA)
OCT 21...	1355	355	648	6.7	11.0	12.3	--	240	200	77
MAR 14...	1500	1220	219	6.7	13.0	7.1	11.9	95	76	28
JUN 09...	1445	1070	321	8.1	26.0	18.5	9.7	130	108	37

DATE	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY LAB (MG/L AS CAC03)	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)
OCT 21...	11	35	24	1.0	2.3	38	15	160	70	.10
MAR 14...	6.1	16	26	.7	2.1	19	7.3	69	28	<.10
JUN 09...	8.8	12	17	.5	1.9	22	.3	100	18	<.10

DATE	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P)	IRON, DIS- SOLVED (UG/L AS FE)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)
OCT 21...	4.7	428	383	.58	410	--	--	82	450
MAR 14...	5.3	182	166	.25	600	1.1	<.010	45	240
JUN 09...	4.1	235	195	.32	679	.52	<.100	30	300

01608500 SOUTH BRANCH POTOMAC RIVER NEAR SPRINGFIELD, WV

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

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

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

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

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

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

AVERAGE DISCHARGE.--59 years (water years 1900-01, 1904-05, 1929-83), 1,297 ft³/s (36.73 m³/s), 11.97 in/yr (304 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 143,000 ft³/s (4,050 m³/s) Mar. 18, 1936, gage height, 34.2 ft (10.42 m), from rating curve extended above 28,000 ft³/s (793 m³/s) on basis of measurement made about 10 mi (16 km) upstream from station, adjusted for storage and inflow and slope-area measurement at gage height 29.84 ft (9.095 m); minimum discharge, 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)
Mar. 19	2300	13500 382	11.45 3.490	Apr. 25	0800	*25900 733	16.71 5.093
Apr. 11	0500	10900 309	10.10 3.078	May 17	1600	11500 326	10.42 3.176

Minimum discharge, 99 ft³/s (3.03 m³/s) Sept. 12, gage height, 1.49 ft (0.454 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	254	265	2390	686	791	1460	2370	2370	1230	452	160	139
2	216	253	2280	645	835	1330	2090	2090	1090	405	143	142
3	197	243	2230	604	2260	1250	3630	1940	987	370	141	141
4	182	248	1770	565	4410	1150	6320	2650	927	345	138	136
5	175	268	1410	522	3100	1090	4410	2470	953	322	142	135
6	168	528	1160	474	2250	1200	3410	2100	880	309	176	128
7	161	614	1040	461	1810	1300	2960	1780	783	296	180	123
8	157	516	940	451	1500	1450	3030	1560	707	280	150	117
9	186	449	801	434	1240	3440	4130	1430	660	263	155	110
10	190	404	709	427	1040	4520	5970	1280	605	247	152	106
11	201	370	651	423	943	3680	9750	1120	558	234	146	102
12	208	344	611	430	734	2910	6490	1010	519	222	146	99
13	216	325	600	471	661	2340	4520	922	484	215	140	107
14	221	307	549	441	772	1920	3500	869	456	208	136	123
15	246	327	478	412	780	1630	3210	893	434	198	149	134
16	313	338	526	409	790	1410	7180	1910	430	191	156	134
17	300	319	3860	403	1740	1210	6030	10500	722	184	145	124
18	295	307	3360	340	3820	1120	4350	6690	764	178	140	119
19	322	298	2310	246	3930	7000	3410	4110	800	180	134	116
20	260	295	1760	250	3280	9780	2770	3250	976	175	127	113
21	246	292	1420	295	2940	6760	2300	2680	1290	172	124	114
22	229	305	1150	360	3170	8150	1920	3710	954	191	119	121
23	221	336	965	395	3440	5680	1630	8670	706	194	129	120
24	220	413	879	404	3910	4020	6800	6690	612	218	128	116
25	216	445	962	541	3480	3120	21600	4450	536	259	126	111
26	216	422	929	667	2690	2490	10700	3300	470	247	140	111
27	228	397	892	612	2060	2160	6360	2590	425	235	144	111
28	295	392	871	601	1660	3150	4390	2080	390	209	146	111
29	329	654	848	592	---	3480	3390	1750	390	190	154	110
30	301	3190	813	586	---	2990	2810	1580	400	176	132	117
31	281	---	750	610	---	2580	---	1420	---	164	129	---
TOTAL	7250	13864	39914	14757	59986	95770	151430	89864	21138	7529	4427	3590
MEAN	234	462	1288	476	2142	3089	5048	2899	705	243	143	120
MAX	329	3190	3860	686	4410	9780	21600	10500	1290	452	180	142
MIN	157	243	478	246	661	1090	1630	869	390	164	119	99
CFSM	.16	.31	.88	.32	1.46	2.10	3.43	1.97	.48	.17	.10	.08
IN.	.18	.35	1.01	.37	1.52	2.42	3.83	2.27	.53	.19	.11	.09

CAL YR 1982 TOTAL 529409 MEAN 1450 MAX 21200 MIN 110 CFSM .99 IN 13.39
WTR YR 1983 TOTAL 509519 MEAN 1396 MAX 21600 MIN 99 CFSM .95 IN 12.49

POTOMAC RIVER BASIN

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. Low flow affected by Stony River Reservoir prior to July 1981 (see station 01595200); since December 1950 by Savage River Reservoir (see station 01597500), and since July 1981 by Bloomington Lake (see station 01595800). Several observations of water temperature were made during the year. Gage-height telemeter at station.

AVERAGE DISCHARGE.--45 years, 3,263 ft³/s (92.41 m³/s), 14.25 in/yr (362 mm/yr).

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

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

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 20,000 ft³/s (566 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Mar. 20	0300	21000 595	15.91 4.849	May 17	1515	23900 677	16.95 5.166
Apr. 11	0830	22800 646	16.58 5.054	May 23	1730	24500 694	17.17 5.233
Apr. 25	1245	*49900 1410	25.08 7.644				

Minimum discharge, 425 ft³/s (12.0 m³/s) Sept. 30, gage height, 3.46 ft (1.055 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	844	792	3670	2200	1750	3280	6090	6000	3710	1520	570	687
2	767	721	3200	2110	1940	3030	5620	5370	3320	1430	652	569
3	679	704	3430	2040	2770	2880	7910	5560	2990	1300	619	534
4	649	716	2910	1810	6320	3370	12400	6950	2990	1210	541	504
5	633	745	2480	1440	4970	3410	9840	7610	3120	1150	544	492
6	622	805	2170	1260	3880	2910	7990	6400	2980	1100	679	492
7	611	1190	2110	1280	3290	2990	7100	5390	2770	1050	651	475
8	604	1070	2260	1250	2870	3140	7700	4570	2560	979	597	450
9	601	973	1690	1220	2500	4880	12000	4180	2320	932	539	437
10	635	906	1690	1230	2220	7470	15500	3780	2110	884	526	426
11	636	855	1560	1290	2050	6620	21400	3250	1950	849	515	418
12	655	816	1430	1370	1800	5470	15200	2890	1740	817	549	421
13	687	803	1320	1360	1600	4610	10600	2740	1640	754	546	498
14	720	758	1300	1300	1850	4000	8320	2550	1570	717	520	618
15	731	745	1370	1280	1900	3510	7670	2690	1460	684	504	525
16	855	787	1590	1240	2010	3100	12600	4300	1330	676	511	497
17	1200	770	3910	1170	2960	2790	11600	20100	1470	646	510	482
18	786	753	4960	1050	5990	2660	8990	14700	1730	635	515	470
19	768	755	3510	950	7190	7160	7390	10400	2690	661	501	457
20	745	745	2880	850	6270	17300	6310	8780	2710	662	482	598
21	729	748	2540	1000	5730	10700	5540	7260	8800	772	460	757
22	695	806	2680	1080	5960	17500	4710	8450	9770	1200	448	539
23	674	1020	2640	1140	6510	13100	3980	22100	4320	726	474	480
24	666	1070	1840	1230	6820	8760	13600	18000	3090	689	514	457
25	669	1060	1890	1290	6380	6840	45800	11300	2470	719	513	450
26	664	992	1910	1580	5220	5690	26000	8030	2040	721	483	441
27	678	944	1890	1500	4240	5190	13900	6300	1790	696	490	439
28	701	932	2040	1480	3630	6920	9840	5280	1590	675	568	439
29	777	1510	2340	1420	---	8240	7800	4690	1520	656	703	434
30	804	3810	2490	1460	---	7390	6760	4540	1650	603	672	449
31	1190	---	2370	1520	---	6510	---	4180	---	586	1270	---
TOTAL	22675	29301	74070	42400	110620	191420	340160	228340	84200	26699	17666	14935
MEAN	731	977	2389	1368	3951	6175	11340	7366	2807	861	570	498
MAX	1200	3810	4960	2200	7190	17500	45800	22100	9770	1520	1270	757
MIN	601	704	1300	850	1600	2660	3980	2550	1330	586	448	418

CAL YR 1982	TOTAL	1256546	MEAN	3443	MAX	33900	MIN	527	CFSM	1.11	IN	15.03
WTR YR 1983	TOTAL	1182486	MEAN	3240	MAX	45800	MIN	418	CFSM	1.04	IN	14.15

01613000 POTOMAC RIVER AT HANCOCK, MD

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

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

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

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

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

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

AVERAGE DISCHARGE.--51 years, 4,127 ft³/s (116.9 m³/s), 13.76 in/yr (350 mm/yr).

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

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

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

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Mar. 20	1200	26800 759	14.27 4.349	Apr. 25	2000	*60700 1720	22.21 6.770
Mar. 22	1930	23400 663	13.23 4.032	May 17	1830	32900 932	15.95 4.862
Apr. 11	1445	28500 807	14.77 4.502	May 23	2345	27800 787	14.58 4.444

Minimum discharge, 452 ft³/s (12.8 m³/s) Sept. 12, gage height, 2.59 ft (0.789 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	980	1230	4760	2530	1750	4310	7700	7810	4560	1790	631	1240
2	914	861	3720	2380	2040	3970	7100	6810	4040	1700	609	762
3	828	797	3720	2280	2940	3740	9660	6690	3640	1590	665	637
4	749	817	3660	2190	5030	3520	17100	7730	3360	1450	671	586
5	717	824	3090	1890	6850	4270	14000	9280	3540	1350	589	553
6	697	871	2660	1570	5210	3710	10800	8540	3480	1280	618	529
7	682	1080	2330	1420	4220	3480	9160	7100	3190	1190	749	526
8	669	1370	2480	1420	3640	3600	8940	5980	3090	1130	725	512
9	660	1200	2160	1390	3180	4100	13600	5260	2880	1060	740	491
10	650	1080	1850	1400	2780	7790	18600	4760	2580	1010	629	476
11	684	1000	1800	1480	2540	8790	27000	4240	2360	956	602	466
12	686	950	1650	1600	2340	7310	22100	3680	2170	917	585	460
13	735	914	1520	1690	1860	6100	15100	3370	1960	885	593	495
14	767	883	1420	1670	1770	5200	11400	3140	1850	825	598	523
15	779	835	1440	1580	2130	4570	9470	3080	1750	786	565	651
16	791	823	1570	1500	2380	4000	14500	3720	1620	749	549	578
17	950	857	2030	1450	2770	3580	17000	19900	1590	736	548	530
18	1190	845	5450	1250	4870	3280	12600	23100	1850	703	554	521
19	847	832	4760	1150	9090	4250	10100	14500	2430	726	559	515
20	828	839	3660	900	9230	19900	8470	11400	3040	750	541	504
21	815	834	3080	1100	8260	17900	7300	9850	6280	736	519	613
22	788	865	2810	1200	8070	21800	6350	9230	14300	902	501	824
23	756	953	3130	1310	9000	18800	5260	20100	6850	1130	496	586
24	733	1140	2480	1400	9420	12700	7810	24200	4280	784	514	518
25	734	1150	2080	1460	9050	9190	52500	15500	3240	738	554	491
26	743	1140	2170	1560	7430	7510	41000	10900	2610	756	575	491
27	736	1060	2180	1880	5990	6520	20300	8140	2170	766	514	491
28	753	1050	2180	1740	4910	7460	13600	6730	1920	743	523	485
29	792	1340	2410	1660	---	10500	10500	5400	1800	717	605	485
30	876	2340	2650	1640	---	9970	8700	5340	1810	702	726	491
31	925	---	2760	1680	---	8570	---	5120	---	650	806	---
TOTAL	24454	30780	83660	49370	138750	240390	437720	281000	100240	30207	18653	17030
MEAN	789	1026	2699	1593	4955	7755	14590	9065	3341	974	602	568
MAX	1190	2340	5450	2530	9420	21800	52500	24200	14300	1790	806	1240
MIN	650	797	1420	900	1750	3280	5260	3080	1590	650	496	460
CFSM	.19	.25	.66	.39	1.22	1.90	3.58	2.23	.82	.24	.15	.14
IN.	.22	.28	.76	.45	1.27	2.20	4.00	2.57	.92	.28	.17	.16

CAL YR 1982	TOTAL	1509439	MEAN	4135	MAX	36400	MIN	562	CFSM	1.02	IN	13.79
WTR YR 1983	TOTAL	1452254	MEAN	3979	MAX	52500	MIN	460	CFSM	.98	IN	13.26

POTOMAC RIVER BASIN

01614500 CONOCOCHIEGUE 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. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--55 years, 590 ft³/s (16.71 m³/s), 16.22 in/yr (412 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 discharge, 21 ft³/s (0.59 m³/s) Aug. 8, Sept. 12, 1966; minimum daily discharge, 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 (122 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. 3	1115	*5860 166	8.82 2.688	Apr. 25	0530	4780 135	7.94 2.420
Apr. 10	1715	4350 123	7.55 2.301	May 23	0630	4730 134	7.89 2.405

Minimum discharge, 84 ft³/s (2.38 m³/s) Sept. 29, gage height, 1.28 ft (0.390 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	126	94	323	243	237	641	1050	1100	708	342	132	159
2	120	93	264	230	364	621	949	1030	644	320	138	139
3	114	91	228	219	2530	578	4710	1070	590	302	136	123
4	112	100	206	203	1670	528	2870	1280	662	284	134	113
5	114	151	192	184	1040	491	1860	1130	675	284	134	111
6	111	166	192	179	809	455	1510	953	551	365	136	107
7	109	136	194	187	698	537	1340	850	514	284	151	105
8	109	116	176	177	615	543	1660	804	471	254	134	102
9	110	111	162	167	526	822	2450	892	428	235	124	96
10	105	105	152	175	462	931	3640	741	399	225	118	93
11	101	107	147	325	320	906	3710	661	412	215	122	92
12	104	100	143	409	300	793	2540	611	365	209	149	91
13	116	107	133	324	340	701	1910	572	354	201	138	99
14	159	109	136	282	380	628	1570	541	335	190	132	104
15	157	116	137	274	440	578	1790	622	309	182	122	99
16	132	111	323	269	480	524	2850	785	294	175	119	96
17	112	103	736	200	520	478	2150	1540	302	170	113	95
18	105	102	447	160	531	467	1740	1110	358	166	112	92
19	103	103	331	155	713	1470	1470	912	608	161	113	88
20	103	100	293	150	800	2110	1290	1270	892	160	109	88
21	105	102	260	180	842	1990	1150	1140	1270	165	106	92
22	105	105	235	240	1030	2350	1000	1280	856	162	105	112
23	102	112	225	300	1280	1630	898	4360	605	161	103	111
24	98	132	276	408	1240	1300	2160	2420	498	165	105	101
25	100	128	302	431	1100	1090	4460	1690	438	160	100	98
26	109	116	282	339	932	932	2910	1380	390	152	99	96
27	109	111	267	260	771	942	2030	1160	358	144	99	92
28	109	116	299	239	687	2390	1630	995	338	139	118	91
29	102	423	320	225	---	1840	1370	954	458	135	124	89
30	98	519	292	218	---	1400	1230	914	406	131	116	93
31	96	---	261	233	---	1190	---	784	---	127	122	---
TOTAL	3455	4085	7934	7585	21657	31856	61897	35551	15488	6365	3763	3067
MEAN	111	136	256	245	773	1028	2063	1147	516	205	121	102
MAX	159	519	736	431	2530	2390	4710	4360	1270	365	151	159
MIN	96	91	133	150	237	455	898	541	294	127	99	88
CFSM	.23	.28	.52	.50	1.57	2.08	4.18	2.32	1.05	.42	.25	.21
IN.	.26	.31	.60	.57	1.63	2.40	4.66	2.68	1.17	.48	.28	.23

CAL YR 1982 TOTAL 184337 MEAN 505 MAX 3090 MIN 89 CFSM 1.02 IN 13.88
WTR YR 1983 TOTAL 202703 MEAN 555 MAX 4710 MIN 88 CFSM 1.12 IN 15.26

POTOMAC RIVER BASIN

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01614500 CONOCOCHIEAGUE CREEK AT FAIRVIEW, MD--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1967 to June 1983 (discontinued).

WATER QUALITY DATA, OCTOBER 1982 TO JUNE 1983

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD 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)
OCT 22...	1045	109	444	8.4	8.0	9.2	13.7	210	35	61
MAR 15...	1030	562	288	7.0	13.0	8.9	10.8	130	30	36
JUN 10...	1315	327	476	8.0	26.0	17.7	10.0	230	64	69

DATE	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY LAB (MG/L AS CAC03)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)
OCT 22...	13	11	10	.3	3.0	171	1.3	24	16	.20
MAR 15...	9.3	7.7	11	.3	1.8	98	19	21	11	<.10
JUN 10...	15	10	8	.3	3.0	185	3.3	25	17	.20

DATE	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P)	PHOS- PHATE, ORTHO, DIS- SOLVED (MG/L AS PO4)	IRON, DIS- SOLVED (UG/L AS FE)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)
OCT 22...	2.1	286	233	.39	84.2	--	--	--	11	3
MAR 15...	6.5	173	152	.24	272	3.8	.100	.31	22	7
JUN 10...	7.3	289	249	.39	255	5.0	.110	.34	13	12

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. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--20 years, 12.8 ft³/s (0.362 m³/s), 9.20 in/yr (234 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)
Apr. 10	1100	64 1.81	1.97 0.600	Apr. 24	2200	*84 2.38	2.18 0.664
Apr. 15	2000	62 1.76	1.95 0.594				

Minimum discharge, 1.2 ft³/s (0.034 m³/s) Sept. 20, 21.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.1	4.7	6.4	4.8	4.5	8.8	9.0	27	20	12	8.0	5.5
2	5.8	4.6	6.7	4.8	5.8	8.8	9.1	26	19	12	8.3	3.7
3	5.8	4.7	5.8	4.8	8.2	8.2	20	26	19	12	8.4	3.5
4	5.1	6.1	5.8	4.5	6.7	8.2	14	28	20	11	8.3	3.1
5	5.4	7.0	5.5	4.4	5.8	8.0	13	25	21	12	8.4	2.9
6	5.2	5.7	5.4	4.4	5.8	8.0	12	23	19	13	8.4	2.6
7	4.9	5.5	4.8	4.4	5.8	8.2	12	22	18	12	7.7	2.6
8	4.8	5.2	4.8	4.4	5.9	8.8	16	23	18	11	6.4	2.4
9	4.9	5.0	4.5	4.4	5.6	11	22	25	17	11	4.4	2.4
10	4.7	5.1	4.4	5.5	5.5	10	49	22	17	11	5.5	2.2
11	4.8	5.0	4.6	7.0	5.0	9.7	37	21	17	11	6.7	2.0
12	4.7	4.8	4.5	5.8	4.8	9.0	30	20	16	10	6.4	2.0
13	5.6	5.7	4.3	5.3	5.0	8.7	26	20	16	10	7.4	2.0
14	5.8	5.0	4.2	5.1	5.5	8.5	25	19	15	9.8	5.8	1.7
15	5.2	4.8	4.4	5.1	5.5	8.4	39	21	15	9.8	4.4	1.5
16	4.6	4.7	6.4	5.2	5.7	8.0	42	29	14	9.5	6.1	1.5
17	4.5	4.8	6.4	4.9	6.1	8.0	31	34	14	9.3	6.1	1.5
18	4.4	4.7	5.4	4.7	6.7	8.7	29	24	17	8.9	5.8	1.3
19	4.8	4.8	5.3	4.5	7.7	11	27	22	17	8.9	3.7	1.3
20	4.4	4.8	5.3	4.4	8.1	9.5	26	25	18	9.1	3.7	1.3
21	4.8	4.8	5.0	4.2	8.2	9.6	24	22	19	8.9	3.5	1.7
22	4.5	4.9	4.8	4.0	9.1	9.2	23	25	20	8.7	3.3	2.9
23	4.4	5.0	4.9	5.0	11	8.6	23	32	16	8.6	3.5	3.3
24	4.5	4.6	5.1	5.8	11	8.5	52	25	14	8.7	3.7	3.1
25	5.5	4.4	4.8	5.2	10	8.4	59	22	14	8.5	3.5	2.6
26	6.1	4.4	5.2	4.8	9.8	8.2	38	22	13	8.4	3.5	2.2
27	5.4	4.4	5.3	4.7	8.8	9.5	33	25	13	8.2	3.5	2.0
28	4.8	4.9	5.5	4.4	8.8	12	31	22	13	8.2	3.5	1.8
29	4.8	11	5.4	4.4	---	9.8	29	22	14	8.0	4.2	1.8
30	4.8	7.4	5.0	4.6	---	9.3	28	22	13	7.9	4.2	1.8
31	4.8	---	4.8	4.8	---	9.1	---	21	---	8.0	4.8	---
TOTAL	155.9	158.5	160.7	150.3	196.4	279.7	828.1	742	496	305.4	171.1	70.2
MEAN	5.03	5.28	5.18	4.85	7.01	9.02	27.6	23.9	16.5	9.85	5.52	2.34
MAX	6.1	11	6.7	7.0	11	12	59	34	21	13	8.4	5.5
MIN	4.4	4.4	4.2	4.0	4.5	8.0	9.0	19	13	7.9	3.3	1.3
CFSM	.27	.28	.27	.26	.37	.48	1.46	1.27	.87	.52	.29	.12
IN.	.31	.31	.32	.30	.39	.55	1.63	1.46	.98	.60	.34	.14

CAL YR 1982	TOTAL	4258.3	MEAN 11.7	MAX 54	MIN 4.2	CFSM .62	IN 8.38
WTR YR 1983	TOTAL	3714.3	MEAN 10.2	MAX 59	MIN 1.3	CFSM .54	IN 7.31

01618000 POTOMAC RIVER AT SHEPHERDSTOWN, WV

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

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

WATER-DISCHARGE RECORDS

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

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

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

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

AVERAGE DISCHARGE.--44 years (water years 1929-53, 1965-83), 6,091 ft³/s (172.5 m³/s), 13.94 in/yr (354 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 335,000 ft³/s (9,490 m³/s) Mar. 19, 1936, gage height, 42.1 ft (12.83 m), from floodmarks, from rating curve extended above 200,000 ft³/s (5,660 m³/s) on basis of slope-area measurement of peak flow; minimum discharge, 170 ft³/s (4.81 m³/s) Aug. 1, 1966; minimum daily discharge, 185 ft³/s (5.24 m³/s) July 31, 1966.

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

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

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Mar. 20	2200	34700 983	11.41 3.478	Apr. 26	0100	*78600 2230	19.17 5.843
Apr. 4	0730	30900 875	10.61 3.234	May 18	0630	39500 1120	12.38 3.773
Apr. 11	1630	42900 1210	13.05 3.978	May 24	0600	37800 1070	12.04 3.670
Apr. 17	0930	27000 765	9.76 2.975				

Minimum discharge, 718 ft³/s (20.3 m³/s) Sept. 12, gage height, 1.66 ft (0.506 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1210	1030	3860	3240	2260	6630	11500	12400	6860	2830	1010	1110
2	1310	1460	5160	2980	2370	6040	10400	10900	6150	2700	1060	1540
3	1300	1300	4160	2820	5390	5620	19500	10000	5480	2540	1020	1210
4	1360	1040	4290	2630	8940	5220	29700	10600	5120	2400	1020	1010
5	1180	1250	3940	2580	10500	5040	24000	12800	5060	2410	1130	930
6	1050	1420	3470	2200	8320	5700	17800	12700	5090	2250	1040	881
7	1070	1310	3000	1970	6530	4870	14500	10900	4810	2150	1050	845
8	982	1370	2680	1830	5630	5200	13500	9390	4560	1940	1100	818
9	1030	1730	2760	1810	4870	6020	18700	8330	4310	1830	1110	797
10	1020	1530	2440	1840	4290	8710	29400	7620	3890	1700	1090	775
11	983	1540	2150	1950	4020	12200	40800	6740	3550	1630	1020	752
12	925	1450	2110	2430	3290	10900	37400	6010	3300	1570	1060	735
13	977	1030	1970	2600	2400	9000	25800	5340	3020	1480	1020	752
14	1150	1230	1850	2510	2300	7630	19400	5010	2790	1410	975	786
15	1100	1450	1700	2380	2600	6650	15600	4880	2600	1360	968	790
16	1050	1190	1840	2240	3300	5900	19200	5300	2550	1330	947	840
17	1210	1060	2320	2110	4500	5230	26100	13600	2370	1270	905	878
18	1270	951	4080	1850	7500	4780	20800	35300	2480	1250	890	828
19	1400	947	6820	1400	14000	6810	16400	22500	3070	1240	886	808
20	1390	1100	5070	1350	15000	25500	13500	16700	4010	1210	880	797
21	1180	1110	4080	1200	14000	28100	11500	14900	5930	1190	853	812
22	1060	1140	3530	1250	13000	28900	10000	12800	18100	1200	832	860
23	1010	1140	3270	1640	14000	29100	8640	20900	13700	1210	821	1030
24	840	1210	3620	1870	14800	20500	10600	35700	7370	1680	825	985
25	1010	1360	2940	2100	13800	14700	55800	25400	5260	1540	815	865
26	1430	1460	2690	2220	11900	11600	66900	17500	4190	1190	811	818
27	1070	1400	2740	2280	9550	9760	38000	13100	3540	999	855	786
28	976	1360	2740	2490	7740	11200	23300	10500	3090	1060	842	775
29	1050	1590	2820	2380	---	15800	17400	8890	2910	1170	808	767
30	1080	2390	3070	2290	---	15600	14100	8110	2920	1190	949	787
31	979	---	3220	2260	---	13200	---	7500	---	1050	981	---
TOTAL	34652	39548	100390	66700	216800	352110	680240	402320	148080	49979	29573	26367
MEAN	1118	1318	3238	2152	7743	11360	22670	12980	4936	1612	954	879
MAX	1430	2390	6820	3240	15000	29100	66900	35700	18100	2830	1130	1540
MIN	840	947	1700	1200	2260	4780	8640	4880	2370	999	808	735
CFSM	.19	.22	.55	.36	1.30	1.91	3.82	2.19	.83	.27	.16	.15
IN.	.22	.25	.63	.42	1.36	2.21	4.24	2.52	.93	.31	.19	.17

CAL YR 1982 TOTAL 2157536 MEAN 5911 MAX 50700 MIN 798 CFSM 1.00 IN 13.52
WTR YR 1983 TOTAL 2146759 MEAN 5882 MAX 66900 MIN 735 CFSM .99 IN 13.45

POTOMAC RIVER BASIN

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

WATER-QUALITY RECORDS

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD UNITS)	TEMPER- ATURE, AIR (DEG C)	TEMPER- ATURE (DEG C)	BARO- METRIC PRES- SURE (MM OF HG)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)
NOV 30...	1345	2500	450	8.1	15.0	9.5	757	2.6	11.3	100
FEB 08...	1345	5580	205	7.6	2.0	4.0	753	6.5	14.2	110
APR 19...	1330	16100	185	7.9	7.0	8.5	--	18	19.6	--
MAY 24...	1315	36500	177	8.0	19.0	16.0	756	90	10.7	109
JUL 18...	1330	1250	420	7.9	24.5	28.0	--	1.3	7.8	--
SEP 12...	1130	731	490	7.8	27.0	28.0	760	1.9	9.3	119
DATE	COLT- FORM, FECAL, 0.7 UM-HF (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 DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
NOV 30...	23	920	170	74	55	9.0	19	19	.7	2.4
FEB 08...	21	--	82	32	25	4.7	6.0	13	.3	1.7
APR 19...	93	630	77	28	23	4.7	4.0	10	.2	1.3
MAY 24...	K3000	K12000	70	29	21	4.3	3.9	10	.2	1.8
JUL 18...	K6	130	190	74	56	11	14	14	.5	2.3
SEP 12...	K6	650	200	89	59	12	24	21	.8	2.6
DATE	ALKA- LITY LAB (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)
NOV 30...	101	1.5	72	34	<.10	.5	268	253	.36	1810
FEB 08...	50	2.4	29	9.0	<.10	5.5	119	111	.16	1790
APR 19...	49	1.2	30	5.4	<.10	7.0	118	105	.16	5130
MAY 24...	41	.8	24	3.8	<.10	6.2	110	90	.15	10800
JUL 18...	111	2.7	60	23	.20	3.4	290	237	.39	979
SEP 12...	108	3.3	81	37	.20	2.8	317	284	.43	626
DATE	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS NH4)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS TOTAL (MG/L AS P04)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P)	PHOS- PHATE, ORTHO, DIS- SOLVED (MG/L AS P04)	
NOV 30...	.59	.080	.10	.50	.090	.24	.090	.060	.18	
FEB 08...	--	--	--	--	--	--	--	--	--	
APR 19...	1.3	.020	.03	.50	.050	.15	.020	.020	.06	
MAY 24...	.87	.030	.04	.70	.180	.55	.040	.020	.06	
JUL 18...	1.5	.070	.09	.60	.070	.21	.060	.030	.09	
SEP 12...	.95	.080	.10	1.20	.090	.24	.070	.060	.18	

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

POTOMAC RIVER BASIN

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01618000 POTOMAC RIVER AT SHEPHERDSTOWN, WV--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	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)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)
NOV 30...	<10	1	65	<1	<1	--	<3	5	14	<1
APR 19...	30	1	43	<1	<1	<1	<3	2	33	5
MAY 24...	70	1	47	1	1	<1	3	2	26	<1
SEP 12...	10	3	70	<1	<1	<1	<3	1	3	1

DATE	LITHIUM DIS- SOLVED (UG/L AS LI)	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)	VANA- DIUM, DIS- SOLVED (UG/L AS V)	ZINC, DIS- SOLVED (UG/L AS ZN)
NOV 30...	9	8	.7	<10	4	<1	<1	300	<6.0	64
APR 19...	<4	17	.2	<10	4	<1	<1	98	<6.0	7
MAY 24...	4	3	<.1	10	<1	<1	<1	92	6.0	3
SEP 12...	9	20	<.1	<10	4	<1	<1	320	<6.0	<3

DATE	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
NOV 30...	13	88	99
FEB 08...	9	136	91
APR 19...	30	1300	94

DATE	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
MAY 24...	267	26300	96
JUL 18...	4	14	96
SEP 12...	5	9.9	98

POTOMAC RIVER BASIN

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.--60 years (water years 1898-1903, 1905, 1931-83), 275 ft³/s (7.788 m³/s), 13.29 in/yr (338 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 discharge, 9.4 ft³/s (0.266 m³/s) Nov. 22, 1957, result of regulation caused by construction work above station; minimum daily discharge, 37 ft³/s (1.05 m³/s) Jan. 30, 1966.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,500 ft³/s (42.5 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)
Apr. 10	2115	2190 62.0	6.46 1.969	Apr. 25	0615	2040 57.8	6.24 1.902
Apr. 16	0645	1570 44.5	5.53 1.686	June 19	1530	*2830 80.1	7.34 2.237

Minimum discharge, 38 ft³/s (1.08 m³/s) Feb. 11, gage height, 2.04 ft (0.622 m), result of freezeup.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	128	104	153	106	117	253	318	638	428	348	173	172
2	125	104	148	104	130	257	310	607	409	332	233	146
3	121	101	134	103	230	265	718	590	391	315	191	135
4	117	115	127	103	240	259	634	636	409	303	181	130
5	118	156	122	102	184	249	514	588	528	320	179	128
6	117	127	117	102	167	238	471	528	415	324	222	127
7	116	112	112	102	163	255	451	498	378	290	180	126
8	115	107	110	101	161	287	485	486	360	274	169	123
9	114	108	107	100	152	398	670	510	343	270	167	121
10	109	106	105	111	146	376	1790	468	329	263	161	119
11	108	104	105	145	110	363	1580	441	321	255	162	116
12	110	103	105	153	105	329	1050	428	309	251	251	115
13	123	119	102	125	150	306	857	408	298	243	185	148
14	152	118	102	115	160	290	752	395	291	235	167	148
15	132	108	100	114	160	277	896	399	285	231	161	125
16	118	105	136	113	163	263	1370	530	282	225	158	119
17	111	102	169	111	179	251	992	722	274	218	155	118
18	109	102	136	110	180	251	873	552	369	213	154	115
19	112	101	119	107	189	764	785	502	1470	212	152	113
20	112	100	116	105	191	777	721	549	682	212	148	114
21	114	100	116	105	201	555	672	527	829	229	141	126
22	114	101	112	105	231	523	622	600	651	216	138	161
23	111	104	111	118	308	425	583	1100	521	205	140	128
24	109	102	115	143	350	382	965	669	470	208	140	119
25	117	99	115	132	330	352	1820	605	436	205	139	115
26	149	95	112	121	304	326	1120	565	400	195	136	115
27	136	95	113	115	274	331	912	545	380	190	133	116
28	120	100	114	112	258	462	800	497	364	186	133	118
29	113	236	113	109	---	390	727	488	451	180	137	112
30	108	230	110	110	---	344	680	481	384	177	143	121
31	106	---	106	116	---	327	---	449	---	173	136	---
TOTAL	3664	3464	3662	3518	5533	11125	25138	17001	13457	7498	5065	3789
MEAN	118	115	118	113	198	359	838	548	449	242	163	126
MAX	152	236	169	153	350	777	1820	1100	1470	348	251	172
MIN	106	95	100	100	105	238	310	395	274	173	133	112
(*)	-11.9	-11.3	-11.5	-12.0	-10.0	-6.1	-5.7	-5.7	-7.4	-10.5	-13.8	-13.1
MEAN#	106	104	106	101	188	353	832	542	442	232	149	113
CFSM#	0.38	0.37	0.38	0.36	0.67	1.26	2.96	1.93	1.57	0.83	0.53	0.40
IN#	0.44	0.41	0.44	0.42	0.70	1.45	3.30	2.22	1.75	0.96	0.61	0.45

CAL YR 1982 TOTAL 97680 MEAN 268 MAX 1420 MIN 95 MEAN# 259 CFSM# 0.92 IN# 12.48
WTR YR 1983 TOTAL 102914 MEAN 282 MAX 1820 MIN 95 MEAN# 272 CFSM# 0.97 IN# 13.14

* Pumpage in cubic feet per second, from Potomac River for municipal supply of Hagerstown.

* Adjusted for pumpage.

POTOMAC RIVER BASIN

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01619500 ANTIETAM CREEK NEAR SHARPSBURG, MD--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1965 to September 1983 (discontinued).

WATER QUALITY DATA. WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD 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)
OCT 22...	1330	114	556	8.2	13.0	10.6	--	250	42	75
MAR 16...	1315	273	385	8.1	15.5	10.9	10.8	190	41	53
JUN 10...	1315	327	476	8.0	26.0	17.7	10.0	230	64	69

DATE	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY LAB (MG/L AS CAC03)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)
OCT 22...	15	14	11	.4	3.8	207	2.5	35	20	.30
MAR 16...	13	12	12	.4	2.7	145	2.2	23	18	.20
JUN 10...	15	10	8	.3	3.0	185	3.3	9.8	17	.20

DATE	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P)	PHOS- PHATE, ORTHO, DIS- SOLVED (MG/L AS PO4)	IRON, DIS- SOLVED (UG/L AS FE)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)
OCT 22...	7.1	331	294	.45	102	--	--	--	23	9
MAR 16...	8.3	232	218	.32	171	3.7	.120	.37	19	19
JUN 10...	7.3	289	234	.39	255	5.0	.110	.34	13	12

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

AVERAGE DISCHARGE.--68 years (water years 1896-1908, 1929-83), 2,686 ft³/s (76.07 m³/s), 12.00 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 discharge, about 59 ft³/s (1.67 m³/s) Oct. 4, 1930, gage height, 0.39 ft (0.119 m); minimum daily discharge, 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)
Mar. 20	1500	*35700 1010	12.95 3.947	Apr. 17	0145	23700 671	10.59 3.228
Apr. 4	1400	22500 637	10.33 3.149	Apr. 25	2300	32500 920	12.37 3.770
Apr. 11	1745	27800 787	11.47 3.496	May 18	0100	17600 498	9.14 2.786

Minimum discharge, 357 ft³/s (10.1 m³/s) Oct. 11, gage height, 1.17 ft (0.357 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1010	748	2030	1370	1280	4930	5210	6270	3300	1720	695	610
2	748	738	3260	1350	1300	4660	4930	5580	3030	1540	680	748
3	702	718	3140	1240	1910	4510	7580	5100	2790	1560	702	718
4	652	754	3280	1200	5040	4260	18800	4740	2620	1750	725	645
5	673	1250	2710	1140	7020	3960	14500	4380	2580	1740	771	624
6	604	1400	2380	1140	5380	3730	9880	4030	2710	1520	886	652
7	624	1690	2110	1110	4300	3660	7990	3660	3530	1490	811	617
8	571	1640	1820	1120	3660	3710	7360	3390	3050	1370	795	631
9	590	1150	1700	1030	3150	4660	7340	3280	2420	1370	878	584
10	624	1060	1600	1120	2760	6900	12200	3080	2160	1210	860	533
11	680	951	1320	1320	2200	7380	23100	2890	2070	1140	827	552
12	680	973	1400	1430	1940	6360	21100	2680	1920	1120	860	558
13	666	839	1360	1340	1700	5440	13600	2540	1820	1080	779	564
14	695	878	1370	1430	1800	4740	10200	2460	1750	1060	779	604
15	748	860	1330	1280	2050	4200	8820	2490	1630	992	779	645
16	673	886	1350	1200	2350	3750	15900	3170	1700	983	819	631
17	673	819	2180	1200	2650	3350	20100	12300	1610	938	811	624
18	638	803	6990	1110	2960	3350	13500	15000	1740	903	638	610
19	666	811	5960	1000	4810	11300	10200	9360	1790	894	673	597
20	638	771	4510	903	5960	29400	8240	6970	1860	878	680	578
21	680	771	3600	870	6060	18800	7020	5840	2220	929	680	578
22	718	811	3010	920	6500	12700	6100	5800	6430	819	533	597
23	604	771	2580	1000	7700	11400	5380	8950	3960	835	695	604
24	571	802	2260	1100	9030	8790	7480	8390	2820	779	710	624
25	695	763	1960	1200	10000	7180	22800	6790	2310	819	631	564
26	740	771	1860	1220	8040	6100	25800	5720	2000	878	564	527
27	929	755	1760	1310	6680	5440	15100	4960	1800	787	558	527
28	944	771	1690	1250	5540	5420	10800	4360	1680	819	604	578
29	1040	869	1580	1240	---	6500	8600	3860	1740	787	624	558
30	929	1330	1480	1230	---	6460	7220	3590	1700	748	624	558
31	787	---	1440	1290	---	5680	---	3460	---	673	604	---
TOTAL	22192	20153	75020	36663	123770	218720	356850	165090	72740	34131	22275	18040
MEAN	716	938	2420	1183	4420	7055	11900	5325	2425	1101	719	601
MAX	1040	1690	6990	1430	10000	29400	25800	15000	6430	1750	886	748
MIN	571	718	1320	870	1280	3350	4930	2460	1610	673	533	527
CFSM	.24	.31	.80	.39	1.45	2.32	3.91	1.75	.80	.36	.24	.20
IN.	.27	.34	.92	.45	1.51	2.68	4.37	2.02	.89	.42	.27	.22

CAL YR 1982	TOTAL	976809	MEAN	2676	MAX	25400	MIN	562	CFSM	.88	IN	11.95
WTR YR 1983	TOTAL	1173644	MEAN	3215	MAX	29400	MIN	527	CFSM	1.06	IN	14.36

POTOMAC RIVER BASIN

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

WATER-QUALITY RECORDS

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

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1980 to September 1983 (discontinued).

WATER TEMPERATURES: October 1980 to September 1983 (discontinued).

INSTRUMENTATION.--Water-quality monitor October 1980 to September 1983.

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

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE (water years 1981-82): Maximum, 778 micromhos Dec. 29, 1980; minimum, 212 micromhos Jan. 17, 1982.

WATER TEMPERATURES: Maximum, 30.0°C July 20-21, 1981; minimum, 0.0°C on many days during winter periods.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum, 29.5°C July 31, Aug. 8; minimum, 0.0°C Jan. 18-20, 22-25.

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD UNITS)	TEMPER- ATURE, AIR (DEG C)	TEMPER- ATURE (DEG C)	BARO- METRIC PRES- SURE (MM OF HG)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)
NOV 30...	1100	1380	450	8.7	9.5	8.5	757	2.0	11.7	101
FEB 08...	1130	3640	200	7.6	1.0	3.0	753	6.6	13.5	102
APR 19...	1115	10700	192	8.3	3.5	8.5	--	25	17.4	--
MAY 24...	1130	8390	230	8.2	17.0	17.0	756	20	9.0	94
JUL 18...	1130	983	420	8.5	24.0	27.5	--	3.9	7.3	--
SEP 12...	0930	558	525	8.2	24.0	24.0	750	4.8	7.4	90

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 DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
NOV 30...	20	620	170	16	45	13	28	26	1.0	2.6
FEB 08...	27	--	73	15	21	5.0	7.8	18	.4	1.6
APR 19...	390	790	81	14	23	5.6	4.6	11	.2	1.4
MAY 24...	1100	1500	99	15	28	7.1	5.8	11	.3	1.9
JUL 18...	32	170	160	35	41	15	24	24	.8	2.8
SEP 12...	K14	2800	180	30	47	16	37	30	1.2	2.4

DATE	ALKA- LINITY LAB (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 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)
NOV 30...	150	.6	59	22	.10	.5	269	261	.37	1000
FEB 08...	58	2.8	24	5.6	<.10	5.6	113	106	.15	1110
APR 19...	67	.6	18	4.6	<.10	7.3	117	105	.16	3250
MAY 24...	84	1.0	16	4.4	<.10	6.7	126	121	.17	2850
JUL 18...	129	.8	58	16	.20	5.8	272	240	.37	722
SEP 12...	154	2.1	78	24	.20	3.6	318	301	.43	479

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

POTOMAC RIVER BASIN

01636500 SHENANDOAH RIVER AT MILLVILLE, WV--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS NH4)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS TOTAL (MG/L AS P04)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P)	PHOS- PHATE, ORTHO, DIS- SOLVED (MG/L AS P04)
NOV 30...	.72	.090	.12	.50	.090	.28	.080	.070	.21
FEB 08...	.96	.050	.06	1.50	.500	1.5	.070	.060	.18
APR 19...	1.1	.050	.06	.50	.100	.31	.040	.040	.12
MAY 24...	1.1	.050	.06	.70	.120	.37	.060	.060	.18
JUL 18...	.77	.020	.03	.90	.070	.21	.050	<.010	--
SEP 12...	.76	.060	.08	1.20	.140	.43	.120	.120	.37

DATE	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)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)
NOV 30...	<10	4	41	<1	<1	--	<3	8	13	1
APR 19...	30	1	32	<1	<1	<1	<3	2	47	4
MAY 24...	60	1	40	1	1	<1	3	5	48	<1
SEP 12...	20	3	50	1	<1	<1	<3	1	<3	<1

DATE	LITHIUM DIS- SOLVED (UG/L AS LI)	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)	VANA- DIUM, DIS- SOLVED (UG/L AS V)	ZINC, DIS- SOLVED (UG/L AS ZN)
NOV 30...	16	5	.6	<10	<1	<1	<1	160	<6.0	55
APR 19...	<4	3	.1	<10	2	<1	<1	71	<6.0	16
MAY 24...	4	3	<.1	10	<1	<1	<1	90	6.0	6
SEP 12...	10	9	<.1	20	1	<1	<1	190	<6.0	<3

DATE	SEDI- MENT, DIS- SOLVED (MG/L)	SEDI- MENT, CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
NOV 30...	5	19	77
FEB 08...	13	128	81
APR 19...	54	1560	96

DATE	SEDI- MENT, DIS- SOLVED (MG/L)	SEDI- MENT, CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
MAY 24...	60	1360	94
JUL 18...	13	35	96
SEP 12...	11	17	78

01636500 SHENANDOAH RIVER AT MILLVILLE, WV--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	476	451	467	439	426	433	442	425	434	338	326	332
2	462	445	449	426	418	422	429	359	382	342	331	336
3	452	447	449	437	423	429	371	359	366	344	334	340
4	475	449	471	441	436	439	362	336	346	351	335	345
5	467	460	462	442	435	438	335	325	320	352	345	349
6	480	461	471	440	434	437	325	292	310	359	345	353
7	502	482	492	445	415	428	292	286	290	370	357	364
8	522	503	512	431	373	395	302	288	300	377	359	366
9	526	522	524	387	374	383	304	289	302	381	374	377
10	520	512	517	391	387	389	309	298	304	383	376	378
11	523	511	515	395	387	390	313	301	310	387	379	383
12	525	514	521	407	395	401	325	308	318	382	376	378
13	513	497	504	426	405	416	328	318	321	375	368	371
14	520	497	508	427	423	426	336	328	333	383	368	376
15	522	487	509	428	420	424	351	335	346	375	371	374
16	496	483	487	419	411	414	349	344	346	387	369	377
17	500	495	498	420	412	415	346	339	340	386	370	377
18	507	495	502	424	420	421	340	288	310	398	383	391
19	510	506	509	422	417	420	293	267	276	399	392	395
20	507	495	502	422	417	419	268	227	241	402	392	395
21	503	494	498	420	415	418	227	207	214	408	401	404
22	505	499	504	417	409	413	213	208	210	411	401	404
23	497	490	493	424	414	418	226	214	221	436	400	412
24	496	489	492	442	424	434	246	226	233	436	400	420
25	499	487	494	448	443	445	249	238	241	411	389	401
26	488	476	480	446	432	437	260	251	255	423	406	412
27	476	464	469	459	433	445	274	256	268	419	402	409
28	480	466	472	478	457	469	286	276	281	402	389	393
29	487	475	481	477	437	458	294	286	290	394	383	389
30	485	457	470	440	422	432	317	293	306	397	282	391
31	457	439	447	---	---	---	326	310	318	402	396	399
MONTH	526	439	489	478	373	424	442	207	301	436	282	380

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN			
FEBRUARY				MARCH				APRIL				MAY			
1	402	393	399												
2	393	378	389												
3	405	367	389												
4	368	296	347												
5	289	255	272												
6	249	217	225												
7	218	202	208												
8	207	194	198												
9	196	192	194												
10	206	196	201												
11	214	206	210												
12	236	215	226												
13	242	230	235												
14	265	240	250												
15	280	265	270												
NOTE: No record MARCH-SEPTEMBER 1983															
16	293	281	287												
17	296	288	292												
18	294	289	292												
19	288	274	279												
20	275	264	269												
21	264	252	258												
22	261	251	257												
23	254	240	252												
24	246	237	243												
25	---	---	---												
26	---	---	---												
27	---	---	---												
28	---	---	---												
29	---	---	---												
30	---	---	---												
31	---	---	---												
MONTH	405	192	268												

NOTE: No record MARCH-SEPTEMBER 1983

POTOMAC RIVER BASIN

01636500 SHENANDOAH RIVER AT MILLVILLE, WV--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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

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

POTOMAC RIVER BASIN

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01636500 SHENANDOAH RIVER AT MILLVILLE, WV--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	18.0	17.0	17.5	23.5	21.0	22.0	28.5	28.0	28.0	24.5	23.5	24.0
2	18.5	16.5	17.5	25.0	23.0	24.0	29.0	27.0	28.0	24.5	23.5	24.0
3	18.5	18.0	18.5	26.5	24.5	25.5	29.0	27.5	28.0	24.5	23.0	23.5
4	19.0	18.0	18.5	26.5	25.5	26.0	28.5	27.5	28.0	24.0	23.0	23.5
5	20.5	18.5	19.5	26.5	25.0	25.5	28.5	27.5	28.0	24.5	22.5	23.5
6	21.5	20.0	20.5	24.5	23.5	23.5	28.5	27.5	28.0	25.5	23.5	24.5
7	21.0	20.0	20.5	23.5	22.0	23.0	29.0	27.5	28.5	25.5	24.5	25.0
8	22.0	20.0	21.0	23.5	22.0	23.0	29.5	28.0	28.5	25.0	23.5	24.5
9	21.0	20.0	20.5	24.0	23.0	23.5	29.0	28.0	28.5	24.5	23.0	24.0
10	22.0	19.0	20.5	24.5	23.0	23.5	28.5	27.5	28.0	24.5	22.5	24.0
11	23.5	20.5	22.0	24.0	22.5	23.5	28.0	26.5	27.0	24.5	23.0	24.0
12	24.5	22.0	23.5	24.5	23.0	23.5	26.0	24.0	25.0	24.5	23.5	24.0
13	25.5	23.0	24.0	25.5	24.0	24.5	24.0	22.5	23.0	24.0	22.5	23.0
14	26.0	23.5	24.5	25.5	24.5	25.0	23.5	22.0	22.5	22.5	21.0	21.5
15	26.0	24.5	25.5	26.5	24.5	25.5	24.0	22.5	23.0	20.5	19.5	20.5
16	26.5	25.0	25.5	26.5	25.5	26.0	25.0	23.0	24.0	19.5	18.5	19.0
17	26.5	25.0	26.0	27.0	25.5	26.0	26.0	24.0	25.0	19.5	18.0	18.5
18	26.0	24.5	25.0	27.0	25.5	26.5	26.0	25.0	25.5	20.0	18.0	19.0
19	25.0	23.5	24.0	27.0	26.5	27.0	27.5	25.0	26.0	21.0	19.0	20.0
20	24.5	23.5	24.0	27.5	26.5	27.0	28.0	26.0	27.0	22.0	20.0	21.0
21	24.0	21.5	22.5	28.0	26.5	27.0	28.0	26.5	27.0	21.5	20.5	21.0
22	23.0	20.5	21.5	27.5	26.5	27.0	28.5	26.0	27.0	20.0	18.0	19.0
23	22.0	19.5	20.5	27.0	25.5	26.0	27.5	25.5	24.5	17.5	15.5	16.5
24	23.5	20.5	22.0	26.5	25.5	26.0	25.5	25.0	25.5	15.5	14.0	14.5
25	24.0	22.5	23.0	26.5	25.5	26.0	26.0	24.0	25.0	15.0	13.5	14.0
26	24.5	22.5	23.5	26.0	25.0	25.5	26.5	24.0	25.0	15.0	13.5	14.5
27	26.0	23.0	24.5	27.0	25.5	26.5	26.5	25.0	25.5	15.5	13.5	14.5
28	26.0	24.5	25.5	27.5	26.0	27.0	26.5	25.5	26.0	16.0	14.5	15.5
29	25.5	23.5	24.0	27.5	27.0	27.0	26.5	25.5	26.0	16.0	15.0	15.5
30	23.0	21.5	22.0	29.0	27.0	28.0	27.0	25.5	24.0	15.5	15.0	15.5
31	---	---	---	29.5	27.5	28.5	26.0	24.5	25.0	---	---	---
MONTH	26.5	16.5	22.5	29.5	21.0	25.5	29.5	22.0	26.5	25.5	13.5	20.5

POTOMAC RIVER BASIN

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).

WATER-DISCHARGE RECORDS

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

AVERAGE DISCHARGE.--36 years, 75.6 ft³/s (2.141 m³/s), 15.35 in/yr (390 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)
Apr. 10	0730	*2560 72.5	6.34 1.932	June 20	0700	1760 49.8	5.33 1.625

Minimum discharge, 1.0 ft³/s (0.03 m³/s) Sept. 11, 12, gage height, 1.40 ft (0.427 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.0	7.4	32	22	28	114	113	180	78	42	6.3	4.8
2	6.9	7.2	36	21	47	130	115	161	72	39	7.4	7.0
3	6.2	7.0	31	20	163	120	469	147	66	34	9.2	4.3
4	5.7	25	29	18	94	105	254	148	75	30	7.1	3.2
5	5.8	49	27	18	70	93	204	122	119	29	10	3.0
6	5.2	21	25	18	65	85	182	104	69	30	94	2.6
7	5.3	15	21	18	60	115	174	94	60	26	19	2.2
8	5.3	12	19	17	54	186	212	98	54	23	12	1.8
9	5.2	11	17	17	46	236	310	107	48	22	8.8	1.7
10	4.8	10	15	23	42	221	1360	80	44	21	6.9	1.5
11	4.8	9.9	16	64	22	188	621	73	42	19	8.8	1.2
12	5.2	9.9	16	39	22	163	439	68	39	18	14	1.1
13	9.1	16	13	28	28	141	352	63	36	17	12	2.9
14	18	19	12	27	40	126	289	60	34	15	9.1	3.2
15	12	14	15	26	46	114	519	84	32	14	7.4	4.1
16	8.4	11	49	25	53	101	452	209	42	13	6.3	3.0
17	6.5	9.6	40	19	62	92	361	216	33	13	5.7	2.3
18	5.8	9.1	28	16	74	148	306	129	82	12	5.5	1.9
19	5.8	9.1	31	16	83	494	256	119	100	12	5.1	1.7
20	5.8	8.9	30	18	91	286	217	160	271	12	4.9	1.6
21	6.5	9.1	27	22	105	280	184	132	251	20	3.6	3.8
22	6.8	9.3	25	25	147	217	160	171	114	15	3.1	16
23	6.5	9.9	23	33	205	176	146	220	83	12	3.0	8.8
24	6.2	10	24	49	200	155	655	155	70	12	3.8	4.8
25	16	9.3	23	38	172	139	624	136	62	11	3.5	3.6
26	31	8.6	24	32	148	122	424	135	53	10	3.1	3.1
27	17	8.1	25	28	124	164	341	137	48	8.9	2.6	2.9
28	12	12	27	27	114	201	278	104	43	7.9	2.5	2.6
29	9.9	72	28	24	---	144	233	109	66	7.1	5.9	2.3
30	8.8	40	25	28	---	128	202	105	48	6.5	3.1	3.1
31	8.2	---	23	31	---	121	---	87	---	6.1	3.3	---
TOTAL	268.7	469.4	776	807	2405	5105	10456	3913	2234	557.5	297.0	106.1
MEAN	8.67	15.6	25.0	26.0	85.9	165	349	126	74.5	18.0	9.58	3.54
MAX	31	72	49	64	205	494	1360	220	271	42	94	16
MIN	4.8	7.0	12	16	22	85	113	60	32	6.1	2.5	1.1
CFSM	.13	.23	.37	.39	1.28	2.47	5.22	1.88	1.11	.27	.14	.05
IN.	.15	.26	.43	.45	1.34	2.84	5.81	2.18	1.24	.31	.17	.06

CAL YR 1982 TOTAL 21801.2 MEAN 59.7 MAX 499 MIN 3.4 CFSM .89 IN 12.12
WTR YR 1983 TOTAL 27394.7 MEAN 75.1 MAX 1360 MIN 1.1 CFSM 1.12 IN 15.23

01637500 CATOCTIN CREEK NEAR MIDDLETOWN, MD--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1982 to June 1983 (discontinued).

WATER QUALITY DATA, OCTOBER 1982 TO JUNE 1983

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD 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 AS CAC03)	CALCIUM DIS- SOLVED (MG/L AS CA)
JAN 21...	1115	20	191	8.0	-5	.1	5	--	75	22	18
JUN 16...	0930	48	144	7.4	29.0	21.7	20	8.3	55	7	14

DATE	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY FIELD (MG/L AS CAC03)	CARBON DIOXIDE DIS- SOLVED (MG/L AS C02)	SULFATE DIS- SOLVED (MG/L AS S04)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS Si02)
JAN 21...	7.3	8.5	19	.4	1.8	53	1.0	20	21	<.10	12
JUN 16...	4.9	5.6	18	.3	1.6	48	3.7	13	11	.10	11

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 TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (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 N03)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS TOTAL (MG/L AS P04)
JAN 21...	123	121	.17	6.6	1.8	1.8	--	--	--	.130	.40
JUN 16...	112	90	.15	14.5	.90	--	.50	1.4	6.2	.080	.25

DATE	PHOS- PHORUS, ORTHO, TOTAL (MG/L AS P)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P)	PHOS- PHATE, ORTHO, DIS- SOLVED (MG/L AS P04)	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)	CARBON, ORGANIC TOTAL (MG/L AS C)
JAN 21...	--	.110	.34	150	110	39	20	0	22	2.3
JUN 16...	.050	--	--	510	450	64	20	0	21	4.3

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 Oct. 28, 1929, nonrecording gage at same site. Prior to Sept. 2, 1902, at datum about 0.45 ft (0.317 m) higher.

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

AVERAGE DISCHARGE.--88 years, 9,360 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 discharge, 530 ft³/s (15.0 m³/s) Sept. 11, 12, 1966, gage height, 0.27 ft (0.082 m).

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

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

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Mar. 21	0030	66400 1880	13.13 4.002	Apr. 26	0500	*115000 3260	19.21 5.855
Apr. 4	1800	52300 1480	11.12 3.389	May 18	1100	54900 1550	11.50 3.505
Apr. 11	2000	75700 2140	14.40 4.389	May 24	1130	47400 1340	10.38 3.164
Apr. 17	0900	51300 1450	10.97 3.344				

Minimum discharge, 1,400 ft³/s (39.6 m³/s) Sept. 11, 27, 30, gage height, 0.79 ft (0.241 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2590	1950	5350	5220	4090	13500	18500	21200	11900	5560	1980	1810
2	2320	2120	9400	5030	4280	12500	16900	18900	10900	5410	2120	2140
3	2300	2410	8490	4690	5720	11800	24900	17100	9880	5060	2110	2430
4	2270	2490	8460	4580	13400	11100	48500	16900	9230	5000	2100	1970
5	2220	2640	7900	4280	18600	10400	44000	18400	9050	5210	2190	1770
6	2020	3300	6880	4160	16300	10700	31600	18600	9180	4680	2350	1700
7	1810	3390	6040	3660	12800	10200	25400	16600	9470	4550	2340	1670
8	1890	3460	5320	3440	10700	11700	23000	14700	9370	4150	2110	1580
9	1730	3360	4940	3290	9310	12300	26300	13500	8030	4000	2200	1600
10	1810	2990	4850	3460	8220	16100	50700	12400	7300	3780	2220	1430
11	1820	2790	4200	3910	7500	21600	70900	11300	6760	3430	2180	1420
12	1900	2880	4010	4240	5680	20100	68400	10300	6320	3340	2300	1420
13	1820	2640	3870	4580	5250	16900	46900	9420	5940	3260	2170	1450
14	1970	2210	3780	4590	5420	14500	34200	8820	5590	3110	2020	1500
15	2120	2500	3530	4430	5610	12800	29700	8770	5200	3020	1980	1560
16	2060	2580	3860	4080	6740	11400	37100	10600	5160	2820	1990	1570
17	1960	2310	4560	3920	7680	10200	50400	21200	4870	2760	1960	1590
18	2130	2100	9460	3740	8670	10100	40400	51900	5370	2650	1870	1610
19	2160	2010	14000	3260	14800	17300	31200	37700	6140	2570	1740	1550
20	2320	2010	11400	2880	21400	46700	25400	27300	7900	2590	1760	1500
21	2220	2150	9090	2760	20900	55800	21600	23400	9230	2550	1760	1520
22	2090	2180	7670	2920	20500	43300	18900	21100	20700	2560	1680	1620
23	1940	2230	6760	3050	23000	44000	16500	27600	23600	2380	1580	1650
24	1730	2270	6500	3540	25900	33600	20800	46300	13500	2710	1850	1780
25	1780	2260	6030	3780	26400	25100	69200	37600	9740	2910	1700	1660
26	2310	2470	5290	3910	23100	20100	109000	27200	7940	2740	1600	1520
27	2560	2510	5090	4110	19100	17300	62800	21200	6760	2330	1530	1410
28	2290	2490	5070	4180	15700	17300	40100	17200	6030	2120	1610	1420
29	2300	3340	4980	4250	---	22700	30300	15000	5810	2280	1630	1450
30	2360	3800	5010	4120	---	24100	24800	13500	5800	2280	1620	1480
31	2170	---	5200	4080	---	21100	---	12700	---	2230	1730	---
TOTAL	64970	77840	196990	122140	366770	626300	1158400	628410	262670	104040	59980	48780
MEAN	2096	2595	6355	3940	13100	20200	38610	20270	8756	3356	1935	1626
MAX	2590	3800	14000	5220	26400	55800	109000	51900	23600	5560	2350	2430
MIN	1730	1950	3530	2760	4090	10100	16500	8770	4870	2120	1530	1410
CFSM	.22	.27	.66	.41	1.36	2.09	4.00	2.10	.91	.35	.20	.17
IN.	.25	.30	.76	.47	1.41	2.41	4.47	2.42	1.01	.40	.23	.19

CAL YR 1982 TOTAL 3317870 MEAN 9090 MAX 76400 MIN 1550 CFSM .94 IN 12.79
WTR YR 1983 TOTAL 3717290 MEAN 10180 MAX 109000 MIN 1410 CFSM 1.06 IN 14.33

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 by local observer 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, 30.0°C Aug. 7; minimum daily, 0.0°C Jan. 24, 26-28.

SEDIMENT CONCENTRATIONS: Maximum daily mean, 736 mg/L Apr. 26; minimum daily mean, 1 mg/L Jan. 23.

SEDIMENT LOADS: Maximum daily, 222,000 tons (201,000 tonnes) Apr. 26; minimum daily, 8.6 tons (7.8 tonnes) Jan. 22.

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD 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)
DEC 28...	1230	4750	270	7.9	13.0	8.0	--	110	29	32
FEB 25...	0945	25500	210	7.5	6.0	6.0	12.7	81	27	24
JUL 26...	1245	2630	430	8.2	30.0	25.5	8.2	180	56	50

DATE	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY LAB (MG/L AS CAC03)	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)
DEC 28...	6.3	8.9	15	.4	1.6	77	1.9	34	12	<.10
FEB 25...	5.0	5.3	12	.3	1.8	54	3.3	26	8.4	.10
JUL 26...	13	19	19	.6	2.6	123	1.5	59	22	.20

DATE	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSY- 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)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P)	PHOS- PHATE, ORTHO, DIS- SOLVED (MG/L AS PO4)	IRON, DIS- SOLVED (UG/L AS FE)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)
DEC 28...	4.1	152	145	.21	1950	1.3	.050	.15	<3	6
FEB 25...	5.6	118	109	.16	8120	1.3	.040	.12	31	13
JUL 26...	3.6	259	243	.35	1840	1.2	.030	.09	6	3

POTOMAC RIVER BASIN

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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 .004 MM	SED. SUSP. FALL DIAM. % FINER THAN .008 MM
APR 11...	0950	68500	10.0	2730	505000	38	49

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
APR 11...	54	61	79	88	96	100

WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TRITIUM IN WATER MOLE- CULES (TU)	TRITIUM WATER MOLE- CULES COUNT ERROR (TU)	DATE	TRITIUM IN WATER MOLE- CULES (TU)	TRITIUM WATER MOLE- CULES COUNT ERROR (TU)
OCT 01-16	34.7	1.9	APR 01-17	33.1	1.4
17-20	33.8	1.3	18-30	24.1	1.2
21-31	30.5	1.2	MAY 01-17	33.0	1.6
NOV 01-07	30.5	1.2	18-31	34.4	1.6
10-29	33.3	1.5	JUN 01-15	32.3	1.5
30-30	10.0	.5	16-30	36.2	1.7
DEC 01-17	10.0	.5	JUL 01-18	32.8	1.5
18-31	32.7	1.5	19-31	31.7	1.6
JAN 01-07	32.7	1.5	AUG 02-17	32.8	1.8
08-16	33.7	1.5	19-31	35.7	1.9
FEB 04-22	29.7	1.4	SEP 01-15	31.4	1.8
MAR 01-18	35.6	1.5	16-30	29.8	1.6
18-31	33.8	1.5			

WATER QUALITY DATA, OCTOBER 1982 TO MAY 1983

DATE	TRITIUM IN WATER MOLE- CULES (TU)	TRITIUM WATER MOLE- CULES COUNT ERROR (TU)	DATE	TRITIUM IN WATER MOLE- CULES (TU)	TRITIUM WATER MOLE- CULES COUNT ERROR (TU)
OCT 01-16	28.3	1.5	MAR 17-31	30.7	1.3
17-31	27.1	1.5	APR 01-16	31.3	1.4
NOV 01-21	27.8	1.0	17-30	31.3	1.4
23-30	29.4	1.1	MAY 01-16	32.5	1.4
DEC 01-15	31.0	1.3	17-29	31.3	1.4
16-30	30.8	1.3	JUN 02-30	37.6	1.7
JAN 01-17	32.2	1.3	JUL 02-30	32.5	1.5
18-31	33.1	1.4	AUG 01-31	27.6	1.3
FEB 02-20	31.5	1.3	SEP 01-30	29.1	1.4
21-28	31.4	1.3			
MAR 01-16	32.8	1.4			

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

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17.0	14.0	8.0	5.0	3.0	5.0	7.0	17.0	18.0	25.0	27.0	23.0
2	19.0	15.0	9.0	6.0	5.0	5.0	8.0	17.0	16.0	24.0	27.0	24.0
3	19.0	16.0	9.0	5.0	5.0	6.0	8.0	17.0	18.0	25.0	29.0	23.0
4	21.0	16.0	11.0	5.0	2.0	6.0	9.0	16.0	18.0	26.0	27.0	26.0
5	21.0	11.0	12.0	3.0	3.0	8.0	9.0	15.0	18.0	26.0	27.0	24.0
6	20.0	10.0	12.0	3.0	3.0	8.0	9.0	15.0	20.0	24.0	27.0	26.0
7	20.0	11.0	10.0	3.0	3.0	9.0	9.0	16.0	20.0	22.0	30.0	26.0
8	20.0	11.0	9.0	3.0	2.0	8.0	10.0	15.0	20.0	23.0	28.0	24.0
9	21.0	10.0	8.0	4.0	2.0	8.0	10.0	14.0	20.0	24.0	28.0	23.0
10	17.0	10.0	6.0	4.0	2.0	9.0	10.0	16.0	19.0	24.0	27.0	23.0
11	16.0	10.0	6.0	4.0	---	8.0	10.0	14.0	21.0	23.0	27.0	25.0
12	15.0	11.0	5.0	3.0	---	7.0	10.0	18.0	26.0	25.0	25.0	25.0
13	17.0	10.0	4.0	2.0	---	8.0	10.0	15.0	24.0	27.0	22.0	22.0
14	15.0	8.0	4.0	2.0	---	7.0	10.0	17.0	24.0	28.0	21.0	21.0
15	15.0	8.0	3.0	4.0	---	8.0	10.0	19.0	25.0	27.0	27.0	20.0
16	15.0	6.0	6.0	4.0	---	7.0	10.0	16.0	26.0	28.0	23.0	20.0
17	12.0	7.0	5.0	2.0	3.0	7.0	10.0	15.0	28.0	29.0	24.0	22.0
18	13.0	7.0	4.0	2.0	3.0	7.0	9.0	15.0	25.0	27.0	26.0	19.0
19	12.0	8.0	3.0	2.0	2.0	10.0	8.0	13.0	26.0	28.0	26.0	21.0
20	12.0	9.0	3.0	3.0	2.0	10.0	8.0	14.0	24.0	27.0	26.0	22.0
21	14.0	11.0	3.0	3.0	4.0	9.0	8.0	15.0	23.0	27.0	26.0	23.0
22	11.0	11.0	3.0	2.0	4.0	8.0	9.0	15.0	22.0	26.0	26.0	18.0
23	12.0	11.0	3.0	3.0	6.0	7.0	10.0	16.0	20.0	24.0	27.0	16.0
24	11.0	9.0	3.0	1.0	5.0	6.0	10.0	16.0	20.0	28.0	25.0	15.0
25	9.0	7.0	5.0	2.0	6.0	6.0	10.0	17.0	21.0	25.0	25.0	16.0
26	9.0	7.0	6.0	1.0	5.0	5.0	10.0	17.0	21.0	24.0	26.0	16.0
27	11.0	7.0	5.0	1.0	4.0	6.0	10.0	15.0	23.0	25.0	26.0	16.0
28	13.0	7.0	6.0	1.0	5.0	7.0	10.0	15.0	25.0	26.0	26.0	18.0
29	13.0	7.0	8.0	2.0	---	7.0	13.0	17.0	23.0	26.0	26.0	17.0
30	13.0	8.0	6.0	2.0	---	6.0	14.0	---	23.0	26.0	25.0	16.0
31	14.0	---	5.0	2.0	---	6.0	---	---	---	27.0	26.0	---

SUSPENDED-SEDIMENT, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)
OCTOBER			NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	10	66	4	20	15	217	5	70	8	88	11	401
2	8	48	7	38	39	990	4	54	6	69	9	304
3	5	29	5	31	24	550	4	51	11	170	9	287
4	4	23	4	25	24	548	4	49	52	1880	10	300
5	4	22	4	27	15	320	4	46	54	2710	10	281
6	6	31	5	42	17	316	4	45	43	1890	11	318
7	5	23	5	44	19	310	4	40	19	657	14	386
8	4	19	7	62	14	201	3	28	10	289	17	537
9	4	18	7	60	8	107	3	27	8	201	20	664
10	3	14	6	48	6	79	5	47	8	178	34	1480
11	3	14	3	23	5	57	3	32	6	121	38	2220
12	5	24	3	23	5	54	3	34	6	92	26	1410
13	5	23	3	21	4	42	3	37	5	71	23	1050
14	4	20	4	24	4	41	3	37	8	117	20	783
15	5	27	5	34	4	38	3	36	10	151	16	553
16	5	26	4	28	5	52	3	33	15	273	12	369
17	2	10	2	12	8	98	4	42	20	415	11	303
18	3	16	3	17	24	613	26	263	14	328	11	300
19	6	33	3	16	32	1210	7	62	14	559	30	1400
20	4	24	3	16	24	739	4	31	38	2200	368	53300
21	4	23	3	17	18	442	3	22	36	2030	311	46900
22	3	16	3	18	14	290	2	16	34	1880	135	15800
23	2	9.9	3	18	13	237	1	8.2	35	2170	165	19600
24	2	8.8	3	18	11	193	2	19	47	3290	120	10900
25	3	14	3	18	9	147	2	20	44	3140	60	4070
26	3	18	3	20	7	100	2	21	32	2000	32	1740
27	3	20	3	20	6	82	2	22	22	1130	20	934
28	4	23	3	20	5	68	3	34	14	593	20	934
29	4	23	3	27	5	67	6	69	---	---	26	1590
30	4	24	6	62	6	81	9	100	---	---	36	2340
31	3	17	---	---	5	70	10	110	---	---	28	1600
TOTAL	---	706.7	---	849	---	8359	---	1505.2	---	28692	---	173054

POTOMAC RIVER BASIN

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

SUSPENDED-SEDIMENT, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

[illegible]

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. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--41 years, 202 ft³/s (5.721 m³/s), 15.86 in/yr (403 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)
Mar. 19	0600	4950 140	10.27 3.130	Apr. 15	2030	9000 255	13.98 4.261
Apr. 3	0930	5500 156	10.83 3.301	Apr. 24	1600	5550 157	10.88 3.316
Apr. 10	1200	*10000 283	14.81 4.514				

Minimum discharge, 0.8 ft³/s (0.023 m³/s) Aug. 26, gage height, 1.68 ft (0.512 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13	31	109	64	162	361	211	182	117	78	6.1	3.7
2	11	30	163	61	795	484	180	163	100	63	9.2	8.8
3	9.8	29	114	57	2230	277	2590	197	87	51	13	7.0
4	8.6	51	100	48	543	193	619	204	116	40	12	6.7
5	7.8	327	89	44	276	165	363	168	244	35	9.5	5.6
6	7.6	94	75	43	221	146	292	127	115	75	8.0	4.5
7	7.7	59	66	49	202	500	259	107	84	43	13	3.5
8	7.7	47	50	44	204	1190	997	101	70	30	12	2.5
9	7.6	43	40	41	172	1210	1670	113	60	24	7.9	1.7
10	7.9	40	35	106	143	966	6790	96	52	21	5.5	1.2
11	12	38	33	917	86	513	1200	82	47	20	6.0	1.2
12	12	37	34	274	59	326	625	74	42	19	9.1	1.3
13	14	37	29	157	151	235	417	69	38	17	13	2.9
14	31	42	24	125	167	189	329	66	32	16	11	5.3
15	33	32	24	116	143	169	3750	77	29	14	7.3	5.4
16	19	21	279	130	166	145	2500	192	28	13	10	4.1
17	15	18	287	91	203	129	634	703	27	12	16	3.7
18	13	17	129	72	275	238	439	204	45	11	13	3.5
19	13	16	90	61	381	3350	336	143	183	10	4.3	2.7
20	13	17	90	52	408	765	286	963	300	10	4.7	2.1
21	13	16	86	44	401	1320	239	346	992	11	5.8	3.3
22	13	16	79	43	558	764	194	662	297	9.4	4.9	18
23	14	19	67	63	976	371	171	2190	141	9.0	3.7	15
24	15	23	113	232	937	281	2630	449	98	11	2.0	9.5
25	16	21	98	162	722	239	1450	289	75	9.4	1.2	7.8
26	23	19	86	132	558	194	577	252	59	9.6	.90	5.6
27	33	17	83	123	312	626	373	298	49	8.8	1.1	4.4
28	34	17	95	118	326	1770	297	172	46	7.8	1.6	3.7
29	35	450	116	104	---	452	238	168	684	7.1	2.5	3.4
30	32	199	93	105	---	287	209	183	124	6.5	2.4	3.7
31	32	---	72	176	---	242	---	138	---	5.8	2.3	---
TOTAL	523.7	1823	2848	3854	11777	18097	30865	9138	4381	697.4	219.00	151.8
MEAN	16.9	60.8	91.9	124	421	584	1020	295	146	22.5	7.06	5.06
MAX	35	450	287	917	2230	3350	6790	2190	992	78	16	18
MIN	7.6	16	24	41	59	129	171	66	27	5.8	.90	1.2
CFSM	.10	.35	.53	.72	2.43	3.38	5.95	1.71	.84	.13	.04	.03
IN.	.11	.39	.61	.83	2.53	3.89	6.64	1.96	.94	.15	.05	.03

CAL YR 1982 TOTAL 64777.50 MEAN 177 MAX 2840 MIN 4.0 CFSM 1.02 IN 13.93
WTR YR 1983 TOTAL 84374.90 MEAN 231 MAX 6790 MIN .90 CFSM 1.34 IN 18.14

POTOMAC RIVER BASIN

01639000 MONOCACY RIVER AT BRIDGEPORT, MD--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1948-51, 1969-72, 1974-79, 1982 to June 1983 (discontinued).

WATER QUALITY DATA, OCTOBER 1982 TO JUNE 1983

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD 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)
JAN 28...	1600	114	238	9.6	1.0	1.2	5	--	88	35
JUN 17...	1245	27	230	8.3	31.5	26.3	25	6.9	88	6

DATE	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY FIELD (MG/L AS CAC03)	CARBON DIOXIDE DIS- SOLVED (MG/L AS C02)	SULFATE DIS- SOLVED (MG/L AS S04)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)
JAN 28...	23	7.5	11	21	.5	2.4	53	.0	31	17
JUN 17...	24	6.7	12	22	.6	3.6	82	.8	21	17

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 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)
JAN 28...	.10	8.2	133	132	.18	40.9	2.7	--	--	--
JUN 17...	.20	1.0	140	135	.19	10.2	.10	.50	.60	2.7

DATE	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS TOTAL (MG/L AS P04)	PHOS- PHORUS, ORTHO, 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)	CARBON, ORGANIC TOTAL (MG/L AS C)
JAN 28...	.090	.28	.090	160	130	35	10	0	11	4.1
JUN 17...	.090	.28	.050	120	100	23	30	30	2	4.4

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).

WATER-DISCHARGE RECORDS

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.--Water-discharge records good except those for period of no gage-height record, Oct. 10 to Nov. 16, which are fair. Occasional diversion for irrigation above station. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--36 years, 110 ft³/s (3.115 m³/s), 14.65 in/yr (372 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 discharge, 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)
Apr. 10	0800	*3590 102	8.82 2.688	June 20	2330	1870 53.0	5.65 1.722
Apr. 15	1500	3180 90.1	8.13 2.478				

Minimum discharge, 7.9 ft³/s (0.22 m³/s) Sept. 21, gage height, 0.77 ft (0.235 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	26	24	51	31	48	145	119	157	115	93	28	27
2	24	24	67	30	116	181	111	149	107	85	27	27
3	23	35	49	30	253	130	238	142	101	76	27	23
4	22	45	44	28	112	109	140	151	116	69	42	23
5	22	70	40	28	77	98	117	133	129	98	31	24
6	22	45	37	31	71	90	109	120	99	123	76	24
7	21	35	33	30	71	135	112	114	93	75	48	17
8	21	30	31	29	70	328	206	114	87	66	34	19
9	20	28	30	28	59	300	338	121	81	62	30	17
10	22	26	28	96	50	332	2370	104	78	59	27	14
11	24	26	29	195	45	203	576	98	76	54	26	16
12	26	44	31	88	60	158	347	94	74	53	51	17
13	30	50	41	61	80	131	263	92	72	51	36	25
14	40	42	35	52	100	115	220	90	69	47	32	28
15	28	36	50	52	90	107	1560	104	82	45	30	25
16	23	30	94	54	96	94	1010	239	86	44	29	20
17	22	29	86	48	98	88	433	275	70	42	27	20
18	22	28	49	42	109	159	334	133	161	40	28	19
19	21	28	41	36	131	541	275	124	227	39	29	20
20	21	27	41	33	143	201	245	193	323	40	27	17
21	21	27	39	32	126	529	212	286	411	40	23	16
22	22	28	33	32	181	283	186	535	131	39	22	36
23	22	27	35	56	294	185	171	446	100	35	24	27
24	26	27	35	107	281	155	806	227	89	42	22	23
25	32	24	34	67	223	137	476	185	81	38	24	20
26	48	24	34	56	174	120	270	165	72	36	23	23
27	30	24	33	52	134	226	229	160	68	33	19	21
28	27	25	34	49	132	327	204	137	76	32	20	20
29	26	161	39	48	---	170	183	144	509	30	31	19
30	25	71	33	45	---	138	171	139	114	29	30	19
31	24	---	31	54	---	128	---	123	---	28	27	---
TOTAL	783	1140	1287	1620	3424	6043	12039	5294	3897	1643	950	646
MEAN	25.3	38.0	41.5	52.3	122	195	401	171	130	53.0	30.6	21.5
MAX	48	161	94	195	294	541	2370	535	509	123	76	36
MIN	20	24	28	28	45	88	109	90	68	28	19	14
CFSM	.25	.37	.41	.51	1.20	1.91	3.93	1.68	1.28	.52	.30	.21
IN.	.29	.42	.47	.59	1.25	2.20	4.39	1.93	1.42	.60	.35	.24
CAL YR 1982	TOTAL	30815	MEAN	84.4	MAX	1700	MIN	14	CFSM	.83	IN	11.24
WTR YR 1983	TOTAL	38766	MEAN	106	MAX	2370	MIN	14	CFSM	1.04	IN	14.14

POTOMAC RIVER BASIN

01639500 BIG PIPE CREEK AT BRUCEVILLE, MD--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1982 to July 1983 (discontinued).

WATER QUALITY DATA, OCTOBER 1982 TO JULY 1983

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD 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)
JAN 28...	1530	52	188	8.9	4.0	2.5	5	--	77	13
JUL 19...	1100	39	193	7.9	33.0	26.1	20	7.6	85	8

DATE	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY FIELD (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)
JAN 28...	23	4.7	5.1	12	.3	1.9	64	.2	13	12
JUL 19...	26	4.9	4.1	9	.2	1.9	77	1.9	10	12

DATE	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)	NITRO- GEN, NO2+NO3 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)
JAN 28...	<.10	4.7	117	103	.16	16.4	3.1	--	--	--
JUL 19...	<.10	3.5	133	109	.18	14.0	2.8	.40	3.2	14

DATE	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS TOTAL (MG/L AS P04)	PHOS- PHORUS, ORTHOPHOS- PHATE, 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- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	CARBON, ORGANIC TOTAL (MG/L AS C)
JAN 28...	.020	.06	.020	180	150	33	30	6	24	1.8
JUL 19...	.050	.15	.030	260	250	14	20	10	10	2.9

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).

WATER-DISCHARGE RECORDS

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.--Water-discharge records good. Small diversions above station prior to 1959 water year by Victor Cullen State Hospital. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--52 years, 9.33 ft³/s (0.264 m³/s), 21.37 in/yr (543 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)
Mar. 18	2230	*542 15.3	4.28 1.305	Apr. 15	1600	122 3.46	2.77 0.844
Apr. 3	0015	158 4.47	2.96 0.902	Apr. 24	1100	175 4.96	3.04 0.927
Apr. 10	0500	303 8.58	3.56 1.085	June 18	2015	150 4.25	2.92 0.890

Minimum discharge, 0.31 ft³/s (0.009 m³/s) Sept. 11, gage height, 0.86 ft (0.262 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.76	.55	3.3	1.7	3.9	13	17	23	12	6.6	2.9	1.2
2	.70	.77	3.2	1.7	33	20	22	21	11	6.0	2.4	.73
3	.64	.78	2.4	1.6	40	21	59	22	10	5.3	1.7	.65
4	.61	3.6	2.2	1.4	17	20	30	22	23	5.0	2.3	.59
5	.67	3.4	2.0	1.4	12	17	25	18	21	6.6	1.7	.61
6	.70	1.6	1.8	1.5	9.2	17	22	16	13	5.8	2.0	.52
7	.69	1.2	1.5	1.5	8.6	23	21	15	11	4.7	1.6	.47
8	.64	.95	1.3	1.4	7.3	38	31	16	10	4.3	1.3	.41
9	.60	.97	1.3	1.4	6.4	35	40	15	9.2	4.1	1.1	.39
10	.57	.89	1.2	7.0	6.3	36	141	13	8.8	4.0	1.0	.37
11	.61	.86	1.3	10	2.5	27	59	12	8.2	3.7	2.4	.35
12	.63	.98	1.3	5.0	3.0	23	39	11	7.6	3.5	2.0	.96
13	1.6	4.2	1.1	3.4	4.0	19	32	10	7.1	3.3	1.5	2.0
14	1.8	1.9	1.1	3.1	5.5	17	27	10	6.8	3.0	1.3	.95
15	.85	1.3	1.3	3.1	5.1	15	70	13	6.5	2.9	1.2	.59
16	.72	1.1	10	2.7	5.2	14	54	31	6.3	2.8	1.1	.55
17	.68	1.0	3.9	2.8	5.4	13	40	26	5.9	2.6	.99	.55
18	.66	.97	2.6	2.3	5.7	92	33	19	27	2.5	.95	.50
19	.70	.97	2.2	2.0	5.7	146	28	20	17	2.5	.90	.47
20	.69	1.1	2.1	1.8	6.0	52	26	22	18	3.9	.74	.42
21	1.1	1.0	1.9	1.9	8.1	48	23	22	20	3.7	.64	1.9
22	.78	1.5	1.8	2.0	14	34	21	32	13	2.6	.62	1.4
23	.72	1.6	2.1	4.3	19	27	20	34	10	2.5	.65	.59
24	.70	1.3	2.6	5.4	18	24	120	25	8.9	2.8	.79	.55
25	2.7	1.1	2.2	3.9	15	21	77	21	7.9	2.3	.70	.53
26	3.1	.97	2.3	3.5	13	19	48	22	7.2	2.1	.61	.53
27	1.4	.92	2.2	3.3	12	28	38	19	6.6	1.9	.53	.53
28	1.1	3.1	2.4	3.3	12	27	31	16	8.3	1.7	.89	.52
29	.94	17	2.4	3.2	---	21	28	17	9.8	1.6	.91	.47
30	.88	3.6	2.0	3.9	---	19	25	15	7.2	1.5	.66	1.6
31	1.1	---	1.8	4.4	---	18	---	13	---	1.5	1.2	---
TOTAL	30.04	61.18	70.8	95.9	302.9	944	1247	591	338.3	107.3	39.28	21.90
MEAN	.97	2.04	2.28	3.09	10.8	30.5	41.6	19.1	11.3	3.46	1.27	.73
MAX	3.1	17	10	10	40	146	141	34	27	6.6	2.9	2.0
MIN	.57	.55	1.1	1.4	2.5	13	17	10	5.9	1.5	.53	.35
CFSM	.16	.34	.38	.52	1.82	5.14	7.07	3.22	1.91	.58	.21	.12
IN.	.19	.38	.44	.60	1.90	5.92	7.82	3.71	2.12	.67	.25	.14

CAL YR 1982 TOTAL 2624.90 MEAN 7.19 MAX 63 MIN .45 CFSM 1.21 IN 16.46
WTR YR 1983 TOTAL 3849.60 MEAN 10.5 MAX 146 MIN .35 CFSM 1.77 IN 24.15

POTOMAC RIVER BASIN

01640500 OWENS CREEK AT LANTZ, MD--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1982 to June 1983 (discontinued).

WATER QUALITY DATA, OCTOBER 1982 TO JUNE 1983

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD 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)
JAN 14...	1245	3.1	104	8.3	3.0	2.6	8	--	42	12
JUN 16...	1915	5.6	100	7.5	24.5	19.0	20	9.0	39	0

DATE	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY FIELD (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)
JAN 14...	10	4.1	4.8	20	.3	.6	30	.3	10	9.5
JUN 16...	9.8	3.6	4.2	19	.3	.7	49	3.0	8.8	6.2

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 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)
JAN 14...	<.10	14	77	71	.10	.64	1.3	--	--	--
JUN 16...	<.10	17	87	80	.12	1.3	.90	.20	1.1	4.9

DATE	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS TOTAL (MG/L AS PO4)	PHOS- PHORUS, ORTHO, 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)	CARBON, ORGANIC TOTAL (MG/L AS C)
JAN 14...	<.010	--	<.010	140	--	<3	<10	--	1	1.2
JUN 16...	.020	.06	<.010	280	270	13	20	20	4	1.7

01640965 HUNTING CREEK NEAR FOXVILLE, MD

LOCATION.--Lat 39°37'10", long 77°28'00", Frederick County, Hydrologic Unit 02070008, on left downstream wingwall of culvert on park road in Cunningham Falls State Park, 0.25 mi (0.40 km) upstream from Hunting Creek Lake, and 2.9 mi (4.7 km) west of Thurmont.

DRAINAGE AREA.--2.14 mi² (5.54 km²).

PERIOD OF RECORD.--October 1981 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Altitude of gage is 1,030 ft (314 m), from topographic map.

REMARKS.--Records good except those for period of no gage-height record, Oct. 1 to Dec. 20, 1981, which are fair. Several observations of water temperature were made during the year.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 64.0 ft³/s (1.812 m³/s) June 13, 1982, gage height, 3.40 ft (1.036 m); minimum daily discharge, 0.04 ft³/s (0.001 m³/s) Aug. 30, Sept. 18, 1982.

EXTREMES FOR CURRENT PERIOD.--Peak discharges above base of 30 ft³/s (0.84 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. 3, 1982	1700	37	1.05	3.21	0.978	June 13, 1982	1015	*64	1.81	3.40	1.036
June 5, 1982	1345	39	1.10	3.23	0.985						
Feb. 2, 1983	1845	32	0.91	3.17	0.966	Apr. 10, 1983	0500	46	1.30	3.29	1.003
Mar. 18, 1983	2145	*53	1.50	3.33	1.015	Apr. 24, 1983	1000	33	0.93	3.18	0.969
Apr. 3, 1983	0115	36	1.02	3.20	0.975						

Water year 1982: Minimum daily discharge, 0.04 ft³/s (0.001 m³/s) Aug. 30, Sept. 18.

Water year 1983: Minimum daily discharge, 0.05 ft³/s (0.001 m³/s) Oct. 12.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.20	.55	.70	5.4	6.2	4.4	3.5	5.8	.92	1.1	.40	.06
2	.30	.50	2.4	4.0	3.3	4.3	3.2	5.2	.98	.90	.36	.10
3	.20	.46	1.6	3.0	15	4.0	8.5	4.8	1.6	1.4	.34	.11
4	.19	.44	1.2	15	11	3.6	10	4.4	2.1	1.3	.34	.06
5	.18	.44	1.0	10	7.8	3.7	7.7	3.9	9.6	.94	.51	.06
6	.28	1.4	.95	8.0	6.4	3.6	10	3.6	7.8	.81	.33	.06
7	.24	.60	1.1	6.0	5.2	6.1	7.8	3.3	4.8	.71	.29	.06
8	.20	.44	1.0	5.4	4.5	5.2	7.0	3.4	3.5	.68	.27	.08
9	.18	.40	.85	4.7	4.3	4.8	6.9	3.1	2.8	.70	.30	.10
10	.18	.38	.75	4.0	3.7	4.5	7.6	2.7	3.4	.63	.25	.10
11	.18	.36	.70	3.4	3.2	5.6	7.5	2.5	3.8	.61	.23	.08
12	.20	.34	.75	3.0	2.8	21	6.6	2.2	3.6	.62	.30	.06
13	.18	.36	.70	2.6	2.7	18	6.3	2.0	29	.53	.24	.06
14	.18	.40	.80	2.2	2.5	14	5.6	1.8	18	.51	.20	.05
15	.18	.40	1.0	2.0	2.7	9.7	5.0	1.6	9.0	.53	.17	.06
16	.18	.40	.90	1.8	6.7	12	4.7	1.5	7.8	.50	.16	.06
17	.18	.36	.75	1.6	12	15	5.6	1.6	12	.45	.16	.05
18	.22	.36	.75	1.5	7.7	11	7.1	1.9	9.0	.41	.21	.04
19	.30	.36	.80	1.5	7.2	9.0	5.5	1.5	6.4	.47	.17	.05
20	.20	.46	.78	1.5	7.2	9.2	5.0	1.3	5.0	.56	.14	.14
21	.20	.50	.77	1.5	8.6	8.5	4.8	1.2	3.9	.47	.10	.10
22	.20	.48	.83	1.4	7.3	7.2	4.2	1.4	3.3	.39	.09	.20
23	.30	.40	3.6	1.4	7.4	6.4	3.8	1.8	2.8	.37	.09	.12
24	.36	.36	4.0	1.4	7.6	5.7	3.6	1.8	2.3	.36	.11	.09
25	.34	.42	3.0	1.3	6.5	5.4	3.3	1.6	2.0	.30	.09	.08
26	.50	.55	2.5	1.2	5.4	5.6	8.0	1.3	1.8	.27	.08	.12
27	4.0	.75	2.4	1.1	5.0	5.0	9.0	1.0	1.6	.72	.06	2.4
28	1.6	.65	2.4	1.0	4.6	4.6	9.0	1.2	1.5	1.6	.06	.34
29	.80	.60	2.3	1.0	---	4.5	7.2	1.6	1.4	.57	.06	.21
30	.65	.55	2.0	1.0	---	4.4	6.3	2.0	1.3	.47	.04	.17
31	.60	---	1.8	1.7	---	5.0	---	1.6	---	.47	.05	---
TOTAL	13.70	14.67	45.08	100.6	174.5	231.0	190.3	74.6	163.00	20.35	6.20	5.27
MEAN	.44	.49	1.45	3.25	6.23	7.45	6.34	2.41	5.43	.66	.20	.18
MAX	4.0	1.4	4.0	15	15	21	10	5.8	29	1.6	.51	2.4
MIN	.18	.34	.70	1.0	2.5	3.6	3.2	1.0	.92	.27	.04	.04
CFSM	.21	.23	.68	1.52	2.91	3.48	2.96	1.13	2.54	.31	.09	.08
IN.	.24	.25	.78	1.75	3.03	4.01	3.31	1.30	2.83	.35	.11	.09

WTR YR 1982 TOTAL 1039.27 MEAN 2.85 MAX 29 MIN .04 CFSM 1.33 IN 18.06

POTOMAC RIVER BASIN

01640965 HUNTING CREEK NEAR FOXVILLE, MD--Continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.12	.24	.79	.57	1.5	5.6	6.4	6.1	3.3	.85	.20	.15
2	.10	.25	.79	.55	13	7.9	8.3	5.3	2.9	.78	.19	.11
3	.08	.27	.65	.54	18	6.6	22	5.0	2.7	.67	.16	.10
4	.08	1.2	.61	.51	7.2	5.7	13	4.9	7.6	.59	.17	.08
5	.08	1.1	.58	.50	4.9	4.9	10	4.0	9.2	.62	.31	.08
6	.08	.56	.55	.50	4.2	5.5	8.8	3.5	4.6	.64	.42	.08
7	.08	.47	.49	.50	3.8	7.8	7.9	3.1	3.7	.51	.19	.07
8	.07	.43	.45	.50	3.4	17	12	3.5	3.0	.44	.15	.06
9	.07	.43	.43	.48	3.2	16	16	3.3	2.5	.39	.12	.06
10	.07	.37	.41	3.5	3.0	15	29	2.7	2.3	.37	.10	.06
11	.06	.34	.41	4.7	2.6	11	20	2.4	2.1	.34	.26	.06
12	.05	.37	.41	2.0	2.4	8.3	13	2.2	1.8	.31	.26	.08
13	.19	.77	.40	1.4	2.3	6.8	10	2.2	1.6	.28	.17	.18
14	.34	.55	.38	1.2	2.0	5.7	9.0	2.1	1.4	.26	.14	.12
15	.26	.45	.41	1.1	2.0	5.1	20	3.7	1.3	.24	.12	.08
16	.20	.42	3.0	1.0	2.1	4.2	19	14	1.3	.22	.11	.08
17	.19	.38	1.3	.91	2.3	4.0	13	13	1.1	.20	.11	.09
18	.19	.36	.80	.79	2.5	18	11	7.5	2.7	.18	.14	.07
19	.17	.34	.69	.82	2.6	30	9.0	8.2	2.6	.18	.12	.07
20	.17	.35	.63	.79	2.8	18	8.0	10	4.3	.55	.10	.10
21	.21	.34	.58	.73	4.0	18	5.9	10	4.5	.55	.09	.17
22	.19	.46	.55	.72	7.9	12	5.1	11	2.2	.28	.09	.24
23	.19	.40	.56	1.8	10	9.7	4.8	14	1.6	.23	.09	.12
24	.19	.34	.62	2.3	9.0	8.3	25	9.2	1.4	.22	.10	.09
25	.38	.30	.62	1.8	7.1	7.3	23	6.8	1.2	.19	.09	.08
26	.52	.28	.65	1.6	5.7	6.5	15	8.5	1.0	.17	.08	.08
27	.38	.27	.64	1.4	4.9	11	12	6.9	.92	.16	.08	.08
28	.29	.67	.70	1.3	4.8	13	9.8	4.9	.90	.13	.09	.08
29	.26	5.9	.70	1.2	---	9.0	8.8	5.3	1.1	.12	.09	.10
30	.25	1.1	.62	1.4	---	7.6	7.5	4.5	.93	.11	.09	.20
31	.23	---	.57	1.6	---	6.9	---	3.8	---	.11	.15	---
TOTAL	5.74	19.71	20.99	38.71	139.2	312.4	382.3	191.6	77.75	10.89	4.58	3.01
MEAN	.19	.66	.68	1.25	4.97	10.1	12.7	6.18	2.59	.35	.15	.10
MAX	.52	5.9	3.0	4.7	18	30	29	14	9.2	.85	.42	.24
MIN	.05	.24	.38	.48	1.5	4.0	4.8	2.1	.90	.11	.08	.06
CFSM	.09	.31	.32	.58	2.32	4.72	5.94	2.89	1.21	.16	.07	.05
IN.	.10	.34	.36	.67	2.42	5.43	6.64	3.33	1.35	.19	.08	.05

CAL YR 1982	TOTAL	1012.26	MEAN 2.77	MAX 29	MIN .04	CFSM 1.29	IN 17.59
WTR YR 1983	TOTAL	1206.88	MEAN 3.31	MAX 30	MIN .05	CFSM 1.55	IN 20.97

01640970 HUNTING CREEK TRIBUTARY NEAR FOXVILLE, MD

LOCATION.--Lat 39°37'42", long 77°27'44", Frederick County, Hydrologic Unit 02070003, on left downstream wingwall of culvert of park road in Cunningham Falls State Park, 600 ft (183 m) upstream from Hunting Creek Lake, and 2.7 mi (4.3 km) west of Thurmont.

DRAINAGE AREA.--4.01 mi² (10.39 km²).

PERIOD OF RECORD.--October 1981 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Altitude of gage is 1,030 ft (314 m), from topographic map.

REMARKS.--Records good except those for the period of no gage-height record, Oct. 1 to Dec. 21, 1981, which are fair. Several observations of water temperature were made during the year.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 138 ft³/s (3.91 m³/s) Mar. 18, 1983, gage height, 2.30 ft (0.701 m); minimum discharge, 0.12 ft³/s (0.003 m³/s) Sept. 10, 11, 12, 20, 1983.

EXTREMES FOR CURRENT PERIOD.--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)
Apr. 3, 1982	1715	92	2.61	June 16, 1982	2345	95	2.69
June 13, 1982	1045	*117	3.31				
Mar. 18, 1983	2300	*138	3.91	Apr. 24, 1983	1100	99	2.80
Apr. 3, 1983	0045	107	3.03	June 4, 1983	2130	92	2.61
Apr. 10, 1983	0600	123	3.48				

Water year 1982: Minimum discharge, 0.22 ft³/s (0.006 m³/s) Sept. 30.

Water year 1983: Minimum discharge, 0.12 ft³/s (0.003 m³/s) Sept. 10, 11, 12, 20, gage height, 0.12 ft (0.037 m).

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.60	1.2	2.0	8.4	28	6.5	6.8	8.7	3.2	3.6	1.6	.54
2	.90	1.1	4.0	5.9	6.3	6.4	5.8	8.0	3.3	3.2	1.4	.65
3	.70	1.1	3.1	4.4	20	6.1	29	7.4	4.2	5.2	1.6	.52
4	.60	1.1	2.2	39	21	5.7	20	6.9	4.7	4.3	1.3	.43
5	.55	1.1	1.9	16	11	6.2	13	6.3	28	3.5	2.3	.45
6	.60	2.5	1.8	9.8	8.6	6.0	18	5.9	12	3.1	1.4	.46
7	.70	1.6	1.9	9.4	7.3	10	12	5.5	6.7	2.9	1.2	.44
8	.60	1.4	2.2	7.2	6.4	7.9	11	6.0	5.2	3.1	1.2	.48
9	.55	1.2	1.6	6.0	6.2	7.1	11	5.7	4.4	3.1	1.3	.55
10	.55	1.2	1.5	5.4	5.8	6.8	13	5.0	5.4	2.6	1.1	.55
11	.55	1.2	1.5	5.0	5.9	12	13	4.8	5.5	2.5	1.0	.52
12	.60	1.2	1.5	4.6	5.0	37	11	4.4	6.4	2.6	1.4	.47
13	.65	1.1	1.4	4.2	4.7	27	10	4.7	6.1	2.2	1.1	.39
14	.60	1.1	1.6	4.0	4.5	21	9.5	4.0	25	2.2	.93	.39
15	.60	1.1	2.0	3.8	5.2	16	9.1	3.7	14	2.2	.88	.42
16	.60	1.2	2.2	3.6	12	24	8.7	3.5	16	2.0	.78	.56
17	.65	1.2	1.8	3.4	18	28	11	3.7	33	1.8	.76	.42
18	.70	1.2	1.6	3.3	11	18	11	4.3	22	1.7	1.0	.38
19	.85	1.3	1.5	3.2	10	15	8.7	3.4	13	1.7	.72	.38
20	.70	1.5	1.5	3.1	10	17	8.2	3.1	9.9	2.5	.67	.62
21	.70	1.3	1.7	3.1	12	15	7.8	2.9	8.2	1.9	.66	.62
22	.70	1.2	2.2	3.1	10	12	7.1	3.0	7.2	1.5	.63	.94
23	.95	1.2	7.2	3.1	11	10	6.8	4.0	6.4	1.6	.65	.69
24	.90	1.2	5.9	3.2	11	9.6	6.5	4.2	5.7	1.5	.83	.53
25	1.0	1.3	4.1	3.0	9.0	9.0	6.2	3.6	5.2	1.3	.69	.49
26	2.0	1.4	3.3	2.9	7.5	9.3	19	3.2	4.9	1.1	.59	.59
27	7.0	1.3	3.3	2.8	7.0	7.9	15	2.9	4.6	9.7	.55	9.6
28	4.0	1.2	3.3	2.7	6.6	7.1	14	3.5	4.3	4.1	.64	.58
29	1.9	1.2	3.2	2.7	---	7.0	10	4.2	4.1	2.1	.50	.30
30	1.5	1.1	2.7	2.6	---	6.7	9.4	5.3	4.2	1.7	.49	.25
31	1.3	---	2.5	4.1	---	7.8	---	4.6	---	1.8	.52	---
TOTAL	34.80	38.0	78.2	183.0	281.0	385.1	341.6	146.4	337.7	84.3	30.39	24.21
MEAN	1.12	1.27	2.52	5.90	10.0	12.4	11.4	4.72	11.3	2.72	.98	.81
MAX	7.0	2.5	7.2	39	28	37	29	8.7	61	9.7	2.3	9.6
MIN	.55	1.1	1.4	2.6	4.5	5.7	5.8	2.9	3.2	1.1	.49	.25
CFSM	.28	.32	.63	1.47	2.49	3.09	2.84	1.18	2.82	.68	.24	.20
IN.	.32	.35	.73	1.70	2.61	3.57	3.17	1.36	3.13	.78	.28	.22

WTR YR 1982 TOTAL 1964.70 MEAN 5.38 MAX 61 MIN .25 CFSM 1.34 IN 18.22

POTOMAC RIVER BASIN

01640970 HUNTING CREEK TRIBUTARY NEAR FOXVILLE, MD--Continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.20	.45	2.5	1.2	2.9	7.9	9.4	13	6.4	2.1	1.0	.33
2	.18	.48	2.4	1.2	26	12	15	12	5.8	1.9	.79	.15
3	.16	.53	1.9	1.2	29	11	46	12	5.5	1.6	.45	.14
4	.16	3.5	1.7	.97	10	9.9	19	13	20	1.4	.74	.14
5	.16	2.9	1.5	1.0	6.7	8.5	15	9.4	16	1.3	.88	.14
6	.17	1.2	1.4	1.1	6.0	9.5	13	8.3	8.6	1.4	1.5	.14
7	.16	.93	1.1	1.0	5.8	13	13	7.7	7.3	1.3	.47	.13
8	.16	.84	.95	1.1	5.1	30	19	9.8	6.3	1.2	.31	.13
9	.16	.80	.92	1.0	4.5	23	27	8.4	5.6	1.1	.24	.13
10	.15	.69	.81	8.8	4.3	21	73	7.0	5.2	1.1	.19	.13
11	.15	.66	.87	8.8	4.2	15	36	6.4	4.8	.97	.57	.12
12	.16	.79	.92	3.9	4.2	12	24	5.9	4.3	.92	.60	.15
13	.50	3.2	.79	2.5	4.0	10	19	5.5	3.9	.86	.32	.56
14	.72	1.4	.75	2.4	4.0	9.1	17	5.3	3.6	.74	.26	.23
15	.29	1.2	.92	2.4	4.0	8.4	51	8.5	3.4	.72	.21	.13
16	.25	.97	8.6	2.3	4.2	7.5	35	25	3.2	.67	.18	.13
17	.25	.92	3.3	2.3	4.6	7.1	24	17	2.9	.59	.17	.13
18	.25	.92	1.9	1.9	5.1	42	20	10	12	.58	.24	.13
19	.25	.85	1.6	1.9	5.1	71	17	12	8.0	.60	.19	.13
20	.25	.90	1.6	1.8	5.3	29	16	15	11	1.8	.16	.13
21	.45	.92	1.5	1.8	7.0	30	13	15	10	1.7	.15	1.7
22	.33	.99	1.4	1.8	12	20	12	20	5.4	.72	.15	.71
23	.29	1.0	1.5	6.0	14	16	11	19	4.0	.59	.15	.17
24	.27	.91	2.0	5.8	11	14	75	13	3.3	.79	.15	.16
25	1.4	.77	1.7	3.4	8.9	12	49	10	2.9	.55	.15	.16
26	1.9	.69	1.7	2.9	7.5	10	28	15	2.5	.53	.14	.16
27	.69	.66	1.7	2.6	6.6	21	22	11	2.3	.42	.14	.16
28	.49	2.1	1.8	2.5	6.6	21	18	8.4	2.3	.37	.16	.16
29	.45	12	1.8	2.4	---	14	17	9.6	3.4	.31	.15	.15
30	.42	2.7	1.4	3.2	---	11	15	8.2	2.4	.29	.14	.94
31	.42	---	1.3	3.6	---	10	---	7.1	---	.28	.23	---
TOTAL	11.84	46.87	54.23	84.77	218.6	535.9	768.4	347.5	182.3	29.40	11.18	7.87
MEAN	.38	1.56	1.75	2.73	7.81	17.3	25.6	11.2	6.08	.95	.36	.26
MAX	1.9	12	8.6	8.8	29	71	75	25	20	2.1	1.5	1.7
MIN	.15	.45	.75	.97	2.9	7.1	9.4	5.3	2.3	.28	.14	.12
CFSM	.10	.39	.44	.68	1.95	4.31	6.38	2.79	1.52	.24	.09	.07
IN.	.11	.43	.50	.79	2.03	4.97	7.13	3.22	1.69	.27	.10	.07

CAL YR 1982 TOTAL 1926.64 MEAN 5.28 MAX 61 MIN .15 CFSM 1.32 IN 17.87
WTR YR 1983 TOTAL 2298.86 MEAN 6.30 MAX 75 MIN .12 CFSM 1.57 IN 21.32

01640975 HUNTING CREEK NEAR THURMONT, MD

LOCATION.--Lat 39°27'48", long 77°27'20", Frederick County, Hydrologic Unit 02070008, on left bank 600 ft (183 m) downstream from dam on Hunting Creek Lake, 10.7 mi (17.2 km) upstream from mouth, 1.6 mi (2.6 km) upstream from Bear Branch, and 2.4 mi (3.9 km) west of Thurmont.

DRAINAGE AREA.--7.08 mi² (18.34 km²).

PERIOD OF RECORD.--December 1981 to current year.

GAGE.--Water-stage recorder, crest-stage gage, and concrete control. Altitude of gage is 940 ft (287 m), from topographic map.

REMARKS.--Records good. Flow regulated by Hunting Creek Lake 600 ft (183 m) upstream. Several observations of water temperature were made during the year.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 340 ft³/s (9.63 m³/s) Apr. 10, 1983, gage height, 3.17 ft (0.966 m); minimum discharge, 1.3 ft³/s (0.030 m³/s) Aug. 15, 16, 1982.

EXTREMES FOR CURRENT PERIOD.--December 1981 to September 1982: Maximum discharge during period, 236 ft³/s (6.68 m³/s) June 13, gage height, 2.70 ft (0.823 m); minimum discharge, 1.3 ft³/s (0.037 m³/s) Aug. 15, 16, gage height, 0.10 ft (0.030 m).

Water year 1983: Maximum discharge, 340 ft³/s (9.63 m³/s) Apr. 10, gage height, 3.17 ft (0.966 m); minimum discharge 1.5 ft³/s (0.042 m³/s) Oct. 20, 21, gage height, 0.12 ft (0.037 m).

DISCHARGE, IN CUBIC FEET PER SECOND, DECEMBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1			---	7.4	7.9	17	18	20	6.5	6.8	2.4	2.3
2			---	7.3	8.4	17	19	18	5.8	6.0	2.0	2.3
3			---	7.3	8.6	17	19	17	5.2	6.3	1.9	2.3
4			---	8.1	9.3	18	26	15	7.5	7.9	1.8	2.3
5			---	9.5	9.7	18	27	14	25	6.5	2.2	2.3
6			---	9.4	9.7	19	29	13	32	5.6	2.2	2.3
7			---	9.7	10	21	29	12	20	4.7	1.8	2.3
8			---	10	10	19	26	12	15	4.3	1.7	2.3
9			---	10	10	18	25	12	11	4.2	1.7	2.3
10			---	10	10	17	24	12	9.8	4.1	1.6	2.3
11			---	10	10	16	26	11	11	3.7	1.4	2.1
12			---	10	10	21	24	8.9	11	3.6	1.4	2.1
13			---	10	10	22	22	8.7	76	3.4	1.4	2.1
14			---	10	10	26	21	8.7	63	2.9	1.4	2.1
15			---	10	10	28	20	7.1	31	2.9	1.3	2.1
16			---	10	10	36	19	5.2	25	2.9	1.4	2.1
17			---	10	11	45	20	5.1	45	2.7	2.0	2.1
18			---	10	16	37	20	5.1	38	2.5	2.1	2.1
19			---	9.9	18	33	20	5.1	26	2.4	2.1	2.1
20			---	9.7	20	31	20	5.1	22	2.8	2.1	2.1
21			---	9.7	22	30	19	5.1	18	3.0	2.1	2.1
22			---	9.6	23	28	19	4.8	15	2.5	2.1	2.1
23			---	9.5	23	25	15	4.7	13	2.3	2.1	2.1
24			---	9.4	25	24	12	4.6	12	2.0	2.1	2.1
25			---	9.3	23	21	12	4.1	10	1.8	2.1	2.1
26			---	8.7	20	20	13	2.9	9.4	1.6	2.1	2.1
27			---	8.4	19	19	18	3.6	8.7	3.8	2.1	2.2
28			---	8.0	18	18	25	5.1	8.1	11	2.1	2.1
29			---	7.7	---	18	24	6.6	7.5	6.4	2.1	2.1
30			---	7.4	---	18	22	6.8	7.3	3.8	2.1	2.1
31			7.3	7.3	---	18	---	8.0	---	3.0	2.1	---
TOTAL			---	283.3	391.6	715	633	271.3	594.8	127.4	59.0	65.1
MEAN			---	9.14	14.0	23.1	21.1	8.75	19.8	4.11	1.90	2.17
MAX			---	10	25	45	29	20	76	11	2.4	2.3
MIN			---	7.3	7.9	16	12	2.9	5.2	1.6	1.3	2.1

01640975 HUNTING CREEK NEAR THURMONT, MD--Continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.1	2.2	2.5	2.7	4.4	13	20	24	13	4.8	1.8	2.0
2	2.1	2.3	2.5	2.7	5.1	17	20	22	12	4.5	1.9	1.9
3	2.1	2.3	2.5	2.7	27	18	91	22	11	4.1	1.9	1.9
4	2.1	2.4	2.5	2.7	28	16	41	20	16	3.5	1.9	1.9
5	2.1	2.4	2.5	2.7	20	12	31	18	24	3.3	1.9	2.1
6	2.1	2.3	2.5	2.7	15	11	27	16	17	3.3	1.9	2.1
7	2.1	2.3	2.5	2.7	13	19	24	14	14	3.0	1.9	2.1
8	2.1	2.3	2.5	2.7	11	38	31	14	13	2.7	1.9	2.1
9	2.1	2.3	2.5	2.7	9.2	50	39	15	12	2.5	1.9	2.1
10	2.1	2.3	2.5	2.7	8.1	42	175	13	11	2.5	2.1	2.1
11	2.1	2.1	2.5	2.9	7.7	32	74	12	10	2.1	2.1	2.1
12	2.1	2.2	2.5	2.9	7.6	26	49	12	9.5	2.0	1.9	2.4
13	2.1	2.3	2.5	2.9	7.5	22	37	11	9.0	1.9	1.9	2.4
14	2.1	2.3	2.5	2.9	7.1	19	33	10	8.5	1.9	1.9	2.3
15	2.1	2.3	2.5	3.0	6.8	17	77	11	7.9	1.9	1.9	2.3
16	1.9	2.3	2.7	3.1	6.8	16	75	28	7.5	1.9	1.9	2.3
17	1.7	2.3	2.7	3.1	6.9	15	44	39	7.0	1.9	1.9	2.4
18	1.7	2.1	2.7	3.1	7.3	80	36	24	8.5	1.7	2.1	2.5
19	1.6	2.1	2.7	3.1	7.4	160	32	20	13	1.7	2.1	2.5
20	1.6	2.1	2.7	3.1	7.8	70	29	28	12	1.8	2.1	2.6
21	1.8	2.1	2.7	3.7	8.7	50	26	28	19	2.7	2.3	2.8
22	2.3	2.1	2.7	4.2	13	41	24	37	13	2.3	2.1	2.5
23	2.5	2.1	2.7	4.2	21	32	22	34	11	1.9	2.1	2.3
24	2.5	2.0	2.7	4.4	24	28	136	23	9.5	2.1	2.1	2.3
25	2.5	1.9	2.7	4.4	21	24	104	19	8.2	1.9	2.1	2.3
26	2.5	1.9	2.7	4.4	18	22	56	26	7.1	1.9	2.1	2.0
27	2.5	1.9	2.7	4.4	15	27	40	25	6.0	1.9	2.1	1.9
28	2.5	1.8	2.7	4.4	13	41	34	18	5.4	1.8	2.2	2.2
29	2.5	2.4	2.7	4.4	---	30	30	18	5.5	1.7	2.1	3.9
30	2.5	2.5	2.7	4.4	---	24	27	17	5.2	1.7	2.1	4.6
31	2.4	---	2.7	4.4	---	22	---	15	---	1.7	2.1	---
TOTAL	66.5	65.9	80.7	104.4	347.4	1034	1484	633	325.8	74.6	62.3	70.9
MEAN	2.15	2.20	2.60	3.37	12.4	33.4	49.5	20.4	10.9	2.41	2.01	2.36
MAX	2.5	2.5	2.7	4.4	28	160	175	39	24	4.8	2.3	4.6
MIN	1.6	1.8	2.5	2.7	4.4	11	20	10	5.2	1.7	1.8	1.9
CAL YR 1982	TOTAL	3353.6	MEAN	9.19	MAX	76	MIN	1.3				
WTR YR 1983	TOTAL	4349.5	MEAN	11.9	MAX	175	MIN	1.6				

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.

WATER-DISCHARGE RECORDS

REMARKS.--Water-discharge 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. Regulation since spring of 1970 at low flow by Hunting Creek Lake, 5.6 miles (9.0 km) above station. Several observations of water temperature were made during the year.

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 discharge, 0.4 ft³/s (0.011 m³/s) Sept. 9, 1966, gage height, 1.48 ft (0.451 m).

Date	Time	Discharge (ft ³ /s) (m ³ /s)		Gage height (ft) (m)		Date	Time	Discharge (ft ³ /s) (m ³ /s)		Gage height (ft) (m)	
Mar. 19	0030	911	25.8	4.16	1.268	Apr. 15	1830	409	11.6	3.20	0.975
Apr. 3	0100	769	21.8	3.92	1.195	Apr. 24	2300	504	14.3	3.41	1.039
Apr. 10	0730	*1350	38.2	4.81	1.467	June 20	2100	513	14.5	3.43	1.045

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.2	7.5	8.9	6.2	9.6	33	51	65	38	16	6.9	3.9
2	4.2	7.9	8.4	5.9	48	36	70	60	35	15	5.5	3.3
3	4.2	7.5	7.9	5.9	84	36	271	55	33	13	4.4	3.3
4	4.2	23	7.9	5.9	52	34	110	55	46	12	5.3	3.3
5	4.2	10	7.2	5.9	37	30	82	49	71	12	9.9	3.3
6	4.2	5.9	6.7	5.9	30	34	70	43	45	12	7.7	3.3
7	4.2	5.3	6.1	5.9	27	50	65	40	36	11	5.3	3.0
8	4.5	5.1	5.9	5.9	23	111	90	39	32	10	4.8	2.8
9	4.8	4.9	5.9	5.5	20	112	134	40	29	9.3	4.5	2.8
10	4.8	4.8	5.5	22	18	102	676	32	26	8.8	4.0	2.9
11	5.0	4.8	5.3	21	17	77	220	31	24	8.3	8.4	2.8
12	5.5	4.8	5.3	12	17	63	139	29	22	7.5	5.9	4.0
13	8.3	7.9	5.3	9.4	17	53	108	27	21	6.6	4.9	5.8
14	7.2	5.3	5.1	8.7	16	46	88	26	18	6.1	4.8	3.9
15	6.0	5.1	4.9	8.7	16	42	235	33	17	6.0	4.6	3.4
16	5.9	4.8	22	8.7	17	38	197	70	16	6.1	4.3	3.7
17	6.1	4.3	11	7.4	19	35	131	80	15	5.8	4.2	3.7
18	6.0	4.2	8.1	5.9	21	177	107	52	61	5.3	4.5	3.3
19	6.3	4.2	7.3	5.9	25	482	90	56	44	5.1	4.4	3.3
20	6.5	4.2	7.2	8.4	25	161	78	74	74	9.2	4.2	3.3
21	6.5	4.2	7.2	8.4	28	135	69	70	59	9.8	4.2	9.7
22	6.9	4.2	6.8	7.9	39	102	62	94	36	7.0	3.9	4.8
23	7.2	4.2	6.5	15	56	78	57	104	28	6.4	3.8	3.7
24	7.2	4.2	6.5	13	57	66	295	74	24	6.0	3.7	3.7
25	11	4.2	6.5	11	54	59	258	61	22	5.9	3.5	3.7
26	8.0	4.2	6.5	11	44	52	140	73	18	5.7	3.3	3.3
27	7.2	4.2	6.8	10	36	106	108	66	15	5.2	3.5	3.3
28	7.2	7.4	7.2	10	33	99	89	50	18	4.8	4.4	3.3
29	7.2	28	7.2	9.5	---	74	79	51	21	4.6	5.3	4.2
30	7.2	9.4	6.6	11	---	62	70	48	17	4.4	4.5	7.2
31	7.2	---	6.5	11	---	56	---	42	---	4.2	4.2	---
TOTAL	189.1	205.7	226.2	288.9	885.6	2641	4239	1689	961	249.1	152.8	116.0
MEAN	6.10	6.86	7.30	9.32	31.6	85.2	141	54.5	32.0	8.04	4.93	3.87
MAX	11	28	22	22	84	482	676	104	74	16	9.9	9.7
MIN	4.2	4.2	4.9	5.5	9.6	30	51	26	15	4.2	3.3	2.8
CFSM	.33	.37	.40	.51	1.72	4.63	7.66	2.96	1.74	.44	.27	.21
IN.	.38	.42	.46	.58	1.79	5.34	8.57	3.41	1.94	.50	.31	.22

CAL YR 1982	TOTAL	8593.2	MEAN	23.5	MAX	394	MIN	3.7	CFSM	1.28	IN	17.37
WTR YR 1983	TOTAL	11843.4	MEAN	32.4	MAX	676	MIN	2.8	CFSM	1.76	IN	23.94

POTOMAC RIVER BASIN

01641000 HUNTING CREEK AT JIMTOWN, MD--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1982 to June 1983 (discontinued).

WATER QUALITY DATA, OCTOBER 1982 TO JUNE 1983

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD 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)
JAN 17...	1730	8.6	271	9.5	-1.0	1.5	5	--	74	27
JUN 23...	1145	30	140	7.5	27.0	18.0	19	9.3	51	3

DATE	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY FIELD (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)
JAN 17...	21	5.3	25	42	1.3	1.8	47	.0	11	42
JUN 23...	15	3.4	6.6	21	.4	1.2	49	3.0	10	12

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,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS NO3)
JAN 17...	<.10	9.3	155	144	.21	3.6	1.4	--	--	--
JUN 23...	<.10	9.7	86	87	.12	7.0	.90	.50	1.4	6.2

DATE	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS TOTAL (MG/L AS PO4)	PHOS- PHORUS, ORTHO, TOTAL (MG/L AS P)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDEED 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- PENDEED RECOV. (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	CARBON, ORGANIC TOTAL (MG/L AS C)
JAN 17...	.410	1.3	.410	190	160	34	30	10	19	2.9
JUN 23...	.140	.43	.110	270	230	45	20	1	19	3.0

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).

WATER-DISCHARGE RECORDS

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.--Water-discharge records good except those above 100 ft³/s (2.8 m³/s), which are fair. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--36 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 computation of flow over dam at gage height 5.75 ft (1.753 m); minimum discharge, 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)
Apr. 3	0100	115 3.26	2.29 0.698	Apr. 24	0100	108 3.06	2.26 0.689
Apr. 10	0500	*142 4.02	2.40 0.732				

Minimum discharge, 1.0 ft³/s (0.28 m³/s) Sept. 10, 11, 12, 19, 20, 21, gage height 1.13 ft (0.344 m).

REVISIONS.--The peak discharges and annual maximum (*) for water years 1972, 1973, 1974, 1977, 1978, 1979, 1980, 1981, and 1982 have been revised as shown in the following table. They supersede figures published in the reports for 1972-1974 and 1977-1982.

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)
1972	June 21, 1972	2230	*609 17.2	4.01 1.222	1979	Jan. 24, 1979	1700	247 7.00	2.80 0.853
						Feb. 26, 1979	0130	106 3.00	2.25 0.686
1973	May 28, 1973	0800	*113 3.20	2.28 0.695		Mar. 5, 1979	1930	165 4.67	2.50 0.762
						Sept. 5, 1979	2400	*678 19.2	3.83 1.167
1974	Mar. 30, 1974	1900	103 2.92	2.24 0.683	1980	Mar. 21, 1980	1430	*177 5.01	2.55 0.777
	May 12, 1974	1730	*110 3.12	2.26 0.689					
1977	Apr. 5, 1977	0230	*135 3.82	2.37 0.722	1981	Feb. 23, 1981	1430	*196 5.55	2.62 0.799
1978	Jan. 26, 1978	0700	123 3.48	2.32 0.707	1982	June 13, 1982	1300	*132 3.74	2.36 0.719
	May 16, 1978	0430	*285 8.07	2.92 0.890					
	Aug. 11, 1978	2230	110 3.12	2.27 0.692					

POTOMAC RIVER BASIN

01641500 FISHING CREEK NEAR LEWISTOWN, MD--Continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.5	1.5	2.2	1.8	3.7	15	25	31	17	7.6	2.6	2.0
2	1.4	1.5	2.2	1.8	10	17	26	27	15	7.2	2.6	1.6
3	1.5	1.5	2.0	1.8	21	17	66	25	14	6.8	2.5	1.5
4	1.5	4.4	1.9	1.7	15	17	47	24	16	6.5	2.5	1.5
5	1.5	3.3	1.8	1.7	13	17	42	21	15	6.6	5.5	1.4
6	1.5	1.9	1.7	1.8	12	17	37	19	13	6.2	4.9	1.3
7	1.5	1.7	1.6	1.8	12	20	34	17	12	5.8	3.6	1.3
8	1.6	1.7	1.5	1.7	11	29	34	17	12	5.6	3.0	1.2
9	1.5	1.6	1.5	1.7	9.8	34	39	16	11	5.4	2.7	1.2
10	1.5	1.5	1.4	4.2	9.4	37	129	15	11	5.2	2.6	1.1
11	1.5	1.5	1.4	5.2	8.3	33	107	14	9.9	5.3	3.1	1.1
12	1.5	1.6	1.5	3.5	8.0	30	69	14	9.4	5.2	3.0	1.3
13	2.5	3.1	1.4	3.1	8.4	27	56	13	9.4	5.0	2.7	1.8
14	2.4	2.1	1.4	3.0	8.6	24	47	13	9.0	4.7	2.6	1.6
15	1.7	1.8	1.4	3.3	8.5	21	64	15	8.4	4.5	2.4	1.3
16	1.6	1.7	5.2	3.1	8.5	19	65	22	8.2	4.3	2.2	1.3
17	1.5	1.5	2.8	2.9	8.6	18	60	21	7.9	4.0	2.2	1.3
18	1.5	1.5	2.2	2.7	8.6	32	52	20	16	3.9	2.1	1.2
19	1.6	1.5	2.1	2.6	8.5	84	44	22	12	3.8	2.0	1.1
20	1.6	1.5	2.0	2.6	8.4	65	37	25	16	4.2	1.9	1.1
21	1.8	1.5	1.9	2.6	9.2	58	32	24	17	4.7	1.8	3.2
22	1.7	1.5	1.8	2.7	12	45	28	27	12	3.8	1.8	2.4
23	1.6	1.5	1.8	3.9	15	38	26	29	10	3.6	1.8	1.5
24	1.5	1.5	2.0	4.0	16	34	78	27	9.2	3.6	1.9	1.4
25	2.7	1.4	1.9	3.6	16	30	90	26	8.9	3.4	1.8	1.4
26	2.3	1.4	2.0	3.5	15	26	66	26	8.2	3.3	1.6	1.3
27	1.7	1.4	2.0	3.3	15	32	55	24	7.9	3.1	1.5	1.2
28	1.5	2.1	2.1	3.3	14	33	45	21	8.6	2.9	1.6	1.2
29	1.5	6.9	2.1	3.3	---	29	39	21	10	2.8	1.6	1.2
30	1.5	2.5	1.9	3.7	---	27	34	19	8.2	2.7	1.5	2.1
31	1.5	---	1.8	3.9	---	26	---	18	---	2.7	1.9	---
TOTAL	51.7	60.1	60.5	89.8	313.5	951	1571	653	342.2	144.4	75.5	44.1
MEAN	1.67	2.00	1.95	2.90	11.2	30.7	52.4	21.1	11.4	4.66	2.44	1.47
MAX	2.7	6.9	5.2	5.2	21	84	129	31	17	7.6	5.5	3.2
MIN	1.4	1.4	1.4	1.7	3.7	15	25	13	7.9	2.7	1.5	1.1
CFSM	.23	.27	.27	.40	1.54	4.21	7.19	2.89	1.56	.64	.34	.20
IN.	.26	.31	.31	.46	1.60	4.85	8.03	3.33	1.75	.74	.39	.23
CAL YR 1982 TOTAL	3618.9			MEAN 9.91	MAX 61	MIN 1.4	CFSM 1.36	IN 18.46				
WTR YR 1983 TOTAL	4358.8			MEAN 11.9	MAX 129	MIN 1.1	CFSM 1.63	IN 22.24				

POTOMAC RIVER BASIN

01641500 FISHING CREEK NEAR LEWISTOWN, MD--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1982 to June 1983 (discontinued).

WATER QUALITY DATA, OCTOBER 1982 TO JUNE 1983

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD 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)
JAN 19...	1700	2.6	19	8.1	-6.0	.1	5	--	6	0
JUN 13...	1730	8.8	17	7.3	26.0	16.0	15	9.2	5	0

DATE	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY FIELD (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)
JAN 19...	1.7	.5	.8	19	.1	.7	8.0	.1	4.0	1.6
JUN 13...	1.4	.5	1.2	30	.2	.6	8.0	.8	3.8	1.5

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 TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)
JAN 19...	<.10	4.8	20	19	.03	.14	.10	.26	--	<.010
JUN 13...	<.10	4.8	16	19	.02	.38	<.10	--	<.10	.020

DATE	PHOS- PHORUS TOTAL (MG/L AS PO4)	PHOS- PHORUS, ORTHO, TOTAL (MG/L AS P)	PHOS- PHORUS, ORTHO, DIS- SOLVED (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)	CARBON, ORGANIC TOTAL (MG/L AS C)
JAN 19...	--	--	<.010	120	110	8	<10	--	1	1.0
JUN 13...	.06	<.010	--	100	80	25	10	6	4	1.3

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 1974-79, 1982 to July 1983 (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, OCTOBER 1982 TO JULY 1983

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD 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)
JAN 28...	1430	271	232	8.2	6.5	1.4	10	--	88	27
JUL 19...	1600	138	253	8.5	32.0	29.0	20	9.3	110	9

DATE	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LITY FIELD (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)
JAN 28...	25	6.1	9.0	18	.4	2.4	61	.7	22	18
JUL 19...	33	6.3	6.8	12	.3	2.6	100	.6	18	15

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,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS NO3)
JAN 28...	<.10	6.5	134	126	.18	98.0	2.6	--	--	--
JUL 19...	<.10	2.8	173	144	.24	64.5	1.9	.40	2.3	10

DATE	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS TOTAL (MG/L AS PO4)	PHOS- PHORUS, ORTHO, 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)	CARBON, ORGANIC TOTAL (MG/L AS C)
JAN 28...	.110	.34	.100	150	120	31	10	1	9	3.8
JUL 19...	.110	.34	.080	150	140	15	30	30	4	4.1

POTOMAC RIVER BASIN

199

01642500 LINGANORE CREEK NEAR FREDERICK, MD

WATER-QUALITY RECORDS

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 4.0 mi (6.4 km) east of Frederick.

DRAINAGE AREA.--82.3 mi² (213.2 km²).

PERIOD OF RECORD.--Water year 1982 to June 1983 (discontinued).

WATER QUALITY DATA, OCTOBER 1982 TO JUNE 1983

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD 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)
JAN 19...	1530	27	187	8.4	-5.0	2.5	10	--	82	12
JUN 13...	1400	74	165	8.8	31.0	24.5	17	7.3	71	9

DATE	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY FIELD (MG/L AS CAC03)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)
JAN 19...	23	5.9	4.9	11	.2	3.7	70	.5	11	11
JUN 13...	20	5.1	4.5	12	.2	2.0	62	.2	10	9.4

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)
JAN 19...	<.10	2.6	110	104	.15	7.9	2.1	2.0	.060	.18
JUN 13...	<.10	--	113	--	.15	22.6	2.1	--	.040	.12

DATE	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P)	PHOS- PHATE, ORTHO, DIS- SOLVED (MG/L AS PO4)	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- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)
JAN 19...	--	.030	.09	310	260	50	140	50	93
JUN 13...	.010	--	--	190	170	17	170	50	120

POTOMAC RIVER BASIN

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, 2.0 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.--54 years, 926 ft³/s (26.22 m³/s), 15.39 in/yr (391 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)
Mar. 19	1700	14000 396	13.47 4.106	Apr. 16	1100	21400 606	17.15 5.227
Apr. 3	1830	9190 260	10.59 3.228	Apr. 25	0530	13600 385	13.24 4.036
Apr. 11	0030	*26600 753	19.34 5.895	June 21	0600	8990 255	10.46 3.188

Minimum discharge, 83 ft³/s (2.35 m³/s) Sept. 12, gage height, 1.17 ft (0.357 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	160	153	549	264	524	1450	1300	1390	844	679	163	128
2	145	149	479	250	667	2010	1160	1270	765	590	174	126
3	134	146	505	242	5050	1600	6260	1210	698	525	175	120
4	129	269	405	232	2750	1170	3600	1220	703	472	180	114
5	125	683	368	218	1240	1000	2000	1190	1020	446	201	115
6	125	579	332	216	920	880	1610	999	860	574	533	112
7	124	300	291	217	830	1390	1460	892	689	526	296	108
8	124	228	259	218	825	3380	1900	850	608	416	224	102
9	123	200	231	210	720	4880	4630	894	550	378	188	95
10	118	189	209	317	619	3540	19000	807	506	355	170	92
11	117	176	202	2060	486	2910	15300	723	482	333	171	90
12	118	175	205	1730	305	1920	4240	678	460	324	190	90
13	139	274	201	725	486	1460	2980	644	434	391	209	113
14	156	319	176	537	768	1220	2350	620	407	290	194	132
15	162	238	169	479	694	1080	6180	668	391	269	181	125
16	179	208	393	468	663	958	17100	1180	412	260	167	113
17	147	183	1060	433	743	857	4530	2770	385	250	157	109
18	133	172	595	300	896	1040	3250	1380	952	237	151	102
19	127	160	413	278	1150	10700	2650	1000	3560	231	149	101
20	124	157	355	344	1310	5120	2180	2010	3460	242	146	94
21	129	155	341	290	1360	3830	1850	1830	6290	276	137	116
22	130	155	320	257	1670	4930	1560	2810	2110	246	130	146
23	131	156	296	311	2680	2360	1390	5420	1210	223	122	145
24	129	155	282	583	3390	1770	5400	2590	915	218	123	138
25	167	155	329	678	2650	1500	10000	1660	784	218	124	120
26	207	152	321	525	2440	1290	3850	1370	668	215	121	111
27	231	147	307	459	1540	1530	2710	1550	590	200	117	107
28	195	159	309	432	1390	5830	2190	1150	552	190	156	104
29	170	723	329	407	---	2570	1800	1050	1980	180	152	98
30	163	1240	342	387	---	1690	1550	1100	1050	172	135	118
31	157	---	298	439	---	1430	---	962	---	168	131	---
TOTAL	4518	8155	10871	14506	38766	77295	135980	43887	34335	10094	5467	3384
MEAN	146	272	351	468	1385	2493	4533	1416	1145	326	176	113
MAX	231	1240	1060	2060	5050	10700	19000	5420	6290	679	533	146
MIN	117	146	169	210	305	857	1160	620	385	168	117	90
CFSM	.18	.33	.43	.57	1.70	3.05	5.55	1.73	1.40	.40	.22	.14
IN.	.21	.37	.49	.66	1.77	3.52	6.19	2.00	1.56	.46	.25	.15
CAL YR 1982	TOTAL	274417	MEAN	752	MAX	9880	MIN 99	CFSM	.92	IN	12.49	
WTR YR 1983	TOTAL	387258	MEAN	1061	MAX	19000	MIN 90	CFSM	1.30	IN	17.63	

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 by local observer at time of sampling. 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, 1980-83): Maximum daily, 32.0°C July 21, 1980; 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 water years 1961-67, 1970, 1972, and 1982.

SEDIMENT LOADS: Maximum daily, 134,000 tons (122,000 tonnes) June 22, 1972; minimum daily, 0.39 tons (0.35 tonne) Dec. 14, 1981.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES:--Maximum daily, 29°C July 16, 31; minimum daily, 2.0°C Jan. 16, 23.

SEDIMENT CONCENTRATIONS: Maximum daily mean, 490 mg/L Mar. 28; minimum daily mean, 2 mg/L Jan. 8, 9.

SEDIMENT LOADS: Maximum daily, 23,600 tons (21,400 tonnes) Apr. 10; minimum daily, 1.1 tonnes (1.0 tonne) Jan. 9.

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD 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)
DEC 28...	1115	311	300	7.6	--	8.5	--	--	110	30	32
JAN 27...	1700	450	254	9.2	3.5	1.9	10	13.6	93	18	27
FEB 24...	1145	3880	220	7.3	6.5	4.0	--	12.8	76	35	21
JUL 19...	1915	229	298	7.7	30.0	27.8	17	6.3	140	6	43
26...	1130	214	345	7.6	3.5	24.0	--	7.2	140	25	45

DATE	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY FIELD (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)
DEC 28...	7.3	11	17	.5	2.9	--	3.9	23	18	.10	3.5
JAN 27...	6.1	12	21	.6	3.1	75	.9	21	23	<.10	6.1
FEB 24...	5.7	6.8	16	.4	3.4	--	4.0	24	15	.20	7.3
JUL 19...	6.9	9.2	13	.4	3.2	130	5.0	20	21	.10	3.8
26...	7.4	12	15	.5	3.2	--	5.7	18	22	.20	4.6

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 TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (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)	PHOS- PHORUS TOTAL (MG/L AS P04)
DEC 28...	191	146	.26	160	--	2.7	--	--	--	--	--
JAN 27...	135	143	.18	164	2.5	--	--	--	--	.250	.77
FEB 24...	130	108	.18	1360	--	3.2	--	--	--	--	--
JUL 19...	216	185	.29	134	2.8	--	.80	3.6	16	.160	.49
26...	198	184	.27	114	--	2.8	--	--	--	--	--

POTOMAC RIVER BASIN

01643020 MONOCACY RIVER AT REICH'S FORD BRIDGE NEAR FREDERICK, MD--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	PHOS- PHORUS, ORTHO, TOTAL (MG/L AS P)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P)	PHOS- PHATE, ORTHO, DIS- SOLVED (MG/L AS P04)	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)	CARBON, ORGANIC TOTAL (MG/L AS C)
DEC 28...	--	.190	.58	--	--	21	--	--	28	--
JAN 27...	.240	--	--	590	560	29	60	50	11	4.5
FEB 24...	--	.110	.34	--	--	72	--	--	14	--
JUL 19...	.120	--	--	260	250	7	40	30	15	4.5
26...	--	.200	.61	--	--	15	--	--	27	--

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
ONCE-DAILY

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

SUSPENDED-SEDIMENT, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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	25	11	22	9.1	48	71	3	2.1	4	5.7	21	82								
2	25	9.8	25	10	46	59	6	4.1	39	70	68	369								
3	21	7.6	21	8.3	55	75	12	7.8	253	3790	32	138								
4	17	5.9	22	16	39	43	18	11	387	3020	22	69								
5	19	6.4	100	184	31	31	26	15	150	502	24	65								
6	46	16	70	109	25	22	9	5.2	18	45	19	45								
7	68	23	28	23	22	17	3	1.8	10	22	45	169								
8	43	14	26	16	22	15	2	1.2	9	20	83	850								
9	45	15	30	16	19	12	2	1.1	8	16	32	422								
10	36	11	26	13	15	8.5	118	101	7	12	13	124								
11	45	14	19	9.0	11	6.0	363	1680	5	6.6	12	94								
12	45	14	18	8.5	40	22	30	140	5	4.1	13	67								
13	40	15	29	21	41	22	16	31	10	13	14	55								
14	38	16	49	42	35	17	10	14	15	31	16	53								
15	23	10	18	12	30	14	9	12	15	28	18	52								
16	10	4.8	15	8.4	28	30	9	11	15	27	22	57								
17	5	2.0	14	6.9	80	229	6	7.0	18	36	15	35								
18	22	7.9	15	7.0	12	19	45	36	20	48	10	28								
19	15	5.1	16	6.9	7	7.8	61	46	18	56	409	13600								
20	22	7.4	16	6.8	9	8.6	57	53	20	71	339	5250								
21	36	13	17	7.1	10	9.2	48	38	32	118	116	1180								
22	20	7.0	19	8.0	13	11	37	26	34	153	101	1500								
23	9	3.2	21	8.8	19	15	22	18	50	362	22	140								
24	8	2.8	16	6.7	25	19	11	17	52	476	18	86								
25	53	24	12	5.0	38	34	8	15	17	122	16	65								
26	44	25	13	5.3	30	26	7	9.9	18	119	14	49								
27	33	21	14	5.6	25	21	4	5.0	27	112	24	138								
28	35	18	16	6.9	20	17	5	5.8	65	244	490	7950								
29	21	9.6	117	258	15	13	5	5.5	---	---	350	2430								
30	14	6.2	114	382	10	9.2	5	5.2	---	---	108	493								
31	16	6.8	---	---	5	4.0	4	4.7	---	---	44	170								
TOTAL	---	352.5	---	1226.3	---	907.3	---	2330.4	---	9529.4	---	35825								
APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER										
1	22	77	16	60	10	23	120	220	12	5.3	15	5.2								
2	24	75	14	48	9	19	78	124	15	7.0	15	5.1								
3	329	6520	14	46	8	15	56	78	16	7.6	13	4.2								
4	63	714	16	53	8	15	50	64	14	6.8	12	3.7								
5	20	108	20	64	30	83	48	58	12	6.5	10	3.1								
6	10	43	18	49	25	58	50	77	66	95	9	2.7								
7	5	20	16	39	20	37	51	72	50	40	7	2.0								
8	8	41	14	32	15	25	44	49	20	12	7	1.9								
9	25	313	20	48	10	15	38	39	10	5.1	6	1.5								
10	368	23600	18	39	10	14	38	36	10	4.6	6	1.5								
11	226	12200	14	27	9	12	34	32	10	4.6	6	1.5								
12	70	801	10	18	9	11	27	24	15	7.7	6	1.5								
13	38	306	8	14	8	9.4	25	26	20	11	8	2.4								
14	25	159	6	10	8	8.8	20	23	20	10	15	5.3								
15	310	9150	15	27	8	8.4	24	19	20	9.8	12	4.1								
16	328	16600	27	86	10	11	10	13	18	8.1	9	2.7								
17	66	807	75	561	10	10	22	15	17	7.2	9	2.6								
18	30	263	55	205	60	154	27	17	16	6.5	9	2.5								
19	20	143	35	94	150	1440	20	12	14	5.6	9	2.5								
20	15	88	129	795	220	2060	13	8.5	13	5.1	8	2.0								
21	15	75	175	865	400	6790	32	24	13	4.8	10	3.1								
22	15	63	215	1630	250	1420	28	19	13	4.6	10	3.9								
23	15	56	375	6080	75	245	21	13	14	4.6	10	3.9								
24	60	1450	260	1820	60	148	15	8.8	13	4.3	10	3.7								
25	200	5780	80	359	50	106	14	8.2	13	4.4	10	3.2								
26	90	936	25	92	42	76	14	8.1	10	3.3	10	3.0								
27	64	468	19	80	36	57	13	7.0	10	3.2	12	3.5								
28	43	254	15	47	30	45	13	6.7	25	11	18	5.1								
29	28	136	15	43	274	1760	13	6.3	20	8.2	16	4.2								
30	16	67	16	48	175	496	12	5.6	15	5.5	18	5.7								
31	---	---	15	39	---	---	12	5.4	15	5.3	---	---								
TOTAL	---	81313	---	13418	---	15171.6	---	1118.6	---	324.7	---	97.3								
TOTAL LOAD FOR YEAR: 161614.1 TONS.																				

POTOMAC RIVER BASIN

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).

WATER-DISCHARGE RECORDS

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

AVERAGE DISCHARGE.--27 years (water years 1949-58, 1967-83), 70.3 ft³/s (1.991 m³/s) 15.20 in/yr (386 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 discharge, 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)	
Mar. 8	0900	1830	51.8	6.22	1.896	Apr. 15	1800	1830	51.8	6.22	1.896
Apr. 10	0915	*3050	86.4	7.97	2.429						

Minimum daily discharge, 7.7 ft³/s (0.22 m³/s) Sept. 12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16	16	41	22	26	96	94	133	91	45	19	14
2	15	15	40	22	61	128	89	126	80	43	20	12
3	14	16	32	22	118	100	251	116	75	40	19	11
4	14	33	29	20	64	86	127	115	84	40	19	10
5	14	51	27	21	46	77	108	105	71	44	68	11
6	14	23	25	24	43	71	101	96	66	40	78	9.7
7	14	20	23	22	45	85	102	90	146	36	26	8.7
8	14	19	22	21	44	650	140	97	68	35	22	8.0
9	13	18	21	20	38	293	179	95	61	35	20	7.9
10	13	18	20	54	36	238	1470	82	58	34	18	7.9
11	13	17	22	98	23	169	411	78	57	33	22	7.8
12	14	18	25	52	30	138	284	75	55	32	27	7.7
13	17	43	21	39	40	117	220	72	52	31	22	13
14	22	26	20	35	55	105	186	70	51	29	20	14
15	15	22	21	34	50	96	797	174	51	29	18	9.9
16	14	20	116	31	53	85	466	489	50	28	17	9.9
17	13	19	62	27	63	80	303	288	48	26	16	11
18	12	18	40	24	78	110	246	153	49	25	18	9.7
19	13	18	34	21	90	266	209	133	73	25	17	8.9
20	14	18	33	20	90	135	184	145	92	27	14	8.1
21	15	18	30	21	98	243	163	234	306	41	13	10
22	14	18	26	22	136	167	149	295	80	26	12	20
23	14	18	26	46	194	130	143	376	61	25	17	10
24	14	18	26	64	163	112	520	189	54	26	18	9.6
25	41	16	25	40	129	98	378	150	51	24	15	9.6
26	40	16	25	36	110	87	241	138	47	24	14	9.6
27	23	16	25	33	92	168	197	131	46	22	13	9.6
28	19	20	26	31	87	200	173	109	45	21	13	9.0
29	17	147	27	28	---	125	156	116	49	20	15	8.4
30	16	48	24	29	---	106	144	112	47	19	13	15
31	16	---	23	29	---	100	---	100	---	19	12	---
TOTAL	517	783	957	1008	2102	4661	8230	4682	2164	944	655	311.0
MEAN	16.7	26.1	30.9	32.5	75.1	150	274	151	72.1	30.5	21.1	10.4
MAX	41	147	116	98	194	650	1470	489	306	45	78	20
MIN	12	15	20	20	23	71	89	70	45	19	12	7.7
CFSM	.27	.42	.49	.52	1.20	2.39	4.36	2.40	1.15	.49	.34	.17
IN.	.31	.46	.57	.60	1.25	2.76	4.88	2.77	1.28	.56	.39	.18

CAL YR 1982	TOTAL	19819.9	MEAN 54.3	MAX 1000	MIN 9.9	CFSM .87	IN 11.74
WTR YR 1983	TOTAL	27014.0	MEAN 74.0	MAX 1470	MIN 7.7	CFSM 1.18	IN 16.00

01643500 BENNETT CREEK AT PARK MILLS, MD--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1968-71, 1975-76, 1982 to June 1983 (discontinued).

WATER QUALITY DATA, OCTOBER 1982 TO JUNE 1983

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD 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)
JAN 20...	1450	33	134	9.2	-2.0	.2	8	--	54	9	15
JUN 23...	1445	63	127	7.8	27.0	21.8	18	9.4	49	3	14

DATE	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY FIELD (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)
JAN 20...	3.9	5.3	17	.3	1.4	45	.0	8.0	11	<.10	6.9
JUN 23...	3.3	3.8	14	.2	2.1	46	1.4	8.6	9.7	<.10	8.5

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 TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (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)
JAN 20...	89	79	.12	7.9	2.4	2.3	--	--	--	<.010
JUN 23...	80	78	.11	13.6	2.3	--	.30	2.6	12	.050

DATE	PHOS- PHORUS TOTAL (MG/L AS PO4)	PHOS- PHORUS, ORTHO, TOTAL (MG/L AS P)	PHOS- PHORUS, ORTHO, DIS- SOLVED (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. (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	CARBON, ORGANIC TOTAL (MG/L AS C)
JAN 20...	--	--	<.010	230	160	71	50	0	50	--
JUN 23...	.15	.030	--	380	340	38	30	10	19	2.5

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.--53 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 discharge 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 discharge 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)
Mar. 8	1115	2290 64.9	7.26 2.213	Apr. 24	1345	1770 50.1	6.58 2.006
Mar. 27	2330	1300 36.9	5.57 1.698	May 16	2030	2330 70.0	7.30 2.225
Apr. 10	0830	*3260 92.3	8.09 2.466	May 22	2345	2900 82.1	7.84 2.390
Apr. 15	2015	3190 90.3	8.04 2.451	June 7	0045	2470 70.0	7.44 2.268

Minimum discharge, 16 ft³/s (0.453 m³/s) Feb. 11, gage height, 1.77 ft (0.539 m), result of freezeup.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	43	42	95	53	54	118	140	169	145	99	42	37
2	42	41	88	52	118	148	131	162	135	96	44	35
3	39	41	73	51	166	110	416	158	129	91	45	34
4	39	92	69	48	89	100	183	161	146	91	55	33
5	37	149	63	50	71	94	155	152	144	98	48	32
6	37	61	60	55	70	90	147	143	313	89	105	31
7	37	52	55	51	77	111	152	134	724	82	52	30
8	37	49	52	49	77	1110	217	134	187	79	46	28
9	37	47	51	47	67	483	247	146	152	77	43	27
10	36	45	48	89	63	382	2060	124	136	74	40	27
11	36	43	50	147	42	230	494	120	127	71	53	26
12	34	43	56	82	62	180	346	116	118	67	95	26
13	42	111	51	66	86	154	251	111	112	65	52	85
14	55	61	47	63	82	139	210	112	107	62	46	59
15	40	53	50	61	76	129	1290	160	104	63	43	38
16	40	50	336	57	95	116	1180	775	102	60	41	35
17	37	46	135	54	116	109	359	634	99	56	39	35
18	36	45	87	49	149	144	297	213	98	53	54	33
19	37	45	75	48	166	392	250	184	213	46	46	30
20	37	45	72	50	159	180	221	241	278	53	40	30
21	43	45	65	51	168	314	198	319	723	77	36	39
22	39	43	60	49	221	311	181	477	185	49	35	93
23	37	43	61	94	288	176	171	1350	142	45	119	43
24	37	42	61	102	228	153	920	283	124	51	70	38
25	135	40	57	71	163	137	539	216	114	47	50	37
26	120	40	59	65	140	122	305	196	104	50	44	32
27	60	40	59	61	117	220	243	212	99	47	41	33
28	51	48	60	58	109	520	217	166	98	46	40	32
29	46	395	59	56	---	205	196	190	118	44	43	31
30	44	110	54	57	---	161	181	176	102	42	39	36
31	43	---	53	57	---	152	---	153	---	42	36	---
TOTAL	1433	2007	2261	1943	3319	6990	11897	7887	5378	2012	1582	1125
MEAN	46.2	66.9	72.9	62.7	119	225	397	254	179	64.9	51.0	37.5
MAX	135	395	336	147	288	1110	2060	1350	724	99	119	93
MIN	34	40	47	47	42	90	131	111	98	42	35	26
CFSM	.46	.66	.72	.62	1.18	2.23	3.93	2.52	1.77	.64	.51	.37
IN.	.53	.74	.83	.72	1.22	2.57	4.38	2.90	1.98	.74	.58	.41
CAL YR 1982	TOTAL	34358	MEAN	94.1	MAX	1760	MIN	27	CFSM	.93	IN	12.65
WTR YR 1983	TOTAL	47834	MEAN	131	MAX	2060	MIN	26	CFSM	1.30	IN	17.62

POTOMAC RIVER BASIN

01645000 SENECA CREEK AT DAWSONVILLE, MD--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1965 to September 1983 (discontinued).

WATER QUALITY DATA, WATER YEAR 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD 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 AS CAC03)	CALCIUM DIS- SOLVED (MG/L AS CA)
DEC 28...	1330	59	195	7.7	15.0	9.5	--	57	25	15
FEB 25...	1100	163	190	7.2	5.0	4.5	14.1	53	27	14
JUL 26...	1400	52	213	7.5	27.0	21.0	9.7	64	28	17

DATE	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY LAB (MG/L AS CAC03)	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)
DEC 28...	4.8	13	32	.8	2.5	32	1.2	11	21	.10
FEB 25...	4.4	9.7	27	.6	2.6	26	3.2	15	21	.10
JUL 26...	5.2	13	29	.7	3.0	36	2.2	12	21	.20

DATE	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 DIS- SOLVED (MG/L AS N)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P)	PHOS- PHATE, ORTHO, DIS- SOLVED (MG/L AS P04)	IRON, DIS- SOLVED (UG/L AS FE)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)
DEC 28...	8.9	130	96	.18	20.7	4.1	.140	.43	77	54
FEB 25...	8.4	112	91	.15	49.3	3.4	.090	.28	130	82
JUL 26...	9.8	143	104	.19	20.1	4.6	.330	1.0	61	46

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 for the period of backwater from beaver dam, Feb. 27 to Mar. 30, which are fair, and for 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.--26 years, 4.16 ft³/s (0.118 m³/s), 15.27 in/yr (388 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), 7.83 ft (2.387 m), from floodmarks; minimum discharge, 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)
Dec. 16	0715	274 7.76	4.37 1.332	Apr. 15	1715	298 8.44	4.55 1.387
Mar. 27	1800	252 7.14	4.19 1.277	May 16	1600	232 6.57	4.02 1.225
Apr. 9	2145	238 6.74	4.07 1.241	May 22	2115	*502 14.2	5.64 1.719
Apr. 10	0600	418 11.8	5.27 1.606	June 6	2200	478 13.5	5.56 1.695
Apr. 15	1345	326 9.23	4.73 1.442	June 20	2215	418 11.8	5.27 1.606

Minimum discharge, 0.22 ft³/s (0.006 m³/s) Oct. 3, part of each day Sept. 8-12, 19-21, gage height, 1.14 ft (0.347 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.44	.81	5.5	1.4	1.4	10	3.0	3.2	3.4	2.1	.72	.44
2	.44	.82	2.1	1.4	1.4	4.6	8.1	3.1	4.2	1.8	.65	.39
3	.54	.79	1.7	1.4	3.4	3.0	16	3.3	3.2	1.6	.58	.36
4	.54	34	1.7	1.4	2.4	2.6	3.3	5.1	3.0	5.9	.64	.33
5	.58	2.6	1.5	2.2	2.4	2.5	3.1	3.5	3.0	2.1	10	.35
6	.72	1.2	1.5	1.7	3.1	2.5	3.1	4.2	30	1.7	1.4	.55
7	.77	1.0	1.3	1.5	4.7	4.0	7.5	3.7	7.5	1.5	.76	.44
8	.81	.95	1.2	1.4	2.1	40	6.3	6.6	3.0	1.4	.65	.30
9	.86	.89	1.2	1.4	1.8	10	32	2.9	2.6	1.3	.65	.25
10	.77	.85	1.0	13	1.7	5.0	61	2.6	2.5	1.3	.60	.27
11	.75	.79	1.7	3.3	1.5	4.2	17	2.6	2.3	1.2	9.0	.30
12	.78	1.3	2.9	2.0	1.7	3.3	5.1	2.4	2.2	1.2	1.5	.58
13	3.7	4.7	1.9	1.7	2.0	3.1	4.1	2.4	2.4	1.2	.77	8.0
14	1.1	.91	1.6	1.7	2.5	2.7	3.8	2.4	2.2	1.3	.74	.61
15	.65	.90	2.5	1.7	4.5	2.6	92	12	3.6	1.2	.67	.33
16	1.0	.95	36	1.6	7.4	2.5	12	68	2.1	1.1	.58	.31
17	.61	.90	2.9	1.5	8.5	2.5	7.2	5.9	2.0	1.0	.72	.35
18	.64	.90	2.2	1.4	9.6	26	5.3	3.4	2.2	1.0	4.0	.33
19	.69	.93	2.4	1.3	7.5	6.0	4.4	8.9	4.0	1.1	.70	.27
20	.72	.91	2.2	1.3	6.5	5.0	3.9	4.0	28	8.1	.64	.24
21	2.3	.92	1.9	1.4	8.1	30	3.7	17	16	1.7	.53	14
22	.55	.96	1.8	1.5	9.8	5.8	3.5	41	2.7	1.1	5.3	1.4
23	.60	.95	2.3	9.4	11	3.8	5.7	9.0	2.3	1.1	8.1	.39
24	.75	1.1	1.7	2.6	4.3	3.2	49	7.0	2.2	1.5	1.0	.36
25	22	1.2	1.7	1.8	3.6	3.0	9.8	8.0	1.9	.90	.75	.39
26	6.0	.80	2.2	1.7	3.0	3.0	4.6	5.0	1.8	.88	.66	.36
27	1.1	.80	2.3	1.6	2.6	48	4.0	4.4	1.8	.77	.57	.36
28	.90	11	1.9	1.5	2.4	10	3.7	4.0	1.9	.73	.57	.35
29	.82	24	1.7	1.5	---	5.4	3.5	6.5	3.4	.68	.66	.35
30	.87	2.5	1.4	1.4	---	3.8	3.3	4.0	2.0	.64	.52	4.1
31	.86	---	1.4	1.4	---	3.1	---	3.6	---	.66	.44	---
TOTAL	53.86	101.33	95.3	70.1	133.5	261.2	389.0	259.7	149.4	49.76	55.07	37.06
MEAN	1.74	3.38	3.07	2.26	4.77	8.43	13.0	8.38	4.98	1.61	1.78	1.24
MAX	22	34	36	13	14	48	92	68	30	8.1	10	14
MIN	.44	.79	1.0	1.3	1.4	2.5	3.0	2.4	1.8	.64	.44	.24
CFSM	.47	.91	.83	.61	1.29	2.28	3.51	2.27	1.35	.44	.48	.34
IN.	.54	1.02	.96	.70	1.34	2.63	3.91	2.61	1.50	.50	.55	.37

CAL YP 1982 TOTAL 1422.63 MEAN 3.90 MAX 90 MIN .38 CFSM 1.05 IN 14.30
WTR YR 1983 TOTAL 1655.28 MEAN 4.54 MAX 92 MIN .24 CFSM 1.23 IN 16.64

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), since December 1950, by Savage River Reservoir (see station 01597500), and since July 1981, by Bloomington Lake (see station 01595800). Gage-height telemeter at station.

AVERAGE DISCHARGE.--53 years, 11,420 ft³/s (323.4 m³/s), 13.42 in/yr (341 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 discharge 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 discharge (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)
Mar. 21	0745	74300 2100	7.84 2.390	Apr. 26	1445	*128000 3620	9.81 2.990
Apr. 5	0115	59500 1690	7.17 2.185	May 18	1830	62500 1770	7.31 2.228
Apr. 11	Unknown	99100 2810	8.82 2.688	May 24	1800	55000 1560	6.95 2.118
Apr. 16	Unknown	97200 2750	8.75 2.667				

Minimum daily discharge, 1,200 ft³/s (34.0 m³/s) Sept. 11, does not include diversion for municipal use; minimum daily (adjusted) discharge, 1,800 ft³/s (51.0 m³/s) Sept. 13.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2500	2260	5620	5130	4510	17800	22700	26400	14500	7080	1850	1560
2	2430	1970	7200	5210	4930	16700	20200	23400	13400	6270	1780	1550
3	2350	1910	9990	5030	7660	15700	25600	21000	12200	5850	1740	1860
4	2170	2590	8850	4640	14100	14300	49900	19700	11400	5680	1780	2290
5	2130	5130	8590	4410	24000	13100	54200	19900	10900	6140	1880	1980
6	2060	4260	7830	4260	20000	12200	39900	21200	11400	5610	2350	1610
7	1950	4180	6740	4090	16500	12700	31600	20200	16800	5030	2760	1550
8	1740	3890	5940	3620	13500	20000	28100	17900	12500	4920	2510	1460
9	1720	3740	5130	3420	11500	23800	29900	16400	10400	4300	2080	1320
10	1570	3580	4800	3490	10000	21800	58000	15100	9020	4150	1960	1290
11	1580	3200	4750	4760	9020	25600	98000	13800	8110	3970	2000	1200
12	1600	2720	4230	6510	5590	25700	87500	12600	7490	3520	2250	1250
13	1740	2710	3980	5940	4840	21900	64400	11700	6950	3460	2290	1250
14	1820	2540	3830	5430	6240	18700	43400	10800	6440	3260	2200	1300
15	1840	2300	3710	5140	6880	16700	41600	10500	5940	3110	2110	1300
16	2000	2400	5400	4710	8380	14300	64800	14600	5540	2930	1990	1350
17	1990	2440	6510	4380	9290	12800	66600	25600	5360	2750	1970	1350
18	1810	2400	6320	4090	10700	12100	55400	49600	5200	2680	1990	1350
19	1940	2330	12500	3220	13400	20600	40500	49800	6960	2540	1940	1390
20	1960	2290	14000	2660	22500	45400	32700	35100	12300	2580	1620	1390
21	2170	2290	10900	3100	25500	69200	27600	30100	17000	2770	1600	1330
22	2090	2290	8860	3100	25000	52900	23900	28600	18000	2540	1550	1690
23	1980	2250	7580	3400	27700	50600	21000	33900	29900	2480	1910	1510
24	1950	2130	6750	3770	32400	42400	27600	49700	19500	2430	1970	1560
25	2060	2110	6490	4300	32800	32000	63600	48000	13100	2470	1800	1470
26	2640	2240	5920	4510	30300	25200	121000	34900	10200	2670	1660	1560
27	2800	2340	5420	4510	25200	22000	86300	27500	8300	2520	1480	1420
28	2770	2490	5240	4710	20700	25900	52300	22100	7330	2170	1430	1290
29	2500	4500	5200	4730	---	26600	38500	18800	7830	1810	1520	1290
30	2320	5370	5090	4720	---	28500	31000	16900	8340	1850	1590	1420
31	2340	---	5090	4580	---	26100	---	15600	---	1920	1520	---
TOTAL	64520	86850	208460	135570	443140	783300	1447800	761400	332310	111460	59080	44140
MEAN	2081	2895	6725	4373	15830	25270	48260	24560	11080	3595	1906	1471
MAX	2800	5370	14000	6510	32800	69200	121000	49800	29900	7080	2760	2290
MIN	1570	1910	3710	2660	4510	12100	20200	10500	5200	1810	1430	1200
(#)	490	466	467	463	475	461	470	514	533	603	594	578
MEAN#	2573	3360	7198	4837	16320	25730	48720	25070	11610	4199	2499	2050
CFSM#	.22	.29	.62	.42	1.41	2.23	4.21	2.17	1.00	.36	.22	.18
IN#	.26	.32	.72	.48	1.47	2.57	4.70	2.50	1.12	.42	.25	.20

CAL YR 1982	TOTAL	3936130	MEAN	10780	MAX	92700	MIN	1330	MEAN#	11290	CFSM#	.98	IN#	13.26
WTR YR 1983	TOTAL	4478030	MEAN	12270	MAX	121000	MIN	1200	MEAN#	12780	CFSM#	1.11	IN#	15.01

* 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

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.--Water years 1973 to current year. Prior to October 1977, published as "at Great Falls."

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD UNITS)	TEMPER- ATURE, AIR (DEG C)	TEMPER- ATURE (DEG C)	BARO- METRIC PRES- SURE (MM OF HG)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)
DEC 01...	1030	5700	365	8.3	12.5	9.5	766	25	11.9	104
FEB 09...	1015	12000	225	7.7	1.5	2.5	765	6.6	14.6	107
APR 20...	1015	33100	190	8.1	6.0	8.0	--	24	13.6	--
MAY 25...	1030	50400	186	7.8	19.0	15.0	--	60	10.4	--
JUL 19...	1030	2500	370	8.1	25.0	28.0	765	3.6	7.6	97
SEP 13...	1130	1290	430	8.0	28.0	23.0	760	2.4	7.7	90
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 DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
DEC 01...	1200	5500	140	38	40	8.7	16	20	.6	2.9
FEB 09...	850	--	88	29	26	5.6	8.3	17	.4	1.9
APR 20...	200	350	81	27	24	5.2	4.3	10	.2	1.5
MAY 25...	2100	7600	73	23	21	5.0	4.5	11	.2	1.9
JUL 19...	K10	100	150	45	43	11	15	17	.5	2.7
SEP 13...	--	<10000	160	54	43	13	25	25	.9	3.2
DATE	ALKA- LINITY LAR (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 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)
DEC 01...	98	.9	44	22	.10	2.2	203	195	.28	3120
FEB 09...	59	2.3	28	11	<.10	5.1	239	121	.33	7740
APR 20...	55	.8	24	6.1	<.10	7.8	129	106	.18	11500
MAY 25...	50	1.5	20	4.8	<.10	6.8	95	94	.13	12900
JUL 19...	108	1.7	46	17	.20	4.4	246	204	.33	1660
SEP 13...	107	2.1	67	30	.20	4.7	275	251	.37	958
DATE	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS NH4)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS TOTAL (MG/L AS P04)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P)	PHOS- PHATE, ORTHO, DIS- SOLVED (MG/L AS P04)	
DEC 01...	.84	.080	.10	.40	.100	.31	.060	.050	.15	
FEB 09...	1.5	.050	.06	.20	.090	.29	.050	.050	.15	
APR 20...	1.5	.040	.05	.50	.100	.31	.030	.030	.09	
MAY 25...	1.1	.040	.05	.80	.170	.52	.040	.030	.09	
JUL 19...	1.2	.070	.09	.60	.090	.29	.090	.060	.18	
SEP 13...	1.0	.120	.15	1.60	.100	.31	.080	.080	.25	

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

POTOMAC RIVER BASIN

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01646580 POTOMAC RIVER AT CHAIN BRIDGE AT WASHINGTON, DC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	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)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)
DEC 01...	<10	1	44	<1	<1	--	<3	6	63	2
APR 20...	30	1	38	<1	<1	<1	<3	2	58	3
MAY 25...	70	1	41	1	1	<1	3	3	68	<1
SEP 13...	30	2	63	1	<1	<1	<3	2	4	1

DATE	LITHIUM DIS- SOLVED (UG/L AS LI)	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)	VANA- DIUM, DIS- SOLVED (UG/L AS V)	ZINC, DIS- SOLVED (UG/L AS ZN)
DEC 01...	6	16	.5	<10	2	<1	<1	190	<6.0	30
APR 20...	<4	6	--	<10	3	<1	<1	89	<6.0	37
MAY 25...	4	18	<.1	20	<1	<1	<1	90	6.0	12
SEP 13...	11	12	.1	<10	4	<1	<1	240	<6.0	7

DATE	GROSS ALPHA, DIS- SOLVED (UG/L AS U-NAT)	GROSS ALPHA, SUSP. TOTAL (UG/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 (PCI/L AS SR/ YT-90)	GROSS BETA, SUSP. TOTAL (PCI/L AS SR/ YT-90)	RADIUM 226, DIS- SOLVED, RADON METHOD (PCT/L)	URANIUM DIS- SOLVED, EXTRAC- TION (UG/L)
APR 20...	<2.7	1.9	1.3	2.2	1.8	2.1	1.7	.08	.15
SEP 13...	<7.4	1.4	1.0	4.9	1.5	4.7	1.3	.08	.22

DATE	SEDI- MENT, DIS- SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM	DATE	SEDI- MENT, DIS- SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
DEC 01...	19	292	93	MAY 25...	155	21100	96
FEB 09...	18	583	94	JUL 19...	11	74	98
APR 20...	61	5450	91	SEP 13...	6	21	51

POTOMAC RIVER BASIN

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.--54 years, 62.2 ft³/s (1.762 m³/s), 13.58 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 discharge, 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)
Mar. 27	2245	1200 34.0	5.86 1.786	June 21	0545	1510 42.8	6.70 2.042
Apr. 15	2215	*1940 54.9	7.68 2.341				

Minimum discharge, 4.6 ft³/s (0.13 m³/s) Sept. 11, 12, gage height, 1.18 ft (0.360 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14	15	105	26	23	109	68	79	66	45	12	17
2	13	14	45	30	170	104	84	77	62	43	12	15
3	12	14	33	28	71	65	293	72	65	42	11	10
4	12	196	29	34	36	61	83	77	77	120	11	6.6
5	12	114	27	38	30	58	72	69	70	89	84	6.5
6	12	36	26	36	33	60	68	66	186	41	112	7.7
7	12	28	25	32	61	78	87	66	345	38	22	6.6
8	12	25	24	30	38	331	137	78	105	38	17	6.0
9	11	23	23	28	28	175	204	72	74	37	16	5.5
10	9.9	21	22	124	26	169	621	60	65	35	13	5.3
11	11	20	25	70	26	101	269	59	59	34	20	5.0
12	11	20	34	32	30	84	137	57	55	35	52	16
13	25	75	32	27	37	72	121	54	53	35	23	85
14	34	23	27	26	39	65	111	51	52	34	22	28
15	12	20	28	25	54	61	820	117	53	32	21	9.3
16	19	19	313	24	104	58	398	503	51	34	20	6.9
17	11	18	86	23	99	56	193	170	48	30	20	6.4
18	9.9	18	60	24	109	152	153	103	62	29	49	6.3
19	9.9	17	46	24	86	226	128	122	186	28	23	7.0
20	11	17	40	21	71	87	117	121	193	38	20	6.6
21	31	17	36	22	69	270	109	235	588	73	18	76
22	12	17	34	23	77	101	97	155	101	26	26	74
23	9.9	17	32	119	118	82	92	232	80	20	132	16
24	9.2	17	30	43	86	71	529	125	85	24	40	10
25	183	16	30	29	87	66	185	109	69	19	24	8.7
26	95	16	38	26	76	61	124	103	56	17	21	7.1
27	29	16	34	25	67	359	109	98	50	16	20	7.6
28	23	52	32	24	64	217	96	79	71	14	23	7.4
29	20	301	32	23	---	100	88	130	60	12	20	7.6
30	18	53	30	25	---	83	83	104	47	12	18	63
31	16	---	28	24	---	74	---	69	---	12	17	---
TOTAL	719.8	1255	1406	1085	1815	3656	5676	3512	3134	1102	939	540.1
MEAN	23.2	41.8	45.4	35.0	64.8	118	189	113	104	35.5	30.3	18.0
MAX	183	301	313	124	170	359	820	503	588	120	132	85
MIN	9.2	14	22	21	23	56	68	51	47	12	11	5.0
CFSM	.37	.67	.73	.56	1.04	1.90	3.04	1.82	1.67	.57	.49	.29
IN.	.43	.75	.84	.65	1.09	2.19	3.39	2.10	1.87	.66	.56	.32

CAL YR 1982 TOTAL 18887.5 MEAN 51.7 MAX 813 MIN 8.6 CFSM .83 IN 11.30
WTR YR 1983 TOTAL 24839.9 MEAN 68.1 MAX 820 MIN 5.0 CFSM 1.10 IN 14.86

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.--45 years, 84.7 ft³/s (2.399 m³/s), 15.80 in/yr (401 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 discharge 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)
Mar. 27	1930	3250 92.0	6.28 1.914	June 7	0015	4280 121	7.18 2.188
Apr. 10	0715	3130 88.6	6.17 1.881	June 19	2145	*6010 170	8.45 2.576
Apr. 15	1700	4110 116	7.04 2.146	June 20	2300	3280 92.9	6.31 1.923
Apr. 15	2315	3540 100	6.55 1.996	Aug. 5	1900	4920 139	7.73 2.356

Minimum daily discharge, 7.6 ft³/s (0.22 m³/s) Oct. 10, 11, 12, 18, 19.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14	14	155	23	26	142	60	70	65	40	9.4	32
2	11	14	76	23	224	173	84	66	57	36	11	19
3	8.8	16	43	22	129	71	544	62	62	31	7.9	16
4	8.8	86	37	19	51	52	131	66	149	58	8.3	14
5	11	85	32	28	39	45	79	58	203	61	625	14
6	10	27	29	31	40	70	69	53	601	33	113	13
7	12	20	25	24	72	117	85	50	1230	30	35	13
8	10	17	24	23	52	634	141	57	159	28	25	11
9	10	15	22	22	37	306	376	55	85	28	22	10
10	7.6	15	22	108	32	201	1610	47	64	26	19	10
11	7.6	15	24	89	36	111	935	44	52	24	34	10
12	7.6	19	50	42	50	77	243	42	45	24	48	9.9
13	43	282	30	31	70	60	124	42	41	22	21	88
14	40	50	26	27	93	52	94	42	40	20	17	33
15	13	27	30	27	141	49	1420	186	36	20	15	18
16	24	18	450	25	165	45	1150	792	34	19	15	14
17	10	16	101	24	177	42	220	352	33	18	13	14
18	7.6	15	48	24	231	350	144	101	76	17	44	13
19	7.6	15	40	23	204	516	111	91	712	18	17	12
20	10	14	38	22	155	133	91	105	938	48	14	12
21	38	13	34	22	145	646	78	284	1270	43	12	100
22	14	13	29	25	155	239	71	283	185	17	21	68
23	12	14	28	201	252	99	78	303	90	14	80	20
24	11	13	27	76	165	73	821	180	62	17	32	15
25	329	13	25	43	88	60	378	85	47	13	20	13
26	142	13	35	36	66	54	160	72	37	14	16	13
27	37	20	29	32	51	725	114	76	31	12	16	13
28	24	86	31	30	47	502	96	55	65	11	44	12
29	19	480	31	28	---	137	85	155	80	8.8	23	11
30	15	82	25	31	---	82	77	219	47	9.1	18	61
31	18	---	23	31	---	68	---	88	---	8.8	39	---
TOTAL	932.6	1527	1619	1212	2993	5931	9669	4181	6596	768.7	1434.6	701.9
MEAN	30.1	50.9	52.2	39.1	107	191	322	135	220	24.8	46.3	23.4
MAX	329	480	450	201	252	725	1610	792	1270	61	625	100
MIN	7.6	13	22	19	26	42	60	42	31	8.8	7.9	9.9
CFSM	.41	.70	.72	.54	1.47	2.62	4.42	1.85	3.02	.34	.64	.32
IN.	.48	.78	.83	.62	1.53	3.03	4.94	2.14	3.37	.39	.73	.36

CAL YR 1982 TOTAL 23071.1 MEAN 63.2 MAX 1030 MIN 5.5 CFSM .87 IN 11.79
WTR YR 1983 TOTAL 37565.8 MEAN 103 MAX 1610 MIN 7.6 CFSM 1.42 IN 19.20

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 September 1983 (discontinued). 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. Records include pumpage from the Patuxent River to augment water supply for Washington Suburban Sanitary District Aug. 12, 1939, to Aug. 1960. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--60 years, 22.6 ft³/s (0.640 m³/s), 14.55 in/yr (370 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)
Mar. 27	2000	736 20.8	6.48 1.975	May 23	0300	1140 32.3	7.93 2.417
Apr. 10	0200	695 19.7	6.27 1.911	June 7	0030	746 21.1	6.53 1.990
Apr. 10	0800	630 17.8	5.86 1.786	Aug. 5	2030	686 19.4	6.21 1.893
Apr. 15	1800	*1250 35.4	8.21 2.502				

Minimum discharge, 2.6 ft³/s (0.074 m³/s) Oct. 9, 10, 11, Sept. 10, 11, 12, gage height, 1.56 ft (0.475 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.9	4.8	30	8.4	9.2	36	20	22	21	11	4.2	4.8
2	4.0	4.7	16	8.4	80	43	27	22	19	11	4.4	4.3
3	3.4	4.8	11	8.1	36	21	154	21	19	9.7	4.1	4.2
4	3.1	46	10	7.7	17	17	31	23	23	19	4.1	4.1
5	3.4	27	9.2	8.9	15	16	24	20	19	15	113	4.1
6	3.1	8.0	8.8	9.3	13	17	22	18	64	11	33	3.8
7	3.1	6.5	8.0	8.4	18	21	28	18	167	9.2	8.1	3.4
8	3.1	6.0	7.6	7.8	15	138	58	21	28	8.8	6.8	3.6
9	3.0	5.7	7.5	7.7	13	71	121	20	21	8.6	6.0	3.4
10	2.8	5.6	7.1	28	11	53	345	17	18	8.4	5.4	3.0
11	2.9	5.3	8.1	27	8.4	28	119	17	17	8.0	6.9	2.8
12	3.2	5.4	10	13	14	22	42	16	15	7.6	9.6	3.0
13	6.2	14	8.5	10	16	21	31	16	14	7.1	6.5	14
14	6.1	6.7	8.2	9.7	18	17	27	16	13	6.6	5.9	6.5
15	3.7	5.9	11	9.7	21	16	458	35	13	6.4	5.5	4.2
16	3.9	5.3	164	9.0	31	15	133	215	13	6.2	5.1	4.0
17	3.3	5.4	26	8.5	37	15	44	60	12	5.9	5.0	4.5
18	3.3	5.4	15	8.5	51	83	38	27	12	5.6	9.0	4.5
19	3.5	5.5	12	7.9	50	116	31	34	14	5.6	5.2	4.4
20	3.7	5.5	12	7.3	43	30	28	41	45	8.9	4.7	4.4
21	9.5	5.6	11	7.6	51	131	26	82	119	8.7	4.2	19
22	4.3	5.6	9.6	8.2	64	38	24	105	23	5.7	4.7	15
23	3.8	5.7	10	48	79	25	26	237	16	5.5	18	6.0
24	3.7	5.7	9.6	22	39	21	249	35	14	6.0	8.3	5.7
25	66	5.3	9.3	14	26	19	63	26	13	5.3	5.7	5.6
26	31	5.3	11	12	21	17	36	24	12	5.3	5.2	5.7
27	7.8	5.4	10	11	18	189	30	29	11	4.8	4.7	5.6
28	5.9	16	10	10	17	91	27	21	11	4.5	4.6	5.3
29	5.2	123	9.7	9.6	---	32	27	45	14	4.5	5.0	5.2
30	5.0	16	8.6	10	---	24	24	47	12	4.2	4.8	11
31	4.9	---	8.4	9.7	---	22	---	24	---	4.1	4.7	---
TOTAL	220.8	377.1	497.2	375.4	831.6	1405	2315	1354	812	238.2	322.4	175.1
MEAN	7.12	12.6	16.0	12.1	29.7	45.3	77.2	43.7	27.1	7.68	10.4	5.84
MAX	66	123	164	48	80	189	458	237	167	19	113	19
MIN	2.8	4.7	7.1	7.3	8.4	15	20	16	11	4.1	4.1	2.8
CFSM	.34	.60	.76	.57	1.41	2.15	3.66	2.07	1.28	.36	.49	.28
IN.	.39	.66	.88	.66	1.47	2.48	4.08	2.39	1.43	.42	.57	.31

CAL YR 1982 TOTAL 5812.4 MEAN 15.9 MAX 393 MIN 1.8 CFSM .75 IN 10.25
WTR YR 1983 TOTAL 8923.8 MEAN 24.4 MAX 458 MIN 2.8 CFSM 1.16 IN 15.73

01651000 NORTHWEST BRANCH ANACOSTIA RIVER NEAR HYATTSVILLE, MD

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, 1.0 mi (1.6 km) west of Hyattsville, and 1.6 mi (2.6 km) upstream from confluence with Northeast Branch.

DRAINAGE AREA.--49.4 mi² (127.9 km²).

PERIOD OF RECORD.--July 1938 to current year. Monthly discharge only for July 1938 published in WSP 1302.

REVISED 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 (Washington Suburban Sanitary Commission bench mark). 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.

REMARKS.--Records good. Prior to June 1961, low flow regulated by storage at Burnt Mills Dam, 7.0 mi (11.3 km) above station. Inflow pumped from Patuxent River to augment water supply for Washington Suburban Sanitary District, August 1939 to August 1960. Small diversion since 1962 for irrigation of golf courses above station. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--45 years, 46.4 ft³/s (1.314 m³/s), 12.76 in/yr (324 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-backwater measurements at gage height 14.47 ft (4.410 m); minimum discharge, 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 (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Mar. 27	1815	1930 54.7	3.89 1.896	June 6	2330	1880 53.2	3.85 1.173
Apr. 15	1800	*2230 63.2	4.14 1.262	June 19	2115	1990 56.4	3.94 1.201

Minimum discharge, 3.2 ft³/s (0.091 m³/s) Oct. 11.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.6	7.5	96	13	16	93	38	44	37	22	6.5	11
2	8.5	7.5	34	15	179	88	74	42	32	21	5.6	9.5
3	6.5	7.5	21	14	79	35	291	41	40	19	6.5	9.1
4	4.8	110	18	14	28	29	56	46	86	79	7.4	8.3
5	5.6	70	16	23	23	27	44	40	47	62	174	10
6	6.5	15	15	21	31	40	41	36	270	22	131	9.1
7	5.5	10	13	18	61	64	59	35	359	19	19	9.0
8	4.6	9.3	12	14	33	298	102	45	56	18	15	6.5
9	4.9	8.5	12	13	24	146	232	39	40	17	14	7.1
10	4.3	9.2	12	87	24	86	636	32	35	16	13	6.5
11	3.7	8.7	16	58	16	46	307	31	32	17	40	5.3
12	4.0	13	32	24	20	35	88	31	29	16	37	14
13	22	119	19	18	28	31	63	31	28	15	14	82
14	19	12	15	18	40	31	54	30	26	15	11	20
15	6.9	8.5	18	17	75	28	899	114	24	14	11	9.4
16	12	7.5	300	16	84	26	356	448	24	13	9.8	7.7
17	5.1	7.6	49	16	112	25	101	135	22	12	9.6	7.5
18	4.8	7.5	24	12	114	188	78	49	264	11	46	8.4
19	4.8	8.0	23	14	92	236	60	72	282	13	13	8.0
20	4.8	8.5	22	15	73	54	53	77	206	24	11	8.5
21	18	8.5	18	14	69	308	52	203	250	29	10	82
22	8.0	8.5	16	15	86	76	49	139	56	11	27	49
23	5.0	8.5	17	152	145	48	58	309	36	11	107	11
24	4.8	8.9	17	41	74	39	480	76	30	14	24	8.0
25	186	7.9	16	23	43	33	135	45	26	11	13	8.5
26	67	7.5	23	21	35	30	69	40	23	8.7	11	8.5
27	15	7.5	20	19	29	388	57	47	22	9.4	9.8	8.5
28	9.0	54	19	18	27	226	51	36	67	8.1	16	8.4
29	7.8	282	19	17	---	60	51	114	43	7.0	11	7.0
30	7.5	31	16	21	---	46	48	129	23	6.5	11	57
31	7.8	---	14	19	---	42	---	44	---	6.5	11	---
TOTAL	483.8	879.1	962	800	1660	2902	4682	2600	2515	567.2	845.2	504.8
MEAN	15.6	29.3	31.0	25.8	59.3	93.6	156	83.9	83.8	18.3	27.3	16.8
MAX	186	282	300	152	179	388	899	448	359	79	174	82
MIN	3.7	7.5	12	12	16	25	38	30	22	6.5	5.6	5.3
CFSM	.32	.59	.63	.52	1.20	1.90	3.16	1.70	1.70	.37	.55	.34
IN.	.36	.66	.72	.60	1.25	2.19	3.53	1.96	1.89	.43	.64	.38

CAL YR 1982	TOTAL	13708.9	MEAN 37.6	MAX 716	MIN 3.7	CFSM .76	IN 10.32
WTR YR 1983	TOTAL	19401.1	MEAN 53.2	MAX 899	MIN 3.7	CFSM 1.08	IN 14.61

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.--18 years, 47.2 ft³/s (1.337 m³/s), 16.23 in/yr (412 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, 1977, and 1980-83.

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)
Apr. 10	1800	880 24.9	7.08 2.158	May 16	2130	471 13.3	5.86 1.786
Apr. 16	0800	*1220 34.6	7.67 2.338	June 21	1830	912 25.8	7.14 2.176
Apr. 24	2030	520 14.7	6.08 1.853	Aug. 6	0230	547 15.5	6.20 1.890

No flow Sept. 6-12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.6	3.9	55	16	17	110	64	73	52	31	1.6	.75
2	2.1	3.9	59	15	41	170	61	68	48	27	7.6	.51
3	1.5	4.0	35	15	70	66	190	62	45	23	3.5	.26
4	1.3	11	27	14	32	54	88	64	126	38	1.8	.16
5	1.2	49	24	17	28	51	71	56	121	202	51	.05
6	1.2	15	26	32	24	50	69	52	71	52	329	.00
7	1.2	8.1	23	21	40	68	81	50	190	32	38	.00
8	.94	6.6	17	16	48	136	90	51	67	25	15	.00
9	.76	5.9	16	15	34	111	248	51	51	21	9.5	.00
10	.61	5.4	15	24	26	89	697	44	44	18	6.9	.00
11	.58	5.1	16	58	20	71	696	41	40	15	5.5	.00
12	.65	5.0	22	31	26	59	329	39	36	14	8.8	.00
13	1.8	77	21	22	30	53	152	37	33	12	7.0	36
14	6.3	31	18	18	36	50	118	36	47	10	5.1	35
15	6.3	13	21	19	50	48	272	35	29	9.3	4.1	6.8
16	4.2	9.4	124	17	80	45	1050	223	25	8.5	3.4	3.4
17	3.2	8.2	71	15	120	43	300	263	22	8.0	2.8	2.2
18	2.7	7.5	37	13	100	144	184	69	20	8.2	2.8	1.7
19	2.9	7.1	30	12	70	353	147	55	23	18	2.8	1.4
20	3.0	7.0	30	11	55	105	121	55	103	17	2.0	.97
21	4.2	6.9	27	12	44	263	103	148	702	21	1.2	1.1
22	5.2	7.0	22	14	42	183	94	241	177	11	.89	19
23	4.7	6.9	20	76	55	88	89	168	65	6.9	.34	6.1
24	3.9	6.7	19	57	50	76	366	83	50	7.9	2.4	2.9
25	23	6.0	18	34	38	68	321	63	41	7.0	1.8	2.1
26	63	5.6	18	26	32	61	151	55	34	6.3	.64	2.1
27	14	5.6	18	23	28	105	112	62	30	4.9	.35	1.5
28	7.5	7.8	17	21	40	255	96	49	26	4.0	.63	1.1
29	5.6	242	21	19	---	96	86	74	69	3.1	7.4	.86
30	4.6	77	24	19	---	76	80	153	43	2.4	2.5	10
31	4.2	---	18	18	---	69	---	67	---	1.9	1.0	---
TOTAL	184.94	654.6	909	720	1276	3216	6526	2587	2430	665.4	527.35	135.96
MEAN	5.97	21.8	29.3	23.2	45.6	104	218	83.5	81.0	21.5	17.0	4.53
MAX	63	242	124	76	120	353	1050	263	702	202	329	36
MIN	.58	3.9	15	11	17	43	61	35	20	1.9	.34	.00
CFSM	.15	.55	.74	.59	1.15	2.63	5.52	2.11	2.05	.54	.43	.12
IN.	.17	.62	.86	.68	1.20	3.03	6.15	2.44	2.29	.63	.50	.13

CAL YR 1982	TOTAL	12168.31	MEAN 33.3	MAX 757	MIN .00	CFSM .84	IN 11.46
WTR YR 1983	TOTAL	19832.25	MEAN 54.3	MAX 1050	MIN .00	CFSM 1.38	IN 18.68

POTOMAC RIVER BASIN

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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.

REVISED RECORDS.--WDR MD-DE-79-1: 1974(P).

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 except for period of no gage-height record, July 11 to Aug. 22, which are fair. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--15 years, 20.9 ft³/s (0.592 m³/s), 15.34 in/yr (390 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 at times in 1977, 1980, 1981, and 1983.

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)
Mar. 21	1700	407 11.5	4.57 1.393	Apr. 16	0600	*511 14.5	4.89 1.490

No flow Aug. 23, 24, 28, Sept. 12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.6	3.5	31	15	11	57	25	22	24	8.0	.08	2.7
2	1.4	3.5	33	14	21	93	23	22	22	7.0	.10	.94
3	1.3	3.3	19	13	32	32	64	21	19	5.5	.07	.64
4	1.1	13	15	12	18	24	36	26	24	4.7	.06	.49
5	1.1	75	13	14	14	21	24	21	21	13	.10	.32
6	1.1	24	41	27	13	20	25	18	16	8.3	.20	.22
7	1.1	10	32	19	22	25	28	17	15	5.7	.15	.16
8	1.1	7.8	17	15	27	30	29	18	15	4.6	.10	.13
9	1.0	7.0	14	13	18	27	30	24	15	3.7	.20	.11
10	.85	6.3	12	18	15	28	148	17	13	3.4	.40	.05
11	.83	6.0	14	31	11	24	111	16	12	2.6	.30	.03
12	.83	5.7	30	19	15	20	54	15	10	2.2	.80	.00
13	1.6	73	23	14	19	18	36	15	9.3	1.8	.50	2.1
14	4.0	38	16	13	19	17	32	14	16	1.6	.30	10
15	3.7	18	19	15	25	17	67	15	12	1.4	.20	7.0
16	2.4	14	108	15	40	16	328	46	9.0	1.0	.18	2.6
17	1.7	11	60	12	71	16	70	45	7.9	.70	.30	1.3
18	1.4	9.4	26	11	58	75	44	21	6.6	.60	.20	1.3
19	1.3	8.6	20	9.0	42	100	39	17	6.3	1.6	.16	4.4
20	1.3	8.4	21	8.1	29	38	34	25	7.7	.70	.10	4.1
21	1.5	8.4	18	8.6	24	211	30	28	41	.50	.05	4.8
22	1.4	7.7	16	11	23	104	29	72	28	.40	.01	17
23	1.5	7.7	15	37	29	38	28	83	13	.40	.00	7.8
24	1.7	7.5	15	29	28	31	104	30	9.5	.80	.00	3.3
25	12	7.0	14	18	22	28	55	22	7.3	.60	.03	2.2
26	29	6.7	14	15	19	25	37	20	6.3	.50	.07	1.9
27	14	6.9	14	13	17	37	31	33	5.7	.40	.01	1.6
28	7.2	8.2	13	13	16	85	28	23	6.2	.30	.00	1.6
29	5.0	85	20	12	---	39	25	26	12	.20	.09	1.5
30	4.1	39	24	12	---	28	24	63	10	.10	.43	6.0
31	3.8	---	17	12	---	27	---	35	---	.06	1.4	---
TOTAL	111.91	529.6	744	487.7	698	1351	1640	870	419.8	82.36	6.59	86.29
MEAN	3.61	17.7	24.0	15.7	24.9	43.6	54.7	28.1	14.0	2.66	.21	2.88
MAX	29	85	108	37	71	211	328	83	41	13	1.4	17
MIN	.83	3.3	12	8.1	11	16	23	14	5.7	.06	.00	.00
CFSM	.20	.96	1.30	.85	1.35	2.36	2.96	1.52	.76	.14	.01	.16
IN.	.23	1.06	1.50	.98	1.40	2.72	3.30	1.75	.84	.17	.01	.17

CAL YR 1982 TOTAL 5844.77 MEAN 16.0 MAX 168 MIN .18 CFSM .87 IN 11.75
WTR YR 1983 TOTAL 7027.25 MEAN 19.3 MAX 328 MIN .00 CFSM 1.04 IN 14.13

POTOMAC RIVER BASIN

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 good except those above 60 ft³/s (1.7 m³/s), which are fair. Occasional regulation by reservoir on Western Branch of St. Marys River 2.0 mi (3.2 km) upstream since 1975, total capacity, 3,200 acre feet (3.95 hm³). Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--37 years, 23.7 ft³/s (0.671 m³/s), 13.41 in/yr (341 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 discharge, 0.2 ft³/s (0.006 m³/s) Sept. 7, 1966, gage height, 1.13 ft (0.344 m).

REVISIONS.--The maximum discharges for water years 1981 and 1982 have been revised to 196 ft³/s (5.55 m³/s) May 11, 1981, gage height, 3.39 ft (1.033 m), and 422 ft³/s (12.0 m³/s) June 5, 1982, gage height, 5.15 ft (1.570 m), superseding figures published in reports for 1981 and 1982.

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)
Mar. 21	1700	851 24.1	7.24 2.207	Apr. 16	0600	*1230 34.8	8.63 2.630
Apr. 10	1500	469 13.3	5.45 1.661				

Minimum discharge, 1.6 ft³/s (0.045 m³/s) Aug. 23, 25, 26, 27, 28, gage height 1.26 ft (0.384 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.8	6.0	36	14	11	47	30	26	23	5.5	2.4	28
2	5.1	5.6	37	13	20	115	26	23	21	5.3	3.0	12
3	4.4	5.6	26	13	28	64	49	21	17	4.9	2.4	8.9
4	4.1	7.7	21	11	20	45	37	31	16	4.4	2.4	6.5
5	3.8	55	18	13	16	33	31	23	14	6.6	2.4	5.2
6	3.9	22	16	21	15	28	29	20	12	5.4	4.8	4.3
7	3.9	14	15	16	29	26	30	18	11	4.5	4.1	4.1
8	3.8	11	14	14	31	52	34	17	13	3.8	3.1	3.3
9	3.6	9.2	12	12	23	47	40	19	12	3.6	2.8	2.7
10	3.4	8.1	11	15	19	38	281	16	10	3.3	5.6	2.4
11	3.1	7.6	12	22	17	32	222	15	9.0	3.0	3.8	2.2
12	3.1	7.5	25	17	18	27	112	14	8.3	2.9	8.3	2.0
13	4.8	65	22	14	20	22	75	13	7.6	3.0	6.7	4.2
14	7.8	33	18	13	20	19	56	13	7.1	2.9	4.3	7.7
15	5.7	37	19	15	24	18	100	13	6.5	2.8	3.9	6.0
16	4.6	24	90	14	40	16	660	39	5.9	2.7	3.1	4.5
17	3.8	17	72	12	58	15	197	33	5.5	2.5	2.7	3.8
18	3.4	14	45	11	68	105	99	20	5.1	2.4	2.4	3.5
19	3.1	12	31	10	65	170	75	17	5.1	2.6	2.3	3.0
20	3.2	11	27	9.3	50	78	57	24	20	2.9	2.2	2.7
21	3.3	10	22	8.9	39	395	43	21	27	3.5	2.1	5.8
22	3.3	9.6	18	10	32	210	36	53	16	3.5	1.8	23
23	3.3	9.2	16	28	36	90	32	120	11	2.6	1.6	8.6
24	3.3	9.0	15	25	37	64	174	58	8.6	2.7	1.9	6.1
25	27	7.7	14	20	29	48	124	36	7.6	2.6	1.7	4.8
26	29	7.5	14	17	24	36	74	28	6.3	2.5	1.6	4.2
27	15	7.7	13	15	20	51	52	68	5.6	2.3	1.7	3.9
28	10	10	13	14	18	89	41	31	5.3	2.2	1.7	3.6
29	8.2	72	18	13	---	60	33	32	5.7	2.1	3.0	3.3
30	7.1	41	20	13	---	43	28	39	6.1	2.0	16	12
31	6.4	---	16	128	---	34	---	29	---	1.9	20	---
TOTAL	200.3	556.0	746	455.2	827	2117	2876	930	328.3	102.9	125.8	192.3
MEAN	6.46	18.5	24.1	14.7	29.5	68.3	95.9	30.0	10.9	3.32	4.06	6.41
MAX	29	72	90	28	68	395	660	120	27	6.6	20	28
MIN	3.1	5.6	11	8.9	11	15	26	13	5.1	1.9	1.6	2.0
CFSM	.27	.77	1.00	.61	1.23	2.85	4.00	1.25	.45	.14	.17	.27
IN.	.31	.86	1.16	.71	1.28	3.28	4.46	1.44	.51	.16	.19	.30

CAL YR 1982	TOTAL	7605.8	MEAN 20.8	MAX 316	MIN 1.9	CFSM .87	IN 11.79
WTR YR 1983	TOTAL	9456.8	MEAN 25.9	MAX 660	MIN 1.6	CFSM 1.08	IN 14.66

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 except those for January, which are fair. 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.--42 years, 297 ft³/s (8.411 m³/s), 30.10 in/yr (765 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 discharge, 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)
Apr. 24	2115	2370 67.1	5.75 1.753	May 16	2315	*2400 68.0	5.79 1.765

Minimum discharge, 12 ft³/s (0.34 m³/s) Sept. 12, gage height, 1.90 ft (0.579 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	48	30	638	249	352	333	406	297	204	60	33	83
2	41	28	691	211	368	393	343	334	189	54	42	42
3	34	28	487	185	525	417	390	472	167	46	33	27
4	30	52	374	149	427	471	344	1450	310	53	28	23
5	28	157	297	144	335	560	298	1070	269	53	26	22
6	28	80	257	124	274	501	312	683	204	71	26	26
7	28	59	220	117	241	488	450	503	181	48	27	26
8	28	53	177	107	190	566	643	424	153	38	25	22
9	28	46	157	94	150	763	761	387	123	33	21	18
10	41	42	134	92	110	597	1110	293	103	31	22	16
11	44	41	120	113	86	479	1000	239	84	29	24	14
12	36	40	110	104	92	399	830	205	75	27	25	14
13	39	63	98	78	102	335	640	178	66	26	28	32
14	68	60	91	72	108	342	512	167	59	24	22	61
15	48	51	95	66	120	319	1040	386	54	23	19	30
16	43	46	554	60	130	269	880	1310	54	21	16	22
17	45	45	465	58	188	235	642	1800	123	23	16	20
18	39	42	326	56	208	235	500	934	146	40	18	21
19	34	40	273	54	227	590	399	656	160	35	26	19
20	32	41	253	52	267	738	334	561	153	75	21	17
21	53	51	209	52	400	1170	278	530	315	328	19	21
22	50	241	176	64	627	1080	227	752	243	211	17	34
23	39	424	290	75	777	728	200	1160	163	100	26	30
24	34	303	752	105	777	544	1530	788	120	296	42	21
25	34	285	775	110	621	424	1800	553	96	165	28	20
26	37	216	704	105	467	338	928	414	78	96	20	19
27	31	208	701	100	362	557	621	324	67	71	18	20
28	31	292	620	97	328	872	472	252	61	55	86	19
29	28	1100	489	89	---	701	395	235	67	46	49	18
30	28	673	373	151	---	571	365	389	78	39	31	20
31	28	---	296	473	---	479	---	252	---	35	29	---
TOTAL	1155	4837	11202	3606	8859	16494	18650	17998	4165	2252	863	777
MEAN	37.3	161	361	116	316	532	622	581	139	72.6	27.8	25.9
MAX	68	1100	775	473	777	1170	1800	1800	315	328	86	83
MIN	28	28	91	52	86	235	200	167	54	21	16	14
CFSM	.28	1.20	2.69	.87	2.36	3.97	4.64	4.34	1.04	.54	.21	.19
IN.	.32	1.34	3.11	1.00	2.46	4.58	5.18	5.00	1.16	.63	.24	.22

CAL YR 1982	TOTAL	103301	MEAN 283	MAX 2500	MIN 21	CFSM 2.11	IN 28.68
WTR YR 1983	TOTAL	90858	MEAN 249	MAX 1800	MIN 14	CFSM 1.86	IN 25.22

MONONGAHELA RIVER BASIN

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, 87,800 acre-ft (108 hm³) May 24, elevation, 2,460.60 ft (749.991 m); minimum, 64,000 acre-ft (78.9 hm³) Nov. 23, elevation, 2,453.90 ft (747.949 m).

MONTHEND ELEVATION AND CONTENTS, AT 2400, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

Date	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)
Sept. 30	2456.8	73900	
Oct. 31	2455.0	67700	-6200
Nov. 30	2454.3	65400	-2300
Dec. 31	2455.2	68400	+3000
CAL YR 1982			-5700
Jan. 31	2455.1	68100	-300
Feb. 28	2456.2	71800	+3700
Mar. 31	2459.1	82200	+10400
Apr. 30	2460.1	85900	+3700
May 31	2460.5	87400	+1500
June 30	2459.6	84100	-3300
July 31	2458.3	79300	-4800
Aug. 31	2457.2	75400	-3900
Sept. 30	2456.1	71500	-3900
WTR YR 1983			-2400

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).

PERIOD OF RECORD.--August 1898 to December 1904 and October 1940 to current year. Annual maximum, water years 1905, 1923-31, 1940, published in WSP 1675. October, November 1940 monthly discharge only, published in WSP 1305. September 1922 to September 1926 (gage heights only) in reports of Pennsylvania Department of Forests and Waters.

REVISED RECORDS.--WSP 1385: Drainage area at former site, 1898-1905, 1941(M), 1942, 1944-45, 1948-49, 1951(M).

GAGE.--Water-stage recorder. Datum of gage is 1,487.33 ft (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. 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.--49 years (water years 1899-1904, 1941-83), 639 ft³/s (18.10 m³/s), 29.42 in/yr (747 mm/yr), adjusted for storage since October 1940.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 15,600 ft³/s (440 m³/s) Mar. 29, 1924, gage height, 14.2 ft (4.33 m), from floodmarks, site and datum then in use or 10.2 ft (3.11 m), present site and datum, from rating curve extended above 5,800 ft³/s (164 m³/s) on basis of slope-area measurement of peak flow; minimum daily discharge, 8.2 ft³/s (0.23 m³/s) Sept. 11, 1966.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4,030 ft³/s (114 m³/s) May 16, gage height, 5.27 ft (1.606 m); minimum discharge, 35 ft³/s (0.99 m³/s) Sept. 23, gage height, 1.88 ft (0.573 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	259	125	855	436	570	544	785	675	660	282	105	121
2	139	152	1050	383	541	597	575	802	572	110	122	150
3	82	154	763	385	718	639	611	1140	580	101	125	71
4	174	169	580	340	680	716	643	2640	839	101	112	56
5	229	300	487	290	507	803	597	2500	700	245	104	51
6	223	201	492	296	449	760	580	1910	588	228	68	199
7	235	124	468	296	441	839	726	1120	561	232	59	187
8	214	173	371	229	386	831	1110	985	496	212	95	99
9	120	189	334	210	320	1210	1380	846	440	82	102	94
10	66	182	328	232	285	970	1760	776	402	74	103	45
11	184	205	273	258	200	802	1890	692	301	174	126	38
12	228	201	249	272	185	642	1730	621	226	215	116	79
13	234	136	259	230	185	541	1370	486	407	183	61	128
14	262	134	273	239	260	591	1170	380	312	185	58	129
15	245	177	246	186	320	567	1940	557	310	222	92	145
16	151	185	770	156	276	503	1840	2090	281	113	97	119
17	95	173	843	233	320	459	1320	3130	305	61	89	60
18	132	180	545	238	367	429	1200	1670	280	218	97	50
19	189	170	461	231	361	709	1020	1190	287	229	96	93
20	165	114	544	262	404	1130	915	1090	371	138	92	200
21	152	96	444	283	559	1660	824	814	510	380	80	107
22	172	171	379	204	867	1960	675	1160	494	337	101	117
23	125	633	461	170	1080	1280	429	2210	393	202	142	79
24	83	509	1070	340	1170	986	1910	1700	333	243	114	66
25	133	443	1070	350	969	787	3440	1280	175	347	119	47
26	156	394	1000	307	717	570	2000	1020	149	210	102	84
27	158	344	1020	281	568	753	1430	830	249	167	56	85
28	151	375	979	249	577	1600	1220	578	243	141	91	93
29	152	1700	794	222	---	1270	1050	587	188	143	155	109
30	100	1130	646	233	---	1030	757	683	238	81	122	74
31	67	---	540	629	---	868	---	768	---	71	120	---
TOTAL	5075	9239	18594	8670	14282	27046	36897	36930	11890	5727	3121	2975
MEAN	164	308	600	280	510	872	1230	1191	396	185	101	99.2
MAX	262	1700	1070	629	1170	1960	3440	3130	839	380	155	200
MIN	66	96	246	156	185	429	429	380	149	61	56	38
(#)	-101	-38.7	+48.8	-4.9	+66.6	+169	+62	+24.4	-55.5	-78.1	-63.5	-65.5
MEAN#	63	269	649	275	577	1041	1292	1215	340	107	37.5	33.7
CFSM#	0.21	0.91	2.20	0.93	1.96	3.53	4.38	4.12	1.15	0.36	0.13	0.11
IN#	0.24	1.02	2.54	1.07	2.04	4.07	4.89	4.75	1.28	0.42	0.15	0.12

CAL YR 1982 TOTAL 196933 MEAN 540 MAX 4240 MIN 44 MEAN# 532 CFSM# 1.80 IN# 24.46
WTR YR 1983 TOTAL 180446 MEAN 494 MAX 3440 MIN 38 MEAN# 491 CFSM# 1.66 IN# 22.60

* Change in contents, equivalent in cubic feet per second, in Deep Creek Reservoir furnished by Pennsylvania Electric Co.

* Adjusted for change in contents.

MONONGAHELA RIVER BASIN

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).

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. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--19 years, 87.6 ft³/s (2.481 m³/s), 24.33 in/yr (618 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 discharge, 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)
Apr. 15	1000	605 17.1	3.35 1.021	Apr. 24	2000	*770 21.8	3.60 1.097

Minimum discharge, 3.5 ft³/s (0.10 m³/s) Sept. 30, gage height, 0.61 ft (0.186 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.6	7.0	98	62	70	84	122	96	66	22	8.1	21
2	8.9	7.0	92	55	83	86	100	106	60	20	9.0	9.5
3	8.2	6.9	79	49	143	88	102	162	58	18	8.0	7.3
4	7.8	19	67	41	123	104	87	335	155	19	9.5	6.5
5	7.6	22	58	42	95	125	79	340	150	19	10	6.4
6	7.4	13	53	38	82	127	83	257	123	17	8.0	6.8
7	7.0	11	44	36	74	141	84	165	109	15	7.2	5.6
8	7.0	10	38	33	62	152	149	130	85	14	6.5	5.2
9	7.0	9.4	35	30	52	190	287	104	70	13	6.0	4.6
10	8.0	9.4	33	30	46	156	350	83	60	13	5.8	4.3
11	9.4	8.6	30	33	32	141	324	72	52	12	14	4.1
12	8.0	8.4	26	30	46	118	253	64	47	11	22	4.0
13	11	11	24	26	40	100	184	58	44	11	11	22
14	15	9.1	28	26	46	100	149	55	40	9.3	7.7	12
15	10	8.2	31	26	43	90	350	86	36	8.9	6.7	6.6
16	9.4	7.8	125	20	46	76	324	318	34	8.8	6.2	5.5
17	8.9	8.0	94	19	58	71	248	437	85	9.0	5.8	6.9
18	8.2	8.0	77	19	59	71	177	307	66	12	7.1	5.6
19	7.8	7.8	67	18	67	177	135	244	49	20	7.0	4.9
20	7.8	7.8	61	18	83	197	106	171	57	37	5.9	4.4
21	11	9.6	51	17	125	340	89	144	61	43	5.1	5.1
22	9.1	20	44	21	219	318	76	212	48	36	7.1	6.9
23	8.0	30	96	28	287	235	69	381	41	19	29	5.2
24	7.4	30	184	44	272	177	414	329	37	40	15	4.5
25	7.2	30	140	34	162	130	575	262	33	22	8.8	4.3
26	7.2	28	117	30	127	102	335	165	29	18	7.1	4.1
27	6.9	33	110	28	102	146	253	122	26	14	6.4	3.9
28	6.7	64	106	27	92	248	152	98	24	12	12	3.8
29	6.7	242	97	28	---	197	125	92	25	11	8.3	3.8
30	6.7	114	82	47	---	177	120	97	25	9.7	6.6	5.0
31	6.9	---	70	78	---	149	---	75	---	8.8	17	---
TOTAL	257.8	800.0	2257	1033	2736	4613	5900	5567	1795	542.5	293.9	199.8
MEAN	8.32	26.7	72.8	33.3	97.7	149	197	180	59.8	17.5	9.48	6.66
MAX	15	242	184	78	287	340	575	437	155	43	29	22
MIN	6.7	6.9	24	17	32	71	69	55	24	8.8	5.1	3.8
CFSM	.17	.55	1.49	.68	2.00	3.05	4.03	3.68	1.22	.36	.19	.14
IN.	.20	.61	1.72	.79	2.08	3.51	4.49	4.23	1.37	.41	.22	.15

CAL YR 1982	TOTAL	27447.0	MEAN 75.2	MAX 802	MIN 5.8	CFSM 1.54	IN 20.88
WTR YR 1983	TOTAL	25955.0	MEAN 71.2	MAX 575	MIN 3.8	CFSM 1.46	IN 19.77

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).

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

AVERAGE DISCHARGE.--36 years, 118 ft³/s (3.342 m³/s), 25.64 in/yr (651 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.--Maximum discharge, 1,210 ft³/s (34.3 m³/s) Apr. 24, gage height, 3.97 ft (1.210 m), no other peak above base of 1,000 ft³/s (28 m³/s); minimum discharge, 1.8 ft³/s (0.051 m³/s) Sept. 12, gage height, 0.92 ft (0.280 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13	8.7	144	74	101	123	169	142	103	28	6.2	32
2	9.8	8.7	150	68	93	152	156	168	95	24	6.2	16
3	9.0	8.7	109	63	171	171	230	228	87	20	5.7	10
4	8.2	14	90	60	127	224	185	356	281	21	4.8	7.7
5	7.7	34	77	59	101	265	158	261	203	20	5.3	6.2
6	7.1	22	76	58	103	254	147	182	125	19	4.8	6.6
7	7.1	16	68	55	82	294	163	149	107	15	4.4	5.3
8	7.0	14	59	48	71	346	284	131	93	13	4.0	4.8
9	6.6	12	54	44	60	467	391	127	78	12	3.0	3.7
10	6.6	12	50	43	52	261	525	105	68	12	2.7	3.0
11	7.5	11	47	61	48	207	364	91	59	11	4.4	2.4
12	8.7	11	46	57	73	171	300	82	52	9.9	13	2.1
13	11	12	43	50	66	144	229	74	46	9.3	9.3	7.7
14	22	13	43	48	62	144	186	69	42	7.7	7.2	18
15	18	13	49	44	60	127	419	125	39	6.6	4.8	10
16	15	12	272	35	62	110	315	496	38	6.2	4.0	7.2
17	14	12	151	34	68	97	224	490	89	5.7	3.4	8.2
18	13	11	95	33	76	99	190	236	73	6.6	6.6	6.6
19	11	11	87	31	84	511	160	195	58	7.2	7.2	4.8
20	10	11	75	30	105	370	142	246	154	14	4.8	3.7
21	13	20	68	29	139	516	127	200	137	38	3.7	5.7
22	15	65	66	40	228	384	110	398	85	48	3.7	8.7
23	13	94	154	45	294	254	90	646	64	26	12	6.6
24	11	70	259	55	269	205	762	345	50	72	14	5.7
25	10	62	168	60	193	168	654	233	40	28	10	5.3
26	9.9	46	135	50	147	143	311	181	34	17	7.7	4.4
27	9.5	50	141	44	127	244	220	151	29	12	6.2	4.0
28	9.2	86	139	40	116	363	174	123	27	9.9	7.2	3.7
29	8.7	427	113	38	---	279	154	128	31	8.7	7.2	3.5
30	8.7	165	93	73	---	215	174	197	31	7.7	7.2	5.0
31	8.7	---	80	137	---	184	---	125	---	6.6	14	---
TOTAL	329.0	1352.1	3201	1606	3178	7492	7722	6680	2418	542.1	204.7	218.6
MEAN	10.6	45.1	103	51.8	114	242	257	215	80.6	17.5	6.60	7.29
MAX	22	427	272	137	294	516	762	646	281	72	14	32
MIN	6.6	8.7	43	29	48	97	99	69	27	5.7	2.7	2.1
CFSM	.17	.72	1.65	.83	1.82	3.87	4.11	3.44	1.29	.28	.11	.12
IN.	.20	.80	1.91	.96	1.89	4.46	4.60	3.98	1.44	.32	.12	.13

CAL YR 1982 TOTAL 38025.7 MEAN 104 MAX 1080 MIN 3.9 CFSM 1.66 IN 22.63
WTR YR 1983 TOTAL 34943.5 MEAN 95.7 MAX 762 MIN 2.1 CFSM 1.53 IN 20.80

TEMPERATURE MEASUREMENTS AT GAGING STATIONS
WATER-QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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									
01477800 - SHELLPOT C AT WILMINGTON DE (LAT 39 45 39 LONG 075 31 10)									
OCT , 1982					APR , 1983				
07...	1130	7.4	22.0	19.0	07...	1045	4.5	16.5	12.0
NOV					MAY				
16...	1410	2.0	9.5	19.5	11...	1230	2.3	19.5	13.5
DEC					JUN				
21...	1300	2.0	6.0	4.5	28...	1035	1.7	29.0	23.0
FEB , 1983					JUL				
04...	1350	5.3	3.5	5.5	29...	1120	.62	30.5	23.5
MAR					AUG				
09...	1020	20	7.0	6.5	31...	1120	.37	27.5	24.0
01478000 - CHRISTINA R AT COOCHS BRIDGE DE (LAT 39 38 16 LONG 075 43 46)									
OCT , 1982					APR , 1983				
04...	1205	4.8	22.0	18.0	07...	1345	31	13.5	1.1
NOV					MAY				
16...	1035	8.9	7.5	6.0	23...	1400	85	23.0	17.5
FEB , 1983					JUL				
17...	1030	35	7.0	1.0	12...	1005	8.3	25.0	20.0
MAR					29...	1425	5.9	31.5	25.0
15...	0955	20	15.0	8.0	AUG				
25...	1005	26	2.5	4.5	18...	1235	5.9	31.0	22.5
01479000 - WHITE CLAY C NR NEWARK DE (LAT 39 42 00 LONG 075 41 10)									
OCT , 1982					MAY , 1983				
05...	1135	28	20.5	17.5	12...	1405	132	19.5	14.5
NOV					JUN				
15...	1100	48	8.0	7.5	20...	1355	138	26.0	20.0
DEC					JUL				
20...	1050	62	3.0	1.8	28...	1555	52	30.5	26.5
FEB , 1983					AUG				
08...	1350	112	3.5	3.5	09...	1305	41	33.5	28.0
MAR					31...	1355	37	28.5	24.0
10...	1430	227	9.5	7.5	SEP				
25...	1255	162	5.5	6.0	19...	1120	28	27.5	20.0
APR									
13...	1300	209	14.0	11.0					
01480000 - RED CLAY C AT WOODDALE DE (LAT 39 45 52 LONG 075 38 08)									
OCT , 1982					APR , 1983				
05...	1345	17	23.0	18.0	21...	1050	128	12.5	8.5
NOV					MAY				
15...	1240	25	7.0	8.0	12...	1000	79	18.0	12.0
DEC					JUN				
20...	1300	32	4.0	3.0	20...	1000	88	26.0	19.5
FEB , 1983					JUL				
08...	1115	56	4.5	2.0	28...	1140	32	29.5	23.0
MAR					AUG				
10...	1000	90	6.5	7.0	29...	1415	32	31.5	24.5
01481500 - BRANDYWINE C AT WILMINGTON DE (LAT 39 46 09 LONG 075 34 25)									
NOV , 1982					JUN , 1983				
01...	1130	243	27.0	16.0	01...	0950	777	19.0	15.5
MAR , 1983					AUG				
01...	1055	502	8.5	4.5	01...	0955	155	30.0	27.5
APR					SEP				
01...	1020	885	9.5	7.0	01...	1140	137	27.5	25.5
MAY									
02...	1030	1020	23.0	17.5					
01483200 - BLACKBIRD C AT BLACKBIRD DE (LAT 39 21 58 LONG 075 40 10)									
OCT , 1982					APR , 1983				
05...	0905	.44	17.5	20.0	06...	1450	7.2	13.0	12.5
NOV					MAY				
15...	1520	2.5	6.0	9.0	13...	1240	4.9	23.5	16.5
DEC					JUN				
17...	1245	11	3.0	2.0	28...	1345	2.6	29.5	27.5
FEB , 1983					JUL				
01...	1510	2.7	11.0	5.5	27...	1500	1.2	30.0	30.0
MAR					AUG				
09...	1345	11	8.5	8.0	23...	1435	1.2	28.5	29.0

TEMPERATURE MEASUREMENTS AT GAGING STATIONS

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WATER-QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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)
ST. JONES RIVER BASIN									
01483700 - ST JONES R AT DOVER DE (LAT 39 09 49 LONG 075 31 10)									
OCT , 1982					MAR , 1983				
01... 0930	3.8	18.5	20.0		29... 1530	203	7.0	9.0	
NOV 01... 0920	5.4	20.0	14.5		APR 11... 1005	571	9.5	10.0	
DEC 01... 0945	64	12.0	19.5		MAY 02... 1045	50	23.0	19.5	
JAN , 1983					09... 1600	31	15.0	20.0	
03... 0920	18	4.5	7.0		31... 1050	123	24.0	19.0	
31... 0930	23	9.0	4.0		AUG 01... 1015	5.3	29.5	26.0	
FEB 28... 0930	43	11.0	5.0		SEP 01... 1105	13	26.0	25.5	
MAR 22... 1045	316	5.5	11.0						
MURDERKILL RIVER BASIN									
01484000 - MURDERKILL R NR FELTON DE (LAT 38 58 33 LONG 075 34 03)									
OCT , 1982					MAY , 1983				
07... 1520	2.3	26.5	19.0		17... 1120	92	12.0	12.5	
DEC 22... 1420	9.5	9.5	5.0		JUN 17... 1235	9.6	28.0	19.5	
JAN , 1983					JUL 18... 1445	4.3	32.0	22.5	
31... 1415	8.3	12.0	6.5		SEP 02... 1435	6.5	24.5	20.5	
MAR 02... 1050	93	12.5	8.0						
22... 1255	85	11.0	10.0						
APR 11... 1625	1670	15.0	12.0						
MISPILLION RIVER BASIN									
01484100 - BEAVERDAM B AT HOUSTON DE (LAT 38 54 20 LONG 075 30 49)									
OCT , 1982					MAY , 1983				
06... 1425	.66	27.5	18.0		17... 1320	6.6	14.5	14.0	
NOV 18... 1215	.83	14.0	10.0		JUN 16... 1355	3.0	30.5	18.0	
DEC 22... 1225	2.4	7.0	8.0		21... 1145	14	19.5	18.5	
JAN , 1983					JUL 18... 1250	2.1	30.5	18.5	
31... 1220	2.0	9.5	9.5		SEP 02... 1245	1.6	25.0	18.0	
MAR 02... 0930	9.6	10.5	8.0						
APR 13... 0935	10	13.0	11.0						
INDIAN RIVER BASIN									
01484500 - STOCKLEY B AT STOCKLEY DE (LAT 38 38 19 LONG 075 20 31)									
OCT , 1982					APR , 1983				
05... 1340	1.7	26.0	18.0		13... 1240	22	18.0	15.0	
NOV 23... 1430	3.9	19.0	14.5		MAY 20... 1230	9.7	19.5	15.5	
DEC 30... 1345	8.2	5.5	9.5		JUN 14... 1145	7.1	26.5	19.5	
FEB , 1983					AUG 03... 1005	2.5	26.5	19.5	
02... 1230	7.7	14.0	9.0		SEP 06... 1015	3.0	27.0	21.0	
MAR 08... 1030	18	8.5	10.0						
POCOMOKE RIVER BASIN									
01485000 - POCOMOKE R NR WILLARDS, MD (LAT 38 23 20 LONG 075 19 30)									
OCT , 1982					MAR , 1983				
07... 1045	7.6	23.0	18.0		28... 1230	521	17.5	10.5	
NOV 24... 1140	51	12.0	13.0		APR 15... 1150	142	20.0	13.0	
DEC 30... 1110	78	4.5	9.0		JUN 15... 1050	30	27.5	20.5	
FEB , 1983					AUG 02... 1240	15	29.0	24.5	
15... 1205	193	8.0	3.5		26... 1350	12	27.5	20.5	
MAR 14... 1110	181	15.0	8.0						

TEMPERATURE MEASUREMENTS AT GAGING STATIONS
WATER-QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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)
POCOMOKE RIVER BASIN--CONTINUED									
01485500 - NASSAWANGO C NR SNOW HILL, MD (LAT 38 13 44 LONG 075 28 19)									
OCT , 1982					MAY , 1983				
04...	1235	3.3	24.5	15.5	17...	1130	37	17.5	13.0
DEC					JUN				
28...	1345	37	20.0	11.0	16...	1100	13	28.0	20.0
FEB , 1983					JUL				
09...	1340	120	4.0	25.0	20...	1230	27	29.0	22.0
MAR					AUG				
16...	1305	96	11.5	10.5	22...	1150	2.2	26.0	20.0
29...	1110	355	11.0	9.0					
APR									
19...	1315	278	8.0	9.5					
MANOKIN RIVER BASIN									
01486000 - MANOKIN B NR PRINCESS ANNE, MD (LAT 38 12 50 LONG 075 40 18)									
DEC , 1982					MAY , 1983				
28...	1110	3.0	17.0	12.0	16...	1320	2.3	17.5	19.0
FEB , 1983					JUN				
09...	1105	6.4	7.5	5.5	14...	1100	2.0	27.0	21.5
MAR					JUL				
16...	1045	6.9	13.5	10.5	20...	1015	.77	29.0	24.0
28...	1500	34	16.0	14.0	AUG				
APR					25...	1150	.26	27.5	23.0
19...	1050	16	7.0	9.5					
NANTICOKE RIVER BASIN									
01487000 - NANTICOKE R NR BRIDGEVILLE, DE (LAT 38 43 45 LONG 075 33 41)									
OCT , 1982					APR , 1983				
05...	1045	25	22.5	18.0	25...	1320	419	10.5	12.0
NOV					MAY				
23...	1050	31	16.0	13.5	23...	1445	152	29.5	19.5
JAN , 1983					JUN				
04...	1130	57	5.0	6.0	17...	0955	76	23.5	20.5
FEB					JUL				
16...	1115	83	8.0	4.0	26...	1350	44	26.5	23.0
MAR					SEP				
19...	1215	319	19.0	12.0	06...	1315	42	30.0	23.0
22...	1000	293	8.0	10.5					
01488500 - MARSHYHOPE C NR ADAMSVILLE DE (LAT 38 50 59 LONG 075 40 24)									
OCT , 1982					APR , 1983				
06...	1235	7.3	28.0	19.5	12...	1230	249	15.5	12.5
DEC					MAY				
22...	1015	28	4.0	3.5	05...	1345	69	21.0	18.5
JAN , 1983					JUN				
25...	1325	27	8.0	7.0	13...	1045	46	29.0	21.0
MAR					JUL				
08...	1305	141	7.5	10.0	18...	1025	22	31.5	25.0
28...	1150	358	12.0	10.5	AUG				
APR					17...	1125	15	28.0	21.0
11...	1520	837	12.5	11.5					
01489000 - FAULKNER B AT FEDERALSBURG, MD (LAT 38 42 44 LONG 075 47 34)									
OCT , 1982					MAY , 1983				
06...	1015	1.5	20.0	17.0	18...	1345	12	18.5	16.5
NOV					JUN				
22...	1050	2.4	14.0	11.5	13...	1310	7.8	29.5	22.0
DEC					JUL				
29...	1405	7.5	13.0	13.0	26...	1050	1.3	25.5	20.0
JAN , 1983					SEP				
25...	1100	6.3	6.5	6.0	02...	1005	1.1	22.0	20.0
FEB					29...	1140	1.4	19.0	15.0
28...	1250	13	11.0	7.5					
APR									
18...	1320	38	12.5	13.0					

TEMPERATURE MEASUREMENTS AT GAGING STATIONS

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WATER-QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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)
CHOPTANK RIVER BASIN									
01491000 - CHOPTANK R NR GREENSBORO, MD (LAT 38 59 50 LONG 075 47 10)									
OCT , 1982					APR , 1983				
26...	1005	32	12.0	10.0	11...	1735	2050	10.0	10.5
NOV					26...	1100	862	17.0	10.0
22...	1005	25	12.5	19.5	MAY				
DEC					23...	0930	638	20.5	18.0
27...	1100	87	7.5	10.5	26...	0930	238	18.5	18.0
JAN , 1983					JUN				
11...	1015	99	10.0	7.5	27...	0930	158	25.5	22.0
24...	1015	96	7.0	3.0	JUL				
FEB					27...	1155	42	27.0	24.0
23...	0930	242	11.5	7.0	AUG				
MAR					16...	1150	31	24.0	20.0
22...	0905	1690	6.5	11.5	29...	1040	119	24.0	23.0
22...	1330	1520	10.5	10.0	SEP				
23...	1230	749	5.5	9.5	26...	1115	26	15.5	14.0
28...	1430	622	12.5	10.0					
CHESTER RIVER BASIN									
01493000 - UNICORN B NR MILLINGTON, MD (LAT 39 14 59 LONG 075 51 40)									
OCT , 1982					APR , 1983				
12...	1045	6.5	17.5	18.0	17...	1030	301	9.5	10.0
NOV					18...	0925	124	8.0	10.5
16...	1035	12	4.0	8.5	MAY				
DEC					19...	1445	40	19.5	15.5
23...	1340	36	7.5	4.5	JUN				
FEB , 1983					23...	1405	113	26.5	21.0
03...	1025	36	11.5	9.5	JUL				
MAR					22...	1025	29	23.0	24.5
03...	1320	60	15.0	19.5	SEP				
APR					13...	1120	12	20.5	25.0
14...	1305	69	17.0	13.0					
01493500 - MORGAN C NR KENNEDYVILLE, MD (LAT 39 16 48 LONG 076 00 54)									
OCT , 1982					MAY , 1983				
12...	1320	3.5	18.5	14.5	24...	1055	21	21.5	18.0
NOV					JUN				
16...	1355	4.7	9.5	5.5	21...	1415	326	23.0	20.0
DEC					22...	0940	53	24.5	19.0
29...	1055	5.3	15.5	11.5	23...	1100	13	23.5	18.0
FEB , 1983					AUG				
03...	1315	24	9.5	9.0	03...	1335	5.4	35.0	23.0
MAR					30...	1200	76	29.0	22.0
03...	1110	8.6	13.0	7.0	SEP				
APR					28...	1230	5.8	23.0	15.5
14...	1025	10	16.0	10.0					
ELK RIVER BASIN									
01495000 - BIG ELK C AT ELK MILLS, MD (LAT 39 39 26 LONG 075 49 20)									
OCT , 1982					APR , 1983				
07...	1420	18	25.0	20.0	06...	1030	96	14.0	10.0
NOV					MAY				
02...	1445	23	--	14.6	10...	1200	90	14.0	12.0
18...	1030	26	13.0	16.0	JUN				
DEC					13...	1255	66	33.0	21.0
14...	1100	17	2.0	1.5	JUL				
JAN , 1983					25...	1425	38	29.0	23.5
27...	1115	49	5.5	3.0	AUG				
MAR					23...	1125	28	31.5	23.0
07...	1300	80	18.5	10.5					
NORTHEAST RIVER BASIN									
01496000 - NORTHEAST C AT LESLIE, MD (LAT 39 37 40 LONG 075 56 40)									
OCT , 1982					APR , 1983				
06...	1355	4.9	22.5	18.5	04...	1300	43	16.0	10.5
NOV					MAY				
17...	1325	9.4	10.0	17.0	09...	1240	25	14.0	14.5
DEC					JUN				
14...	1315	16	3.0	2.5	13...	1035	15	27.5	20.5
JAN , 1983					JUL				
26...	1325	25	5.5	3.5	21...	1245	10	30.5	25.0
MAR					AUG				
07...	1025	41	11.0	9.0	24...	1310	7.5	28.0	23.5

TEMPERATURE MEASUREMENTS AT GAGING STATIONS

WATER-QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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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PRINCIPIO CREEK BASIN

01496200 - PRINCIPIO C NR PRINCIPIO FURNACE, MD (LAT 39 37 34 LONG 076 02 27)

OCT , 1982					APR , 1983				
06...	1045	2.4	19.0	17.0	04...	1050	17	14.5	11.0
NOV					MAY				
17...	1055	4.2	6.5	5.0	09...	1030	13	13.5	12.5
DEC					JUN				
15...	1145	4.8	7.0	7.5	08...	1015	11	23.5	17.5
JAN , 1983					JUL				
26...	1120	8.6	5.0	4.0	21...	1040	4.5	31.0	23.0
MAR					AUG				
04...	1250	9.4	12.5	10.0	24...	1055	2.8	28.5	21.5

SUSQUEHANNA RIVER BASIN

01578310 - SUSQUEHANNA R AT CONOWINGO, MD (LAT 39 39 26 LONG 076 10 31)

DEC , 1982					MAY , 1983				
02...	1015	80800	10.5	10.0	26...	1000	75800	20.0	18.5
FEB , 1983					JUL				
17...	1230	41800	--	4.0	20...	1000	5150	26.0	26.0
APR					SEP				
21...	0930	122000	11.0	7.5	14...	1200	5190	20.5	24.0

01580000 - DEER C AT ROCKS, MD (LAT 39 37 49 LONG 076 24 13)

APR , 1983					JUN , 1983				
06...	1315	147	13.0	12.0	30...	1330	143	23.0	20.0
MAY					AUG				
19...	1345	183	16.0	14.0	18...	1400	68	26.0	23.0

BUSH RIVER BASIN

01581700 - WINTERS RN NR BENSON, MD (LAT 39 31 12 LONG 076 22 24)

APR , 1983					JUN , 1983				
06...	1000	59	12.5	10.0	30...	1000	52	23.0	18.0
MAY					AUG				
19...	1015	76	16.0	13.0	18...	1015	25	25.0	22.0

GUNPOWDER RIVER BASIN

01582000 - LITTLE FALLS AT BLUE MOUNT, MD (LAT 39 36 16 LONG 076 37 16)

APR , 1983					JUN , 1983				
05...	1030	83	12.0	9.0	28...	1015	68	24.0	20.0
18...	1300	210	9.0	9.0	AUG				
MAY					16...	1400	37	25.5	20.0
12...	1030	94	17.0	11.0					

01583100 - PINEY RN AT DOVER MD (LAT 39 31 15 LONG 076 46 02)

MAR , 1983					MAY , 1983				
31...	1000	16	6.0	6.0	10...	1045	18	13.0	11.0
APR					JUN				
21...	1230	28	14.0	10.0	27...	1000	13	25.0	19.0

01583500 - WESTERN RN AT WESTERN RUN, MD (LAT 39 30 38 LONG 076 40 37)

MAR , 1983					JUN , 1983				
31...	1315	92	9.0	7.5	27...	1330	77	27.0	21.0
MAY									
10...	1400	96	16.0	13.5					

01583600 - BEAVERDAM RN AT COCKEYSVILLE MD (LAT 39 29 13 LONG 076 38 42)

MAR , 1983					JUN , 1983				
31...	1430	37	8.5	9.0	27...	1515	23	30.0	22.0
APR					AUG				
18...	1530	59	10.0	11.5	17...	1100	13	24.5	19.0

TEMPERATURE MEASUREMENTS AT GAGING STATIONS
WATER-QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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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)
GUNPOWDER RIVER BASIN--CONTINUED									
01584050 - LONG GREEN C AT GLEN ARM, MD (LAT 39 27 17 LONG 076 28 45)									
MAY , 1983					AUG , 1983				
12...	1445	14	19.0	16.0	17...	1300	6.1	25.0	20.0
JUN									
29...	1515	15	22.0	20.0					
01585100 - WHITEMARSH RN AT WHITE MARSH, MD (LAT 39 22 15 LONG 076 26 46)									
APR , 1983					JUL , 1983				
01...	1230	7.0	13.0	11.0	01...	1445	4.2	30.0	27.0
BACK RIVER BASIN									
01585200 - WB HERRING RN AT IDLEWYLDE, MD (LAT 39 22 25 LONG 076 35 35)									
AUG , 1983									
17...	1500	.44	32.0	25.0					
01585300 - STEMMERS RN AT ROSSVILLE, MD (LAT 39 20 28 LONG 076 29 17)									
MAY , 1983					JUL , 1983				
17...	1215	5.6	13.0	15.0	01...	1300	1.3	28.0	25.0
01585400 - BRIEN RN AT STEMMERS RUN, MD (LAT 39 20 01 LONG 076 28 23)									
APR , 1983					JUL , 1983				
01...	1000	.98	11.0	7.0	01...	1115	.67	23.0	19.0
MAY					AUG				
17...	1015	3.6	11.0	11.5	19...	0930	.37	24.5	21.0
PATAPSCO RIVER BASIN									
01585500 - CRANBERRY B NR WESTMINSTER, MD (LAT 39 35 35 LONG 076 58 05)									
OCT , 1982					MAR , 1983				
04...	1240	1.4	26.5	16.5	28...	1440	3.0	9.0	9.0
NOV					MAY				
15...	1310	.46	6.5	8.0	09...	1530	4.5	16.0	15.0
JAN , 1983					JUN				
07...	1425	1.4	11.0	6.0	06...	1350	3.6	28.0	17.0
FEB					23...	1500	3.0	--	19.0
22...	1150	2.9	10.0	6.0	AUG				
MAR					15...	1510	1.8	20.0	17.5
21...	1355	34	12.5	11.5					
01586000 - NB PATAPSCO R AT CEDARHURST, MD (LAT 39 30 00 LONG 076 53 00)									
OCT , 1982					MAR , 1983				
04...	1055	17	21.5	16.0	28...	1025	153	9.5	6.5
NOV					JUN				
15...	1100	20	5.0	6.5	23...	1015	50	23.0	18.0
JAN , 1983					AUG				
07...	1035	21	6.0	2.0	15...	1030	25	23.0	17.0
FEB									
14...	1045	35	2.5	1.0					
01586210 - BEAVER RN NR FINKSBURG MD (LAT 39 29 22 LONG 076 54 12)									
DEC , 1982					MAY , 1983				
08...	1145	6.6	7.0	6.0	09...	1155	22	16.5	13.0
JAN , 1983					JUN				
07...	1215	6.3	8.0	3.0	23...	1200	14	25.0	19.0
FEB					AUG				
22...	0930	15	7.0	3.0	15...	1150	6.1	17.0	17.0
MAR									
28...	1140	38	11.5	7.5					
01586610 - MORGAN RN NR LOUISVILLE MD (LAT 39 27 07 LONG 076 57 20)									
DEC , 1982					MAY , 1983				
08...	1335	11	8.5	7.0	09...	1345	51	14.0	14.0
FEB , 1983					JUN				
22...	1050	32	10.0	4.5	06...	1230	41	26.0	17.0
MAR					AUG				
28...	1255	87	9.0	8.5	15...	1345	14	19.0	19.0
APR									
13...	1300	84	16.0	11.0					

TEMPERATURE MEASUREMENTS AT GAGING STATIONS
WATER-QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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)
PATAPSCO RIVER BASIN--CONTINUED									
01589000 - PATAPSCO R AT HOLLOFIELD, MD (LAT 39 18 36 LONG 076 47 34)									
DEC , 1982					JUN , 1983				
28...	0930	75	10.0	7.5	28...	1515	126	28.0	25.0
FEB , 1983					JUL				
25...	1245	209	7.0	5.0	26...	1000	43	23.5	22.0
MAR					AUG				
30...	1400	215	7.0	8.0	16...	1045	54	24.0	21.0
MAY									
11...	1415	178	15.0	16.0					
01589100 - EB HERBERT RN AT ARBUTUS, MD (LAT 39 14 24 LONG 076 41 33)									
MAR , 1983					JUN , 1983				
30...	1145	2.6	8.0	9.0	29...	1100	2.2	19.0	20.0
MAY									
11...	1030	1.5	15.0	12.0					
01589300 - GWYNNNS FALLS AT VILLA NOVA, MD (LAT 39 20 45 LONG 076 44 01)									
MAR , 1983					MAY , 1983				
29...	1300	50	8.0	9.0	09...	1200	44	12.0	14.0
APR					JUN				
21...	0930	50	9.5	8.0	23...	1145	36	21.0	20.0
01589330 - DEAD RN AT FRANKLINTOWN, MD (LAT 39 18 40 LONG 076 43 02)									
APR , 1983					JUN , 1983				
05...	1300	3.8	15.0	12.5	29...	1300	5.8	20.0	21.0
MAY									
11...	1215	1.9	15.0	15.0					
01589440 - JONES FALLS AT SORRENTO, MD (LAT 39 23 30 LONG 076 39 42)									
MAR , 1983					MAY , 1983				
29...	1500	52	9.0	10.0	09...	1400	43	14.0	14.0
APR					JUN				
21...	1100	60	13.0	9.0	23...	1400	40	25.0	19.0
SOUTH RIVER BASIN									
01590500 - BACON RIDGE B AT CHESTERFIELD, MD (LAT 39 00 07 LONG 076 36 53)									
APR , 1983					JUL , 1983				
08...	1500	15	15.0	11.5	07...	1215	7.8	20.0	18.0
MAY									
18...	1345	11	19.0	14.0					
PATUXENT RIVER BASIN									
01591000 - PATUXENT R NR UNITY, MD (LAT 39 14 18 LONG 077 03 23)									
OCT , 1982					APR , 1983				
07...	1030	8.1	18.5	16.5	05...	1355	59	15.0	11.0
NOV					AUG				
18...	1010	12	9.0	5.0	16...	1130	13	20.0	17.0
01591400 - CATTAIL C AT ROXBURY MILLS RD AT ROXBURY MILLS (LAT 39 15 27 LONG 077 03 13)									
OCT , 1982					FEB , 1983				
07...	0915	5.6	16.5	16.5	17...	0935	18	3.5	.5
NOV					APR				
18...	0840	8.0	6.0	5.0	05...	1510	28	15.0	12.0
JAN , 1983					AUG				
17...	1040	13	1.0	1.0	16...	1000	9.8	20.0	16.5
01591610 - PATUXENT R BL BRIGHTON DAM NR BRIGHTON, MD (LAT 39 11 31 LONG 077 00 16)									
NOV , 1982					FEB , 1983				
18...	1320	28	14.0	11.0	17...	1220	1.9	6.0	5.0

TEMPERATURE MEASUREMENTS AT GAGING STATIONS

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WATER-QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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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PATUXENT RIVER BASIN--CONTINUED

01591700 - HAWLINGS R NR SANDY SPRING, MD (LAT 39 10 29 LONG 077 01 22)

JAN , 1983					MAY , 1983				
17...	1255	15	-5.5	1.0	17...	1300	75	13.0	11.0
FEB					AUG				
17...	1335	24	7.5	1.0	16...	1330	7.4	25.0	18.0
APR									
05...	1225	33	15.0	10.5					

01592500 - PATUXENT R NR LAUREL, MD (LAT 39 06 56 LONG 076 52 27)

JAN , 1983					MAR , 1983				
13...	1350	17	2.0	5.0	31...	1320	19	8.5	8.0
FEB					AUG				
17...	1530	17	6.0	4.5	12...	1445	8.6	21.0	21.0

01593500 - L PATUXENT R AT GUILFORD, MD (LAT 39 10 04 LONG 076 51 07)

NOV , 1982					APR , 1983				
19...	1100	11	9.0	8.0	05...	1005	54	12.5	10.0
JAN , 1983					MAY				
14...	1025	17	2.0	2.0	17...	1020	130	8.0	11.0
FEB									
18...	1030	51	3.5	3.0					

01594440 - PATUXENT R NR BOWIE, MD (LAT 38 57 21 LONG 076 41 36)

DEC , 1982					MAY , 1983				
01...	1300	248	12.5	10.0	25...	1215	920	20.0	16.0
FEB , 1983					JUL				
09...	1215	188	2.0	4.0	19...	1215	131	25.0	24.5
APR					AUG				
20...	1300	1190	5.5	7.5	26...	1130	106	26.0	22.0

POTOMAC RIVER BASIN

01594930 - LAUREL RN AT DOBBIN RD NR WILSON, MD (LAT 39 14 37 LONG 079 25 43)

OCT , 1982					MAY , 1983				
07...	1040	3.6	20.0	16.0	06...	1135	46	12.0	7.4
NOV					23...	1110	105	18.0	12.0
17...	1220	8.4	9.0	3.1	JUN				
DEC					14...	1050	9.4	23.0	15.0
22...	1200	14	3.0	1.0	16...	1215	9.9	31.0	17.5
29...	0930	35	-1.0	6.7	JUL				
FEB , 1983					20...	1215	5.6	33.0	23.0
15...	1235	12	.0	9.0	AUG				
MAR					03...	1125	3.8	28.0	19.9
10...	0945	36	1.0	5.5	26...	1140	5.4	23.0	20.0
11...	1200	31	-2.0	4.0					
16...	1045	21	4.0	5.0					
21...	1340	132	2.0	6.0					

01594934 - SF SAND RN NR WILSON, MD (LAT 39 15 31 LONG 079 24 40)

OCT , 1982					MAY , 1983				
07...	1205	.19	22.0	17.5	06...	1310	7.9	19.0	12.5
NOV					23...	1100	18	18.0	12.5
17...	1040	.07	4.4	3.6	JUN				
DEC					14...	1310	2.8	27.0	21.0
29...	1125	5.3	-1.0	7.1	16...	1410	2.8	24.0	22.5
JAN , 1983					JUL				
25...	0930	1.8	-1.0	1.0	20...	1255	.25	33.0	26.0
FEB					AUG				
10...	1035	.88	-3.0	1.5	02...	1510	.33	26.0	26.1
MAR					26...	1300	3.7	29.0	23.0
21...	1250	33	3.0	6.5					

TEMPERATURE MEASUREMENTS AT GAGING STATIONS
WATER-QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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									
01594936 - NF SAND RN NR WILSON, MD (LAT 39 15 36 LONG 079 24 36)									
OCT , 1982					JUN , 1983				
07... 1200	.24	22.0	16.5		16... 1450	1.0	22.0	19.0	
FEB , 1983					17... 1335	1.0	28.0	21.0	
15... 1345	2.0	.0	.5		JUL				
MAR					20... 1345	.22	33.0	24.0	
10... 1210	7.2	2.0	5.0		AUG				
21... 1445	26	2.0	5.5		02... 1600	.19	24.0	23.9	
MAY					26... 1400	.20	26.0	21.5	
06... 1400	8.1	20.0	12.5						
01595000 - NB POTOMAC R AT STEYER, MD (LAT 39 18 07 LONG 079 18 26)									
NOV , 1982					MAY , 1983				
03... 1300	19	23.0	15.0		23... 1140	767	19.0	12.5	
DEC					JUL				
14... 1350	76	9.0	.5		12... 1030	16	24.0	18.0	
JAN , 1983					AUG				
24... 1220	61	.0	.0		22... 1325	9.6	27.0	26.5	
MAR					SEP				
07... 1230	223	10.0	7.0		30... 1205	14	10.0	10.5	
APR									
18... 1500	228	4.0	5.0						
01595500 - NB POTOMAC R AT KITZMILLER, MD (LAT 39 23 38 LONG 079 10 55)									
OCT , 1982					APR , 1983				
01... 0840	92	9.0	13.0		06... 1025	762	10.0	9.5	
NOV					MAY				
02... 1440	77	18.0	15.0		03... 1150	712	18.0	14.0	
DEC					JUN				
30... 1200	354	.0	3.7		02... 1100	331	18.0	13.0	
JAN , 1983					JUL				
20... 0930	144	-11.0	.4		06... 1055	72	15.0	20.0	
FEB					AUG				
03... 0940	642	-1.0	1.5		03... 1050	44	26.0	25.5	
MAR					SEP				
02... 1015	589	8.0	4.5		01... 1205	104	25.0	22.0	
01595800 - NB POTOMAC R AT BARNUM, WV (LAT 39 26 44 LONG 079 06 39)									
OCT , 1982					MAY , 1983				
01... 1010	266	12.0	16.0		03... 1345	894	16.0	9.5	
NOV					JUN				
02... 1110	244	12.5	12.0		02... 1440	481	18.0	15.5	
DEC					JUL				
29... 1015	724	7.0	7.5		06... 1535	245	18.0	17.5	
JAN , 1983					AUG				
20... 1230	295	-11.0	4.5		03... 1615	184	30.0	19.5	
FEB					18... 1330	180	26.0	17.0	
01... 1005	281	-3.0	4.0		SEP				
MAR					01... 1400	181	27.0	19.0	
02... 1520	295	12.0	5.5						
APR									
05... 1125	971	9.0	6.0						
01596500 - SAVAGE R NR BARTON, MD (LAT 39 34 05 LONG 079 06 10)									
NOV , 1982					APR , 1983				
05... 1525	14	.0	6.0		14... 1305	135	9.0	9.0	
DEC					MAY				
13... 1535	13	-5.0	.0		25... 0955	216	10.0	8.0	
JAN , 1983					JUL				
26... 0845	23	.0	.0		14... 0905	5.1	22.0	20.0	
MAR					AUG				
09... 0830	282	7.0	6.0		24... 1215	5.0	25.0	19.0	

TEMPERATURE MEASUREMENTS AT GAGING STATIONS

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WATER-QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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									
01597500 - SAVAGE R BL SAVAGE R DAM NR BLOOMINGTON, MD (LAT 39 30 05 LONG 079 07 25)									
OCT , 1982					MAY , 1983				
01... 1000	50	12.0	11.0		04... 1020	229	10.0	7.0	
NOV 01... 0935	48	19.0	12.0		24... 1130	106	13.0	11.0	
JAN , 1983					JUN 03... 1050	103	17.0	10.0	
24... 1020	50	2.0	1.0		JUL 05... 1355	54	21.0	14.0	
FEB 02... 1100	53	3.0	2.0		AUG 01... 1400	99	27.0	12.0	
MAR 01... 1105	90	8.0	6.0		SEP 19... 1245	262	27.0	14.0	
APR 04... 1050	312	6.0	5.0						
01598500 - NB POTOMAC R AT LUKE, MD (LAT 39 28 45 LONG 079 03 55)									
OCT , 1982					MAY , 1983				
01... 1115	318	13.0	16.0		02... 1540	940	25.0	12.0	
NOV 01... 1000	315	20.0	12.0		03... 1045	1090	16.0	10.0	
JAN , 1983					JUN 03... 1205	630	18.0	11.0	
03... 1155	865	-1.0	7.5		16... 1445	330	25.0	20.0	
FEB 01... 0930	365	-2.0	3.0		JUL 05... 1530	330	25.0	20.0	
MAR 01... 1230	463	12.0	6.0		AUG 01... 1420	781	24.0	18.0	
22... 1600	3020	-3.0	8.0		SEP 02... 1050	220	17.0	16.0	
APR 04... 0955	1200	6.0	5.0						
01599000 - GEORGES C AT FRANKLIN, MD (LAT 39 29 38 LONG 079 02 42)									
OCT , 1982					APR , 1983				
01... 1305	8.6	19.0	17.0		04... 1020	248	6.0	5.5	
NOV 01... 1110	7.9	21.0	16.0		MAY 02... 1105	169	17.0	11.0	
DEC 14... 1055	11	2.0	.5		JUN 03... 0930	89	16.0	11.0	
JAN , 1983					JUL 07... 0935	23	13.0	14.0	
03... 1235	19	.0	6.0		AUG 04... 1005	9.4	23.0	18.0	
FEB 02... 1025	28	6.0	3.0		SEP 02... 1100	9.6	26.0	20.0	
MAR 01... 1250	66	13.0	6.0						
22... 1315	293	-2.0	7.0						
01600000 - NB POTOMAC R AT PINTO, MD (LAT 39 33 59 LONG 078 50 25)									
NOV , 1982					MAY , 1983				
01... 1345	329	27.0	16.5		04... 1115	2050	10.0	10.5	
JAN , 1983					JUN 06... 0900	982	19.0	18.0	
03... 1315	898	5.0	6.5		JUL 07... 1220	357	23.0	21.0	
FEB 02... 1320	440	7.0	5.5		AUG 02... 1645	279	29.0	25.5	
MAR 03... 1100	606	13.0	7.0		SEP 02... 1250	249	25.0	22.0	
APR 06... 0930	1870	10.0	7.5						
07... 1135	1900	12.0	7.5						
27... 1310	2510	20.0	10.0						
01601500 - WILLS C NR CUMBERLAND, MD (LAT 39 40 07 LONG 078 47 18)									
OCT , 1982					MAY , 1983				
05... 1210	30	16.0	13.0		24... 1500	1690	16.0	12.0	
NOV 03... 1405	26	25.0	16.0		JUN 21... 1405	8930	14.0	18.0	
DEC 16... 1305	219	7.0	5.0		JUL 13... 1045	73	27.0	21.0	
JAN , 1983					AUG 17... 1050	34	23.0	16.0	
27... 1400	120	2.0	2.0						
APR 18... 1030	730	3.0	6.0						

TEMPERATURE MEASUREMENTS AT GAGING STATIONS
WATER-QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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									
01603000 - NB POTOMAC R NR CUMBERLAND, MD (LAT 39 37 16 LONG 078 46 24)									
OCT , 1982					APR , 1983				
21...	1325	355	--	12.5	04...	1315	3540	6.5	5.0
21...	1355	355	11.0	12.3	MAY				
NOV					04...	1455	3080	16.0	13.0
01...	1030	346	25.0	18.0	JUN				
JAN , 1983					06...	1245	1350	27.0	18.0
04...	1115	699	.0	4.0	09...	1445	1070	26.0	18.5
FEB					JUL				
03...	1505	1220	1.0	3.0	07...	1500	464	25.0	22.5
MAR					AUG				
03...	0930	900	12.0	6.5	04...	1555	294	31.0	26.0
14...	1500	1220	13.0	7.1	SEP				
14...	1505	1220	13.0	7.0	02...	1345	303	26.0	23.0
22...	1055	6330	-2.0	9.0					
01610000 - POTOMAC R AT PAW PAW, WV (LAT 39 32 13 LONG 078 27 28)									
OCT , 1982					MAY , 1983				
05...	0900	635	16.0	14.0	31...	0845	4230	15.0	11.0
JAN , 1983					JUN				
24...	1130	1220	3.0	4.0	27...	1110	1790	23.0	20.0
FEB					JUL				
09...	1140	2420	.0	1.5	18...	1510	700	29.0	25.0
23...	0850	6450	4.0	6.0	22...	1425	1120	29.0	26.0
MAR					AUG				
28...	1010	7050	9.0	7.0	29...	1100	1000	26.0	21.0
APR					SEP				
13...	1500	10300	12.0	9.0	26...	0910	441	12.0	18.0
25...	1435	49800	8.0	10.0					
01613000 - POTOMAC R AT HANCOCK, MD (LAT 39 41 49 LONG 078 10 39)									
OCT , 1982					MAY , 1983				
04...	0900	756	20.0	18.0	31...	0950	5220	16.0	12.0
NOV					JUN				
02...	1600	818	26.0	15.0	27...	0925	2210	20.0	19.0
JAN , 1983					JUL				
24...	0955	1390	4.0	3.0	18...	1155	707	28.0	24.0
FEB					27...	0945	766	20.0	22.0
23...	0955	8970	5.0	6.0	AUG				
MAR					29...	0900	603	22.0	20.0
04...	1410	3510	17.0	7.0	SEP				
28...	1120	7050	8.0	7.0	26...	1000	498	10.0	17.0
APR									
13...	1210	15200	12.0	8.0					
26...	1340	42300	16.0	11.0					
01614500 - CONOCOCHIEGUE C AT FAIRVIEW, MD (LAT 39 42 29 LONG 077 50 00)									
OCT , 1982					MAY , 1983				
04...	1005	111	18.0	16.0	25...	1030	1720	15.0	12.0
22...	1045	109	8.0	9.0	JUN				
NOV					10...	1015	398	19.5	17.5
03...	1010	91	18.0	14.0	10...	1315	327	26.0	17.5
DEC					JUL				
15...	1435	137	6.0	4.0	08...	1115	258	20.0	15.0
JAN , 1983					AUG				
27...	0920	268	-2.0	1.0	16...	1035	112	21.0	19.0
MAR					SEP				
10...	1130	947	7.0	9.0	26...	1125	96	18.0	17.0
15...	1030	582	13.0	8.9					
APR									
15...	1400	1600	6.0	8.0					

TEMPERATURE MEASUREMENTS AT GAGING STATIONS

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WATER-QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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									
01617000 - MARSH RUN AT GRIMES, MD (LAT 39 30 53 LONG 077 46 38)									
OCT , 1982					APR , 1983				
04...	1050	5.5	18.0	15.0	15...	1135	29	9.0	7.0
NOV					MAY				
02...	1350	4.7	28.0	17.0	23...	1100	37	17.0	10.0
DEC					JUL				
15...	1300	4.5	6.0	5.0	08...	1315	11	27.0	18.0
JAN , 1983					AUG				
26...	1435	4.9	.0	2.0	16...	1220	5.9	24.0	21.0
MAR					SEP				
10...	1300	11	8.0	9.0	26...	1305	2.1	17.0	14.0
01618000 - POTOMAC R AT SHEPHERDSTOWN, WV (LAT 39 26 04 LONG 077 48 07)									
OCT , 1982					MAY , 1983				
04...	1140	1280	17.0	18.0	23...	1450	22400	23.0	13.0
NOV					24...	1315	36500	19.0	16.0
02...	1045	1600	22.0	14.0	JUL				
30...	1345	2500	15.0	9.5	08...	1335	1930	27.0	22.0
DEC					15...	1430	1250	27.5	25.0
15...	1035	1710	3.0	5.0	18...	1330	1250	24.5	28.0
JAN , 1983					22...	1105	1220	24.0	25.0
26...	1250	2210	2.0	4.0	AUG				
FEB					16...	1320	940	27.0	24.0
08...	1345	5580	2.0	4.0	SEP				
MAR					12...	1130	731	27.0	28.0
04...	1130	5420	15.0	7.0	26...	1355	811	19.0	18.0
APR									
14...	1220	18800	12.0	9.0					
19...	1330	16100	7.0	8.5					
01619500 - ANTIETAM C NR SHARPSBURG, MD (LAT 39 27 01 LONG 077 43 52)									
OCT , 1982					APR , 1983				
04...	1120	117	21.0	19.0	14...	1415	778	6.0	7.0
22...	1330	114	13.0	10.6	MAY				
NOV					23...	1350	957	20.0	12.0
02...	1210	102	27.0	15.0	JUN				
DEC					10...	1315	327	26.0	17.5
15...	1140	100	6.0	5.0	JUL				
JAN , 1983					08...	1510	275	29.0	19.0
26...	1210	122	2.0	3.0	AUG				
MAR					16...	1430	158	27.0	23.0
10...	1410	370	7.0	10.0	SEP				
15...	1250	273	16.0	11.0	26...	1415	114	20.0	19.0
16...	1315	273	15.5	10.9					
01637500 - CATOCTIN C NR MIDDLETOWN, MD (LAT 39 25 35 LONG 077 33 25)									
OCT , 1982					MAR , 1983				
05...	1545	5.9	23.0	20.5	29...	1415	143	11.0	10.0
NOV					JUN				
17...	0905	9.7	-.1	2.0	16...	0930	48	29.0	21.7
JAN , 1983					AUG				
11...	1415	70	10.0	6.0	09...	1315	8.4	29.0	26.0
21...	1115	20	-.5	.1					
01638500 - POTOMAC R AT POINT OF ROCKS, MD (LAT 39 16 25 LONG 077 32 35)									
DEC , 1982					APR , 1983				
28...	1230	4750	13.0	8.0	11...	0950	68500	--	10.0
FEB , 1983					JUL				
25...	0945	25500	6.0	6.0	26...	1245	2630	30.0	25.5
01639000 - MONOCACY R AT BRIDGEPORT, MD (LAT 39 40 43 LONG 077 14 06)									
OCT , 1982					JUN , 1983				
04...	1410	8.2	25.0	20.0	17...	1245	27	31.5	26.3
NOV					AUG				
15...	1535	28	4.0	7.0	08...	1415	9.7	35.0	28.0
JAN , 1983									
10...	1330	44	4.0	3.0					
28...	1600	114	1.0	1.2					

TEMPERATURE MEASUREMENTS AT GAGING STATIONS
WATER-QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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									
01639500 - B PIPE C AT BRUCEVILLE, MD (LAT 39 36 45 LONG 077 14 10)									
OCT , 1982					MAY , 1983				
05...	1110	25	19.0	17.5	10...	1125	100	--	13.5
NOV					JUL				
16...	1125	31	4.0	4.0	19...	1100	39	33.0	26.1
JAN , 1983					AUG				
10...	1130	40	4.0	3.0	08...	1145	32	30.0	25.0
28...	1530	52	4.0	2.5					
MAR									
29...	0910	169	7.5	7.0					
01640500 - OWENS C AT LANTZ, MD (LAT 39 40 36 LONG 077 27 50)									
OCT , 1982					MAY , 1983				
05...	1350	.59	21.5	1.8	10...	0925	13	8.0	9.0
NOV					JUN				
16...	1322	1.0	6.0	6.0	16...	1915	5.6	24.5	19.0
JAN , 1983					22...	1140	14	20.0	16.0
10...	1545	7.8	4.0	3.0	AUG				
14...	1245	3.1	3.0	2.6	08...	1620	1.3	21.0	18.0
24...	1035	5.4	3.0	.1					
MAR									
28...	1655	25	8.0	6.5					
01640965 - HUNTING CR TRIB NR FOXVILLE MD (LAT 39 37 42 LONG 077 27 44)									
FEB , 1983					APR , 1983				
10...	1130	3.0	1.5	.5	07...	1035	7.1	11.0	8.5
01640970 - HUNTING CR NR FOXVILLE MD (LAT 39 37 10 LONG 077 28 00)									
NOV , 1982					APR , 1983				
19...	1345	.08	--	5.0	07...	0950	12	10.0	8.5
01640975 - HUNTING C NR THURMONT, MD (LAT 39 27 48 LONG 077 27 20)									
NOV , 1982					MAR , 1983				
19...	1115	2.2	--	8.0	21...	0955	50	10.0	7.5
FEB , 1983					APR				
10...	1000	8.6	-3.0	4.0	07...	1255	24	11.0	8.0
01641000 - HUNTING C AT JIMTOWN, MD (LAT 39 35 40 LONG 077 23 50)									
OCT , 1982					MAR , 1983				
05...	0915	4.0	16.0	17.0	29...	1050	72	6.0	7.0
NOV					JUN				
16...	0945	4.1	1.0	3.5	23...	1145	30	27.0	18.0
JAN , 1983					AUG				
11...	0940	21	7.0	5.0	09...	0930	4.5	25.0	22.0
17...	1730	8.6	-1.0	1.5					
01641500 - FISHING C NR LEWISTOWN, MD (LAT 39 31 35 LONG 077 28 00)									
OCT , 1982					MAR , 1983				
05...	1715	1.6	19.0	15.5	29...	1220	28	6.0	7.5
NOV					JUN				
16...	1445	1.4	5.0	6.0	13...	1730	8.8	26.0	16.0
JAN , 1983					AUG				
11...	1135	5.0	10.5	5.5	09...	1110	281	25.0	19.0
19...	1700	2.6	-6.0	.1					
01643000 - MONOCACY R AT JUG BRIDGE NR FREDERICK, MD (LAT 39 23 16 LONG 077 22 48)									
OCT , 1982					NOV , 1982				
06...	1130	115	20.0	19.5	17...	1405	178	6.5	6.0

TEMPERATURE MEASUREMENTS AT GAGING STATIONS
WATER-QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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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									
01643500 - BENNETT C AT PARK MILLS, MD (LAT 39 17 40 LONG 077 24 30)									
OCT , 1982					MAR , 1983				
06...	1330	15	20.5	18.0	29...	1655	125	7.0	10.0
NOV					JUN				
17...	1155	19	7.0	4.0	23...	1445	63	27.0	21.8
JAN , 1983					AUG				
11...	1710	71	6.0	6.5	09...	1545	20	27.0	25.0
20...	1450	33	-2.0	.2					
01645000 - SENECA C AT DAWSONVILLE, MD (LAT 39 07 41 LONG 077 20 13)									
NOV , 1982					MAY , 1983				
24...	1025	45	1200	12.0	31...	1025	145	15.0	15.0
DEC					JUL				
27...	1020	57	6.0	9.0	26...	1400	52	27.0	21.0
28...	1330	59	15.0	9.5	AUG				
FEB , 1983					30...	1300	40	25.0	23.0
25...	1100	163	5.0	4.5					
01645200 - WATTS B AT ROCKVILLE, MD (LAT 39 05 03 LONG 077 10 38)									
JAN , 1983					AUG , 1983				
12...	1000	1.9	3.5	5.0	10...	0930	.55	21.0	20.0
MAR									
30...	1015	3.2	4.5	6.0					
01648000 - ROCK C AT SHERRILL DR WASH, DC (LAT 38 58 21 LONG 077 02 25)									
JAN , 1983					MAY , 1983				
13...	1155	28	.0	3.0	12...	1145	58	17.0	15.0
MAR					AUG				
31...	1100	76	10.0	7.5	11...	1045	12	27.0	24.0
01649500 - NE B ANACOSTIA R AT RIVERDALE, MD (LAT 38 57 37 LONG 076 55 34)									
JAN , 1983					MAR , 1983				
12...	1545	36	3.0	7.0	30...	1345	82	11.0	10.5
01650500 - NW B ANACOSTIA R NR COLESVILLE, MD (LAT 39 03 55 LONG 077 01 48)									
JAN , 1983					AUG , 1983				
12...	1240	12	3.5	5.0	10...	1100	5.1	23.0	21.0
MAR									
30...	1200	23	7.0	21.0					
01651000 - NW B ANACOSTIA R NR HYATTSVILLE, MD (LAT 38 57 09 LONG 076 58 00)									
MAR , 1983					AUG , 1983				
30...	1525	47	11.0	11.0	10...	1545	11	26.0	30.0
MAY									
12...	1010	30	19.0	16.0					
01653600 - PISCATAWAY C AT PISCATAWAY, MD (LAT 38 42 20 LONG 076 58 00)									
APR , 1983					JUL , 1983				
08...	1230	88	16.0	11.5	13...	1145	13	31.0	21.0
01661050 - ST CLEMENT C NR CLEMENTS, MD (LAT 38 20 00 LONG 076 43 31)									
APR , 1983					JUL , 1983				
07...	1130	29	13.0	11.5	11...	1145	2.8	25.0	20.0
01661500 - ST MARYS R AT GREAT MILLS, MD (LAT 38 14 36 LONG 076 30 13)									
APR , 1983					JUL , 1983				
07...	1415	31	13.0	11.0	11...	1445	3.3	25.0	20.0
MAY									
24...	1445	58	20.0	20.0					

TEMPERATURE MEASUREMENTS AT GAGING STATIONS
WATER-QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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)
MONONGAHELA RIVER BASIN									
03075500 - YOUGHIOGHENY R NR OAKLAND, MD (LAT 39 25 19 LONG 079 25 32)									
NOV , 1982					APR , 1983				
14...	1440	47	6.0	11.0	18...	1300	527	5.0	9.0
DEC					MAY				
14...	1100	93	5.0	5.0	23...	1500	1180	21.0	13.0
JAN , 1983					JUL				
24...	1530	163	.0	.0	12...	1345	27	26.0	18.0
MAR					AUG				
07...	1500	439	16.0	6.5	22...	1215	16	28.0	24.5
03076500 - YOUGHIOGHENY R AT FRIENDSVILLE, MD (LAT 39 39 13 LONG 079 24 31)									
NOV , 1982					MAY , 1983				
04...	0945	81	12.0	12.0	24...	1100	1480	14.0	13.0
DEC					JUL				
15...	1000	193	3.0	2.0	13...	0905	65	26.0	20.0
JAN , 1983					AUG				
25...	0910	272	-3.0	5.0	23...	1020	46	27.0	21.0
MAR					24...	0900	54	25.0	20.0
08...	1110	738	2.0	6.5					
APR									
15...	0900	1560	8.0	9.0					
03076600 - BEAR C AT FRIENDSVILLE, MD (LAT 39 39 22 LONG 079 23 41)									
NOV , 1982					APR , 1983				
04...	1210	12	9.0	12.0	15...	1215	476	9.0	8.0
DEC					MAY				
15...	1330	35	11.0	5.0	24...	1210	318	14.0	12.5
JAN , 1983					JUL				
25...	1430	35	1.0	.0	13...	1115	11	27.0	19.0
MAR					AUG				
08...	1545	168	10.0	6.0	23...	1315	21	23.0	18.0
10...	1445	169	.0	5.0					
03078000 - CASSELMAN R AT GRANTSVILLE, MD (LAT 39 42 08 LONG 079 08 12)									
NOV , 1982					APR , 1983				
05...	1130	33	.0	6.0	14...	1515	184	9.0	9.0
DEC					MAY				
13...	1215	43	-5.0	.0	25...	1125	237	19.0	11.5
JAN , 1983					JUL				
25...	1620	58	-10.0	.0	13...	1355	8.9	28.0	22.0
MAR					AUG				
09...	1230	371	7.0	6.5	23...	1445	16	25.5	22.0

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 annual maximum stage and discharge at crest-stage stations and the second is a table of annual maximum stage for tidal crest-stage stations. Discharge measurements made at miscellaneous sites for both low flow and high flow are given in a third table.

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 1983

Station No.	Station name	Location	Drainage area (mi ²)	Period of record	Date	Annual maximum	
						Gage height (ft)	Dis- charge (ft ³ /s)
Delaware River basin							
01478040	Christina River near Bear, DE	Lat 39°38'12", long 75°40'53", New Castle County, on right bank 500 ft upstream from highway bridge, 1.3 mi north- west of Bear, 1.6 mi downstream from Belltown Run, and 17.7 mi upstream from mouth.	40.6	1979-82†, 1983	3-21-83	11.0	3,420
Susquehanna River basin							
01577940	Broad Creek tributary at Whiteford, MD	Lat 39°42'14", long 76°21'49", Har- ford County, at upstream side of culvert on State Highway 165, 0.8 mi upstream from mouth, and 1.0 mi southwest of Whiteford.	.77	1971-83	7- 4-83	7.78	215
Gunpowder River basin							
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†, 1971-83	4-16-83	6.22	2,840
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	1958-83	3- 8-83	6.16	570
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. High- way 40, 1.9 mi northwest of Frostburg city limits, and about 26 mi upstream from mouth.	41.5	1971-83	1983	<19.0	<21
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 down- stream from Little Wills Creek, and 0.5 mi south of Hyndman.	146	1951-67†, 1968-83	6-21-83	9.33	8,310

† Operated as a continuous-record station.
a Approximately.

DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

Annual maximum discharge at crest-stage partial-record stations during water year 1983

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							
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. High- way 40, 0.2 mi northeast of Pratt, and 1.0 mi upstream from Kifer Hollow.	.70	1971-83	4-24-83	11.19	33
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. High- way 40, 0.2 mi upstream from mouth, and 0.9 mi west of Forest Park.	10.4	1965-69, 1971-83	4-24-83	5.06	340
01613150	Ditch Run near Hancock, MD	Lat 39°41'30", long 78°07'57", Washington County, at upstream side of culvert on U.S. High- way 40, 0.3 mi upstream from mouth, and 2.7 mi east of Hancock.	a4.8	1965-83	4- 3-83	5.0	153
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 Ave- nue, 1.7 mi upstream from mouth, and 2.0 mi southwest of Bethesda.	a4.1	1944-59†, 1960-61, 1962-78†, 1979-83	12-16-82	2.51	208
01658000	Mattawoman Creek near Pomonkey MD	Lat 38°35'45", long 77°03'25", Charles County, at downstream side of bridge on State High- way 227, 1.2 mi southeast of Pomonkey, and 12.6 mi upstream from mouth.	54.8	1949-72†, 1973-83	4-16-83	5.86	2,900
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	1965-83	5-16-83	4.03	13
03078500	Big Piney Run near Salis- bury, PA	Lat 39°43'34", long 79°02'55", Somerset County, 660 ft up- stream from Little Piney Run, and 2.5 mi southeast of Salis- bury.	24.5	1932-70†, 1974-83	5-23-83	4.77	1,420

† Operated as a continuous-record station.

a Approximately.

Annual maximum discharge at crest-stage partial-record stations during water year 1983

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 1983

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.	1966-83	3-18-83	4.74
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.	1966-83	4-24-83	6.22
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.	1966-83	4-24-83	4.82
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.	1966-83	10-25-82	5.01

DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

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 1983

Stream	Tributary to	Location	Drainage area (mi ²)	Measured previously (water years)	Measurements	
					Date	Discharge (ft ³ /s)
Gunpowder River basin						
01583985 Gunpowder Falls	Gunpowder River	Lat 39°25'31", long 76°31'47", Baltimore County, at bridge on Cromwell Bridge Road, 0.5 mi northeast of Loch Raven, Md.	308	1975-81	4- 6-83	51
					4-11-83	*1,000
					4-22-83	362
					7-20-83	6.3
				9- 9-83	219	
Potomac River basin						
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	1975-82	10- 5-82	13
					12-16-82	24
					9-17-83	23
01641810 Monocacy River	Potomac River	Lat 39°28'47", long 77°23'18", Frederick County, at Biggs Ford Bridge on Biggs Ford Road, 2.0 mi west of Walkersville, Md.	637	1974-79, 1982	1-28-83	348
					7-19-83	138
01642500 Linganore Creek	Monocacy River	Lat 39°24'55", long 77°20'00", Frederick County, on left bank 2.4 mi upstream from mouth, and 4.0 mi east of Frederick, Md.	82.3	1931-32†, 1934-82†	1-19-83	26.5
					6-13-83	73.7
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 1979-82	7-29-83	265
					9-29-83	149

* Not base flow.

† Operated as a continuous-record station.

Laurel Run seepage investigations--Headwaters to mouth, Garrett County, MD

One series of discharge measurements was made during the 1983 water year, on Aug. 3, on Laurel Run and its tributaries in Maryland, to study the effects of underground coal mining on channel gains and losses. The reach is 4.79 mi (7.71 km) in length and extends from its mouth near Wilson, Md., to its headwaters. The measurements were made during a period of base flow; for 4 days before the respective investigations no measurable precipitation had fallen. Tributary flow was considered a contribution and not a gain. Indicated gains or losses may be substantially in error as affected by small inaccuracies in open-channel measurements. Previous series of measurements were made in the 1981 water year.

Laurel Run mile	Stream	Location	Meas. discharge (ft ³ /s)	Gain or loss	Water temp. (°C)	pH (units)	Conductivity (micro-mhos)	Dissolved oxygen (mg/L)
Aug. 3, 1983								
4.79	Laurel Run	Lat 39°13'12", long 79°28'42", Garrett Co., 1.0 mi north-east of Kempton.	0.02	-	15.5	-	-	-
4.64	Laurel Run tributary	Lat 39°13'17", long 79°28'44", Garrett Co., 1.05 mi north-east of Kempton.	3.92	-	-	-	-	-
3.69	Laurel Run	Lat 39°13'39", long 79°27'50", Garrett Co., 1.8 mi north-east of Kempton.	2.98	-0.96	24.0	-	-	-
3.64	Laurel Run tributary	Lat 39°13'41", long 79°27'48", Garrett Co., at mouth.	.01	-	-	-	-	-
3.48	....do....	Lat 39°13'44", long 79°27'39", Garrett Co., at mouth.	.01	-	-	-	-	-
2.70	Laurel Run	Lat 39°14'14", long 79°27'02", Garrett Co., 2.8 mi north-east of Kempton.	3.41	+ .41	18.6	3.3	896	7.8
2.60	Chestnut Ridge Run	Lat 39°14'18", long 79°27'02", Garrett Co., at mouth.	.29	-	18.5	7.1	969	8.0
2.32	Laurel Run tributary	Lat 39°14'12", long 79°26'40", Garrett Co., at mouth.	.07	-	17.2	7.9	29	7.5
1.67	Dutch Run	Lat 39°14'42", long 79°26'00", Garrett Co., at mouth.	.06	-	17.5	7.0	204	5.3
1.18	Laurel Run	Gaging station near Wilson (0159430)	3.82	- .01	19.9	3.3	902	7.8
.10	....do....	Lat 39°14'47", long 79°24'42", Garrett Co., at mouth.	4.16	+ .34	18.2	-	895	8.8
Overall net gain or loss				- .22				

Sand Run seepage investigations--Headwaters to Wilson, MD

One series of discharge measurements was made during the 1983 water year, on Aug. 2, on Sand Run and its tributaries in Maryland, to study the effects of underground coal mining on channel gains and losses. The reach is 2.41 mi (3.88 km) in length along the North Fork of Sand Run and 2.35 mi (3.78 km) in length along the South Fork of Sand Run and extends from the headwaters to the sample station Sand Run near Wilson (01594942). The measurements were made during periods of base flow; for 3 days before the respective investigations no measurable precipitation had fallen. Tributary flow was considered a contribution and not a gain. Indicated gains or losses may be substantially in error as affected by small inaccuracies in open-channel measurements. Previous series of measurements were made in the 1981 water year.

Run mile	Stream	Location	Meas. discharge (ft ³ /s)	Gain or loss	Water temp. (°C)	pH (units)	Conduc- tivity (micro- mhos)	Dis- solved oxygen (mg/L)
Aug. 2, 1983								
1.81	North Fork Sand Run	Lat 39°16'35", long 79°25'56", Garrett Co., 2.4 mi north- west of Wilson.	-	-	-	-	-	-
1.80	North Fork Sand Run tributary	Lat 39°16'19", long 79°25'27", Garrett Co., 2.4 mi north- west of Wilson.	0.02	-	-	-	-	-
1.38	North Fork Sand Run	Lat 39°16'19", long 79°25'36", Garrett Co., 1.9 mi north- west of Wilson.	.10	-	21.9	7.2	92	7.5
.43	....do....	Lat 39°15'55", long 79°24'42", Garrett Co., 1.1 mi north- west of Wilson.	.19	+0.07	22.9	-	595	5.5
.05	....do....	Gaging station near Wilson (01594936).	.19	0	23.9	7.2	552	7.2
		Overall net gain or loss North Fork Sand Run		+ .07				
1.75	South Fork Sand Run	Lat 39°15'58", long 79°26'13", Garrett Co., 2.2 mi north- west of Wilson.	.07	-	20.0	-	311	5.7
1.15	....do....	Lat 39°15'34", long 79°25'44", Garrett Co., 1.6 mi north- west of Wilson.	.06	- .01	20.8	7.2	258	5.3
.48	....do....	Gaging station near Wilson (01594934).	.11	+ .05	28.7	7.5	1343	6.4
		Overall net gain or loss South Fork Sand Run		+ .04				
.19	Sand Run	Lat 39°15'13", long 79°24'04", Garrett Co., 0.2 mi west of Wilson.	.33	+ .03	26.1	6.7	2030	6.7
		Overall net gain or loss		+ .14				

Cecil County low-flow investigations

Several random and five series of base-flow discharge measurements were made throughout Cecil County as part of a water-availability study in cooperation with Cecil County and the Maryland Geological Survey. The series were made Apr. 21-22, May 13, June 13-15, Aug. 17, and Aug. 26. Range of flow measured covers high to low base flow. The data collected in these series of measurements, along with that already collected, will provide the basis for determining base-flow yields throughout the county.

Weather records at Conowingo Dam in the western portion of the area and Newark University Farm in the eastern portion of the area show that no significant precipitation occurred for 4 days prior to Apr. 21, 4 days prior to May 13, 8 days prior to June 13, 4 days prior to Aug. 17, and 4 days prior to Aug. 26. Therefore, the measurements are considered to represent base flow.

The measurements on each stream are listed in order proceeding downstream and each tributary is inserted in the order in which it enters the main stream. Drainage areas were determined from recent U.S. Geological Survey topographic maps of a scale of 1:24,000 and contour interval of 20 ft. Previous series of measurements were made as indicated.

Discharge measurements of streams and tributaries in Cecil County, MD

Station No.	Station name	Location	Drainage area (mi ²)	Measured previously (water years)	Date of measurement	Measured discharge (ft ³ /s)	Cfs per square mile
Delaware River Basin							
01477850	Christina River near Newark, DE	Lat 39°42'02", long 75°47'18", New Castle County, DE, at bridge on Wedgewood Road, 0.5 mi north of State Highway 273, 2.0 mi northwest of Newark.	3.76	1982	6-14-83	5.18	1.378
01477860	West Branch Christina River near Newark, DE	Lat 39°39'20", long 75°47'00", New Castle County, DE, at bridge on Ott's Chapel Road, 0.15 mi south of Delaware State Highway 2, 2.0 mi southwest of Newark.	4.20	1982	4-22-83 6-14-83	3.67 1.83	.874 .436
Sassafras River Basin							
01494450	Sassafras River tributary at Ginns Corner, MD	Lat 39°23'23", long 75°46'47", Cecil County, at culvert on Edgar Price Road, 0.7 mi east of Ginns Corner.	3.81	1982	6-14-83	3.13	.822
Elk River Basin							
01494995	Gramies Run at Elk Mills, MD	Lat 39°40'31", long 75°50'32", Cecil County, at wooden bridge on Booth Road, 0.8 mi north of Elk Mills.	3.05	1982	4-21-83 6-14-83 8-26-83	5.94 3.05 .65	1.948 1.000 .213
01495480	Little Elk Creek at Rock Church, MD	Lat 39°42'03", long 75°53'12", Cecil County, at bridge on State Highway 273, at Rock Church.	17.8	1982	4-21-83 6-13-83	38.6 19.9	2.169 1.118
01495500	Little Elk Creek at Childs, MD	Lat 39°38'30", long 75°52'00", Cecil County, at bridge on State Highway 545, 0.2 mi northwest of Childs.	26.8	1948-58	3-30-82 11- 3-83 6-13-83	16.0 9.02 27.0	.597 .337 1.007
01495520	Laurel Run near Elkton, MD	Lat 29°37'45", long 75°52'29", Cecil County, at culvert on Zeitler Road, 0.87 mi west of State Highway 545, 2.3 mi northwest of Elkton.	3.87	1982	6-14-83 8-26-83	1.07 0	.276 0
01495525	Dogwood Run at Elkton, MD	Lat 39°37'00", long 75°50'58", Cecil County, at culvert on State Highway 545, 1.5 mi northwest of Elkton.	1.62	1982	6-13-83 8-26-83	.36 .03	.222 .019
01495950	Scotchman Creek tributary near Cecilton, MD	Lat 39°25'15", long 75°53'15", Cecil County, at wooden bridge on New Cut Road, 1.5 mi northwest of Cecilton.	1.40	1982	6-14-83 8-17-83	.86 .69	.614 .493

Cecil County low-flow investigations--Continued

Discharge measurements of streams and tributaries in Cecil County, MD

Station No.	Station name	Location	Drainage area (mi ²)	Measured previously (water years)	Date of measurement	Measured discharge (ft ³ /s)	Cfs per square mile
Northeast River Basin							
01496030	West Branch Little Northeast Creek at Zion, MD	Lat 39°40'52", long 75°57'07", Cecil County, at culvert on Dr. Miller Road, 0.7 mi northeast of Zion.	3.32	1982	4-21-83 6-14-83 8-17-83	2.91 1.28 .83	.877 .386 .250
01496055	Northeast River tributary at North East, MD	Lat 39°35'43", long 75°56'36", Cecil County, at culvert on State Highway 272, 0.4 mi south of State Highway 7 at North East.	1.55	1982	4-21-83 5-13-83 6-13-83 8-17-83	1.31 .30 .20 .09	.845 .194 .129 .058
01496060	Stony Run near North East, MD	Lat 39°36'24", long 75°57'33", Cecil County, at wooden bridge on Razor Strap Road, 0.5 mi west of State Police Barracks, 0.9 mi northwest of North East.	8.23	1982	5-13-83 6-13-83 8-17-83	6.67 4.98 1.27	.810 .605 .154
01496085	Northeast River tributary at Charlestown, MD	Lat 39°34'50", long 75°59'51", Cecil County, at culvert on State Highway 7, at northeast city limits of Charlestown.	1.03	1982	5-13-83 6-15-83	.40 .51	.388 .495
01496100	Hance Point Creek at Hance Point, MD	Lat 39°33'30", long 75°57'19", Cecil County, at culvert on Hance Point Road, 2.9 mi south of North East.	1.36	-	4-21-83 5-13-83 6-13-83 8-17-83	.46 .61 .40 .06	.338 .449 .294 .044
Principio Creek Basin							
01496225	Principio Creek tributary at Belvedere, MD	Lat 39°35'39", long 76°01'19", Cecil County, at culvert on Belvedere Road at Belvedere, 0.8 mi north of U.S. Highway 40.	2.08	1982	4-21-83 6-15-83	3.25 1.37	1.563 .659
Mill Creek Basin							
01496250	Mill Creek at Jackson, MD	Lat 39°34'29", long 76°03'22", Cecil County, at culvert on U.S. Highway 40, 0.95 mi southwest of Jackson.	3.73	1982	4-21-83 5-13-83 6-15-83	8.68 5.36 4.43	2.327 1.437 1.188
Susquehanna River Basin							
01578300	Conowingo Creek at Oakwood, MD	Lat 39°42'01", long 76°11'22", Cecil County, at bridge on Pilot Town Road, 0.5 mi west of Oakwood.	34.4	1982	4-22-83 6-16-83	84.8 38.2	2.465 1.110
01578480	Stone Run at Rising Sun, MD	Lat 39°42'21", long 76°04'40", Cecil County, at culvert on U.S. Highway 1, 1.25 mi west of Rising Sun.	6.71	1982	4-21-83 6-16-83	10.2 4.39	1.520 .654
01578485	Stone Run near Rising Sun, MD	Lat 39°42'38", long 76°03'29", Cecil County, at culvert on U.S. Highway 1, 0.95 mi northwest of Rising Sun.	2.24	1982	4-21-83	.62	.277
01578490	Love Run at Richardsmere, MD	Lat 39°41'23", long 76°07'38", Cecil County, at bridge on Colora Road at Richardsmere.	3.55	1982	4-22-83 6-15-83	4.84 3.18	1.363 .896
01578150	Octoraro Creek tributary at Richardsmere, MD	Lat 39°41'09", long 76°08'32", Cecil County, at bridge on Colora Road at Richardsmere.	3.27	1982	4-22-83 6-15-83 9-28-83	5.10 2.91 .93	1.560 .890 .284

Potomac River basin low-flow investigations

Base-flow discharge measurements were made throughout Frederick County as part of a water-availability study in cooperation with Frederick County and the Maryland Geological Survey. The data collected in these measurements, along with that already collected, will provide the basis for determining the base-flow yields throughout the county.

Weather records at Frederick, in the central portion of the area, and Emmitsburg, in the northern part of the area, were used to check periods prior to measurements for rainfall. Measurements are considered to represent base flow except as indicated.

The measurements on each stream are listed in order proceeding downstream, and each tributary is inserted in the order in which it enters the main stream. Drainage areas were determined from recent U.S. Geological Survey topographic maps of a scale of 1:24,000 and contour interval of 10 to 20 ft. Previous series of measurements were made as indicated.

Discharge measurements of tributaries to the Potomac River in Frederick County, MD

Station No.	Station name	Location	Drainage area (mi ²)	Measured previously (water years)	Date of measurement	Measured discharge (ft ³ /s)	Cfs per square mile
01636850	Little Catoctin Creek near Brunswick, MD	Lat 39°19'25", long 77°35'35", Frederick County, at bridge on Highway 464, 1.4 mi northeast of Brunswick.	8.64	1977-82	1-21-83 3-17-83 6-16-83 9-28-83	1.71 8.66 3.79 .26	0.198 1.002 .439 .030
01638050	Catoctin Creek at Olive, MD	Lat 39°19'56", long 77°34'45", Frederick County, at bridge on State Highway 464, 0.4 mi northeast of Olive.	112	1982	1-21-83 3-17-83 6-16-83 7-20-83 9-19-83	34.0 138 72.6 20.8 2.78	.304 1.232 .648 .186 .025
01638520	Potomac River tributary at Point of Rocks, MD	Lat 39°16'23", long 77°31'31", Frederick County, at bridge on Rock Hall Road, 0.2 mi from State Highway 28 and 0.5 mi upstream from mouth.	3.04	1982	1-27-83 3-17-83 6-15-83 7-20-83 9-19-83	.12 2.07 1.18 .39 <.01	.039 .681 .388 .128 <.001
01638600	Tuscarora Creek at Tuscarora, MD	Lat 39°15'06", long 77°28'49", Frederick County, at bridge on New Design Road, 0.7 mi southwest of Tuscarora.	20.3	1975-79, 1982	1-27-83 3-17-83 6-15-83 9-29-83	8.10 23.9 13.5 4.12	.399 1.177 .665 .203
01639150	Piney Creek near Keysville, MD	Lat 39°39'19", long 77°15'54", Carroll County, 300 ft upstream from bridge on Baumgardner Road, 1.6 mi northwest of Keysville.	34.4	1982	1-13-83 3-17-83 5-13-83 6-14-83 6-17-83 7-20-83 9-12-83	20.3 27.0 10.1 6.78 5.16 2.82 .02	.590 .785 .294 .197 .150 .082 <.001
01639325	Friends Creek near Emmitsburg, MD	Lat 39°43'03", long 77°23'35", Frederick County, at concrete ford on Hornets Nest Road, 3.5 mi northwest of Emmitsburg.	12.2	1977-82	1-14-83 6-14-83 6-17-83 9-29-83	8.82 4.47 5.36 .29	.723 .366 .439 .024
01639390	Toms Creek near Keysville, MD	Lat 39°38'23", long 77°16'55", Frederick County, at abandoned bridge site on Sixes Road, 1.3 mi west of Keysville.	88.1	1982	1-13-83 5-13-83 6-14-83 6-17-83 7-20-83 9-12-83	75.1 74.9 36.7 29.7 13.3 1.53	.852 .850 .417 .337 .151 .017
01640200	Little Pipe Creek at Keymar, MD	Lat 39°35'28", long 77°14'35", Frederick County, at bridge on State Highway 194, 0.6 mi southwest of Keymar.	80.0	1982	1-17-83 3-17-83 5-13-83 6-14-83 7-19-83 9-12-83	31.6 83.4 89.9 59.7 42.0 13.3	.395 1.043 1.124 .746 .525 .166
01640750	Owens Creek near Rocky Ridge, MD	Lat 39°35'07", long 77°20'08", Frederick County, at bridge on Longs Mill Road, 1.6 mi southwest of Rocky Ridge.	38.8	1982	1-13-83 3-17-83 6-14-83 6-16-83 9-12-83	21.6 55.0 19.8 18.5 .56	.557 1.418 .510 .477 .014
01641600	Fishing Creek near Utica, MD	Lat 39°30'41", long 77°23'07", Frederick County, at bridge on Lenhart Road, 1.0 mi southeast of Utica.	17.9	1982	1-20-83 3-17-83 6-14-83 6-16-83 7-20-83 9-12-83	2.12 30.7 11.1 11.2 5.88 1.33	.118 1.715 .620 .626 .328 .074

Potomac River basin low-flow investigations--Continued

Discharge measurements of tributaries to the Potomac River in Frederick County, MD

Station No.	Station name	Location	Drainage area (mi ²)	Measured previous-ly (water years)	Date of measurement	Measured discharge (ft ³ /s)	Cfs per square mile
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, 2.0 mi north of Frederick.	16.5	1974-79, 1982	1-18-83	6.64	0.402
					3-17-83	22.8	1.382
					6-17-83	8.59	.521
					9-29-83	1.92	.116
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.	28.4	1964-66, 1975-79, 1982	1-19-83	13.5	.475
					6-14-83	9.54	.336
					9-29-83	2.87	.101
01643110	Bush Creek at Reels Mill, MD	Lat 39°21'37", long 77°22'08", Frederick County, at Reels Mill bridge on Reels Mill Road, 3.5 mi southeast of Frederick.	29.7	1982	1-20-83	12.2	.411
					3-17-83	30.8	1.037
					6-15-83	23.6	.795
					9-19-83	5.73	.193
01643125	Ballenger Creek near Lime Kiln, MD	Lat 39°21'52", long 77°25'01", Frederick County, at bridge on State Highway 85, 1.2 mi northeast of Lime Kiln.	20.2	1977-82	1-20-83	7.78	.385
					3-17-83	21.8	1.079
					6-15-83	19.5	.965
					9-29-83	4.98	.247

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 1982 TO SEPTEMBER 1983

DELAWARE RIVER BASIN

01477850

- CHRISTINA R NR NEWARK DEL

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD UNITS)	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)
NOV 02...	1140	1.6	107	7.2	13.2	20	9.1	40	11	9.9

DATE	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	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 SI02)
NOV 02...	3.8	6.6	25	.5	2.8	3.5	12	9.6	.20	16

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,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)
NOV 02...	74	78	.10	.32	1.5	.33	1.8	8.0	.020

DATE	PHOS- PHORUS TOTAL (MG/L AS P04)	PHOS- PHORUS, ORTHOPHOSPHATE TOTAL (MG/L AS P)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, SUS- PENDED RECOVERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	MANGA- NESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGA- NESE, SUS- PENDED RECOVERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	CARBON, ORGANIC TOTAL (MG/L AS C)
NOV 02...	.06	.010	160	100	60	10	0	12	2.8

ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS

WATER-QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DELAWARE RIVER BASIN--CONTINUED

01477860

- WB CHRISTINA R NR NEWARK DEL

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD UNITS)	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)
NOV 02...	1340	.91	451	6.9	15.3	10	8.6	73	39	19

DATE	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	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)
NOV 02...	6.2	48	57	2.5	5.6	8.3	20	93	.30	17

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,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)
NOV 02...	256	230	.35	.63	2.9	.60	3.5	15	.190

DATE	PHOS- PHORUS TOTAL (MG/L AS P04)	PHOS- PHORUS, ORTHO, 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- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	CARRON, ORGANIC TOTAL (MG/L AS C)
NOV 02...	.58	.160	800	380	420	170	10	160	6.1

WATER-QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

SASSAFRAS RIVER BASIN

01494450

- SASSAFRAS R TR AT GINNS CORNER MD

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD UNITS)	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)
NOV 03...	1715	1.2	130	6.8	16.7	15	5.1	58	27	12

DATE	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	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)
NOV 03...	6.8	4.7	14	.3	3.1	9.5	15	12	.20	19

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,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)
NOV 03...	99	92	.13	.32	2.6	.50	3.1	14	.160

DATE	PHOS- PHORUS TOTAL (MG/L AS P04)	PHOS- PHORUS, ORTHO, 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)	CARBON, ORGANIC TOTAL (MG/L AS C)
NOV 03...	.49	.090	2200	1900	260	300	100	200	4.9

ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS

WATER-QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

ELK RIVER BASIN

01494995

- GRAMIES RN AT ELK MILLS MD

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD UNITS)	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)
NOV 03...	1220	1.0	96	7.2	14.6	15	9.2	33	8	8.4

DATE	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	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)
NOV 03...	3.0	8.6	34	.7	1.8	3.1	14	8.5	<.10	23

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,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)
NOV 03...	81	82	.11	.22	.90	.30	1.2	5.3	.020

DATE	PHOS- PHORUS TOTAL (MG/L AS PO4)	PHOS- PHORUS, ORTHO, TOTAL (MG/L AS P)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, SUS- PENDED RECOVERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	MANGA- NESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGA- NESE, SUS- PENDED RECOVERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	CARBON, ORGANIC TOTAL (MG/L AS C)
NOV 03...	.06	<.010	230	180	48	10	5	5	3.2

WATER-QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

ELK RIVER BASIN--CONTINUED

01495480

- L ELK C AT ROCK CHURCH MD

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD UNITS)	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)
NOV 02...	1000	5.9	106	7.3	12.5	15	9.8	52	15	9.6

DATE	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	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)
NOV 02...	6.7	6.7	21	.4	2.4	3.6	10	9.8	<.10	9.8

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 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)
NOV 02...	88	77	.12	1.4	2.6	.70	3.3	15	.020

DATE	PHOS- PHORUS TOTAL (MG/L AS P04)	PHOS- PHORUS, ORTHO, 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)	CARBON, ORGANIC TOTAL (MG/L AS C)
NOV 02...	.06	.030	260	190	66	30	7	23	2.5

ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS

WATER-QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

ELK RIVER BASIN--CONTINUED

01495500

- L ELK C AT CHILDS, MD

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD UNITS)	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)
NOV 03...	1350	9.0	127	8.8	16.3	10	11.2	53	19	11

DATE	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	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)
NOV 03...	6.2	8.9	26	.5	2.6	.1	12	12	<.10	11

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,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)
NOV 03...	89	84	.12	2.2	2.1	.30	2.4	11	.030

DATE	PHOS- PHORUS TOTAL (MG/L AS P04)	PHOS- PHORUS, ORTHOPHOSPHATE TOTAL (MG/L AS P)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, SUS- PENDED RECOVERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	MANGA- NESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGA- NESE, SUS- PENDED RECOVERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	CARBON, ORGANIC TOTAL (MG/L AS C)
NOV 03...	.09	.020	320	180	140	30	10	19	5.3

WATER-QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

ELK RIVER BASIN--CONTINUED

01495520

- LAUREL RN NR ELKTON MD

DATE	TIME	STREAM-FLOW, INSTANTANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD UNITS)	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)	SODIUM, DIS- SOLVED (MG/L AS NA)
NOV 03...	1050	.27	102	6.9	13.3	20	5.5	31	11	6.8	3.5	11

DATE	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	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)
NOV 03...	41	.9	2.1	4.9	11	19	<.10	13	85	79	.12	.06

DATE	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN+AM- MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS TOTAL (MG/L AS PO4)	PHOS- PHORUS, ORTHO, 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)	CARBON, ORGANIC TOTAL (MG/L AS C)
NOV 03...	<.10	3.70	.030	.09	<.010	870	660	210	140	30	110	5.9

01495525

- DOGWOOD RN AT ELKTON MD

DATE	TIME	STREAM-FLOW, INSTANTANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD UNITS)	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)	SODIUM, DIS- SOLVED (MG/L AS NA)
NOV 03...	0940	.11	160	7.5	13.3	20	5.6	47	12	10	5.4	14

DATE	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	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)
NOV 03...	40	1.0	3.5	2.1	11	29	.20	6.7	105	103	.14	.03

DATE	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN+AM- MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS TOTAL (MG/L AS PO4)	PHOS- PHORUS, ORTHO, 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)	CARBON, ORGANIC TOTAL (MG/L AS C)
NOV 03...	<.10	.40	.070	.21	.050	470	260	210	40	5	35	6.0

WATER-QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

ELK RIVER BASIN--CONTINUED

01495550

- PERCH CR NR ELKTON MD

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD UNITS)	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)
NOV 03...	1500	1.2	85	7.2	15.4	30	7.3	34	15	6.7

DATE	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	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)
NOV 03...	4.1	5.1	23	.4	2.6	2.3	11	9.8	<.10	9.8

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 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)
NOV 03...	66	61	.09	.21	1.3	.50	1.8	8.0	.020

DATE	PHOS- PHORUS TOTAL (MG/L AS P04)	PHOS- PHORUS, ORTHO, TOTAL (MG/L AS P)	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- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	CARBON, ORGANIC TOTAL (MG/L AS C)
NOV 03...	.06	<.010	560	350	210	20	2	18	8.2

WATER-QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

NORTHEAST RIVER BASIN

01496100

- HANCE POINT C AT HANCE POINT MD

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD UNITS)	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)
NOV 04...	1015	.18	46	5.8	15.2	20	4.5	14	5	3.1

DATE	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	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)
NOV 04...	1.4	2.9	30	.4	.9	28	6.0	5.2	.10	9.1

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,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)
NOV 04...	48	35	.07	.02	.20	1.00	1.2	5.3	.040

DATE	PHOS- PHORUS TOTAL (MG/L AS P04)	PHOS- PHORUS, ORTHO, 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)	CARBON, ORGANIC TOTAL (MG/L AS C)
NOV 04...	.12	.010	1800	1400	360	190	20	170	4.7

ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS

WATER-QUALITY DATA FOR THE PERIOD JUNE 1982 TO SEPTEMBER 1983

PATUXENT RIVER BASIN

01594480

- PATUXENT R NR DRURY, MD

DATE	TIME	SAM- PLING DEPTH (FEET)	PH (STAND- ARD UNITS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	OXYGEN, DIS- SOLVED (MG/L)	TEMPER- ATURE (DEG C)	STREAM VELOC- ITY, MEAN (FPS)
JUN 1982							
21...	0800	19.0	6.5	130	7.7	21.6	.70
21...	0801	11.0	6.5	130	7.5	21.6	--
21...	0802	8.00	6.5	130	7.4	21.6	--
21...	0803	4.00	6.5	130	7.3	21.7	--
21...	0804	1.00	6.5	130	7.3	21.7	.70
21...	1015	12.0	6.6	140	8.1	21.6	.97
21...	1016	9.00	6.6	140	7.7	21.6	--
21...	1017	6.00	6.6	140	7.7	21.7	--
21...	1018	3.00	6.6	140	7.7	21.7	--
21...	1019	1.00	6.6	140	7.6	21.8	--
21...	1140	12.0	6.6	150	7.8	21.1	--
21...	1141	9.00	6.6	150	7.8	21.2	--
21...	1142	6.00	6.6	150	7.8	21.2	--
21...	1143	3.00	6.7	150	7.8	22.3	--
21...	1144	1.00	6.7	150	7.8	22.3	.76
21...	1405	12.0	6.7	140	8.5	22.7	.21
21...	1406	9.00	6.7	140	8.3	22.6	--
21...	1407	6.00	6.7	140	8.2	22.6	--
21...	1408	3.00	6.7	140	8.2	22.7	--
21...	1409	1.00	6.6	140	8.1	22.8	--
21...	1620	14.0	6.6	130	8.2	22.5	.27
21...	1621	10.0	6.5	140	7.9	22.6	--
21...	1622	5.00	6.5	140	7.8	22.7	--
21...	1623	1.00	6.5	130	7.8	23.0	--
21...	1805	14.0	6.5	140	8.2	22.5	.10
21...	1806	10.0	6.5	140	7.7	22.5	--
21...	1807	6.00	6.5	140	7.7	22.6	--
21...	1808	3.00	6.5	140	7.7	23.0	--
21...	1809	1.00	6.5	140	7.7	23.4	--
25...	1300	13.0	7.0	230	7.2	20.0	--
25...	1301	9.00	7.0	230	7.2	20.1	--
25...	1302	4.00	6.9	230	7.3	20.6	--
25...	1303	1.00	6.9	230	7.3	21.0	--
25...	1400	13.0	7.3	230	7.7	20.6	--
25...	1401	9.00	7.2	230	7.6	20.8	--
25...	1402	4.00	7.1	230	7.6	21.1	--
25...	1403	1.00	7.1	230	7.6	21.3	--
25...	1545	14.0	7.0	230	7.8	21.0	--
25...	1546	9.00	7.0	230	7.0	20.9	--
25...	1547	5.00	7.0	230	6.9	21.5	--
25...	1548	1.00	7.0	240	7.0	21.6	--
25...	1700	14.0	6.9	230	6.6	20.1	--
25...	1701	9.00	6.9	230	6.6	20.8	--
25...	1702	5.00	6.8	230	6.5	20.9	--
25...	1703	1.00	6.8	240	6.5	21.8	--
AUG							
31...	0700	12.0	6.7	220	5.9	19.1	--
31...	0701	10.0	6.7	220	6.0	19.1	--
31...	0702	5.00	6.7	220	6.1	19.1	--
31...	0703	1.00	6.7	220	6.1	19.1	--
31...	0900	12.0	6.7	220	6.8	18.9	.65
31...	0901	8.00	6.7	220	6.5	18.9	--
31...	0902	4.00	6.7	220	6.5	18.9	--
31...	0903	1.00	6.7	220	6.5	18.9	--
31...	1005	11.0	6.7	220	6.6	19.0	.41
31...	1006	8.00	6.7	220	6.5	19.0	--
31...	1007	4.00	6.7	220	6.4	19.1	--
31...	1008	1.00	6.7	220	6.5	19.1	--
31...	1105	11.0	6.8	220	6.9	19.2	.10
31...	1106	8.00	6.8	220	6.6	19.3	--
31...	1107	4.00	6.8	220	6.6	19.3	--
31...	1108	1.00	6.8	220	6.6	19.7	--
31...	1200	11.0	6.8	220	6.8	19.4	.27
31...	1201	8.00	6.8	220	6.7	19.4	--
31...	1202	4.00	6.8	220	6.7	19.6	--
31...	1203	1.00	6.8	220	6.9	20.5	--

WATER-QUALITY DATA FOR THE PERIOD JUNE 1982 TO SEPTEMBER 1983

PATUXENT RIVER BASIN--CONTINUED

01594480

- PATUXENT R NR DRURY, MD--CONTINUED

DATE	TIME	SAM- PLING DEPTH (FEET)	PH (STAND- ARD UNITS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	OXYGEN, DIS- SOLVED (MG/L)	TEMPER- ATURE (DEG C)	STREAM VELOC- ITY, MEAN (FPS)
NOV 1982							
01...	1055	11.0	7.2	240	--	13.2	--
01...	1056	6.00	7.2	240	--	13.0	--
01...	1057	1.00	7.2	240	--	13.1	--
01...	1155	10.0	7.2	240	--	13.2	--
01...	1156	5.00	7.2	240	--	13.2	--
01...	1157	1.00	7.2	240	--	13.3	--
01...	1300	11.0	7.3	240	--	13.6	--
01...	1301	6.00	7.3	240	--	13.4	--
01...	1302	1.00	7.2	240	--	13.8	--
01...	1445	13.0	7.7	220	--	13.7	--
01...	1448	1.00	7.4	220	--	13.8	--
01...	1545	13.0	7.2	220	--	13.5	--
01...	1546	19.0	7.2	220	--	13.5	--
01...	1547	5.00	7.1	220	--	13.6	--
01...	1548	1.00	7.1	220	--	13.7	--
MAR 1983							
08...	0810	12.0	6.9	205	8.8	9.7	.14
08...	0811	6.00	6.8	205	8.8	9.7	--
08...	0812	1.00	6.8	205	8.8	9.7	--
08...	0920	13.0	6.8	209	8.8	9.7	--
08...	0921	6.00	6.8	209	8.8	9.7	--
08...	0922	1.00	6.8	209	8.7	9.7	--
08...	1020	13.0	6.8	209	8.7	9.7	--
08...	1021	6.00	6.8	209	8.6	9.8	--
08...	1022	1.00	6.8	209	8.6	9.8	--
08...	1125	13.0	6.8	209	8.7	9.7	.17
08...	1126	6.00	6.8	209	8.7	9.7	--
08...	1127	1.00	6.8	209	8.6	9.8	--
JUN							
15...	0820	15.0	6.8	188	6.6	22.5	.00
15...	0821	11.0	6.8	188	6.6	22.5	.00
15...	0822	6.00	6.7	188	6.6	22.5	.17
15...	0823	1.00	6.7	188	6.6	22.6	--
15...	0920	15.0	6.7	189	6.4	22.7	.00
15...	0921	7.00	6.7	189	6.5	22.7	.00
15...	0922	1.00	6.7	189	6.7	23.0	.18
15...	1020	15.0	6.7	192	6.3	23.0	.00
15...	1021	7.00	6.7	192	6.4	23.1	.00
15...	1022	1.00	6.7	192	6.6	23.3	.00
15...	1120	15.0	6.7	192	6.3	23.3	.47
15...	1121	7.00	6.7	192	6.6	23.4	--
15...	1122	1.00	6.7	193	7.0	23.9	--
15...	1220	15.0	6.8	193	6.7	23.8	.75
15...	1221	7.00	6.7	193	6.8	23.9	--
15...	1222	1.00	6.7	193	6.8	23.9	--
SEP							
15...	0750	14.0	--	266	5.3	19.8	.18
15...	0751	10.0	--	264	5.4	19.8	.25
15...	0752	6.00	--	264	5.4	19.9	.33
15...	0753	1.00	--	263	5.3	19.9	--
15...	0910	14.0	--	256	5.4	20.2	.38
15...	0911	10.0	--	256	5.4	20.2	.45
15...	0912	6.00	--	255	5.4	20.3	.53
15...	0913	1.00	--	255	5.4	20.3	--
15...	1030	15.0	--	257	5.3	20.5	.30
15...	1031	10.0	--	258	5.2	20.5	.27
15...	1032	6.00	--	258	5.2	20.6	.28
15...	1033	1.00	--	258	5.2	20.6	--
15...	1150	15.0	--	264	5.0	20.8	.18
15...	1151	10.0	--	264	5.0	20.8	.19
15...	1152	6.00	--	264	5.2	20.8	.22
15...	1153	1.00	--	264	5.5	21.2	--

ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS

WATER-QUALITY DATA FOR THE PERIOD JUNE 1982 TO SEPTEMBER 1983

PATUXENT RIVER BASIN--CONTINUED

01594530

- PATUXENT R NR BRISTOL, MD

DATE	TIME	SAM- PLING DEPTH (FEET)	PH (STAND- ARD UNITS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	OXYGEN, DIS- SOLVED (MG/L)	TEMPER- ATURE (DEG C)	STREAM VELOC- ITY, MEAN (FPS)
JUN 1982							
20...	1130	5.00	6.5	130	7.8	21.3	.82
20...	1131	3.00	6.5	130	7.6	21.3	--
20...	1132	1.00	6.5	130	7.6	21.4	--
20...	1330	5.00	6.6	130	7.6	22.6	1.08
20...	1331	3.00	6.5	120	7.7	22.4	--
20...	1332	1.00	6.5	120	7.7	22.6	--
20...	1550	7.00	6.6	115	7.9	23.2	.57
20...	1551	4.00	6.5	115	7.6	23.1	--
20...	1552	1.00	6.5	115	7.6	23.2	--
20...	1730	7.00	6.6	115	7.6	23.5	.28
20...	1731	5.00	6.6	115	7.6	23.4	--
20...	1732	3.00	6.5	115	7.6	23.5	--
20...	1733	1.00	6.6	115	7.7	23.8	--
20...	1940	6.00	6.5	115	7.8	23.0	.79
20...	1941	3.00	6.5	115	7.6	22.9	--
20...	1942	1.00	6.5	115	7.6	22.9	--
SEP							
01...	0820	6.00	7.2	440	8.2	23.4	.85
01...	0821	3.00	7.2	440	8.1	23.4	--
01...	0822	1.00	7.2	440	8.1	23.4	--
01...	0930	6.00	7.0	360	8.3	23.1	.73
01...	0931	3.00	7.0	360	7.4	23.1	--
01...	0932	1.00	6.9	360	7.2	23.1	--
01...	1030	6.00	6.8	320	6.7	23.1	.47
01...	1031	3.00	6.8	320	6.6	23.0	--
01...	1032	1.00	6.8	320	6.6	22.9	--
01...	1135	6.00	6.9	310	6.9	23.3	--
01...	1136	3.00	6.9	320	6.8	23.1	--
01...	1137	1.00	6.9	320	6.8	23.2	.26
01...	1235	6.00	7.2	370	8.2	23.7	.78
01...	1236	3.00	7.2	370	8.1	23.6	--
01...	1237	1.00	7.2	370	8.2	23.6	--
NOV							
02...	0705	6.00	7.0	610	--	13.4	--
02...	0706	3.00	7.0	600	--	13.4	--
02...	0707	1.00	7.0	600	--	13.4	--
02...	0800	6.00	7.0	460	--	13.9	--
02...	0801	3.00	6.9	460	--	13.9	--
02...	0802	1.00	6.9	450	--	13.9	--
02...	0900	5.00	6.9	360	--	14.3	--
02...	0901	3.00	6.9	360	--	14.2	--
02...	0902	1.00	6.9	360	--	14.3	--
02...	1000	4.00	6.9	280	--	14.5	--
02...	1001	1.00	6.9	280	--	14.4	--
02...	1100	4.00	7.0	270	--	14.9	--
02...	1101	1.00	7.1	270	--	15.2	--
02...	1200	4.00	7.1	260	--	15.0	--
02...	1201	1.00	7.1	280	--	15.9	--
02...	1300	5.00	7.1	300	--	15.6	--
02...	1301	3.00	7.1	300	--	15.5	--
02...	1302	1.00	7.1	300	--	15.5	--
02...	1400	5.00	7.3	470	--	15.2	--
02...	1401	3.00	7.3	470	--	15.2	--
02...	1402	1.00	7.2	480	--	15.2	--
02...	1500	6.00	7.3	610	--	15.2	--
02...	1501	3.00	7.3	610	--	15.1	--
02...	1502	1.00	7.3	610	--	15.1	--
MAR 1983							
08...	1350	7.00	6.8	207	9.1	10.4	.14
08...	1351	4.00	6.8	209	9.1	10.5	--
08...	1352	1.00	6.8	208	9.1	10.5	--
08...	1450	7.00	6.8	214	9.2	9.9	.47
08...	1451	4.00	6.8	214	9.2	10.0	--
08...	1452	1.00	6.8	214	9.1	10.0	--
08...	1600	7.00	6.7	211	9.8	9.7	.66
08...	1601	4.00	6.7	212	9.6	9.7	--
08...	1602	1.00	6.8	212	9.7	9.6	--
08...	1650	7.00	6.8	214	9.5	9.6	.58
08...	1651	4.00	6.8	214	9.5	9.6	--
08...	1652	1.00	6.8	214	9.5	9.6	--
JUN							
15...	0801	3.00	6.8	188	9.7	26.2	--
15...	1455	6.00	6.7	197	8.0	25.7	.67
15...	1456	3.00	6.7	197	8.0	25.6	--

WATER-QUALITY DATA FOR THE PERIOD JUNE 1982 TO SEPTEMBER 1983

PATUXENT RIVER BASIN--CONTINUED

01594530

- PATUXENT R NR BRISTOL, MD--CONTINUED

DATE	TIME	SAM- PLING DEPTH (FEET)	PH (STAND- ARD UNITS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	OXYGEN, DIS- SOLVED (MG/L)	TEMPER- ATURE (DEG C)	STREAM VELOC- ITY, MEAN (FPS)
JUN 1983							
15...	1457	1.00	6.7	198	8.0	25.7	.85
15...	1555	5.00	6.7	198	7.7	25.7	.54
15...	1557	1.00	6.7	198	7.7	25.7	.69
15...	1710	5.00	6.6	196	7.9	25.6	.28
15...	1711	3.00	6.6	197	8.0	25.6	--
15...	1712	1.00	6.7	196	8.3	25.8	.40
15...	1800	6.00	6.7	189	9.3	26.0	1.03
15...	1802	1.00	6.8	188	9.8	26.2	1.26
15...	1900	6.00	7.1	171	11.8	26.8	.85
15...	1901	3.00	7.1	170	11.8	26.8	--
15...	1902	1.00	7.1	170	11.8	26.7	1.08
SEP							
14...	1720	5.00	--	325	5.3	22.6	.19
14...	1721	3.00	--	323	5.3	22.6	.43
14...	1722	1.00	--	321	5.3	22.6	--
14...	1820	5.00	--	301	5.3	22.5	.18
14...	1821	3.00	--	301	5.3	22.5	.23
14...	1822	1.00	--	301	5.3	22.5	--
14...	2000	5.00	--	459	7.8	22.5	.44
14...	2001	3.00	--	462	7.8	22.5	--
14...	2002	1.00	--	464	7.8	22.5	--
14...	2115	6.00	--	829	8.5	22.7	.49
14...	2116	3.00	--	830	8.5	22.7	--
14...	2117	1.00	--	831	8.4	22.7	--

01594580

- PATUXENT R AT LOWER MARLBORO MD

JUN 1982							
18...	0810	11.0	6.5	130	7.6	23.2	1.03
18...	0811	8.00	6.5	140	7.5	23.2	--
18...	0812	5.00	6.6	140	7.4	23.2	--
18...	0813	2.00	6.6	140	7.3	23.2	--
18...	0814	1.00	6.6	145	7.3	23.2	--
18...	1040	11.0	6.6	140	7.1	23.3	1.01
18...	1041	8.00	6.6	140	7.0	23.3	--
18...	1042	5.00	6.6	140	7.0	23.4	--
18...	1043	2.00	6.6	140	6.9	23.5	--
18...	1044	1.00	6.6	140	6.9	23.5	--
18...	1240	13.0	6.7	180	7.2	24.0	.99
18...	1241	10.0	6.7	180	7.1	24.0	--
18...	1242	7.00	6.6	180	7.1	24.1	--
18...	1243	4.00	6.6	180	7.1	24.0	--
18...	1244	1.00	6.6	180	7.1	24.1	--
18...	1450	13.0	6.8	190	7.2	24.3	.38
18...	1451	10.0	6.7	190	7.2	24.3	--
18...	1452	7.00	6.7	170	7.2	24.3	--
18...	1453	4.00	6.6	170	7.2	24.2	--
18...	1454	1.00	6.6	160	7.2	24.3	--
18...	1705	12.0	6.6	160	7.5	24.6	1.41
18...	1706	9.00	6.6	160	7.4	24.7	--
18...	1707	6.00	6.6	150	7.4	24.7	--
18...	1708	3.00	6.6	150	7.4	24.7	--
18...	1709	1.00	6.6	150	7.4	24.7	--
18...	1900	11.0	6.6	135	7.4	24.8	1.40
18...	1901	8.00	6.5	140	7.2	24.7	--
18...	1902	5.00	6.5	140	7.2	24.7	--
18...	1903	2.00	6.5	135	7.2	24.7	--
18...	1904	1.00	6.5	140	7.2	24.7	--
SEP							
02...	0722	6.00	7.0	6300	6.3	24.1	--
02...	0723	3.00	7.0	6000	6.3	24.0	--
02...	0724	1.00	7.0	6000	6.3	24.0	--
02...	0830	12.0	7.1	4800	6.3	24.1	.63
02...	0831	9.00	7.1	4800	6.3	24.1	--
02...	0832	6.00	7.1	4800	6.4	24.1	--
02...	0833	3.00	7.1	4800	6.3	24.1	--
02...	0834	1.00	7.1	4800	6.4	24.1	--
02...	0930	11.0	7.1	4400	6.9	24.1	.78

ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS

WATER-QUALITY DATA FOR THE PERIOD JUNE 1982 TO SEPTEMBER 1983

PATUXENT RIVER BASIN--CONTINUED

01594580

- PATUXENT R AT LOWER MARLBORO MD --CONTINUED

DATE	TIME	SAM- PLING DEPTH (FEET)	PH (STAND- ARD UNITS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	OXYGEN, DIS- SOLVED (MG/L)	TEMPER- ATURE (DEG C)	STREAM VELOC- ITY, MEAN (FPS)
SEP 1982							
02...	0931	8.00	7.1	4400	6.6	24.1	--
02...	0932	5.00	7.1	4400	6.6	24.1	--
02...	0933	3.00	7.1	4300	6.6	24.1	--
02...	0934	1.00	7.2	4300	6.7	24.1	--
02...	1030	11.0	7.1	4000	6.7	24.2	.42
02...	1031	8.00	7.1	4000	6.6	24.2	--
02...	1032	5.00	7.1	4000	6.6	24.3	--
02...	1033	3.00	7.2	4000	6.7	24.3	--
02...	1034	1.00	7.2	3900	6.8	24.3	--
02...	1215	12.0	7.3	4100	6.9	24.6	.49
02...	1216	8.00	7.2	4000	6.8	24.6	--
02...	1217	5.00	7.3	3900	7.2	24.8	--
02...	1218	3.00	7.4	3900	7.3	25.0	--
02...	1219	1.00	7.4	3900	7.5	25.1	--
02...	1300	12.0	7.3	4400	6.7	24.6	.68
02...	1301	8.00	7.2	4400	6.7	24.6	--
02...	1302	5.00	7.2	4500	6.8	24.6	--
02...	1303	3.00	7.3	4500	7.0	24.8	--
02...	1304	1.00	7.3	4510	7.1	25.0	--
02...	1415	13.0	7.2	5100	6.7	24.6	1.01
02...	1416	9.00	7.2	5200	6.6	24.6	--
02...	1417	6.00	7.1	5200	6.4	24.7	--
02...	1418	3.00	7.2	5300	6.7	24.8	--
02...	1419	1.00	7.2	5200	6.9	24.9	--
02...	1525	13.0	7.2	6700	6.8	25.2	.80
02...	1526	9.00	7.2	6800	6.7	25.2	--
02...	1527	6.00	7.2	6900	6.8	25.2	--
02...	1528	3.00	7.2	6700	7.1	25.4	--
02...	1529	1.00	7.2	6700	7.1	25.5	--
02...	1620	13.0	7.2	8000	7.0	25.0	.53
02...	1621	9.00	7.2	7800	6.6	24.9	--
02...	1622	6.00	7.2	7100	6.8	25.1	--
02...	1623	3.00	7.2	6200	7.0	25.3	--
02...	1624	1.00	7.3	5700	7.1	25.4	--
02...	1800	13.0	7.2	8300	6.4	25.2	.33
02...	1801	9.00	7.2	8200	6.6	25.2	--
02...	1802	6.00	7.2	8200	6.6	25.1	--
02...	1803	3.00	7.2	8000	6.6	25.2	--
02...	1804	1.00	7.3	7500	6.6	25.2	--
02...	2010	12.0	7.2	4800	7.7	25.0	.69
02...	2011	9.00	7.2	4600	7.3	25.1	--
02...	2012	5.00	7.3	4500	7.2	25.1	--
02...	2013	1.00	7.3	4400	7.3	25.1	--
03...	0915	8.00	7.1	4300	6.6	24.6	1.04
03...	0916	5.00	7.1	4300	6.4	24.7	--
03...	0917	3.00	7.1	4300	6.3	24.7	--
03...	0918	1.00	7.1	4300	6.3	24.7	--
03...	1030	7.00	7.2	3700	7.4	25.1	1.21
03...	1031	5.00	7.3	3700	6.7	25.1	--
03...	1032	3.00	7.3	3700	6.6	25.1	--
03...	1033	1.00	7.3	3700	6.6	25.1	--
03...	1130	7.00	7.2	3400	6.7	25.4	.53
03...	1131	5.00	7.3	3400	6.7	25.3	--
03...	1132	3.00	7.3	3400	6.7	25.3	--
03...	1133	1.00	7.3	3400	6.7	25.3	--
03...	1235	7.00	7.4	3400	7.1	25.5	.28
03...	1236	5.00	7.4	3400	7.0	25.5	--
03...	1237	3.00	7.4	3400	7.1	25.6	--
03...	1238	1.00	7.4	3400	7.1	25.6	--

WATER-QUALITY DATA FOR THE PERIOD JUNE 1982 TO SEPTEMBER 1983

PATUXENT RIVER BASIN--CONTINUED

01594580 - PATUXENT R AT LOWER MARLBORO MD--CONTINUED

DATE	TIME	SAM- PLING DEPTH (FEET)	PH (STAND- ARD UNITS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	OXYGEN, DIS- SOLVED (MG/L)	TEMPER- ATURE (DEG C)	STREAM VELOC- ITY, MEAN (FPS)
OCT 1982							
29...	0720	12.0	8.1	5070	--	11.3	--
29...	0721	7.00	8.1	5030	--	11.3	--
29...	0722	1.00	8.1	5010	--	11.3	--
29...	0835	12.0	8.0	4300	--	10.9	--
29...	0836	7.00	8.0	4300	--	11.0	--
29...	0837	1.00	8.0	4200	--	11.0	--
29...	0955	12.0	8.0	4600	--	11.1	.60
29...	0956	7.00	8.0	4000	--	11.1	--
29...	0957	1.00	8.0	3900	--	11.1	--
29...	1025	12.0	8.0	4500	--	11.4	.68
29...	1026	7.00	8.0	4300	--	11.4	--
29...	1027	1.00	8.0	4100	--	11.5	--
29...	1125	12.0	8.0	5200	--	12.1	1.40
29...	1126	7.00	8.0	5000	--	11.9	--
29...	1127	1.00	8.0	5000	--	11.9	--
29...	1330	12.0	8.1	6700	--	12.7	1.08
MAR 1983							
09...	0816	13.0	7.0	402	9.8	9.5	--
09...	0817	7.00	7.0	386	9.8	9.5	--
09...	0818	1.00	7.0	347	9.8	9.5	--
09...	0855	19.0	6.9	503	9.9	9.4	--
09...	0856	13.0	6.9	516	9.8	9.4	--
09...	0857	7.00	6.9	454	9.8	9.4	--
09...	0858	1.00	6.9	465	9.8	9.4	--
09...	0955	19.0	6.9	--	9.9	9.4	--
09...	0956	13.0	6.9	--	9.8	9.3	--
09...	0957	7.00	6.9	--	9.8	9.4	--
09...	0958	1.00	6.9	881	9.8	9.3	--
09...	1055	19.0	6.9	2910	9.8	9.3	--
09...	1056	13.0	6.9	2950	9.8	9.3	--
09...	1057	7.00	6.9	2330	9.8	9.3	--
09...	1058	1.00	6.9	2340	9.7	9.3	--
JUN							
16...	0815	16.0	6.8	680	7.8	26.1	.95
16...	0816	10.0	6.8	710	7.8	26.1	--
16...	0817	5.00	6.8	705	7.9	26.2	--
16...	0818	1.00	6.8	650	7.9	26.2	--
16...	0915	16.0	6.8	960	7.7	26.4	.50
16...	0916	10.0	6.8	1010	7.6	26.4	--
16...	0917	5.00	6.8	950	7.7	26.4	--
16...	0918	1.00	6.8	940	7.8	26.5	--
16...	1015	16.0	6.8	1080	7.7	26.9	--
16...	1016	10.0	6.8	920	8.0	26.9	--
16...	1017	5.00	6.9	790	8.2	26.9	--
16...	1018	1.00	6.9	652	8.7	27.0	--
16...	1115	15.0	6.8	1070	7.4	27.2	.54
16...	1116	10.0	6.8	1060	7.5	27.1	--
16...	1117	5.00	6.9	877	8.5	27.3	--
16...	1118	1.00	7.1	835	9.6	27.6	--
16...	1215	15.0	6.9	514	8.4	27.5	.75
16...	1216	10.0	6.9	514	8.5	27.3	--
16...	1217	5.00	6.9	480	8.7	27.4	--
16...	1218	1.00	7.1	424	9.9	27.7	--
SEP							
15...	1455	13.0	--	8480	4.4	24.5	.41
15...	1456	10.0	--	8320	4.5	24.5	.70
15...	1457	6.00	--	8000	5.1	24.5	1.38
15...	1458	1.00	--	7000	6.1	24.5	--
15...	1615	13.0	--	7100	6.3	24.6	.46
15...	1616	10.0	--	6800	6.5	24.4	.60
15...	1617	6.00	--	6800	6.6	24.4	1.11
15...	1618	1.00	--	6100	6.5	24.3	--
15...	1735	13.0	--	6230	6.9	24.2	.12
15...	1736	10.0	--	6210	6.9	24.2	.30
15...	1737	6.00	--	6100	7.0	24.2	.22
15...	1738	1.00	--	5980	7.1	24.2	--
15...	1855	13.0	--	6120	7.2	24.2	.39
15...	1856	10.0	--	5940	7.3	24.2	.44
15...	1857	6.00	--	5930	7.4	24.2	.33
15...	1858	1.00	--	5780	7.6	24.1	--

ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS

WATER-QUALITY DATA FOR THE PERIOD JUNE 1982 TO SEPTEMBER 1983

PATUXENT RIVER BASIN--CONTINUED

01594690

- PATUXENT R NR BENEDICT, MD

DATE	TIME	SAM- PLING DEPTH (FEET)	PH (STAND- ARD UNITS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	OXYGEN, DIS- SOLVED (MG/L)	TEMPER- ATURE (DEG C)	STREAM VELOC- ITY, MEAN (FPS)
JUN 1982							
22...	0830	10.0	6.7	12000	7.0	23.8	.68
22...	0831	7.00	6.7	11000	6.9	24.0	--
22...	0832	4.00	6.7	11000	7.0	24.1	--
22...	0833	1.00	6.9	10000	7.4	24.4	--
22...	1050	9.00	6.7	12300	4.4	24.8	.61
22...	1051	6.00	6.7	11700	4.6	24.9	--
22...	1052	3.00	6.7	11200	4.9	25.0	--
22...	1053	1.00	7.1	9900	6.8	25.7	--
22...	1330	10.0	6.8	12200	4.5	24.7	.57
22...	1331	7.00	6.8	12100	4.5	24.8	--
22...	1332	4.00	6.8	11400	5.1	25.0	--
22...	1333	1.00	7.0	11200	6.7	25.2	--
22...	1605	10.0	6.7	15200	2.8	23.9	.19
22...	1606	7.00	6.8	13900	4.2	23.9	--
22...	1607	4.00	7.6	12800	7.9	24.8	--
22...	1608	1.00	8.2	11000	10.5	25.4	--
23...	0730	10.0	6.8	15200	3.4	23.0	.31
23...	0731	7.00	6.8	14300	3.9	23.2	--
23...	0732	4.00	6.9	12300	5.0	23.3	--
23...	0733	1.00	6.9	11900	5.3	23.3	--
23...	0915	10.0	7.0	19500	4.0	24.2	.31
23...	0916	6.00	7.1	18700	4.6	24.3	--
23...	0917	3.00	7.1	18500	4.8	24.2	--
23...	0918	1.00	7.2	18200	5.0	24.2	--
23...	0950	10.0	7.1	19300	4.0	24.5	.46
23...	0951	6.00	7.1	19100	4.0	24.5	--
23...	0952	3.00	7.1	18400	4.5	24.5	--
23...	0953	1.00	7.1	17900	4.8	24.5	--
23...	1100	9.00	7.1	18500	4.4	24.7	.39
23...	1101	6.00	7.1	18400	4.5	24.7	--
23...	1102	3.00	7.1	18100	4.9	24.7	--
23...	1103	1.00	7.1	18000	5.1	24.7	--
23...	1200	9.00	7.2	18100	4.7	24.6	.21
23...	1201	6.00	7.2	17600	5.0	24.8	--
23...	1202	3.00	7.2	17400	5.1	24.8	--
23...	1203	1.00	7.2	17300	5.4	25.0	--
23...	1300	9.00	7.2	17200	5.6	25.0	.12
23...	1301	5.00	7.2	17100	5.3	25.0	--
23...	1302	3.00	7.2	17100	5.4	25.1	--
23...	1303	1.00	7.2	17100	5.4	25.2	--
23...	1310	9.00	6.9	11300	5.3	24.9	.29
23...	1311	6.00	6.9	10400	5.5	25.2	--
23...	1312	3.00	6.9	10200	5.6	25.4	--
23...	1313	1.00	7.0	10200	5.7	25.4	--
23...	1430	9.00	7.1	17800	4.6	25.2	.34
23...	1431	6.00	7.2	17000	5.3	25.2	--
23...	1432	3.00	7.2	16700	5.1	25.7	--
23...	1433	1.00	7.3	16700	6.2	25.8	--
23...	1440	9.00	7.0	11500	6.0	25.0	.47
23...	1441	6.00	7.1	11300	6.3	25.3	--
23...	1442	3.00	7.1	11400	6.6	25.4	--
23...	1443	1.00	7.2	11300	6.5	25.5	--
23...	1530	9.00	7.1	17900	5.0	25.1	.63
23...	1531	6.00	7.1	17700	4.6	25.2	--
23...	1532	3.00	7.2	17200	5.4	25.3	--
23...	1533	1.00	7.2	17200	5.6	25.5	--
23...	1640	10.0	7.2	18200	5.1	25.3	.68
23...	1641	8.00	7.2	18200	5.1	25.3	--
23...	1642	5.00	7.3	18200	5.4	25.3	--
23...	1643	3.00	7.3	18000	5.7	25.4	--
23...	1644	1.00	7.3	18200	5.7	25.5	--
23...	1710	10.0	6.8	16000	2.9	23.6	.37
23...	1711	7.00	6.8	14000	6.5	23.7	--
23...	1712	3.00	7.3	13900	6.6	24.4	--
OCT							
28...	1001	5.00	7.7	19700	--	13.0	--
28...	1002	1.00	7.7	19400	--	13.0	--
28...	1100	9.00	8.0	19900	--	13.1	.28
28...	1101	5.00	8.0	19800	--	13.1	--
28...	1102	1.00	8.0	19400	--	13.1	--
28...	1215	9.00	8.2	20500	--	13.3	.25
28...	1216	5.00	8.2	20100	--	13.2	--
28...	1217	1.00	8.3	19900	--	13.4	--

WATER-QUALITY DATA FOR THE PERIOD JUNE 1982 TO SEPTEMBER 1983

PATUXENT RIVER BASIN--CONTINUED

01594690 - PATUXENT R NR BENEDICT, MD--CONTINUED

DATE	TIME	SAM- PLING DEPTH (FEET)	PH (STAND- ARD UNITS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	OXYGEN, DIS- SOLVED (MG/L)	TEMPER- ATURE (DEG C)	STRFAM VELOC- ITY, MEAN (FPS)
OCT 1982							
28...	1315	9.00	8.1	21500	--	13.5	.10
28...	1316	5.00	8.2	20400	--	13.2	--
28...	1317	1.00	8.3	20200	--	13.4	--
28...	1415	9.00	8.1	21900	--	13.6	.11
28...	1416	5.00	8.2	20500	--	13.3	--
28...	1417	1.00	8.3	19000	--	13.9	--
28...	1515	9.00	8.2	21300	--	13.5	.21
28...	1516	5.00	8.4	20300	--	14.3	--
28...	1517	1.00	8.4	19800	--	14.9	--
28...	1605	9.00	8.2	21200	--	13.6	.26
28...	1606	5.00	8.3	21000	--	13.4	--
28...	1607	1.00	8.3	19700	--	13.6	--
MAR 1983							
09...	1405	12.0	7.8	22800	11.4	6.5	--
09...	1406	6.00	7.8	21600	11.4	7.0	--
09...	1407	1.00	7.6	17700	11.1	8.2	--
09...	1500	11.0	7.8	22600	11.2	6.7	--
09...	1501	5.00	7.7	18600	11.2	7.9	--
09...	1502	1.00	7.6	16500	10.9	8.6	--
09...	1600	11.0	7.7	22800	11.1	6.6	--
09...	1601	5.00	7.6	19900	10.8	7.7	--
09...	1602	1.00	7.6	17200	10.8	8.4	--
09...	1700	11.0	7.7	21400	10.9	7.3	--
09...	1701	5.00	7.6	--	10.7	7.9	--
09...	1702	1.00	7.5	16500	10.6	8.6	--
11...	0915	11.0	7.5	19700	9.4	7.6	.34
11...	0916	6.00	7.3	14200	9.6	8.4	--
11...	0917	1.00	7.3	13200	9.7	8.5	--
11...	1010	11.0	7.5	20200	10.1	7.5	.59
11...	1011	6.00	7.4	15400	9.9	8.3	--
11...	1012	1.00	7.3	13600	9.9	8.6	--
11...	1110	12.0	7.6	22400	10.5	6.8	.42
11...	1111	6.00	7.4	17000	10.1	8.0	--
11...	1112	1.00	7.3	14600	10.1	8.5	--
11...	1215	11.0	7.7	23800	10.8	6.5	.38
11...	1216	6.00	7.5	--	10.0	7.5	--
11...	1217	1.00	7.4	14700	10.0	8.5	--
JUN							
16...	1455	10.0	7.0	8010	5.3	26.6	.16
16...	1456	5.00	7.0	7000	6.0	26.8	--
16...	1457	1.00	7.7	6250	9.1	28.5	--
16...	1555	10.0	7.0	7850	5.5	26.8	--
16...	1556	5.00	7.0	6700	6.4	27.2	--
16...	1557	1.00	8.1	5910	10.3	28.8	--
16...	1655	11.0	7.0	7360	6.0	26.9	.18
16...	1656	5.00	7.4	6150	8.1	28.0	--
16...	1657	1.00	7.9	6020	9.7	28.7	--
16...	1755	11.0	7.1	7380	6.1	26.9	.52
16...	1756	5.00	7.2	7360	7.3	27.1	--
16...	1757	1.00	7.3	7390	7.4	27.3	--
16...	1905	12.0	7.3	7990	7.4	27.1	.36
16...	1906	6.00	7.3	7870	7.4	27.0	--
16...	1907	1.00	7.3	7810	7.4	26.9	--
SEP							
14...	1000	12.0	--	18900	2.7	25.5	.17
14...	1001	8.00	--	18700	3.2	25.3	.17
14...	1002	5.00	--	18700	3.3	25.3	.30
14...	1003	1.00	--	18700	3.3	25.3	--
14...	1105	12.0	--	19200	2.9	25.9	.17
14...	1106	9.00	--	18800	3.1	25.5	.15
14...	1107	5.00	--	18800	3.4	25.4	.27
14...	1108	1.00	--	18700	3.4	25.4	--
14...	1221	9.00	--	18800	3.6	25.4	.17
14...	1222	5.00	--	18700	3.7	25.4	.38
14...	1223	1.00	--	18800	3.7	25.4	--
14...	1320	11.0	--	18500	3.9	25.2	.25
14...	1321	9.00	--	18500	3.9	25.2	.39
14...	1322	5.00	--	18300	4.1	25.1	.64
14...	1323	1.00	--	18300	4.2	25.1	--
14...	1435	10.0	--	18100	3.7	25.2	.25
14...	1436	8.00	--	17500	4.2	24.9	.48
14...	1437	5.00	--	17000	4.8	24.8	.76
14...	1438	1.00	--	17000	4.9	24.7	.80

WATER-QUALITY DATA FOR THE PERIOD JUNE 1982 TO SEPTEMBER 1983

PATUXENT RIVER BASIN--CONTINUED

01594730

- PATUXENT R NR GOLDEN BEACH, MD

DATE	TIME	SAM- PLING DEPTH (FEET)	PH (STAND- ARD UNITS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	OXYGEN, DIS- SOLVED (MG/L)	TEMPER- ATURE (DEG C)	STREAM VELOC- ITY, MEAN (FPS)
JUN 1982							
24...	1530	6.00	7.1	16500	5.0	23.7	.12
24...	1531	5.00	7.2	16500	4.8	23.8	--
24...	1532	4.00	7.2	16400	5.3	24.1	--
24...	1533	3.00	7.3	16100	5.9	24.3	--
24...	1534	2.00	7.5	16100	6.2	24.5	--
24...	1535	1.00	7.5	16200	6.2	24.5	--
24...	1700	7.00	7.1	16400	4.2	23.8	.22
24...	1701	6.00	7.1	16500	4.2	23.8	--
24...	1702	5.00	7.3	16400	5.2	24.3	--
24...	1703	4.00	7.5	16300	6.3	24.6	--
24...	1704	3.00	7.7	16200	7.1	24.8	--
24...	1705	2.00	7.9	16100	7.9	25.2	--
24...	1706	1.00	7.9	16100	8.1	25.3	--
24...	1900	7.00	7.1	16600	4.7	23.7	.19
24...	1901	6.00	7.2	16400	5.2	24.0	--
24...	1902	5.00	7.2	16400	5.3	24.0	--
24...	1903	4.00	7.5	16100	6.3	24.3	--
24...	1904	3.00	7.7	16000	7.2	24.5	--
24...	1905	2.00	7.9	15900	7.9	24.7	--
24...	1906	1.00	8.0	15900	8.2	24.7	--
SEP							
08...	0805	7.00	7.2	20800	4.8	23.8	.22
08...	0806	3.00	7.2	20800	4.5	23.9	--
08...	0807	1.00	7.2	20800	4.5	23.9	--
08...	0930	7.00	7.2	20800	4.4	24.0	.23
08...	0931	3.00	7.2	20700	4.6	24.0	--
08...	0932	1.00	7.2	20700	4.7	23.9	--
08...	1030	6.00	7.2	20700	4.6	24.1	--
08...	1031	3.00	7.2	20600	4.8	23.9	--
08...	1032	1.00	7.2	20500	4.8	23.9	--
08...	1130	6.00	7.2	20700	4.5	24.2	--
08...	1131	3.00	7.2	20600	4.7	24.2	--
08...	1132	1.00	7.3	20500	4.9	24.2	--
OCT							
22...	0850	5.00	7.7	21800	8.1	15.1	.27
22...	0851	3.00	7.7	21800	8.0	15.1	--
22...	0852	1.00	7.7	21900	8.1	15.1	--
22...	0950	5.00	7.7	21900	8.2	15.3	.22
22...	0951	3.00	7.7	21900	8.2	15.3	--
22...	0952	1.00	7.7	21900	8.2	15.3	--
22...	1045	5.00	7.7	23400	8.2	15.3	.18
22...	1046	3.00	7.7	22000	8.2	15.3	--
22...	1047	1.00	7.7	22000	8.2	15.3	--
22...	1140	5.00	7.7	22000	8.4	15.5	.16
22...	1141	3.00	7.7	22000	8.4	15.5	--
22...	1142	1.00	7.7	21900	8.3	15.5	--
JUN 1983							
20...	1525	7.00	6.9	10900	3.0	24.9	.52
20...	1526	5.00	7.1	10300	5.0	25.2	--
20...	1527	1.00	7.6	9640	6.9	25.5	--
20...	1620	7.00	7.6	9560	7.2	25.5	.37
20...	1621	5.00	7.6	9560	7.2	25.5	--
20...	1622	1.00	7.7	9540	7.2	25.5	--
20...	1715	7.00	7.7	9620	7.3	25.4	.27
20...	1716	5.00	7.7	9630	7.4	25.5	--
20...	1717	1.00	7.7	9610	7.4	25.5	--
20...	1835	7.00	7.5	9610	6.4	25.3	.49
20...	1836	5.00	7.5	9540	6.5	25.4	--
20...	1837	1.00	7.5	9490	6.6	25.5	--
SEP							
19...	0930	3.00	--	19900	7.6	24.0	.27
19...	0931	4.00	--	19900	8.4	24.0	.38
19...	0932	1.00	--	19800	7.9	24.1	.33
19...	1035	4.00	--	19900	8.7	24.5	.24
19...	1036	4.00	--	19900	8.9	24.4	.24
19...	1037	1.00	--	19900	9.4	24.6	.27
19...	1155	4.00	--	19900	11.1	25.3	.15
19...	1156	4.00	--	19700	11.2	26.0	.35
19...	1157	1.00	--	19700	11.4	26.1	--
19...	1315	4.00	--	19900	11.8	25.4	--
19...	1316	4.00	--	19900	11.3	25.9	.26
19...	1317	1.00	--	19700	11.8	26.1	--

WATER-QUALITY DATA FOR THE PERIOD JUNE 1982 TO SEPTEMBER 1983

PATUXENT RIVER BASIN--CONTINUED

01594732

- PATUXENT R BL GOLDEN BEACH, MD

DATE	TIME	SAM- PLING DEPTH (FEET)	PH (STAND- ARD UNITS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	OXYGEN. DIS- SOLVED (MG/L)	TEMPER- ATURE (DEG C)	STREAM VELOC- ITY, MEAN (FPS)
JUN 1982							
24...	0920	31.0	6.8	18900	1.4	23.0	.00
24...	0921	26.0	6.7	18900	1.2	23.0	--
24...	0922	20.0	6.7	18600	1.4	23.2	--
24...	0923	15.0	6.8	18300	1.7	23.3	--
24...	0924	10.0	6.9	16600	3.3	23.5	--
24...	0925	5.00	7.7	15500	7.3	23.6	--
24...	0926	1.00	7.8	15500	7.7	23.8	--
24...	1210	30.0	6.9	18900	1.6	23.4	.16
24...	1211	25.0	6.9	18800	1.4	23.5	--
24...	1212	20.0	6.8	18600	1.4	23.5	--
24...	1213	15.0	6.8	18300	1.5	23.6	--
24...	1214	13.0	6.8	17900	1.5	23.6	--
24...	1215	11.0	6.9	17200	2.9	23.7	--
24...	1216	10.0	7.2	16100	5.1	23.9	--
24...	1217	9.00	7.5	15700	6.5	23.9	--
24...	1218	8.00	7.6	15600	7.2	24.1	--
24...	1219	7.00	7.7	15600	7.3	24.1	--
24...	1220	5.00	7.7	15500	7.5	24.1	--
24...	1221	3.00	7.7	15400	7.6	24.2	--
24...	1222	1.00	7.7	15300	7.7	24.5	--
SEP							
08...	1355	30.0	7.0	22100	1.6	24.5	.18
08...	1356	25.0	7.0	21800	2.3	24.5	--
08...	1357	20.0	7.1	21200	3.2	24.4	--
08...	1358	15.0	7.2	20600	4.4	24.3	--
08...	1359	10.0	7.2	20300	4.8	24.2	--
08...	1400	5.00	7.3	20200	4.9	24.3	--
08...	1401	1.00	7.3	20200	5.0	24.3	--
08...	1440	30.0	7.0	22200	1.5	24.5	.19
08...	1441	25.0	7.0	21900	1.8	24.5	--
08...	1442	20.0	7.1	21200	3.5	24.4	--
08...	1443	15.0	7.3	20800	4.5	24.3	--
08...	1444	10.0	7.3	20400	5.0	24.2	--
08...	1445	5.00	7.3	20300	5.2	24.2	--
08...	1446	1.00	7.3	20300	5.2	24.2	--
08...	1550	30.0	7.0	22800	1.7	24.5	.48
08...	1551	25.0	7.0	22100	1.9	24.6	--
08...	1552	20.0	7.2	21100	3.6	24.4	--
08...	1553	15.0	7.4	20700	5.2	24.3	--
08...	1554	10.0	7.4	20600	5.1	24.3	--
08...	1555	5.00	7.4	20400	5.4	24.3	--
08...	1556	1.00	7.4	20400	5.7	24.3	--
08...	1725	30.0	7.0	18800	1.8	24.5	--
08...	1726	25.0	7.0	18800	1.8	24.5	--
08...	1727	20.0	7.0	17000	2.6	24.5	--
08...	1728	15.0	7.2	16800	3.8	24.4	--
08...	1729	10.0	7.3	18000	4.6	24.2	--
08...	1730	5.00	7.4	18300	5.6	24.2	--
08...	1731	1.00	7.5	18200	5.9	24.2	--

WATER-QUALITY DATA FOR THE PERIOD JUNE 1982 TO SEPTEMBER 1983

PATUXENT RIVER BASIN--CONTINUED

01594732

- PATUXENT R BL GOLDEN BEACH, MD--CONTINUED

DATE	TIME	SAM- PLING DEPTH (FEET)	PH (STAND- ARD UNITS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	OXYGEN, DIS- SOLVED (MG/L)	TEMPER- ATURE (DEG C)	STREAM VELOC- ITY, MEAN (FPS)
MAR 1983							
07...	1055	32.0	8.0	24600	11.0	5.5	.00
07...	1056	25.0	8.0	24300	11.0	5.7	--
07...	1057	17.0	8.1	23000	11.4	6.6	--
07...	1058	9.00	8.3	21800	12.6	7.9	--
07...	1059	1.00	8.1	20100	12.3	9.1	--
07...	1150	32.0	8.0	24600	11.8	5.6	--
07...	1151	25.0	8.0	24300	11.6	5.7	--
07...	1152	17.0	8.1	23400	12.1	6.5	--
07...	1153	9.00	8.3	21700	13.2	8.0	--
07...	1154	1.00	8.2	20400	13.3	8.7	--
07...	1255	30.0	7.9	24600	12.0	5.6	--
07...	1256	25.0	8.0	24300	11.8	5.6	--
07...	1257	17.0	8.1	23500	12.2	6.5	--
07...	1258	9.00	8.2	21700	13.1	7.9	--
07...	1259	1.00	8.1	20200	12.9	8.9	--
07...	1350	31.0	7.8	24600	11.4	5.5	.16
07...	1351	25.0	8.0	24200	11.6	5.7	--
07...	1352	17.0	8.1	23500	12.5	6.6	--
07...	1353	9.00	8.2	21800	12.9	7.7	--
07...	1354	1.00	8.1	20300	12.9	8.9	--
JUN							
10...	0900	33.0	6.6	13700	.2	19.9	.16
10...	0901	28.0	6.6	13100	.4	20.2	.16
10...	0902	21.0	6.1	11800	1.7	21.2	--
10...	0903	14.0	6.9	--	5.5	22.2	--
10...	0904	7.00	7.2	8710	6.6	22.4	.46
10...	0905	1.00	7.2	8680	6.6	22.4	--
10...	1005	33.0	6.6	13800	.3	19.9	.29
10...	1006	28.0	6.6	13100	.5	20.5	.43
10...	1008	14.0	6.9	9410	5.0	22.3	--
10...	1009	7.00	7.2	8540	6.3	22.5	.19
10...	1010	1.00	7.3	8520	6.7	22.7	--
10...	1130	33.0	6.7	13700	.3	20.2	.30
10...	1131	28.0	6.6	12900	.5	20.7	.69
10...	1132	21.0	6.7	11800	1.8	21.7	--
10...	1133	14.0	7.0	9640	4.9	22.6	--
10...	1134	7.00	7.4	8590	6.8	22.8	.50
10...	1135	1.00	7.6	8440	7.6	23.4	--
10...	1235	33.0	6.7	14300	.2	19.8	.57
10...	1236	28.0	6.6	14000	.2	19.9	1.03
10...	1237	21.0	6.6	12600	.7	20.9	--
10...	1238	14.0	6.8	10700	3.7	22.1	--
10...	1239	7.00	7.3	9120	6.8	22.6	.63
10...	1240	1.00	7.9	8620	8.7	23.5	--
10...	1325	34.0	6.7	14100	.3	20.0	.37
10...	1326	28.0	6.7	14000	.3	20.1	.97
10...	1327	21.0	6.7	12800	.4	20.8	--
10...	1328	14.0	6.8	10900	3.2	22.0	--
10...	1329	7.00	7.7	9130	7.9	22.7	.63
10...	1330	1.00	8.4	8640	10.1	23.6	--
20...	0915	31.0	6.6	14300	.2	22.4	.36
20...	0916	25.0	6.6	13700	.1	22.7	.75
20...	0917	19.0	6.6	12600	.1	23.7	--
20...	0918	13.0	6.8	10900	2.9	25.2	--
20...	0919	7.00	7.4	9500	6.5	26.2	.48
20...	0920	1.00	7.8	9500	7.7	26.4	--
20...	1015	32.0	6.7	14400	.3	22.6	.52
20...	1016	25.0	6.7	14200	.3	22.6	.85
20...	1017	19.0	6.7	12900	.4	23.4	--
20...	1018	13.0	7.0	10800	3.7	25.6	--
20...	1019	7.00	7.2	10000	5.2	26.1	.50
20...	1020	1.00	7.8	9550	7.6	26.7	--
20...	1115	32.0	6.7	14400	.3	22.7	.37
20...	1116	25.0	6.7	14100	.2	22.8	.55
20...	1117	19.0	6.7	12700	.2	22.8	--
20...	1118	13.0	6.7	11300	1.6	25.1	--
20...	1119	7.00	7.2	10000	4.9	26.1	.39
20...	1120	1.00	8.2	9470	9.1	26.8	--
20...	1215	32.0	6.8	14300	.2	22.9	.19
20...	1216	25.0	6.7	14200	.2	22.9	.33
20...	1217	19.0	6.7	12900	.3	23.7	--
20...	1218	13.0	6.9	11100	2.7	25.6	--
20...	1219	7.00	7.1	10100	4.5	26.2	--
20...	1220	1.00	8.2	9330	9.1	27.3	--

WATER-QUALITY DATA FOR THE PERIOD JUNE 1982 TO SEPTEMBER 1983

PATUXENT RIVER BASIN--CONTINUED

01594732

- PATUXENT R BL GOLDEN BEACH, MD--CONTINUED

DATE	TIME	SAM- PLING DEPTH (FEET)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	OXYGEN, DIS- SOLVED (MG/L)	TEMPER- ATURE (DEG C)	STREAM VELOC- ITY, MEAN (FPS)
SEP 1983						
16...	0800	30.0	23100	.2	26.0	.23
16...	0801	25.0	22100	1.3	25.5	.31
16...	0802	20.0	20900	3.2	24.8	--
16...	0803	15.0	20700	3.8	24.6	--
16...	0804	10.0	20000	5.2	23.7	--
16...	0805	5.00	19800	5.1	23.4	.31
16...	0806	1.00	19800	5.1	23.3	--
16...	0930	30.0	23000	.2	26.1	--
16...	0931	25.0	21700	1.8	25.3	--
16...	0932	20.0	20500	4.7	24.3	--
16...	0933	15.0	20300	4.6	24.2	--
16...	0934	10.0	20300	4.5	24.2	--
16...	0935	5.00	20100	5.0	24.0	.34
16...	0936	1.00	20100	5.0	24.0	--
16...	1015	30.0	23000	.1	26.1	.12
16...	1016	25.0	21000	2.3	25.2	.37
16...	1017	20.0	20400	4.7	24.3	--
16...	1018	15.0	20500	4.7	24.4	--
16...	1019	10.0	20300	4.8	24.3	--
16...	1020	5.00	20200	4.6	24.2	.24
16...	1021	1.00	20200	4.7	24.2	--
16...	1145	30.0	22900	.7	26.2	--
16...	1146	25.0	20600	3.9	24.7	--
16...	1147	20.0	20400	4.4	24.5	--
16...	1148	15.0	20400	4.5	24.4	--
16...	1149	10.0	20300	4.7	24.4	--
16...	1150	5.00	20100	7.1	24.5	--
16...	1151	1.00	20000	7.4	24.5	--
16...	1330	30.0	22900	.7	26.1	.30
16...	1331	25.0	21000	3.0	24.9	.41
16...	1332	20.0	20500	4.5	24.4	--
16...	1333	15.0	20300	4.8	24.4	--
16...	1334	10.0	20400	4.3	24.5	--
16...	1335	5.00	20200	7.3	24.7	.35
16...	1450	30.0	22500	.8	25.7	.21
16...	1451	25.0	20800	3.2	24.7	.66
16...	1452	20.0	20500	3.6	24.6	--
16...	1453	15.0	20300	5.2	24.5	--
16...	1454	10.0	20200	5.6	24.5	--
16...	1455	5.00	20200	5.7	24.5	.54
16...	1456	1.00	20200	5.8	24.5	--
16...	1610	29.0	21000	2.7	24.9	.26
16...	1611	25.0	20900	2.9	24.8	.48
16...	1612	20.0	20600	3.7	24.6	--
16...	1613	15.0	20400	5.4	24.5	--
16...	1614	10.0	20100	5.9	24.4	--
16...	1615	5.00	19900	6.0	24.2	.49
16...	1616	1.00	19900	6.0	24.2	--
16...	1730	29.0	20800	3.0	24.6	--
16...	1731	25.0	20400	3.6	24.3	--
16...	1732	20.0	20500	3.8	24.3	--
16...	1733	15.0	20100	4.3	24.2	--
16...	1734	10.0	19900	5.7	24.1	--
16...	1735	5.00	19800	6.2	24.0	--
16...	1736	1.00	19800	6.2	24.0	--

WATER-QUALITY DATA FOR THE PERIOD JUNE 1982 TO SEPTEMBER 1983

PATUXENT RIVER BASIN--CONTINUED

01594734

- PATUXENT R AB SANDGATES, MD

DATE	TIME	SAM- PLING DEPTH (FEET)	PH (STAND- ARD UNITS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	OXYGEN, DIS- SOLVED (MG/L)	TEMPER- ATURE (DEG C)	STREAM VELOC- ITY, MEAN (FPS)
JUN 1982							
25...	0815	12.0	7.2	16200	5.5	23.8	.18
25...	0816	10.0	7.6	16000	7.3	23.8	--
25...	0817	8.00	7.7	15700	6.8	23.8	--
25...	0818	10.0	7.6	15600	6.6	23.7	--
25...	0819	4.00	7.6	15600	6.8	23.7	--
25...	0820	2.00	7.7	15600	6.9	23.7	--
25...	0821	1.00	7.7	15600	6.8	23.7	--
25...	1025	12.0	7.1	16800	4.3	23.9	--
25...	1026	10.0	7.3	16500	4.9	24.0	--
25...	1027	8.00	7.4	16200	5.7	24.1	--
25...	1028	6.00	7.4	16100	5.8	24.2	--
25...	1029	4.00	7.6	15900	6.4	24.3	--
25...	1030	2.00	7.6	15900	6.8	24.4	--
25...	1031	1.00	7.6	15900	6.8	24.4	--
25...	1200	11.0	7.1	17000	3.2	24.0	.20
25...	1201	10.0	7.2	16400	5.5	24.0	--
25...	1202	8.00	7.6	16100	6.5	24.4	--
25...	1204	6.00	7.7	15900	6.9	24.6	--
25...	1205	4.00	7.7	15900	7.0	24.7	--
SEP							
09...	0940	13.0	7.2	20800	4.0	24.1	.31
09...	0941	10.0	7.2	20700	4.3	24.1	--
09...	0942	5.00	7.3	20600	4.5	23.9	--
09...	0943	1.00	7.2	20600	4.5	23.9	--
09...	1045	13.0	7.3	20600	4.2	24.2	.24
09...	1046	9.00	7.3	20500	4.2	24.1	--
09...	1047	4.00	7.3	20400	4.7	24.0	--
09...	1048	1.00	7.3	20300	4.7	24.0	--
09...	1145	12.0	7.3	20300	4.5	24.6	.22
09...	1146	8.00	7.3	20300	4.5	24.3	--
09...	1147	4.00	7.3	20300	4.5	24.2	--
09...	1148	1.00	7.3	20400	4.6	24.2	--
OCT							
19...	0845	13.0	7.6	17500	7.7	15.7	.44
19...	0846	6.00	7.6	16000	7.8	15.6	--
19...	0847	1.00	7.6	16000	7.7	15.6	--
19...	0935	13.0	7.6	15000	7.6	15.7	.26
19...	0936	6.00	7.6	15000	7.9	15.8	--
19...	0937	1.00	7.7	15000	8.2	15.7	--
19...	1040	12.0	7.6	16000	7.7	16.1	.00
19...	1041	6.00	7.7	16500	7.9	16.0	--
19...	1042	1.00	7.7	16500	8.2	16.1	--
19...	1205	12.0	7.7	17500	7.6	16.2	.23
19...	1206	6.00	7.8	17500	8.4	16.6	--
19...	1207	1.00	7.9	15500	9.0	16.6	--
MAR 1983							
10...	0905	14.0	7.7	24500	11.0	6.5	.14
10...	0906	7.00	8.0	22600	12.8	7.4	--
10...	0907	1.00	7.7	19400	11.6	7.7	--
10...	1006	7.00	8.1	22400	12.9	7.4	--
10...	1007	1.00	7.9	19400	12.1	7.8	--
10...	1105	15.0	7.8	25300	11.7	6.0	.13
10...	1106	8.00	8.1	22500	12.9	7.5	--
10...	1107	1.00	7.8	19200	11.9	8.1	--
10...	1205	15.0	7.9	25200	11.4	6.1	.15
10...	1206	8.00	8.1	21900	12.4	7.5	--
10...	1207	1.00	7.9	19800	11.5	7.8	--
JUN							
14...	1615	16.0	6.8	12300	1.3	22.6	.44
14...	1616	12.0	6.9	11200	--	23.4	.57
14...	1617	6.00	8.0	9680	9.1	24.7	.63
14...	1618	1.00	8.7	8980	13.7	26.8	--
14...	1715	16.0	6.8	12300	1.6	22.6	.35
14...	1716	12.0	6.9	11700	2.4	23.0	--
14...	1717	8.00	7.7	9900	8.5	24.4	--
14...	1718	4.00	8.8	9460	14.0	25.5	.48
14...	1719	1.00	8.9	9270	15.6	27.7	--
14...	1815	17.0	6.9	12600	1.5	22.4	--
14...	1816	12.0	7.0	11900	4.0	23.2	.25
14...	1817	8.00	7.4	9850	--	24.1	--
14...	1818	4.00	8.8	9620	--	25.2	.24
14...	1819	1.00	9.0	9470	16.5	28.1	--
14...	1915	17.0	6.8	12500	1.5	22.3	.12
14...	1916	12.0	7.0	11700	4.0	23.1	.13

WATER-QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

PATUXENT RIVER BASIN--CONTINUED

01594734

- PATUXENT R AB SANDGATES, MD --CONTINUED

DATE	TIME	SAM- PLING DEPTH (FEET)	PH (STAND- ARD UNITS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	OXYGEN, DIS- SOLVED (MG/L)	TEMPER- ATURE (DEG C)	STREAM VELOC- ITY, MEAN (FPS)
JUN 1983							
14...	1917	8.00	7.1	10300	5.2	23.7	--
14...	1918	4.00	8.9	9660	14.8	25.0	--
14...	1919	1.00	9.0	9480	16.7	27.5	--
14...	2005	16.0	6.8	12200	1.8	22.5	.15
14...	2006	12.0	7.0	11200	4.0	23.3	.14
14...	2007	8.00	8.4	9670	11.2	24.5	--
14...	2008	4.00	8.9	9700	15.2	25.1	.20
14...	2009	1.00	9.0	9400	15.8	27.1	--
SEP							
13...	1020	14.0	--	19900	3.1	27.0	.27
13...	1021	10.0	--	19600	4.1	27.0	.43
13...	1022	6.00	--	19600	4.2	27.0	.41
13...	1023	1.00	--	19600	4.2	27.0	--
13...	1120	14.0	--	19700	3.2	27.0	.27
13...	1121	10.0	--	19500	3.9	27.0	.40
13...	1122	6.00	--	19400	4.3	27.1	.84
13...	1123	1.00	--	19400	4.3	27.1	--
13...	1220	14.0	--	20000	2.6	27.0	.17
13...	1221	10.0	--	19400	3.6	27.0	.44
13...	1222	6.00	--	19400	4.0	27.0	.58
13...	1223	1.00	--	19400	4.0	26.9	--
13...	1320	14.0	--	19500	3.8	26.6	.37
13...	1321	10.0	--	19500	3.8	26.6	.32
13...	1322	6.00	--	19500	3.8	26.6	.40
13...	1323	1.00	--	19500	3.8	26.6	--
13...	1420	14.0	--	19500	3.9	26.5	.12
13...	1421	10.0	--	19500	3.9	26.5	.15
13...	1422	6.00	--	19400	3.9	26.5	.19
13...	1423	1.00	--	19500	4.0	26.5	--

01594736

- PATUXENT R NR SANDGATES, MD

JUN 1982							
25...	1350	6.00	7.0	16500	3.9	24.2	.22
25...	1351	5.00	7.0	16500	3.5	24.3	--
25...	1352	4.00	7.0	16500	3.5	24.3	--
25...	1353	3.00	7.2	16500	4.2	24.6	--
25...	1354	2.00	7.4	16300	5.7	24.8	--
25...	1355	1.00	7.4	16200	7.0	25.2	--
25...	1545	6.00	6.9	17200	2.8	24.0	.20
25...	1546	5.00	6.9	17200	2.8	24.1	--
25...	1547	4.00	6.9	17100	3.1	24.2	--
25...	1548	3.00	7.1	17000	--	24.5	--
25...	1549	2.00	7.9	16400	7.9	25.4	--
25...	1550	1.00	8.0	16400	8.2	25.8	--
25...	1551	.50	8.0	16400	8.4	25.8	--
25...	1800	7.00	7.2	16700	5.1	24.1	.17
25...	1801	6.00	7.2	16700	5.0	24.1	--
25...	1802	5.00	7.2	16600	5.2	24.1	--
25...	1803	4.00	7.5	16400	--	24.5	--
25...	1804	3.00	7.9	16400	7.8	25.0	--
25...	1805	2.00	7.9	16300	7.9	25.2	--
25...	1806	1.00	7.9	16300	7.9	25.2	--
SEP							
09...	1340	7.00	7.5	20400	5.8	23.9	.15
09...	1341	3.00	7.5	--	6.0	24.2	--
09...	1342	1.00	7.5	20400	6.2	24.5	--
09...	1446	3.00	7.6	--	6.4	24.6	--
09...	1455	7.00	7.6	20500	6.5	24.6	.24
09...	1456	3.00	7.6	--	6.4	24.6	--
09...	1457	3.00	7.6	--	6.4	24.6	--
09...	1550	7.00	7.5	20500	6.1	24.6	.26
09...	1551	3.00	7.5	--	6.0	24.6	--
09...	1552	1.00	7.5	20500	6.0	24.6	--
09...	1705	7.00	7.5	20500	5.9	24.6	--
09...	1706	4.00	7.5	--	6.1	24.9	--
09...	1707	1.00	7.6	20500	7.2	24.8	--

WATER-QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

PATUXENT RIVER BASIN--CONTINUED

01594736 - PATUXENT R NR SANDGATES, MD--CONTINUED

DATE	TIME	SAM- PLING DEPTH (FEET)	PH (STAND- ARD UNITS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	OXYGEN, DIS- SOLVED (MG/L)	TEMPER- ATURE (DEG C)	STREAM VELOC- ITY, MEAN (FPS)
MAR 1983							
10...	1415	9.00	7.8	22800	11.2	7.5	.15
10...	1416	5.00	8.0	19300	12.3	8.0	--
10...	1417	1.00	8.2	19200	13.9	8.4	--
10...	1515	9.00	7.9	19700	12.5	8.0	--
10...	1516	5.00	8.1	19300	13.4	8.2	--
10...	1517	1.00	7.9	19100	12.2	8.2	--
10...	1615	10.0	7.9	20500	11.6	7.6	--
10...	1616	5.00	7.9	20000	11.7	7.8	--
10...	1617	1.00	7.8	19300	11.6	8.1	--
10...	1715	10.0	7.8	21800	11.5	7.5	--
10...	1716	5.00	7.9	21100	12.0	7.5	--
10...	1717	1.00	7.9	18800	12.0	8.2	--

01594790 - PATUXENT R NR HALF PONE POINT, MD

JUN 1982							
30...	1135	30.0	7.3	19400	4.0	24.4	--
30...	1136	20.0	7.6	18100	5.5	25.2	--
30...	1137	10.0	8.1	17600	7.1	26.1	--
30...	1138	1.00	8.1	17400	8.2	26.5	--
30...	1200	30.0	7.3	19600	4.2	24.3	.25
30...	1201	20.0	7.8	17800	6.4	25.7	--
30...	1202	10.0	8.0	17700	7.3	26.2	--
30...	1203	1.00	8.1	17500	8.5	26.6	--
SEP							
14...	0800	28.0	7.2	23200	3.8	24.4	--
14...	0801	25.0	7.2	23100	3.8	24.4	--
14...	0802	20.0	7.2	22800	4.3	24.5	--
14...	0803	15.0	7.4	22600	5.2	24.6	--
14...	0804	10.0	7.7	22300	6.7	24.6	--
14...	0805	5.00	7.7	22300	6.6	24.6	--
14...	0806	1.00	7.7	22300	6.9	24.6	--
14...	0930	29.0	7.2	23000	3.8	24.5	--
14...	0931	25.0	7.2	23000	4.0	24.5	--
14...	0932	20.0	7.3	22900	4.4	24.6	--
14...	0933	15.0	7.6	22500	6.4	24.7	--
14...	0934	10.0	7.7	22400	7.0	24.7	--
14...	0935	5.00	7.7	22400	7.2	24.7	--
14...	0936	1.00	7.7	22400	7.2	24.7	--
14...	1020	29.0	7.3	23500	4.4	24.6	--
14...	1021	25.0	7.3	23300	4.6	24.6	--
14...	1022	20.0	7.4	22600	5.4	24.7	--
14...	1023	15.0	7.6	22500	6.4	24.7	--
14...	1024	10.0	7.7	22500	6.9	24.8	--
14...	1025	5.00	7.7	22400	7.2	24.9	--
14...	1026	1.00	7.7	22400	7.3	24.9	--
14...	1220	29.0	7.9	23600	4.5	24.8	.12
14...	1221	25.0	7.4	23700	4.6	24.7	--
14...	1222	20.0	7.4	23200	5.2	24.7	--
14...	1223	15.0	7.5	23000	5.7	24.8	--
14...	1224	10.0	7.6	22800	6.2	24.8	--
14...	1225	5.00	7.9	22600	8.0	25.2	--
14...	1226	1.00	8.0	22600	8.2	25.2	--
14...	1310	29.0	7.5	23900	4.7	25.0	.11
14...	1311	25.0	7.5	23900	4.9	24.8	--
14...	1312	20.0	7.6	23600	5.5	24.9	--
14...	1313	15.0	7.6	23200	5.4	24.9	--
14...	1314	10.0	7.7	23000	6.4	25.0	--
14...	1315	5.00	7.9	22800	7.5	25.3	--
14...	1316	1.00	8.0	22800	8.5	25.8	--
14...	1425	29.0	7.6	24000	5.2	24.9	.16
14...	1426	25.0	7.6	24000	5.9	24.9	--
14...	1427	20.0	7.5	23600	5.1	24.9	--
14...	1428	15.0	7.6	23200	6.0	24.9	--
14...	1429	10.0	8.0	22900	8.0	25.2	--
14...	1430	5.00	8.0	22800	8.6	25.7	--
14...	1431	1.00	7.9	22700	8.3	26.1	--
14...	1545	29.0	7.5	23800	4.7	24.9	.36
14...	1546	25.0	7.4	23700	4.5	24.8	--
14...	1547	20.0	7.4	23700	4.4	24.8	--
14...	1548	15.0	7.4	23700	4.5	24.8	--
14...	1549	10.0	7.4	23400	5.0	24.9	--
14...	1550	5.00	7.7	22700	6.6	25.1	--
14...	1551	1.00	7.9	22600	8.1	25.5	--

WATER-QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

PATUXENT RIVER BASIN--CONTINUED

01594790

- PATUXENT R NR HALF PONE POINT, MD--CONTINUED

DATE	TIME	SAM- PLING DEPTH (FEET)	PH (STAND- ARD UNITS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	OXYGEN, DIS- SOLVED (MG/L)	TEMPER- ATURE (DEG C)	STREAM VELOC- ITY, MEAN (FPS)
OCT 1982							
21...	0815	25.0	7.7	24100	7.5	17.1	.57
21...	0816	20.0	7.7	23900	7.8	17.0	--
21...	0817	15.0	7.8	23900	8.0	17.0	--
21...	0818	10.0	7.7	23900	8.0	16.9	--
21...	0819	5.00	7.8	24000	8.0	16.9	--
21...	0820	1.00	7.8	24000	8.0	16.9	--
21...	0920	25.0	7.8	24000	8.0	16.9	.59
21...	0921	20.0	7.8	23900	8.0	16.9	--
21...	0922	15.0	7.8	24000	8.1	16.8	--
21...	0923	10.0	7.8	23900	8.1	16.8	--
21...	0924	5.00	7.8	23900	8.1	16.7	--
21...	0925	1.00	7.8	23900	8.1	16.8	--
21...	1020	25.0	7.8	23900	8.0	16.9	.46
21...	1021	20.0	7.8	23900	8.1	16.8	--
21...	1022	15.0	7.8	23900	8.1	16.8	--
21...	1023	10.0	7.8	23800	8.2	16.7	--
21...	1024	5.00	7.8	23800	8.2	16.7	--
21...	1025	1.00	7.8	23800	8.2	16.7	--
21...	1120	25.0	7.8	23800	8.0	16.8	.33
21...	1121	20.0	7.8	23800	7.9	16.9	--
21...	1122	15.0	7.8	23800	8.0	16.8	--
21...	1123	10.0	7.8	23700	8.0	16.7	--
21...	1124	5.00	7.8	23700	8.0	16.7	--
21...	1125	1.00	7.8	23700	8.0	16.7	--
21...	1310	24.0	7.8	23900	7.8	17.1	.24
21...	1311	20.0	7.8	23800	7.8	17.0	--
21...	1312	15.0	7.8	23800	7.9	17.0	--
21...	1313	10.0	7.8	23700	8.0	17.0	--
21...	1314	5.00	7.8	23700	8.0	17.0	--
21...	1315	1.00	7.8	23700	8.0	17.0	--
21...	1420	24.0	7.8	23700	7.9	17.1	.23
21...	1421	20.0	7.8	23700	7.9	17.0	--
21...	1422	15.0	7.8	23700	8.0	17.0	--
21...	1423	10.0	7.8	23600	8.1	17.0	--
21...	1424	5.00	7.8	23600	8.1	17.1	--
21...	1425	1.00	7.8	23600	8.2	17.1	--
21...	1520	24.0	7.8	23700	8.1	17.1	.27
21...	1521	20.0	7.8	23700	8.1	17.0	--
21...	1522	15.0	7.8	23700	8.2	17.0	--
21...	1523	10.0	7.8	23700	8.3	17.0	--
21...	1524	5.00	7.8	23700	8.4	17.0	--
21...	1525	1.00	7.8	23700	8.4	17.0	--
21...	1620	24.0	7.8	23800	8.0	17.0	--
21...	1621	20.0	7.8	23700	8.3	17.0	--
21...	1622	15.0	7.8	23700	8.3	17.0	--
21...	1623	10.0	7.8	23700	8.3	17.0	--
21...	1624	5.00	7.8	23700	8.3	17.0	--
21...	1625	1.00	7.8	23700	8.3	17.0	--
MAR 1983							
03...	1045	27.0	8.0	--	13.4	5.3	--
03...	1046	25.0	8.0	--	13.4	5.3	--
03...	1047	20.0	8.0	--	13.4	5.5	--
03...	1048	15.0	8.0	--	13.7	5.6	--
03...	1049	10.0	8.0	--	13.4	5.7	--
03...	1050	5.00	8.0	--	13.4	5.8	--
03...	1051	1.00	8.0	--	13.7	6.1	--
03...	1145	27.0	8.0	--	13.4	5.7	--
03...	1146	22.0	8.1	--	13.2	5.8	--
03...	1147	17.0	8.1	--	13.4	5.9	--
03...	1148	12.0	8.1	--	13.5	6.0	--
03...	1149	7.00	8.1	--	13.5	6.2	--
03...	1150	1.00	8.1	--	13.5	6.4	--
03...	1245	26.0	8.1	--	13.4	6.0	--
03...	1246	21.0	8.2	--	13.3	5.9	--
03...	1247	16.0	8.2	--	13.5	6.1	--
03...	1248	11.0	8.2	--	13.4	6.3	--
03...	1249	6.00	8.2	--	13.3	6.3	--
03...	1250	1.00	8.1	--	13.4	6.4	--
03...	1345	23.0	8.0	23600	13.6	6.0	--
03...	1346	12.0	8.1	23400	13.4	6.1	--
03...	1347	1.00	8.1	23200	13.4	6.2	--

WATER-QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

PATUXENT RIVER BASIN--CONTINUED

01594790

- PATUXENT R NR HALF PONE POINT, MD--CONTINUED

DATE	TIME	SAM- PLING DEPTH (FEET)	PH (STAND- ARD UNITS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	OXYGEN, DIS- SOLVED (MG/L)	TEMPER- ATURE (DEG C)	STREAM VELOC- ITY, MEAN (FPS)
JUN 1983							
09...	0900	27.0	6.7	14200	1.8	19.9	.17
09...	0901	21.0	6.7	13300	2.4	20.4	.22
09...	0902	15.0	7.0	11800	5.5	22.0	--
09...	0903	7.00	7.6	11300	8.0	22.6	.35
09...	0904	1.00	7.6	11300	8.1	22.7	--
09...	1025	28.0	6.7	13600	2.1	20.3	.15
09...	1026	21.0	6.7	13200	2.7	20.6	.19
09...	1027	15.0	6.9	12300	4.5	21.6	--
09...	1028	7.00	7.7	11300	8.1	22.8	.48
09...	1029	1.00	7.7	11300	8.2	23.0	--
09...	1130	28.0	6.7	13800	2.1	20.5	.24
09...	1131	21.0	6.8	13200	3.3	20.9	.58
09...	1132	15.0	6.9	12300	4.6	21.6	--
09...	1133	7.00	7.7	11400	8.0	22.7	.51
09...	1134	1.00	7.8	11300	8.3	23.1	--
09...	1335	28.0	6.8	13600	3.0	21.0	.14
09...	1336	21.0	6.9	13400	4.4	21.4	.29
09...	1337	15.0	6.9	12500	3.6	21.5	--
09...	1338	7.00	7.8	11400	8.2	23.1	.30
09...	1339	1.00	7.8	11400	8.3	23.3	--
SEP							
02...	0840	28.0	6.9	21400	2.8	26.4	.19
02...	0841	25.0	6.9	21400	2.9	26.4	--
02...	0842	20.0	7.1	21000	4.1	26.5	.38
02...	0845	5.00	7.6	19700	7.4	26.6	.23
02...	0846	1.00	7.6	19800	7.5	26.6	--
02...	0940	28.0	7.0	21300	3.3	26.6	.13
02...	0941	25.0	7.1	21100	3.5	26.6	--
02...	0942	20.0	7.0	20700	3.2	26.7	.27
02...	0943	15.0	7.5	19900	6.4	26.9	--
02...	0944	10.0	7.4	19800	6.8	26.8	--
02...	0945	5.00	7.7	19700	8.2	26.8	.21
02...	0946	1.00	7.7	19700	8.2	26.9	--
02...	1040	28.0	7.1	21200	3.2	26.7	.16
02...	1041	25.0	7.1	21200	3.3	26.7	--
02...	1042	20.0	7.1	20800	4.0	26.8	.21
02...	1043	15.0	7.3	20000	5.8	26.9	--
02...	1044	10.0	7.8	19500	8.0	27.0	.12
02...	1045	5.00	7.9	19500	9.3	27.1	--
02...	1046	1.00	7.9	19500	9.6	27.1	--
02...	1145	28.0	7.1	20800	3.6	26.9	--
02...	1146	25.0	7.2	20700	4.3	26.9	--
02...	1147	20.0	7.1	20400	3.9	26.9	--
02...	1148	15.0	7.5	19800	5.9	27.0	--
02...	1149	10.0	7.7	19500	8.3	27.0	.20
02...	1150	5.00	7.9	19400	9.8	27.1	--
02...	1151	1.00	8.0	19300	11.0	27.2	--
02...	1240	27.0	7.1	21200	3.3	26.7	.22
02...	1241	25.0	7.1	21000	3.4	26.7	--
02...	1242	20.0	7.1	20600	3.3	26.8	.40
02...	1243	15.0	7.4	20000	5.6	26.9	--
02...	1244	10.0	7.7	10600	7.2	26.9	.38
02...	1245	5.00	7.8	19800	8.3	26.9	--
02...	1246	1.00	7.8	19700	8.4	26.9	--

WATER-QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

PATUXENT RIVER BASIN--CONTINUED

01594820

- PATUXENT R NR TOWN POINT, MD

DATE	TIME	SAM- PLING DEPTH (FEET)	PH (STAND- ARD UNITS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	OXYGEN, DIS- SOLVED, (MG/L)	TEMPER- ATURE (DEG C)	STREAM VELOC- ITY, MEAN (FPS)
JUN 1982							
29...	1015	35.0	7.2	18000	3.6	23.7	.11
29...	1016	18.0	7.5	19000	4.9	24.3	--
29...	1017	10.0	7.5	18900	5.2	24.5	--
29...	1018	1.00	7.8	18400	6.4	24.9	--
29...	1400	35.0	7.3	20800	4.1	24.0	--
29...	1401	18.0	7.8	18800	6.4	24.9	--
29...	1402	10.0	7.8	18800	6.6	25.0	--
29...	1403	1.00	7.9	18800	7.2	25.1	--
29...	1540	35.0	7.3	19400	4.4	24.3	--
29...	1541	25.0	7.9	18700	7.7	25.3	--
29...	1542	18.0	8.1	18400	8.4	25.6	--
29...	1543	10.0	8.1	18200	8.6	25.8	--
29...	1544	1.00	8.3	18100	10.0	26.0	--
29...	1900	35.0	7.2	19900	4.1	23.9	.29
29...	1901	25.0	7.3	19500	4.4	24.0	--
29...	1902	15.0	7.8	19600	6.3	25.3	--
29...	1903	5.00	8.1	17900	8.4	25.8	--
29...	1904	1.00	8.1	17900	8.4	26.0	--
SEP							
14...	1700	32.0	7.4	24000	5.4	24.6	.28
14...	1701	28.0	7.4	24000	5.4	24.6	--
14...	1702	24.0	7.4	23900	5.5	24.7	--
14...	1703	19.0	7.4	23800	5.5	24.7	--
14...	1704	14.0	7.4	23800	5.4	24.7	--
14...	1705	9.00	7.4	23700	5.1	24.7	--
14...	1706	5.00	7.5	23500	6.0	24.9	--
14...	1707	1.00	7.8	23200	7.8	25.4	--
14...	1800	31.0	7.4	23900	5.4	24.6	.24
14...	1801	26.0	7.4	23800	5.3	24.6	--
14...	1802	21.0	7.4	23800	5.4	24.6	--
14...	1803	16.0	7.4	23700	5.4	24.7	--
14...	1804	11.0	7.7	23300	6.8	25.0	--
14...	1805	6.00	7.9	23100	8.2	25.4	--
14...	1806	1.00	8.0	23000	8.9	25.5	--
14...	1900	32.0	7.4	23900	5.4	24.5	.18
14...	1901	27.0	7.4	23800	5.2	24.6	--
14...	1902	22.0	7.4	23900	5.2	24.5	--
14...	1903	17.0	7.4	23600	5.4	24.5	--
14...	1904	12.0	7.5	23400	5.6	24.5	--
14...	1905	6.00	7.9	23000	8.2	25.2	--
14...	1906	1.00	8.0	22900	8.9	25.4	--
14...	2005	32.0	7.4	23900	5.2	24.6	--
14...	2006	27.0	7.4	23500	5.2	24.6	--
14...	2007	22.0	7.4	23500	5.2	24.6	--
14...	2008	17.0	7.4	23500	5.3	24.6	--
14...	2009	12.0	7.5	23300	5.8	24.7	--
14...	2010	6.00	7.5	23200	5.9	24.7	--
14...	2011	1.00	8.0	22700	8.4	25.1	--

WATER-QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

PATUXENT RIVER BASIN--CONTINUED

01594820

- PATUXENT R NR TOWN POINT, MD --CONTINUED

DATE	TIME	SAM- PLING DEPTH (FEET)	PH (STAND- ARD UNITS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	OXYGEN, DIS- SOLVED (MG/L)	TEMPER- ATURE (DEG C)	STREAM VELOC- ITY, MEAN (FPS)
OCT 1982							
20...	0845	33.0	7.7	25500	7.2	17.8	.27
20...	0846	25.0	7.7	25100	7.3	17.7	--
20...	0847	17.0	7.7	25200	7.3	17.7	--
20...	0848	9.00	7.8	25000	7.4	17.6	--
20...	0849	1.00	7.8	25100	7.4	17.6	--
20...	0950	33.0	7.7	24600	6.6	18.0	.22
20...	0951	25.0	7.7	24700	6.6	18.0	--
20...	0952	17.0	7.7	24300	6.6	17.9	--
20...	0953	9.00	7.8	24000	7.1	17.8	--
20...	0954	1.00	7.8	23900	7.3	17.8	--
20...	1105	33.0	7.7	24600	6.6	18.0	.17
20...	1106	25.0	7.7	24700	6.6	18.0	--
20...	1107	17.0	7.7	24300	6.6	17.9	--
20...	1108	9.00	7.8	24000	7.1	17.8	--
20...	1109	1.00	7.8	23900	7.3	17.8	--
20...	1210	31.0	7.7	24400	7.1	18.0	.25
20...	1211	25.0	7.7	24100	7.0	17.9	--
20...	1212	17.0	7.8	22500	7.9	17.6	--
20...	1213	9.00	7.9	22300	8.1	17.6	--
20...	1214	1.00	7.9	--	8.1	17.6	--
20...	1455	33.0	7.8	25200	7.1	18.2	--
20...	1456	25.0	7.8	25100	7.4	18.2	--
20...	1457	17.0	7.8	24700	7.5	18.1	--
20...	1458	9.00	7.8	24700	7.4	18.0	--
20...	1459	1.00	7.8	24500	8.0	18.1	--
20...	1600	33.0	7.7	25800	7.3	18.0	.34
20...	1601	25.0	7.7	25800	7.1	18.0	--
20...	1602	17.0	7.7	25800	7.1	18.0	--
20...	1603	9.00	7.8	25300	7.5	18.0	--
20...	1604	1.00	7.8	25200	7.8	18.0	--
MAR 1983							
04...	0855	32.0	8.1	25900	13.4	5.1	.10
04...	0856	27.0	8.1	25300	13.5	5.2	--
04...	0857	22.0	8.1	25100	13.4	5.3	--
04...	0858	17.0	8.1	24600	13.5	5.4	--
04...	0859	12.0	8.2	24200	13.6	5.7	--
04...	0900	7.00	8.2	24100	13.7	5.8	--
04...	0901	1.00	8.2	23700	13.7	6.0	--
04...	0955	31.0	8.1	25400	13.5	5.4	.19
04...	0956	24.0	8.1	25300	13.5	5.4	--
04...	0957	16.0	8.1	24800	13.5	5.6	--
04...	0958	8.00	8.1	24200	13.7	6.0	--
04...	0959	1.00	8.2	23800	13.8	6.4	--
04...	1055	30.0	8.1	24800	13.7	5.7	.35
04...	1056	22.0	8.1	24600	13.6	5.8	--
04...	1057	14.0	8.1	24400	13.6	6.0	--
04...	1058	7.00	8.1	24300	13.6	6.1	--
04...	1059	1.00	8.1	23500	13.6	7.1	--
04...	1155	31.0	8.1	24900	13.8	6.0	.21
04...	1156	23.0	8.2	24500	13.8	6.0	--
04...	1157	15.0	8.2	24000	13.9	6.3	--
04...	1158	7.00	8.2	23600	14.1	6.6	--
04...	1159	1.00	8.2	23400	14.1	7.4	--
JUN							
14...	1130	36.0	7.0	14000	4.3	22.5	.23
14...	1131	30.0	7.1	13500	5.5	22.9	--
14...	1132	24.0	7.2	13500	5.8	23.0	--
14...	1133	18.0	7.5	12800	7.3	23.6	--
14...	1134	12.0	7.6	12500	7.7	23.9	--
14...	1135	6.00	7.9	12000	8.8	24.6	.23
14...	1136	1.00	8.2	11400	10.5	25.6	--
14...	1230	36.0	7.2	13600	4.9	23.3	.14
14...	1231	30.0	7.3	13400	5.4	23.3	--
14...	1232	24.0	7.5	12700	6.8	23.9	--
14...	1233	18.0	7.5	12500	7.2	24.1	--
14...	1234	12.0	7.9	12200	8.5	24.6	--
14...	1235	3.00	8.0	11900	9.1	25.1	.17
14...	1236	1.00	8.3	11300	10.2	26.2	--
14...	1330	36.0	7.2	13600	5.2	23.7	.11
14...	1331	30.0	7.3	13400	5.4	23.7	.14
14...	1332	24.0	7.3	13200	5.8	23.8	--
14...	1333	18.0	7.3	13200	5.9	23.9	--
14...	1334	12.0	7.7	12400	7.6	24.5	--
14...	1335	6.00	8.1	11800	9.1	25.2	.49
14...	1336	1.00	8.2	11400	9.5	26.3	--

WATER-QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

PATUXENT RIVER BASIN--CONTINUED

01594820

- PATUXENT R NR TOWN POINT, MD--CONTINUED

DATE	TIME	SAM- PLING DEPTH (FEET)	PH (STAND- ARD UNITS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	OXYGEN. DIS- SOLVED (MG/L)	TEMPER- ATURE (DEG C)	STREAM VELOC- ITY, MEAN (FPS)
SEP 1983							
01...	1530	35.0	7.5	20500	5.8	26.9	.26
01...	1531	32.0	7.5	20500	5.8	26.9	--
01...	1532	28.0	7.5	20300	5.9	26.9	.22
01...	1533	21.0	7.5	20200	6.0	26.8	--
01...	1534	14.0	7.7	20000	7.1	27.1	--
01...	1535	7.00	7.7	20100	7.3	27.2	.73
01...	1536	1.00	7.7	20100	7.3	27.3	--
01...	1630	34.0	7.4	20200	5.7	26.9	.32
01...	1631	28.0	7.5	19900	6.3	26.9	.24
01...	1632	22.0	7.6	19900	6.7	27.0	--
01...	1633	16.0	7.6	19800	7.1	27.1	--
01...	1634	8.00	7.7	19700	7.3	27.2	.55
01...	1635	1.00	7.7	19700	7.3	27.3	--
01...	1730	24.0	7.3	20700	4.4	26.8	.34
01...	1731	28.0	7.4	20300	4.9	26.8	.50
01...	1732	22.0	7.6	19900	6.3	27.0	--
01...	1733	16.0	7.8	19600	7.5	27.1	--
01...	1734	8.00	7.9	19500	8.6	27.3	.20
01...	1735	1.00	7.9	19500	8.8	27.3	--
01...	1830	35.0	7.2	21000	3.6	26.7	.31
01...	1831	28.0	7.3	20700	4.1	26.7	.24
01...	1832	22.0	7.4	20200	5.3	26.7	--
01...	1833	16.0	7.7	19700	6.8	27.0	--
01...	1834	8.00	7.8	19200	8.4	27.2	.47
01...	1835	1.00	7.9	19100	8.9	27.2	--

01594850

- PATUXENT R NR DRUM POINT, MD

JUN 1982							
28...	0840	27.0	7.4	20900	4.4	23.6	--
28...	0841	22.0	7.4	20800	4.8	23.7	--
28...	0842	17.0	7.6	20500	5.4	23.9	--
28...	0843	12.0	7.7	20400	5.9	24.1	--
28...	0844	7.00	7.8	20600	6.4	24.2	--
28...	0845	2.00	7.8	20700	6.6	24.2	--
28...	0846	1.00	7.8	18300	6.7	24.3	--
28...	1045	27.0	7.4	19500	4.5	23.6	.30
28...	1046	22.0	7.5	18700	4.9	24.1	--
28...	1047	17.0	7.7	18400	6.0	24.4	--
28...	1048	12.0	7.8	18300	6.5	24.6	--
28...	1049	7.00	7.8	18300	6.6	24.8	--
28...	1050	2.00	7.9	18300	7.1	25.1	--
28...	1051	1.00	7.9	18300	7.4	25.4	--
28...	1400	15.0	7.5	20700	4.0	23.8	--
28...	1401	12.0	7.6	19800	5.2	24.2	--
28...	1402	9.00	7.6	19900	5.3	24.3	--
28...	1403	6.00	7.6	19800	5.1	24.4	--
28...	1404	3.00	7.9	18800	6.8	26.0	--
28...	1405	1.00	7.9	18700	7.4	26.2	--
SEP							
10...	0815	28.0	7.6	24000	6.0	24.0	.21
10...	0816	23.0	7.6	24000	6.0	24.0	--
10...	0817	18.0	7.6	24000	5.8	23.9	--
10...	0818	12.0	7.7	23500	6.2	23.8	--
10...	0819	6.00	7.7	23500	6.2	23.8	--
10...	0820	1.00	7.7	23500	6.2	23.8	--
10...	0930	28.0	7.6	24200	5.6	24.1	.15
10...	0931	23.0	7.7	24100	6.0	24.1	--
10...	0932	18.0	7.7	23800	6.0	24.1	--
10...	0933	12.0	7.7	23600	5.9	24.0	--
10...	0934	6.00	7.7	23600	6.0	23.9	--
10...	0935	1.00	7.7	23600	6.0	24.0	--
10...	1100	27.0	7.7	24100	6.0	24.3	.18
10...	1101	22.0	7.7	23900	6.0	24.2	--
10...	1102	17.0	7.7	23700	5.9	24.2	--
10...	1103	11.0	7.7	23500	6.0	24.2	--
10...	1104	5.00	7.7	23400	6.2	24.3	--
10...	1105	1.00	7.7	23400	6.1	24.3	--
10...	1455	10.0	7.7	23800	6.2	24.7	.24

WATER-QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

PATUXENT RIVER BASIN--CONTINUED

01594850

- PATUXENT R NR DRUM POINT, MD--CONTINUED

DATE	TIME	SAM- PLING DEPTH (FEET)	PH (STAND- ARD UNITS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	OXYGEN, DIS- SOLVED (MG/L)	TEMPER- ATURE (DEG C)	STREAM VELOC- ITY, MEAN (FPS)
SEP 1982							
10...	1456	6.00	7.8	23600	6.8	24.8	--
10...	1457	3.00	7.9	23600	7.3	25.1	--
10...	1458	1.00	7.9	23500	7.3	25.2	--
10...	1600	10.0	7.7	23700	6.3	24.7	.44
10...	1601	6.00	7.8	23700	6.7	24.6	--
10...	1602	3.00	7.9	23500	7.6	24.9	--
10...	1603	1.00	7.9	23600	7.7	25.1	--
10...	1700	10.0	7.6	23700	5.9	24.5	.38
10...	1701	6.00	7.6	23600	6.0	24.6	--
10...	1702	3.00	7.8	23600	6.6	24.9	--
10...	1703	1.00	7.8	23600	6.7	25.0	--
OCT							
18...	1105	27.0	7.6	22800	5.8	18.0	.35
18...	1106	22.0	7.7	21000	6.2	17.7	--
18...	1107	17.0	7.7	18800	5.7	17.8	--
18...	1108	12.0	7.7	18200	--	18.0	--
18...	1109	6.00	7.7	14300	6.8	18.1	--
18...	1110	1.00	7.7	21800	6.9	18.1	--
18...	1220	27.0	7.7	24500	6.3	18.2	.48
18...	1221	22.0	7.7	24000	6.2	18.2	--
18...	1222	17.0	7.7	25100	6.4	18.1	--
18...	1223	12.0	7.7	25000	6.6	18.1	--
18...	1224	6.00	7.7	24300	6.6	18.1	--
18...	1225	1.00	7.8	24000	6.8	18.3	--
18...	1325	28.0	7.7	25700	7.1	18.2	.17
18...	1326	22.0	7.7	25000	7.2	18.0	--
18...	1327	17.0	7.7	24800	7.4	18.0	--
18...	1328	12.0	7.7	24700	7.4	18.0	--
18...	1329	6.00	7.8	24600	7.8	18.3	--
18...	1330	1.00	7.8	24600	8.0	18.3	--
18...	1601	10.0	7.8	25200	8.2	18.2	--
18...	1602	5.00	7.8	25100	8.2	18.2	--
18...	1603	1.00	7.9	24700	8.4	18.1	--
18...	1700	15.0	7.9	24500	8.6	18.2	.29
18...	1701	10.0	7.9	25200	8.8	18.2	--
18...	1702	5.00	7.9	25200	8.9	18.2	--
18...	1703	1.00	7.9	25100	8.9	18.1	--
18...	1805	15.0	7.9	25300	8.9	17.9	.26
18...	1806	10.0	7.9	25300	8.8	17.9	--
18...	1807	5.00	7.9	25300	8.8	17.8	--
18...	1808	1.00	7.9	25300	8.8	17.8	--
MAR 1983							
14...	0900	29.0	8.0	27400	12.1	6.0	.30
14...	0901	21.0	8.1	26100	12.2	6.2	--
14...	0902	14.0	8.1	25700	12.4	6.3	--
14...	0903	7.00	8.1	24800	12.3	6.5	--
14...	0904	1.00	8.1	24600	12.4	6.6	--
14...	1005	28.0	8.1	26800	12.2	6.4	.17
14...	1006	21.0	8.1	26000	12.1	6.4	--
14...	1007	14.0	8.1	25400	12.1	6.6	--
14...	1008	7.00	8.1	24600	12.4	6.8	--
14...	1009	1.00	8.1	23800	12.3	7.3	--
14...	1105	29.0	8.1	27500	12.0	6.3	.40
14...	1106	21.0	8.1	26700	12.1	6.4	--
14...	1107	14.0	8.1	26100	12.1	6.5	--
14...	1108	7.00	8.1	25500	12.2	6.6	--
14...	1109	1.00	8.2	24200	12.4	7.4	--
14...	1205	28.0	8.1	27300	12.1	6.3	.30
14...	1206	21.0	8.1	26600	12.4	6.4	--
14...	1207	14.0	8.1	25800	12.4	6.5	--
14...	1208	7.00	8.2	25200	12.6	6.6	--
14...	1209	1.00	8.1	24400	12.5	7.2	--

WATER-QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

PATUXENT RIVER BASIN--CONTINUED

01594850 - PATUXENT R NR DRUM POINT, MD--CONTINUED

DATE	TIME	SAM- PLING DEPTH (FEET)	PH (STAND- ARD UNITS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	OXYGEN, DIS- SOLVED (MG/L)	TEMPER- ATURE (DEG C)	STREAM VELOC- ITY, MEAN (FPS)
JUN 1983							
08...	1100	30.0	6.9	13600	3.7	20.9	.22
08...	1101	24.0	7.0	13200	5.1	21.2	.20
08...	1102	18.0	7.1	13200	5.3	21.3	--
08...	1103	12.0	7.2	12900	6.1	21.4	--
08...	1104	6.00	7.2	12900	6.3	21.5	.54
08...	1105	1.00	7.2	12900	6.5	21.9	--
08...	1230	29.0	6.9	14100	3.5	20.6	.13
08...	1231	24.0	7.0	13400	4.8	21.1	--
08...	1232	18.0	7.1	13200	5.4	21.3	--
08...	1233	12.0	7.4	12700	6.5	21.5	--
08...	1234	6.00	7.4	12700	6.7	21.6	.29
08...	1235	1.00	7.5	12600	7.0	22.2	--
08...	1405	29.0	7.0	13900	3.8	20.7	.27
08...	1406	24.0	7.1	13100	5.4	21.3	.31
08...	1407	18.0	7.3	12800	6.1	21.5	--
08...	1408	12.0	7.4	12600	6.4	21.5	--
08...	1409	6.00	7.6	12400	7.1	21.7	.25
08...	1410	1.00	7.6	12300	7.4	22.5	--
08...	1519	29.0	7.1	13300	4.7	21.2	.17
08...	1530	24.0	7.3	12900	6.1	21.5	.19
08...	1531	18.0	7.4	12700	6.4	21.5	--
08...	1532	12.0	7.4	12600	6.4	21.4	--
08...	1533	6.00	7.7	12200	7.1	21.3	.30
08...	1535	1.00	7.7	12200	7.5	22.2	--
08...	1651	29.0	6.9	14000	3.6	20.7	.20
08...	1652	24.0	7.1	13300	4.9	21.2	.36
08...	1653	18.0	7.2	13100	5.7	21.6	--
08...	1654	12.0	7.4	12800	6.6	21.8	--
08...	1655	6.00	7.6	12500	7.3	22.0	.13
08...	1656	1.00	7.8	12300	7.6	22.2	--
SEP							
01...	1000	30.0	7.2	22400	3.9	26.4	.44
01...	1001	24.0	7.4	21700	5.9	26.5	.38
01...	1002	18.0	7.5	21600	6.3	26.5	--
01...	1003	12.0	7.5	21600	6.2	26.5	--
01...	1004	6.00	7.5	21600	6.4	26.6	.36
01...	1005	2.00	7.5	21600	6.5	26.6	--
01...	1110	30.0	7.3	22100	4.4	26.5	.41
01...	1111	27.0	7.3	21900	4.9	26.5	--
01...	1112	25.0	7.4	21900	5.2	26.6	.47
01...	1113	22.0	7.4	21700	5.4	26.6	--
01...	1114	18.0	7.4	21600	5.2	26.5	--
01...	1115	12.0	7.4	21500	5.7	26.5	--
01...	1116	6.00	7.5	21500	6.0	26.6	.60
01...	1117	1.00	7.5	21500	6.1	26.6	--
01...	1210	30.0	7.3	21900	4.6	26.4	.38
01...	1211	27.0	7.4	21800	5.3	26.4	--
01...	1212	25.0	7.4	21800	5.4	26.4	.44
01...	1213	22.0	7.4	21800	5.3	26.4	--
01...	1214	18.0	7.4	21700	5.3	26.5	--
01...	1215	12.0	7.5	21600	6.1	26.6	--
01...	1216	6.00	7.6	21500	6.9	26.7	.59
01...	1217	1.00	7.7	21500	7.0	26.8	--
01...	1310	30.0	7.3	21700	4.5	26.6	.55
01...	1311	28.0	7.4	21600	5.2	26.6	--
01...	1312	26.0	7.5	21500	5.8	26.7	.41
01...	1313	24.0	7.7	21400	6.7	26.7	--
01...	1314	18.0	7.7	21400	7.3	26.8	--
01...	1315	12.0	7.7	21400	7.4	26.8	--
01...	1316	6.00	7.8	21300	8.0	26.8	.70
01...	1317	1.00	7.8	21200	8.1	27.0	--

WATER-QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

POTOMAC RIVER BASIN

01594916

- LAUREL RN AT KEMPTON MD

DATE	TIME	STREAM-FLOW, INSTANTANEOUS (CFS)	SPECIFIC CONDUCTANCE (UMHOS)	PH (STANDARD UNITS)	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)
MAR 17...	1545	1.0	43	7.1	3.7	11.7	17	9	4.7	1.2

DATE	SODIUM, DIS-SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM ADSORPTION RATIO	POTASSIUM, DIS-SOLVED (MG/L AS K)	ALKALINITY FIELD (MG/L AS CAC03)	CARBON DIOXIDE DIS-SOLVED (MG/L AS C02)	SULFATE DIS-SOLVED (MG/L AS S04)	CHLORIDE, DIS-SOLVED (MG/L AS CL)	FLUORIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SI02)
MAR 17...	.3	4	.0	.4	8.1	1.2	6.2	1.2	<.10	3.5

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)	NITROGEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	PHOSPHORUS, ORTHO, DIS-SOLVED (MG/L AS P)	ALUMINUM, TOTAL RECOVERABLE (UG/L AS AL)	ALUMINUM, SUSPENDED RECOVERABLE (UG/L AS AL)	ALUMINUM, DIS-SOLVED (UG/L AS AL)
MAR 17...	41	23	.06	.11	1.2	<.010	50	20	30

DATE	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, SUSPENDED RECOVERABLE (UG/L AS FE)	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, DIS-SOLVED (UG/L AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, DIS-SOLVED (UG/L AS MN)	STRONTIUM, DIS-SOLVED (UG/L AS SR)	ZINC, DIS-SOLVED (UG/L AS ZN)
MAR 17...	1	130	110	21	3	<10	4	16	99

WATER-QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

POTOMAC RIVER BASIN--CONTINUED

01594918

- LAUREL RN NR KEMPTON MD

DATE	TIME	STREAM-FLOW, INSTANTANEOUS (CFS)	SPECIFIC CONDUCTANCE (UMHOS)	PH (STANDARD UNITS)	TEMPERATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	HARDNESS (MG/L AS CAC03)	ACIDITY (MG/L AS H)	ACIDITY (MG/L AS CAC03)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNESIUM, DIS-SOLVED (MG/L AS MG)	SODIUM DIS-SOLVED (MG/L AS NA)
MAR 18...	1345	12	575	3.8	8.3	10.5	140	1.7	84	33	13	3.1

DATE	PERCENT SODIUM	SODIUM ADSORPTION RATIO	POTASSIUM, DIS-SOLVED (MG/L AS K)	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)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	SOLIDS, DIS-SOLVED (TONS PER DAY)	NITROGEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	PHOSPHORUS, ORTHO, DIS-SOLVED (MG/L AS P)
MAR 18...	5	.1	2.0	250	1.7	.20	21	378	.51	12.2	.33	<.010

DATE	ALUMINUM, DIS-SOLVED (UG/L AS AL)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, SUSPENDED RECOVERABLE (UG/L AS FE)	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, DIS-SOLVED (UG/L AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, SUSPENDED RECOVERABLE (UG/L AS MN)	MANGANESE, DIS-SOLVED (UG/L AS MN)	STRONTIUM, DIS-SOLVED (UG/L AS SR)	ZINC, DIS-SOLVED (UG/L AS ZN)
MAR 18...	5900	10	14000	0	14000	9	1100	0	1100	180	320

01594923

- LAUREL RN NR RED OAK, MD

DATE	TIME	STREAM-FLOW, INSTANTANEOUS (CFS)	SPECIFIC CONDUCTANCE (UMHOS)	PH (STANDARD UNITS)	TEMPERATURE, AIR (DEG C)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	OXYGEN, DIS-SOLVED (MG/L)	HARDNESS (MG/L AS CAC03)	ACIDITY (MG/L AS H)	ACIDITY (MG/L AS CAC03)	CALCIUM DIS-SOLVED (MG/L AS CA)
AUG 03...	1140	3.4	896	3.3	24.0	18.6	10	7.8	200	2.8	139	48

DATE	MAGNESIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM ADSORPTION RATIO	POTASSIUM, DIS-SOLVED (MG/L AS K)	ALKALINITY LAB (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)
AUG 03...	19	4.9	5	.2	2.4	<1.0	340	2.0	.30	25	580

DATE	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	SOLIDS, DIS-SOLVED (TONS PER DAY)	PHOSPHORUS, TOTAL (MG/L AS P)	ALUMINUM, DIS-SOLVED (UG/L AS AL)	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)	CARBON, ORGANIC TOTAL (MG/L AS C)
AUG 03...	.79	5.3	<.010	10000	14000	3000	11000	1700	0	1700	1.8

WATER-QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

POTOMAC RIVER BASIN--CONTINUED

01594926

- CHESTNUT RIDGE RN NR RED OAK, MD

DATE	TIME	STREAM-FLOW, INSTANTANEOUS (CFS)	SPECIFIC CONDUCTANCE (UMHOS)	PH (STANDARD 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 AS CaCO3)	CALCIUM DIS-SOLVED (MG/L AS Ca)	MAGNESIUM, DIS-SOLVED (MG/L AS Mg)
AUG 03...	1100	.29	969	7.1	26.6	18.5	20	8.0	490	481	160	22

DATE	SODIUM, DIS-SOLVED (MG/L AS Na)	PERCENT SODIUM	SODIUM ADSORPTION RATIO	POTASSIUM, DIS-SOLVED (MG/L AS K)	ALKALINITY LAB (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)	SOLIDS, SUM OF CONSTITUENTS, DIS-SOLVED (MG/L)
AUG 03...	19	8	.4	3.8	10	1.5	520	3.9	.10	3.4	757	739

DATE	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	SOLIDS, DIS-SOLVED (TONS PER DAY)	PHOSPHORUS, TOTAL (MG/L AS P)	ALUMINUM, DIS-SOLVED (UG/L AS AL)	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)	CARBON, ORGANIC TOTAL (MG/L AS C)
AUG 03...	1.0	.59	.020	<100	930	850	79	310	20	290	4.6

01594929

- DUTCH RUN AT RED OAK

DATE	TIME	STREAM-FLOW, INSTANTANEOUS (CFS)	SPECIFIC CONDUCTANCE (UMHOS)	PH (STANDARD 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 AS CaCO3)	CALCIUM DIS-SOLVED (MG/L AS Ca)	MAGNESIUM, DIS-SOLVED (MG/L AS Mg)
AUG 03...	0915	.07	209	6.3	27.0	20.8	30	3.1	92	82	27	5.9

DATE	SODIUM, DIS-SOLVED (MG/L AS Na)	PERCENT SODIUM	SODIUM ADSORPTION RATIO	POTASSIUM, DIS-SOLVED (MG/L AS K)	ALKALINITY LAB (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)	SOLIDS, SUM OF CONSTITUENTS, DIS-SOLVED (MG/L)
AUG 03...	1.8	4	.0	1.0	10	9.7	79	1.9	.10	3.9	142	130

DATE	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	SOLIDS, DIS-SOLVED (TONS PER DAY)	PHOSPHORUS, TOTAL (MG/L AS P)	ALUMINUM, DIS-SOLVED (UG/L AS AL)	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)	CARBON, ORGANIC TOTAL (MG/L AS C)
AUG 03...	.19	.03	<.010	400	5600	4900	680	2000	100	1900	12

WATER-QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

POTOMAC RIVER BASIN--CONTINUED

01594932

- SF SAND RN AT MOON RIDGE

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD 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)
AUG 02...	1550	.06	258	7.2	27.7	20.8	15	5.3	120	87	38	5.2

DATE	SODIUM, DIS- SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY LAB (MG/L AS CACO3)	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)
AUG 02...	3.4	6	.1	1.6	29	3.5	86	2.4	.10	2.6	166	157

DATE	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	PHOS- PHORUS, TOTAL (MG/L AS P)	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	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)	CARBON, ORGANIC TOTAL (MG/L AS C)
AUG 02...	.23	.03	<.010	200	530	440	89	200	40	160	5.1

01594935

- NF SAND RN AT MOON RIDGE,MD

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD UNITS)	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)	SODIUM, DIS- SOLVED (MG/L AS NA)
AUG 02...	1450	.10	93	7.2	21.9	80	7.5	36	32	9.9	2.8	1.0

DATE	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY LAB (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)
AUG 02...	6	.0	.7	4.0	.5	36	1.4	<.10	3.1	75	58

DATE	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	PHOS- PHORUS, TOTAL (MG/L AS P)	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	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)	CARBON, ORGANIC TOTAL (MG/L AS C)
AUG 02...	.10	.02	.010	<100	3700	3400	290	580	20	560	7.7

WATER-QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

POTOMAC RIVER BASIN--CONTINUED

01636850

- L CATOCTIN C NR BRUNSWICK MD

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD 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)
JAN 21...	1245	.59	256	8.6	2.0	.4	10	--	99	36	26
JUN 16...	1130	3.8	228	8.2	30.0	24.4	19	7.8	85	23	23

DATE	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY FIELD (MG/L AS CAC03)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SI02)
JAN 21...	8.2	12	20	.5	2.6	63	.3	25	29	.10	17
JUN 16...	6.7	8.8	17	.4	4.2	62	.8	19	20	.20	15

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 TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (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 N03)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS TOTAL (MG/L AS P04)
JAN 21...	158	158	.21	.25	3.4	2.8	--	--	--	.030	.09
JUN 16...	175	134	.24	1.8	2.7	--	.70	3.4	15	.130	.40

DATE	PHOS- PHORUS, ORTHO, TOTAL (MG/L AS P)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P)	PHOS- PHATE, ORTHO, DIS- SOLVED (MG/L AS P04)	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)	CARBON, ORGANIC TOTAL (MG/L AS C)
JAN 21...	--	.020	.06	230	170	63	60	0	68	2.1
JUN 16...	.090	--	--	590	480	110	40	0	47	4.2

WATER-QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

POTOMAC RIVER BASIN--CONTINUED

01638050

- CATOCTIN C AT OLIVE MD

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD 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)
JAN 21...	1445	33	218	8.2	3.5	.2	5	--	84	26	21
JUN 16...	1245	73	183	8.0	30.0	25.5	17	8.2	73	18	19

DATE	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY FIELD (MG/L AS CAC03)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)
JAN 21...	7.7	9.1	18	.4	2.5	58	.7	21	23	<.10	13
JUN 16...	6.2	6.5	16	.3	2.3	55	1.1	17	14	.20	12

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)	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)	PHOS- PHORUS TOTAL (MG/L AS P04)
JAN 21...	136	132	.19	12.0	2.4	2.3	--	--	--	.100	.31
JUN 16...	138	110	.19	27.2	1.7	--	.50	2.2	9.7	.120	.37

DATE	PHOS- PHORUS, ORTHO, TOTAL (MG/L AS P)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P)	PHOS- PHATE, ORTHO, DIS- SOLVED (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)	CARBON, ORGANIC TOTAL (MG/L AS C)
JAN 21...	--	.100	.31	200	160	40	20	0	26	--
JUN 16...	.090	--	--	670	610	63	20	0	22	2.9

ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS

WATER-QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

POTOMAC RIVER BASIN--CONTINUED

01638520

- POTOMAC R TR AT POINT OF ROCKS MD

DATE	TIME	STREAM- FLOW. INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD 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)
JAN 27...	1430	.12	227	9.1	7.5	1.5	8	--	110	0
JUN 15...	1530	11	351	8.2	32.5	25.6	30	7.0	180	0

DATE	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY FIELD (MG/L AS CACO3)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)
JAN 27...	25	11	3.9	7	.2	2.4	121	.2	9.0	8.0
JUN 15...	44	17	4.1	5	.1	3.0	190	2.3	12	8.5

DATE	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTITU- ENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NO2+NO3 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)
JAN 27...	<.10	7.8	110	140	.15	.04	1.2	--	--	--
JUN 15...	<.10	9.1	214	212	.29	6.4	2.0	1.10	3.1	14

DATE	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS TOTAL (MG/L AS PO4)	PHOS- PHORUS, ORTHO, TOTAL (MG/L AS P)	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 CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDED RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED TOTAL (UG/L AS FE)
JAN 27...	.030	.09	.020	--	--	--	--	190	170	20
JUN 15...	.130	.40	.060	<1	<1	10	4	880	860	18

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)	ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)
JAN 27...	--	--	20	4	16	--	--	--	2.0
JUN 15...	4000	<10	120	40	82	630	<.01	44	3.3

WATER-QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

POTOMAC RIVER BASIN--CONTINUED

01638600

- TUSCARORA C AT TUSCARORA MD

DATE	TIME	STREAM-FLOW, INSTANTANEOUS (CFS)	SPECIFIC CONDUCTANCE (UMHOS)	PH (STANDARD 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)
JAN 27...	1530	8.1	421	8.7	6.5	4.8	5	--	180	18
JUN 15...	1315	13	421	8.0	35.0	20.6	17	8.7	190	43

DATE	CALCIUM DISSOLVED (MG/L AS Ca)	MAGNESIUM, DISSOLVED (MG/L AS Mg)	SODIUM, DISSOLVED (MG/L AS Na)	PERCENT SODIUM	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY FIELD (MG/L AS CaCO3)	CARBON DIOXIDE DISSOLVED (MG/L AS CO2)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS Cl)
JAN 27...	57	9.7	13	13	.4	2.4	165	.6	35	21
JUN 15...	62	9.3	9.5	10	.3	2.3	150	2.9	24	17

DATE	FLUORIDE, DISSOLVED (MG/L AS F)	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)	SOLIDS, DISSOLVED (TONS PER DAY)	NITROGEN, NO2+NO3 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)
JAN 27...	.20	5.1	258	242	.35	5.6	5.6	--	--	--
JUN 15...	.30	7.3	237	222	.32	8.3	6.0	.20	6.2	27

DATE	PHOSPHORUS, TOTAL (MG/L AS P)	PHOSPHORUS, TOTAL (MG/L AS PO4)	PHOSPHORUS, ORTHO, TOTAL (MG/L AS P)	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)	CARBON, ORGANIC TOTAL (MG/L AS C)
JAN 27...	.040	.12	.040	170	160	6	80	0	81	--
JUN 15...	.080	.25	.050	360	350	14	40	8	32	1.7

WATER-QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

POTOMAC RIVER BASIN--CONTINUED

01639150

- PINEY C NR KEYSVILLE MD

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD UNITS)	TEMPER- ATURE, AIR (DEG C)	TEMPER- ATURE (DEG C)	COLOR (PLAT- NUM- COBALT UNITS)	OXYGEN, DIS- SOLVED (MG/L)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)
JAN 13...	1415	20	266	8.3	2.0	1.9	20	--	96	44
JUN 17...	1700	5.2	287	8.1	31.0	27.8	30	7.0	100	14
DATE	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LITY FIELD (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)
JAN 13...	26	7.6	12	20	.6	4.5	52	.5	29	23
JUN 17...	29	7.8	15	23	.7	4.0	91	1.4	20	25
DATE	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTITU- ENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NO2+NO3 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)
JAN 13...	<.10	8.5	171	142	.23	9.4	6.1	--	--	--
JUN 17...	.10	3.8	179	159	.24	2.5	2.7	.50	3.2	14
DATE	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS TOTAL (MG/L AS PO4)	PHOS- PHORUS, ORTHO, 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. (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	CARBON, ORGANIC TOTAL (MG/L AS C)
JAN 13...	.170	.52	.160	360	290	75	20	9	11	4.7
JUN 17...	.370	1.1	.350	110	90	19	20	10	10	5.1

WATER-QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

POTOMAC RIVER BASIN--CONTINUED

01639325

- FRIENDS C NR EMMITSBURG MD

DATE	TIME	STREAM-FLOW, INSTANTANEOUS (CFS)	SPECIFIC CONDUCTANCE (UMHOS)	PH (STANDARD 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)
JAN 14...	1100	8.6	155	8.5	3.5	1.6	5	--	65	24
JUN 17...	1030	5.4	158	8.2	26.5	21.8	20	8.6	67	15

DATE	CALCIUM DISSOLVED (MG/L AS Ca)	MAGNESIUM, DISSOLVED (MG/L AS Mg)	SODIUM, DISSOLVED (MG/L AS Na)	PERCENT SODIUM	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY FIELD (MG/L AS CaCO3)	CARBON DIOXIDE DISSOLVED (MG/L AS CO2)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS Cl)
JAN 14...	15	6.6	6.0	17	.3	.7	41	.2	18	13
JUN 17...	16	6.6	5.4	15	.3	.7	52	.6	15	11

DATE	FLUORIDE, DISSOLVED (MG/L AS F)	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)	SOLIDS, DISSOLVED (TONS PER DAY)	NITROGEN, NO2+NO3 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)
JAN 14...	<.10	11	111	95	.15	2.6	1.9	--	--	--
JUN 17...	.10	12	110	98	.15	1.6	.90	.30	1.2	5.3

DATE	PHOSPHORUS, TOTAL (MG/L AS P)	PHOSPHORUS, TOTAL (MG/L AS PO4)	PHOSPHORUS, ORTHO, TOTAL (MG/L AS P)	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)	CARBON, ORGANIC TOTAL (MG/L AS C)
JAN 14...	.010	.03	<.010	130	--	<3	<10	--	<1	1.5
JUN 17...	.040	.12	.040	200	180	20	20	20	5	2.0

WATER-QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

POTOMAC RIVER BASIN--CONTINUED

01639390

- TOMS C NR KEYSVILLE MD

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD 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)
JAN 13...	1600	75	182	8.1	-5	1.3	10	--	78	21
JUN 17...	1445	35	162	8.5	31.0	27.2	30	9.3	68	2

DATE	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY FIELD (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)
JAN 13...	21	6.2	7.2	16	.4	1.5	57	.9	23	11
JUN 17...	19	5.1	5.5	15	.3	1.4	67	.4	14	7.0

DATE	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTITU- ENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NO2+NO3 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)
JAN 13...	<.10	12	125	116	.17	25.3	1.9	--	--	--
JUN 17...	.20	8.9	114	101	.16	10.8	.80	.70	1.5	6.6

DATE	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS TOTAL (MG/L AS PO4)	PHOS- PHORUS, ORTHO, 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)	CARBON, ORGANIC TOTAL (MG/L AS C)
JAN 13...	.040	.12	.030	290	230	56	20	7	13	3.3
JUN 17...	.110	.34	.090	200	160	37	<10	--	8	3.5

WATER-QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

POTOMAC RIVER BASIN--CONTINUED

01640200

- L PIPE C AT KEYMAR MD

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD UNITS)	TEMPER- ATURE, AIR (DEG C)	TEMPER- ATURE (DEG C)	COLOR (PLAT- YNUM- COBALT UNITS)	OXYGEN, DIS- SOLVED (MG/L)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)
JAN 17...	1445	24	352	8.5	-1.0	.8	5	--	160	73
JUL 19...	1400	38	366	8.1	32.0	26.0	17	7.7	160	13
DATE	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY FIELD (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)
JAN 17...	51	8.0	9.4	11	.3	3.2	88	.5	23	22
JUL 19...	52	7.9	8.0	9	.3	3.1	150	2.3	21	19
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 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)
JAN 17...	.10	5.7	206	175	.28	13.4	5.0	--	--	--
JUL 19...	.10	5.0	216	206	.29	22.2	3.9	.60	4.5	20
DATE	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS TOTAL (MG/L AS PO4)	PHOS- PHORUS, ORTHO, 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)	CARBON, ORGANIC TOTAL (MG/L AS C)
JAN 17...	.290	.89	.270	240	230	12	60	4	56	2.0
JUL 19...	.220	.67	.210	400	390	8	50	30	24	--

WATER-QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

POTOMAC RIVER BASIN--CONTINUED

01640750

- OWENS C NR ROCKY RIDGE MD

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD UNITS)	TEMPER- ATURE, AIR (DEG C)	TEMPER- ATURE (DEG C)	COLOR (PLAT- NUM- COBALT UNITS)	OXYGEN, DIS- SOLVED (MG/L)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)
JAN 13...	0945	22	186	7.9	1.0	.5	15	--	76	36
JUN 16...	1645	19	131	8.2	34.5	25.0	17	8.3	53	2

DATE	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY FIELD (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)
JAN 13...	22	5.1	7.1	16	.4	1.9	50	1.0	22	16
JUN 16...	15	3.8	4.5	15	.3	1.1	51	.6	9.8	6.7

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 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)
JAN 13...	<.10	8.1	124	106	.17	7.2	3.0	--	--	--
JUN 16...	<.10	8.8	94	80	.13	4.8	.80	.20	1.0	4.4

DATE	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS TOTAL (MG/L AS P04)	PHOS- PHORUS, ORTHO, 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)	CARBON, ORGANIC TOTAL (MG/L AS C)
JAN 13...	.030	.09	<.010	530	490	40	30	9	21	3.1
JUN 16...	.030	.09	.020	180	130	52	30	20	9	2.3

WATER-QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

POTOMAC RIVER BASIN--CONTINUED

01641600

- FISHING C NR UTICA MD

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD 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)	
JAN 20...	1200	2.1	234	8.2	-3.5	.4	5	--	98	6	27	
JUN 16...	1530	11	70	7.6	34.0	23.5	20	8.4	29	0	8.2	
DATE		MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY FIELD (MG/L AS CAC03)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)
JAN 20...	7.4	8.5	16	.4	2.1	92	1.1	18	15	<.10	5.5	
JUN 16...	2.0	2.2	14	.2	1.1	28	1.4	9.3	3.2	.10	5.7	
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 TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (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)	PHOS- PHORUS TOTAL (MG/L AS PO4)
JAN 20...	144	139	.20	.82	1.8	1.8	--	--	--	.040	.12	
JUN 16...	84	49	.11	2.5	.50	--	.30	.80	3.5	.060	.18	
DATE		PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P)	PHOS- PHATE, ORTHO, DIS- SOLVED (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)	CARBON, ORGANIC TOTAL (MG/L AS C)	
JAN 20...	--	.020	.06	300	250	52	40	3	37	--		
JUN 16...	.030	--	--	370	20	350	10	0	17	2.8		

ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS

WATER-QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

POTOMAC RIVER BASIN--CONTINUED

01641900

- TUSCARORA C NR FREDERICK MD

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD 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)
JAN 18...	1130	6.6	276	8.2	-6.0	.5	8	--	130	8	40
JUN 14...	1710	8.6	232	7.8	33.0	26.0	20	7.9	100	8	34

DATE	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY FIELD (MG/L AS CAC03)	CARBON DIOXIDE DIS- SOLVED (MG/L AS C02)	SULFATE DIS- SOLVED (MG/L AS S04)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)
JAN 18...	6.7	6.6	10	.3	2.1	120	1.5	18	14	<.10	8.6
JUN 14...	4.8	5.0	9	.2	2.7	97	3.0	12	10	.10	8.3

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)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N03)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS TOTAL (MG/L AS P04)
JAN 18...	179	168	.24	3.2	3.5	4.2	--	--	--	.060	.18
JUN 14...	146	135	.20	3.4	3.0	--	.60	3.6	16	.080	.25

DATE	PHOS- PHORUS, ORTHO, TOTAL (MG/L AS P)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P)	PHOS- PHATE, ORTHO, DIS- SOLVED (MG/L AS P04)	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)	CARBON, ORGANIC TOTAL (MG/L AS C)
JAN 18...	--	.040	.12	230	190	40	30	5	25	--
JUN 14...	.100	--	--	330	260	74	50	10	38	3.6

WATER-QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

POTOMAC RIVER BASIN--CONTINUED

01642050

- ISRAEL C NR WALKERSVILLE MD

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD 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)
JAN 19...	1245	14	319	8.3	-1.0	.4	8	--	140	28	44
JUN 14...	1930	9.5	352	8.0	29.0	25.8	20	7.4	160	31	51
DATE	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY FIELD (MG/L AS CAC03)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)
JAN 19...	8.1	7.6	10	.3	2.9	115	1.1	38	16	<.10	7.2
JUN 14...	8.1	7.3	9	.3	2.9	130	2.5	35	15	.10	6.8
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 TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (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)	PHOS- PHORUS TOTAL (MG/L AS PO4)
JAN 19...	196	193	.27	7.1	3.4	3.3	--	--	--	.040	.12
JUN 14...	216	204	.29	5.5	2.9	--	.40	3.3	15	.080	.25
DATE	PHOS- PHORUS, ORTHO, TOTAL (MG/L AS P)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P)	PHOS- PHATE, ORTHO, DIS- SOLVED (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)	CARBON, ORGANIC TOTAL (MG/L AS C)	
JAN 19...	--	.030	.09	190	160	29	50	0	52	1.4	
JUN 14...	.050	--	--	250	230	16	40	10	28	2.2	

WATER-QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

POTOMAC RIVER BASIN--CONTINUED

01643110

- BUSH C AT REELS MILL MD

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD 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)
JAN 20...	1700	7.5	228	8.7	-4.5	.2	15	--	79	15	22
JUN 15...	0945	24	190	7.7	27.0	20.4	18	6.9	67	10	19

DATE	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LITY FIELD (MG/L AS CAC03)	CARBON DIOXIDE DIS- SOLVED (MG/L AS C02)	SULFATE DIS- SOLVED (MG/L AS S04)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)
JAN 20...	5.8	13	26	.7	2.0	64	.2	12	27	<.10	5.8
JUN 15...	4.7	9.6	23	.5	1.9	57	2.2	10	20	<.10	6.8

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 TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (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 N03)	PHOS- PHORUS, TOTAL (MG/L AS P)
JAN 20...	142	126	.19	2.9	2.7	2.7	--	--	--	.040
JUN 15...	128	106	.17	8.3	2.5	--	.40	2.9	13	.050

DATE	PHOS- PHORUS TOTAL (MG/L AS P04)	PHOS- PHORUS, ORTHO, TOTAL (MG/L AS P)	PHOS- PHORUS, ORTHO, DIS- SOLVED (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)	CARBON, ORGANIC TOTAL (MG/L AS C)
JAN 20...	.12	--	<.010	210	170	44	60	0	63	--
JUN 15...	.15	.030	--	240	200	38	40	10	27	1.7

WATER-QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

POTOMAC RIVER BASIN--CONTINUED

01643125

- BALLENGER C NR LIME KILN MD

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD 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)
JAN 20...	1350	5.6	440	8.3	-3.0	2.3	--	--	--	--	--
JUN 15...	1145	20	473	7.7	34.0	18.1	17	9.4	220	30	68

DATE	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY FIELD (MG/L AS CAC03)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SI02)
JAN 20...	--	--	--	--	--	182	1.7	--	--	--	--
JUN 15...	12	9.3	8	.3	2.4	190	7.3	23	25	.10	8.4

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 TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (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)	PHOS- PHORUS TOTAL (MG/L AS P04)
JAN 20...	--	--	--	--	--	6.7	--	--	--	--	--
JUN 15...	285	262	.39	15.4	6.9	--	.20	7.1	31	.050	.15

DATE	PHOS- PHORUS, ORTHO, TOTAL (MG/L AS P)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P)	PHOS- PHATE, ORTHO, DIS- SOLVED (MG/L AS P04)	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)	CARBON, ORGANIC TOTAL (MG/L AS C)
JAN 20...	.020	.010	.03	--	--	--	--	--	--	--
JUN 15...	.030	--	--	250	240	9	30	2	28	1.2

WATER-QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

POTOMAC RIVER BASIN--CONTINUED

01643580

- MONOCACY R NR DICKERSON, MD

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD 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)
JUL 19...	1300	265	326	8.1	33.0	24.9	20	7.1	140	6

DATE	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY FIELD (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)
JUL 19...	43	6.8	9.0	12	.4	3.2	130	2.0	19	22

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, MONIA + NO2+NO3 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)
JUL 19...	.10	3.5	179	185	.24	128	2.9	.10	3.0	13

DATE	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS TOTAL (MG/L AS P04)	PHOS- PHORUS, ORTHO, TOTAL (MG/L AS P)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, SUS- PENDEED RECOV. (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	CARBON, ORGANIC TOTAL (MG/L AS C)
JUL 19...	.120	.37	.120	250	<3	50	40	9	1.7

WATER-QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

MONONGAHELA RIVER BASIN

03075750 - SF PAWN RN NR THAYERVILLE, MD

DATE	TIME	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD UNITS)	TEMPER- ATURE, AIR (DEG C)	TEMPER- ATURE (DEG C)	ALKA- LITY FIELD (MG/L AS CAC03)	CARBON DIOXIDE DIS- SOLVED (MG/L AS C02)	SULFATE DIS- SOLVED (MG/L AS S04)
AUG 13...	1345	49	7.1	24.0	14.0	12	1.8	5.9

03075755 - NF PAWN RN NR THAYERVILLE, MD

DATE	TIME	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD UNITS)	TEMPER- ATURE, AIR (DEG C)	TEMPER- ATURE (DEG C)	ALKA- LITY FIELD (MG/L AS CAC03)	CARBON DIOXIDE DIS- SOLVED (MG/L AS C02)	SULFATE DIS- SOLVED (MG/L AS S04)
AUG 13...	1345	138	7.0	24.0	14.3	28	5.4	9.9

03075780 - PAWN RN AB MOUTH NR THAYERVILLE, MD

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD UNITS)	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)
AUG 13...	1040	.30	98	7.0	14.1	25	35	8	9.4	2.7	4.1

DATE	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LITY FIELD (MG/L AS CAC03)	CARBON DIOXIDE DIS- SOLVED (MG/L AS C02)	SULFATE DIS- SOLVED (MG/L AS S04)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	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)
AUG 13...	19	.3	2.3	27	5.2	9.2	5.9	<.10	6.7	87	57

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)	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)
AUG 13...	.12	.07	1.7	.070	870	720	150	80	30	48

03075848 - PINEY RN NR THAYERVILLE, MD

DATE	TIME	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	ALKA- LITY FIELD (MG/L AS CAC03)	CARBON DIOXIDE DIS- SOLVED (MG/L AS C02)	SULFATE DIS- SOLVED (MG/L AS S04)
AUG 12...	1200	219	8.2	15.8	62	.8	28

WATER-QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

MONONGAHELA RIVER BASIN--CONTINUED

03075850 - PINEY RN AT THAYERVILLE, MD

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD 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)
AUG 11...	1050	.08	468	6.9	28.5	16.1	12	190	132	65	7.6

DATE	SODIUM, DIS- SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY FIELD AS (MG/L 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)
AUG 11...	14	13	.5	2.9	62	15	130	6.2	4.10	5.8	348

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- 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)
AUG 11...	269	.47	.08	.70	<.010	280	240	42	50	20	35

03075855 - MEADOW MOUNTAIN RN NR THAYERVILLE, MD

DATE	TIME	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD UNITS)	TEMPER- ATURE, AIR (DEG C)	TEMPER- ATURE (DEG C)	ALKA- LINITY FIELD AS (MG/L CAC03)	CARBON DIOXIDE DIS- SOLVED (MG/L AS C02)	SULFATE DIS- SOLVED (MG/L AS S04)
AUG 15...	1515	31	5.4	24.0	12.7	4.0	31	7.9

03075860 - MEADOW MOUNTAIN RN AB MOUTH NR THAYERVILLE, MD

DATE	TIME	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD UNITS)	TEMPER- ATURE, AIR (DEG C)	TEMPER- ATURE (DEG C)	ALKA- LINITY FIELD AS (MG/L CAC03)	CARBON DIOXIDE DIS- SOLVED (MG/L AS C02)	SULFATE DIS- SOLVED (MG/L AS S04)
AUG 15...	1230	39	6.0	22.0	15.5	8.0	15	12

03075865 - MEADOW MOUNTAIN RN AB TR NR THAYERVILLE, MD

DATE	TIME	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD UNITS)	TEMPER- ATURE, AIR (DEG C)	TEMPER- ATURE (DEG C)	ALKA- LINITY FIELD AS (MG/L CAC03)	CARBON DIOXIDE DIS- SOLVED (MG/L AS C02)	SULFATE DIS- SOLVED (MG/L AS S04)
AUG 15...	1600	45	6.5	24.0	16.3	15	9.2	11

WATER-QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

MONONGAHELA RIVER BASIN--CONTINUED

03075867 - MEADOW MOUNTAIN TR NR THAYERVILLE, MD

DATE	TIME	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD UNITS)	TEMPER- ATURE, AIR (DEG C)	TEMPER- ATURE (DEG C)	ALKA- LINIT FIELD (MG/L AS CAC03)	CARBON DIOXIDE DIS- SOLVED (MG/L AS C02)	SULFATE DIS- SOLVED (MG/L AS S04)
AUG 15...	1100	51	6.6	21.0	13.6	20	9.7	8.3

03075870 - MEADOW MOUNTAIN RN AT MOUTH NR THAYERVILLE, MD

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD UNITS)	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)
AUG 15...	1015	.54	58	6.2	13.0	75	29	5	9.7	1.1	1.4

DATE	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINIT FIELD (MG/L AS CAC03)	CARBON DIOXIDE DIS- SOLVED (MG/L AS C02)	SULFATE DIS- SOLVED (MG/L AS S04)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	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)
AUG 15...	9	.1	.6	24	29	9.9	1.8	<.10	5.5	50	45

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)	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)
AUG 15...	.07	.07	.10	.020	3300	2500	770	100	10	86

WATER-QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

MONONGAHELA RIVER BASIN--CONTINUED

03075930 - DEEP C LK TR NR MCHENRY, MD

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD UNITS)	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)
AUG 16...	0900	.02	258	7.0	15.7	30	74	0	25	2.9	8.0

DATE	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY FIELD (MG/L AS CAC03)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	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)
AUG 16...	17	.4	8.1	110	21	11	15	<.10	5.2	174	145

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)	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)
AUG 16...	.24	.00	.50	.190	3300	1700	1600	2200	0	2300

03075958 - GRAVELLY RN AB MOUTH NR MCHENRY, MD

DATE	TIME	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	ALKA- LINITY FIELD (MG/L AS CAC03)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)
AUG 09...	1530	81	7.7	18.4	55	2.1	9.0

WATER-QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

MONONGAHELA RIVER BASIN--CONTINUED

03075960 - GRAVELLY RN NR MCHENRY, MD

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD UNITS)	TEMPER- ATURE, AIR (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)
AUG 09...	1250	.12	69	7.4	29.0	17	30	2	9.6	1.5	1.5

DATE	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY FIELD (MG/L AS CAC03)	CARBON DIOXIDE DIS- SOLVED (MG/L AS C02)	SULFATE DIS- SOLVED (MG/L AS S04)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	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)
AUG 09...	9	.1	.9	28	2.2	9.1	1.6	<.10	5.4	59	47

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)	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)
AUG 09...	.08	.02	.30	.020	470	370	100	140	0	150

03075985 - NF RED RN NR THAYERVILLE, MD

DATE	TIME	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD UNITS)	TEMPER- ATURE, AIR (DEG C)	TEMPER- ATURE (DEG C)	ALKA- LINITY FIELD (MG/L AS CAC03)	CARBON DIOXIDE DIS- SOLVED (MG/L AS C02)	SULFATE DIS- SOLVED (MG/L AS S04)
AUG 10...	1500	94	6.4	26.0	20.3	42	32	11

03075987 - SF RED RN NR THAYERVILLE, MD

DATE	TIME	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD UNITS)	TEMPER- ATURE, AIR (DEG C)	TEMPER- ATURE (DEG C)	ALKA- LINITY FIELD (MG/L AS CAC03)	CARBON DIOXIDE DIS- SOLVED (MG/L AS C02)	SULFATE DIS- SOLVED (MG/L AS S04)
AUG 10...	1500	76	6.8	26.0	22.6	32	9.8	9.1

ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS

WATER-QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

MONONGAHELA RIVER BASIN--CONTINUED

03075990

- RED RN NR THAYERVILLE, MD

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD UNITS)	TEMPER- ATURE, AIR (DEG C)	TEMPER- ATURE (DEG C)	COLOR (PLAT- INUM- COBALT UNITS)	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)
AUG 10...	1015	.15	76	6.6	18.0	16.0	55	31	6	9.9	1.5
DATE	SODIUM, DIS- SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LITY FIELD (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)
AUG 10...	2.9	16	.2	.9	25	12	11	3.5	<.10	4.9	71
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, NO2+NO3 TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDEO 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- PENDEO RECOV. (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)
AUG 10...	50	.10	.03	.60	.030	940	630	310	70	40	30

GROUND-WATER RECORDS

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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 1.0 ft (0.30 m) above land-surface datum.

REMARKS.--Water level affected by pumping in the Dover area. Equipped with water-stage recorder Aug. 26, 1969, to current year.

PERIOD OF RECORD.--August 1969 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 67.40 ft (20.54 m) below land-surface datum, May 5, 1970; lowest recorded, 145.61 ft (44.38 m) below land-surface datum, Aug. 25, 26, 1983.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

NOON VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	122.02	121.32	120.27	117.10	116.87	122.50	---	126.90	128.04	133.26	143.83	143.22
10	121.48	121.93	119.64	117.15	118.27	123.02	---	127.56	128.36	133.77	144.49	144.25
15	120.97	121.56	119.13	117.32	118.54	123.94	---	127.94	128.69	135.05	145.04	144.69
20	120.21	121.91	119.01	117.32	120.26	124.73	---	127.90	130.81	137.63	145.13	143.37
25	119.44	121.90	118.82	116.84	121.01	124.95	---	128.20	131.46	139.65	145.60	144.11
EOM	119.99	120.58	117.44	116.86	121.75	124.61	---	128.03	132.69	141.97	144.06	142.33

WTR YEAR 1983 MAX *115.77 FEB 3, 1983 MIN *145.61 AUG 25, 26, 1983

* Maximum and minimum water levels recorded; no record Apr. 1 to May 4, 1983.

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, 9.70 ft (2.96 m) below land-surface datum, Nov. 24, 1982.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 26	9.46	DEC 27	9.01	FEB 23	8.69	APR 26	4.57	JUN 27	4.93	AUG 29	6.34
NOV 24	9.70	JAN 24	8.94	MAR 29	6.54	MAY 31	4.82	JUL 27	5.70	SEP 26	6.69
DEC 13	9.60										

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 1980 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, 13.74 ft (4.80 m) below land-surface datum, Sept. 30, 1981.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 15	15.08	JAN 24	13.96	MAR 30	11.55	JUN 13	8.73	AUG 17	11.69		
DEC 20	14.39	MAR 1	12.98	MAY 13	8.65	JUL 18	9.90	SEP 26	13.07		

GROUND-WATER LEVELS

DELAWARE--Continued

KENT COUNTY--Continued

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 1982 TO SEPTEMBER 1983

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 26	10.08	DEC 20	5.87	MAR 1	3.86	MAY 13	3.56	JUL 18	5.78	AUG 30	8.61
NOV 15	9.76	DEC 29	6.08	MAR 29	1.76	MAY 23	2.50	JUL 29	6.08	SEP 26	7.47
NOV 15	10.12	JAN 24	4.04	MAR 30	1.80	JUN 13	3.63	AUG 17	7.23	SEP 28	7.62
NOV 30	8.79	FEB 24	3.12	APR 29	1.96	JUL 11	5.40				

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 Oglethorpe.

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, 4.71 ft (1.44 m) below land-surface datum, May 24, 1983; lowest measured, 17.43 ft (5.31 m) below land-surface datum, Feb. 10, 1966. Previous highest water level measured, 4.33 ft (1.32 m) below land-surface datum, Oct. 6, 1978, doubtful reading (well plugged).

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 28	13.00	DEC 30	13.25	MAR 7	9.44	MAY 9	5.42	JUL 11	7.37	AUG 31	10.73
NOV 17	13.48	JAN 26	12.48	APR 4	5.59	MAY 24	4.71	AUG 2	8.82	SEP 29	11.73
DEC 1	13.69										

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 1982 TO SEPTEMBER 1983

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 26	9.09	DEC 17	8.71	MAR 2	6.64	MAY 6	3.19	JUL 22	4.77	AUG 30	6.75
NOV 15	8.94	DEC 29	8.37	MAR 29	3.23	MAY 23	2.29	JUL 29	5.50	SEP 28	7.70
NOV 15	9.17	JAN 24	8.33	APR 7	3.64	JUN 7	3.08	AUG 22	6.55	SEP 28	7.79
NOV 30	9.25	FEB 24	7.29	APR 29	2.06	JUL 11	4.60				

GROUND-WATER LEVELS

307

DELAWARE--Continued

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.

REMARKS.--Equipped with water-stage recorder Dec. 2, 1970, to current year.

PERIOD OF RECORD.--December 1970 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 69.70 ft (21.24 m) below land-surface datum, Jan. 1, 1971; lowest recorded, 81.49 ft (24.84 m) below land-surface datum, Oct. 18, 19, 1982.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

NOON VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	81.32	81.24	80.99	.....	81.00	80.78	80.61	80.35	80.25	80.23	80.46	80.44
10	81.34	81.46	.....	.....	80.92	80.49	80.34	.....	80.42	80.35	80.46	80.50
15	81.16	81.24	.....	.....	80.69	80.54	80.45	80.36	80.33	80.31	80.47	80.55
20	81.40	81.34	.....	81.12	80.91	80.49	80.25	80.40	80.37	80.30	80.40	80.54
25	81.20	81.39	.....	80.88	80.61	80.60	80.12	80.36	80.18	80.29	80.63	80.63
EOM	81.35	81.13	.....	80.90	80.81	80.56	80.49	80.14	80.34	80.40	80.37	80.46

WTR YEAR 1983 MAX *79.95 APR 24, 1983 MIN *81.49 OCT 18, 19, 1982

* Maximum and minimum water levels recorded; no record Dec. 8, 1982, to Jan. 19, 1983, and May 6 to May 12, 1983.

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 1982 TO SEPTEMBER 1983

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 15	13.16	JAN 24	12.38	MAR 30	10.29	JUN 15	11.62	AUG 25	12.88	SEP 26	12.78
DEC 20	12.51	MAR 1	11.34	MAY 13	10.96	JUL 18	11.92				

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 1982 TO SEPTEMBER 1983

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 23	13.42	JAN 24	12.13	MAR 30	8.74	JUN 13	9.27	JUL 18	9.25	AUG 22	10.97
DEC 27	12.66	MAR 1	11.08	MAY 13	8.58						

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, 12.22 ft (3.72 m) below land-surface datum, Dec. 2, 1981.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 26	10.84	DEC 27	7.29	MAR 29	5.21	MAY 23	6.33	JUL 18	8.78	AUG 30	8.61
NOV 15	9.26	JAN 25	6.78	MAR 30	5.43	JUN 13	7.50	JUL 29	9.55	SEP 26	9.06
NOV 23	8.43	FEB 22	6.13	MAY 13	7.43	JUL 11	8.04	AUG 25	9.15	SEP 28	9.81
NOV 30	8.04	MAR 1	5.86								

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 1982 TO SEPTEMBER 1983

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 2	5.33	JAN 26	4.29	APR 18	3.78	JUL 8	4.62				
DEC 15	4.92	MAR 10	3.78	MAY 23	2.36	AUG 16	5.86				

ANNE ARUNDEL COUNTY

390303076463201. Local number, AA-Cb 1.

LOCATION.--Lat 39°03'03", long 76°46'32", Hydrologic Unit 02060006, on Duwall 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, 79.81 ft (24.3 m) below land-surface datum, Oct. 15, 1980.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 6	77.54	MAR 29	74.36	JUN 14	74.70	SEP 8	76.46				
DEC 7	75.68	MAY 18	73.65	AUG 15	76.75						

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, 50.09 ft (15.27 m), Oct. 15, 1981.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 6	48.66	MAR 29	47.46	JUN 14	45.92	SEP 8	47.03				
DEC 7	48.21	MAY 18	46.63	AUG 15	46.64						

GROUND-WATER LEVELS

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MARYLAND--Continued

BALTIMORE CITY

391617076322001. Local number, 2SSE-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: April 1943 to Nov. 22, 1979, and after July 31, 1981, top of casing, 1.8 ft (0.55 m) above land-surface datum; Nov. 23, 1979, to July 31, 1981, lower lip of discharge pipe, 3.6 ft (1.1 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 1982 TO SEPTEMBER 1983

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 15	71.03	NOV 26	68.14	FEB 1	62.89	APR 5	77.24	JUN 3	66.96	AUG 3	77.30
NOV 3	69.99	JAN 3	55.82	MAR 1	62.56	MAY 5	69.93	JUL 6	74.95	SEP 2	76.26

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 0.6 mi (1.0 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 1982 TO SEPTEMBER 1983

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 5	19.57	DEC 6	20.15	FEB 2	19.81	APR 6	14.63	JUN 1	13.11	AUG 1	16.22
NOV 5	19.96	JAN 4	20.17	MAR 4	18.72	MAY 6	12.71	JUL 7	14.76	SEP 1	17.79

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, 61.57 ft (18.76 m) below land-surface datum, Sept. 7, 1983.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 22	56.70	JAN 6	54.46	MAR 2	54.09	MAY 2	53.25	JUL 20	58.48	SEP 7	61.57
NOV 18	55.86	FEB 3	53.80	APR 7	53.38	JUN 7	55.93	AUG 9	60.65		

GROUND-WATER LEVELS

MARYLAND--Continued

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 1982 TO SEPTEMBER 1983

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 4	71.41	DEC 6	73.81	FEB 2	74.35	APR 6	64.35	JUN 2	58.37	AUG 1	65.00
NOV 5	72.73	JAN 4	74.24	MAR 4	72.49	MAY 6	55.16	JUL 7	62.23	SEP 1	67.81

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 1982 TO SEPTEMBER 1983

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 30	79.54	MAR 3	82.64	MAY 25	81.38	AUG 23	82.35				
JAN 18	80.39	APR 8	80.60	JUL 13	78.33						

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 1982 TO SEPTEMBER 1983

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 15	68.50	FEB 1	74.61	MAR 31	77.00	JUN 15	82.06	SEP 8	79.63		
DEC 20	68.85	MAR 4	78.59	MAY 20	80.86	JUL 20	78.75				

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GARRETT COUNTY

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 5.71 ft (1.74 m) below land-surface datum, Jan. 14, 1950; lowest measured, 10.04 ft (3.06 m) below land-surface datum, Oct. 26, 1981.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 25	8.40	DEC 27	9.74	FEB 23	9.13	APR 25	7.12	JUN 27	7.53	AUG 29	8.38
NOV 24	8.48	JAN 24	9.52	MAR 28	7.72	MAY 31	7.36	JUL 27	7.96	SEP 26	9.74

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.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 13	9.67	NOV 26	10.39	FEB 2	10.03	MAY 6	9.40	JUL 7	10.26	SEP 1	9.93
NOV 5	10.32	JAN 4	10.75	MAR 4	9.94	MAY 31	8.94	AUG 1	9.93		

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 4.39 ft (1.34 m) below land-surface datum, June 25, 1972; lowest measured, 15.56 ft (4.74 m) below land-surface datum, Nov. 23, 1981.

[illegible]

GROUND-WATER LEVELS

MARYLAND--Continued

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 1982 TO SEPTEMBER 1983

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 25	35.40	JAN 24	36.22	MAR 28	28.49	MAY 31	24.08	JUL 27	31.22		
NOV 24	35.74	FEB 23	35.60	APR 25	18.94	JUN 27	28.25	SEP 26	34.34		

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 1982 TO SEPTEMBER 1983

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 26	8.77	DEC 27	6.64	FEB 23	5.33	MAY 31	5.22	JUL 27	8.06	SEP 26	8.62
NOV 24	7.57	JAN 24	5.92	MAR 30	4.44	JUN 27	6.78	AUG 26	8.87		

QUALITY OF GROUND WATER

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

LOCAL IDENT- IFIER	STATION NUMBER	GEO- LOGIC UNIT	DATE OF SAMPLE	DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET)	DEPTH OF WELL, TOTAL (FEET)	DEPTH TO BOT- TOM OF SAMPLE INTER- VAL (FT)	DEPTH TO TOP OF SAMPLE INTER- VAL (FT)	ELEV. OF LAND SURFACE DATUM (FT. ABOVE NGVD)	PUMP OR FLOW RATE PRIOR TO SAM- PLING (MIN)
KFNT COUNTY, DELAWARE									
JR31 1	390733075444201	112CLMB	83-06-09	--	27	27	22	60.00	35
KB23 2	390339075421101	112CLMB	83-09-01	--	30	30	25	55.00	20
KB42 9	390128075435401	112CLMB	83-05-27	--	25	25	20	55.00	40
KC14 2	390417075361901	112CLMB	83-08-11	--	29	29	24	60.00	65
KC41 1 40179	390136075390801	112CLMB	83-06-08	--	32	32	27	56.00	40
LB24 1 49799	385810075414701	112CLMB	83-08-10	--	18	18	13	60.00	30
LC42 1 52077	385647075383401	112CLMB	82-12-15	7.06	55	55	50	58.00	45
		112CLMB	83-02-28	4.04	55	55	50	58.00	70
		112CLMB	83-04-12	2.77	55	55	50	58.00	60
		112CLMB	83-07-08	5.64	55	55	50	58.00	45
		112CLMB	83-09-27	--	55	--	--	58.00	--
LC42 2 52078	385647075383402	112CLMB	82-12-15	--	25	25	20	58.00	40
		112CLMB	83-02-28	4.24	25	25	20	58.00	70
		112CLMB	83-04-12	2.96	25	25	20	58.00	25
		112CLMB	83-07-08	5.81	25	25	20	58.00	45
		112CLMB	83-09-27	7.15	25	25	20	58.00	80
MB22 2 31884	385347075431301	112CLMB	83-06-29	--	40	40	35	62.00	>60
MC31 3 37575	385209075394301	112CLMB	83-09-11	--	61	61	41	45.00	30
MC51 1	385041075395601	112CLMB	83-05-12	8.45	19	19	15	55.00	70
MD31 4	385212075343401	112CLMB	83-04-29	--	E55	E55	E50	62.00	30
SUSSEX COUNTY, DELAWARE									
MD55 2 50656	385022075303401	112CLMB	83-09-09	--	50	50	40	56.00	30
NB34 4 48101	384718075410201	112CLMB	83-09-09	--	51	51	41	43.00	25
NC2520	384823075353601	112CLMB	83-05-11	--	E70	E70	E60	50.00	>60
ND25 3 52080	384819075304601	112CLMB	82-12-07	--	117	117	112	50.00	60
		112CLMB	82-12-28	5.17	117	117	112	50.00	55
		112CLMB	83-03-30	2.90	117	117	112	50.00	45
		112CLMB	83-07-21	5.79	117	117	112	50.00	65
ND25 4 52081	384819075304602	112CLMB	82-12-07	--	90	90	85	50.00	60
		112CLMB	82-12-28	5.22	90	90	85	50.00	25
		112CLMB	83-03-30	2.91	90	90	85	50.00	15
		112CLMB	83-07-21	5.79	90	90	85	50.00	60
ND25 5 52082	384819075304501	112CLMB	82-12-07	5.07	54	54	49	50.00	40
		112CLMB	83-01-04	5.07	54	54	49	50.00	60
		112CLMB	83-04-05	3.01	54	54	49	50.00	20
		112CLMB	83-07-21	5.74	54	54	49	50.00	65
ND25 6 52083	384819075304502	112CLMB	82-12-07	5.07	43	43	38	50.00	40
		112CLMB	83-01-07	5.11	43	43	38	50.00	45
		112CLMB	83-04-05	3.08	43	43	38	50.00	25
		112CLMB	83-07-21	5.81	43	43	38	50.00	60
NE54 3	384551075264801	112CLMB	83-03-14	--	82	82	72	50.00	110
OB14 2 36075	384435075414901	112CLMB	83-07-14	--	80	80	40	51.00	>60
OB35 3 50625	384244075402501	112CLMB	83-08-15	7.44	72	72	59	48.00	55
OC1410	384428075355801	112CLMB	83-04-21	--	E110	E110	E100	42.00	>60
OD14 2 47832	384456075314901	112CLMB	83-07-13	--	80	80	35	45.00	>60
OD23 7 335856	384320075321701	112CLMB	83-07-14	--	99	99	69	41.00	>60
OD35 5	384222075305001	112CLMB	83-06-14	--	44	44	E39	36.00	55
OF11 1 52829	384427075243101	112CLMB	83-08-04	--	61	61	51	49.00	50
OF41 1 50320	384145075243201	112CLMB	83-02-09	--	117	117	97	48.00	30
PC13 3	383908075373001	112CLMB	83-03-10	--	104	104	80	33.00	>60
PC3211	383740075381401	112CLMB	83-03-24	--	104	98	78	22.00	>60
PC3212	383729075381301	112CLMB	83-03-24	--	88	83	63	12.00	>60
PD33 3 52084	383748075323501	112CLMB	82-12-08	8.56	47	47	42	35.00	50
		112CLMB	83-02-18	6.46	47	47	42	35.00	95
		112CLMB	83-05-04	4.58	47	47	42	35.00	50
		112CLMB	83-07-07	7.20	47	47	42	35.00	55
PD33 4 52085	383748075323502	112CLMB	82-12-08	8.78	94	94	89	35.00	60
		112CLMB	83-02-22	6.68	94	94	89	35.00	70
		112CLMB	83-05-04	4.74	94	94	89	35.00	60
		112CLMB	83-07-07	7.30	94	94	89	35.00	60
PE25 2	383859075254401	112CLMB	83-08-05	--	35	35	30	48.00	20
QE31 2 37607	383210075290401	112CLMB	83-07-15	--	83	83	23	35.00	>60
RC22 5 50550	382822075385601	112CLMB	83-09-16	7.40	45	45	40	44.00	80
RD35 5 48153	382749075311001	112CLMB	83-07-29	--	99	99	29	55.00	>60

Geologic unit (aquifer): 112CLMB - Columbia Group

E: Estimated

QUALITY OF GROUND WATER

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WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

LOCAL IDENT- IFIER	DATE OF SAMPLE	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)
KENT COUNTY, DELAWARE--CONTINUED					
J831 1	83-06-09	89	5.6	15.0	2.2
K823 2	83-09-01	290	4.8	18.6	2.5
K842 9	83-05-27	240	5.5	13.6	8.7
KC14 2	83-08-11	67	6.0	14.5	1.4
KC41 1 40179	83-06-08	88	6.0	15.0	.3
LB24 1 49799	83-08-10	68	5.4	19.0	2.5
LC42 1 92077	82-12-15	128	6.8	11.5	.0
	83-02-28	126	6.7	13.6	.0
	83-04-12	126	6.7	14.0	.0
	83-07-08	123	6.7	16.5	.0
	83-09-27	119	6.7	16.5	.0
LC42 2 92078	82-12-15	200	6.6	11.7	.0
	83-02-28	202	6.5	14.0	.0
	83-04-12	209	6.5	--	.0
	83-07-08	202	6.4	--	.0
	83-09-27	195	6.5	--	--
MB22 2 31884	83-06-29	180	5.2	15.0	8.5
MC31 3 37575	83-09-11	180	6.3	14.1	.0
MC51 1	83-05-12	208	5.5	15.5	4.8
MD31 4	83-04-29	97	5.9	15.5	6.8
SUSSEX COUNTY, DELAWARE--CONTINUED					
MD55 2 50656	83-09-09	40	5.8	15.1	3.4
NB34 4 48101	83-09-09	118	5.4	19.0	3.1
NC2520	83-05-11	97	5.6	14.6	8.0
ND25 3 92080	82-12-07	90	6.6	13.0	.6
	82-12-28	81	6.5	13.5	.0
	83-03-30	77	6.5	14.0	.0
	83-07-21	74	6.3	18.5	.2
ND25 4 92081	82-12-07	45	6.4	13.2	.1
	82-12-28	43	6.4	14.5	.0
	83-03-30	47	6.5	13.5	.0
	83-07-21	47	6.2	19.0	--
ND25 5 52082	82-12-07	51	6.0	13.2	1.0
	83-01-04	55	6.0	12.8	3.0
	83-04-05	54	5.9	14.0	3.4
	83-07-21	54	5.8	20.0	4.8
ND25 6 52083	82-12-07	47	6.0	13.2	1.0
	83-01-07	50	5.9	13.8	1.6
	83-04-05	47	5.9	14.5	2.1
	83-07-21	47	5.9	--	2.7
NE54 3	83-03-14	39	5.6	13.5	2.6
OB14 2 36075	83-07-14	71	5.6	14.8	7.5
OB35 3 50625	83-08-15	64	5.6	17.0	5.5
OC1410	83-04-21	59	5.8	15.3	8.5
OD14 2 47832	83-07-13	58	5.3	13.8	8.5
OD23 7 335856	83-07-14	180	5.0	13.9	9.0
OD35 5	83-06-14	100	5.5	18.0	5.6
OF11 1 52829	83-08-04	65	6.1	20.0	.3
OF41 1 50320	83-02-09	59	6.0	15.3	3.1
PC13 3	83-03-10	94	5.5	14.5	7.9
PC3211	83-03-24	82	4.9	14.5	4.8
PC3212	83-03-24	97	5.7	14.5	2.6
PD33 3 52084	82-12-08	233	6.3	13.5	4.2
	83-02-18	206	5.5	14.5	3.6
	83-05-04	257	5.4	15.0	3.6
	83-07-07	277	5.2	18.5	4.2
PD33 4 52085	82-12-08	87	6.0	14.0	.7
	83-02-22	89	5.5	15.0	3.7
	83-05-04	64	5.5	16.0	3.5
	83-07-07	71	5.4	--	4.3
PE25 2	83-08-05	212	5.2	15.9	4.9
QE31 2 37607	83-07-15	134	5.2	16.1	8.7
RC22 5 50550	83-09-16	166	4.9	15.0	4.1
RD35 5 48153	83-07-29	53	5.5	15.5	7.2

QUALITY OF GROUND WATER

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

LOCAL IDENT- IFIER	DATE OF SAMPLE	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)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY FIELD (MG/L AS CACO3)
KFNT COUNTY, DELAWARE--CONTINUED										
JR31 1	83-06-09	30	9	9.5	1.6	5.1	26	.4	1.2	21
KR23 2	83-09-01	64	61	15	6.4	20	37	1.1	7.7	2.9
KR42 9	83-05-27	78	71	16	9.0	9.6	20	.5	6.7	7.0
KC14 2	83-08-11	10	0	2.0	1.3	4.4	46	.6	.7	21
KC41 1 40179	83-06-08	10	0	2.6	.7	10	68	1.5	.7	28
LR24 1 49799	83-02-10	7	0	1.6	.7	8.7	70	1.5	.8	8.0
LC42 1 52077	83-02-28	22	0	6.3	1.5	7.2	40	.7	1.0	57
LC42 2 52078	83-09-27	21	0	6.2	1.4	6.5	39	.6	.8	58
	83-02-28	23	0	6.4	1.7	12	52	1.1	1.1	77
	83-09-27	25	0	7.0	1.7	12	50	1.1	.9	74
MR22 2 31884	83-06-29	51	46	8.4	7.3	8.2	24	.5	3.9	5.0
MC31 3 37575	83-09-11	39	0	12	2.1	6.2	25	.5	1.2	43
MC51 1	83-05-12	62	52	6.7	11	5.8	16	.3	2.7	10
MD31 4	83-04-29	15	0	4.4	.9	12	63	1.4	.9	18
SUSSEX COUNTY, DELAWARE--CONTINUED										
MD55 2 50656	83-09-09	6	0	2.0	.2	5.4	65	1.0	.4	13
NR34 4 48101	83-09-09	25	19	6.1	2.2	7.3	35	.7	4.4	6.0
NC2520	83-05-11	20	14	5.7	1.4	7.8	43	.8	1.9	6.0
ND25 3 52080	82-12-28	8	0	2.3	.6	15	78	2.4	1.1	34
ND25 4 52081	82-12-28	2	0	.5	.1	5.7	84	1.9	.4	15
ND25 5 52082	83-01-04	8	0	2.3	.4	6.8	63	1.1	.9	12
ND25 6 52083	83-01-07	7	0	2.2	.3	6.8	65	1.2	.8	13
NF54 3	83-03-14	4	0	1.2	.4	4.4	62	.9	1.2	10
OR14 2 36075	83-07-14	10	5	2.4	1.0	6.4	52	.9	2.0	4.8
OR35 3 50625	83-08-15	10	4	2.5	.8	8.9	61	1.3	2.2	5.7
OC1410	83-04-21	8	0	2.2	.6	6.2	57	1.0	1.7	8.0
ON14 2 47832	83-07-13	10	6	1.8	1.2	5.3	48	.8	2.3	4.0
ON23 7 335856	83-07-14	47	45	7.9	6.5	8.8	27	.6	3.9	1.9
OD35 5	83-06-14	20	14	5.3	1.6	8.5	44	.9	2.6	6.2
OF11 1 52829	83-02-04	2	0	.3	.4	5.9	78	1.7	1.0	25
OF41 1 50320	83-02-09	10	0	2.8	.6	6.7	57	1.0	1.3	15
PC13 3	83-03-10	22	19	5.3	2.2	5.4	32	.5	1.9	3.0
PC3211	83-03-24	16	13	2.4	2.4	4.9	37	.5	2.0	3.0
PC3212	83-03-24	11	0	1.9	1.5	9.5	60	1.3	2.2	23
PD33 3 52084	83-02-18	39	33	10	3.2	16	45	1.2	4.0	6.0
PD33 4 52085	83-02-22	14	10	3.9	1.0	9.1	55	1.1	2.2	4.0
PF25 2	83-08-05	33	27	6.4	4.1	24	59	1.9	2.7	6.3
QF31 2 37607	83-07-15	38	35	9.4	3.5	7.9	30	.6	2.3	3.0
RC22 5 50550	83-09-16	50	48	10	5.9	7.8	24	.5	4.0	2.4
RD35 5 48153	83-07-29	8	2	1.0	1.4	5.0	51	.8	1.8	6.0

QUALITY OF GROUND WATER

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WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

LOCAL IDENT- I- FIER	DATE OF SAMPLE	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)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)
KENT COUNTY, DELAWARE--CONTINUED										
JB31 1	83-06-09	102	19	4.0	<.10	20	66	74	.09	.61
KB23 2	83-09-01	89	17	23	.10	8.6	226	102	.31	21
KR42 9	83-05-27	43	8.7	17	<.10	14	178	86	.24	16
KC14 2	83-08-11	41	8.1	3.0	<.10	19	59	51	.08	<.10
KC41 1 40179	83-06-08	54	10	9.2	<.10	33	57	90	.08	<.10
LB24 1 49799	83-08-10	62	.5	9.7	<.10	28	48	55	.07	2.1
LC42 1 52077	83-02-28	22	29	5.9	.20	35	94	134	.13	<.10
	83-09-27	22	56	8.0	<.10	37	98	167	.13	<.10
LC42 2 52078	83-02-28	47	5.2	15	.20	35	99	150	.13	<.10
	83-09-27	45	6.3	16	<.10	38	107	157	.15	<.10
MR22 2 31884	83-06-29	61	5.0	20	<.10	16	133	72	.18	12
MC31 3 37575	83-09-11	42	15	5.8	.10	23	90	97	.12	.19
MC51 1	83-05-12	61	.7	19	<.10	9.8	168	64	.23	14
MD31 4	83-04-29	44	2.3	8.2	<.10	29	88	69	.12	3.4
SUSSEX COUNTY, DELAWARE--CONTINUED										
MD55 2 50656	83-09-09	40	.6	4.2	<.10	30	63	51	.09	--
NB34 4 48101	83-09-09	46	.8	17	<.10	18	102	60	.14	5.8
NC2520	83-05-11	29	.4	10	<.10	21	91	52	.12	5.7
ND25 3 52080	82-12-28	22	<5.0	4.4	.10	33	87	--	.12	.13
ND25 4 52081	82-12-28	12	<5.0	5.3	<.10	35	63	--	.09	<.10
ND25 5 52082	83-01-04	23	2.0	4.5	<.10	22	56	46	.08	2.1
ND25 6 52083	83-01-07	32	<1.0	4.1	<.10	24	60	--	.08	1.2
NE54 3	83-03-14	49	.9	5.0	<.10	14	56	33	.08	<.10
OB14 2 36075	83-07-14	23	.8	8.1	<.10	19	99	43	.13	5.0
OB35 3 50625	83-08-15	28	.3	4.9	<.10	19	98	42	.13	5.5
OC1410	83-04-21	25	3.0	6.3	<.10	<.0	56	--	.08	2.9
OD14 2 47832	83-07-13	39	1.1	6.3	<.10	12	57	33	.08	2.9
OD23 7 335856	83-07-14	37	.4	13	<.10	11	148	54	.20	15
OD35 5	83-06-14	38	6.0	9.3	<.10	12	77	50	.10	6.8
OF11 1 52829	83-08-04	38	2.7	7.4	<.10	8.7	31	54	.04	<.10
OF41 1 50320	83-02-09	29	<5.0	5.8	<.10	28	60	--	.08	1.8
PC13 3	83-03-10	18	3.6	8.1	<.10	14	84	43	.11	6.4
PC3211	83-03-24	73	8.9	5.9	<.10	7.5	68	37	.09	3.5
PC3212	83-03-24	89	10	7.7	<.10	8.9	70	59	.10	.59
PD33 3 52084	83-02-18	37	<5.0	15	<.10	17	135	--	.18	16
PD33 4 52085	83-02-22	25	<5.0	7.2	<.10	21	74	--	.10	5.7
PE25 2	83-08-05	77	32	19	<.10	11	135	104	.18	6.6
QF31 2 37607	83-07-15	37	.5	11	<.10	14	147	51	.20	12
RC22 5 50550	83-09-16	59	1.2	16	<.10	14	129	61	.18	14
RD35 5 48153	83-07-29	37	.4	7.3	.10	14	84	35	.11	1.9

QUALITY OF GROUND WATER

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

LOCAL IDENT- IFIER	DATE OF SAMPLE	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS NH4)	NITRO- GEN, ORGANIC DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC DIS- (MG/L AS N)	NITRO- GEN DIS- SOLVED (MG/L AS N)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	BARIUM, DIS- SOLVED (UG/L AS BA)	BERYL- LIUM, DIS- SOLVED (UG/L AS BF)
KENT COUNTY,DELAWARE--CONTINUED										
JR31 1	83-06-09	<.010	--	--	.20	.81	.080	<10	89	1
KR23 2	83-09-01	.720	.93	.18	.90	22	<.010	400	610	1
KR42 9	83-05-27	<.010	--	--	.30	16	<.010	200	500	1
KC14 2	83-08-11	<.010	--	--	<.10	--	<.010	<10	61	<1
KC41 1 40179	83-06-08	.010	.01	--	<.10	--	.040	10	86	<1
LR24 1 49799	83-08-10	.020	.03	.18	.20	2.3	<.010	10	85	<1
LC42 1 52077	83-02-28	.210	.27	.19	.40	--	1.10	<10	43	<1
	83-09-27	.170	.22	1.1	1.3	--	.900	--	44	<1
LC42 2 52078	83-02-28	.320	.41	.00	.30	--	.850	<10	62	<1
	83-09-27	.320	.41	.58	.90	--	.420	300	67	<1
MR22 2 31884	83-06-29	<.010	--	--	<.10	--	<.010	--	170	1
MC31 3 37575	83-09-11	.130	.17	.87	1.0	1.2	.060	<10	48	1
MC51 1	83-05-12	.010	.01	--	<.10	--	<.010	40	440	<1
MD31 4	83-04-29	.020	.03	--	<.10	--	<.010	<10	46	<1
SUSSEX COUNTY,DELAWARE--CONTINUED										
MD55 2 50656	83-09-09	<.010	--	--	--	--	<.010	10	34	1
NB34 4 48101	83-09-09	<.010	--	--	2.7	8.5	<.010	100	660	2
NC2520	83-05-11	<.010	--	--	.20	5.9	<.010	10	120	<1
ND25 3 52080	82-12-28	.080	.10	1.4	1.5	1.6	.010	--	34	<1
ND25 4 52081	82-12-28	.030	.04	--	<.10	--	.030	--	30	<1
ND25 5 52082	83-01-04	.020	.03	.28	.30	2.4	<.010	60	50	<1
ND25 6 52083	83-01-07	.050	.06	.15	.20	1.4	.010	10	62	<1
NE54 3	83-03-14	<.010	.01	--	<.10	--	<.010	10	33	<1
OB14 2 36075	83-07-14	<.010	--	--	<.10	--	.020	10	73	1
OR35 3 50625	83-08-15	.050	.06	.15	.20	5.7	.040	<10	140	<1
OC1410	83-04-21	<.010	--	--	<.10	--	<.010	10	72	<1
OD14 2 47832	83-07-13	.010	.01	--	<.10	--	.020	10	230	<1
OD23 7 335856	83-07-14	.060	.08	--	<.10	--	.020	90	680	2
OD35 5	83-06-14	.010	.01	.09	.10	6.9	<.010	20	210	<1
OF11 1 52829	83-08-04	.090	.12	.11	.20	--	.040	<10	86	<1
OF41 1 50320	83-02-09	<.010	--	--	.50	2.3	<.010	<10	62	<1
PC13 3	83-03-10	.020	.03	--	<.10	--	.020	<10	99	1
PC3211	83-03-24	.250	.32	.05	.30	3.8	.060	200	150	<1
PC3212	83-03-24	1.30	1.7	.10	1.4	2.0	.070	20	65	<1
PD33 3 52084	83-02-18	.020	.03	--	<.10	--	.010	20	270	<1
PD33 4 52085	83-02-22	<.010	.01	--	.10	5.8	<.010	40	110	1
PE25 2	83-08-05	<.010	--	--	.40	7.0	.020	<10	140	<1
QE31 2 37607	83-07-15	<.010	--	--	<.10	--	.030	<10	330	1
RC22 5 50550	83-09-16	.010	.01	.29	.30	14	.010	<10	610	1
RO35 5 48153	83-07-29	<.010	--	--	.10	2.0	.050	10	210	<1

QUALITY OF GROUND WATER

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WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

LOCAL IDENT- IFIER	DATE OF SAMPLE	CADMIUM DIS- SOLVED (UG/L AS CD)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)	LITHIUM DIS- SOLVED (UG/L AS LI)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO)
KENT COUNTY, DELAWARE--CONTINUED									
JR31 1	83-06-09	1	4	30	760	10	6	16	10
KB23 2	83-09-01	<1	8	40	27	<10	<4	570	<10
KB42 9	83-05-27	2	3	60	7	10	4	48	10
KC14 2	83-08-11	1	4	<10	180	<10	<4	11	10
KC41 1 40179	83-06-08	<1	21	<10	6400	10	<4	68	<10
LB24 1 49799	83-08-10	<1	4	10	190	10	<4	8	10
LC42 1 52077	83-02-28	3	<3	<10	13000	<10	<4	130	<10
	83-09-27	2	55	<10	16000	<10	<4	110	<10
LC42 2 52078	83-02-28	3	<3	<10	27000	<10	<4	130	<10
	83-09-27	1	96	<10	30000	<10	<4	120	<10
MB22 2 31884	83-06-29	<1	<3	20	39	<10	<4	24	<10
MC31 3 37575	83-09-11	<1	20	<10	5600	<10	<4	160	<10
MC51 1	83-05-12	1	8	10	930	<10	<4	320	<10
MD31 4	83-04-29	<1	<3	<10	12	<10	<4	<1	<10
SUSSEX COUNTY, DELAWARE--CONTINUED									
MD55 2 50656	83-09-09	<1	<3	<10	37	<10	<4	1	20
NB34 4 48101	83-09-09	<1	7	10	19	<10	<4	170	<10
NC2520	83-05-11	<1	<3	30	8	<10	8	4	<10
ND25 3 52080	82-12-28	<1	13	<10	1400	10	<4	92	<10
ND25 4 52081	82-12-28	<1	11	<10	3700	<10	<4	24	<10
ND25 5 52082	83-01-04	<1	<3	<10	18	<10	<4	10	10
ND25 6 52083	83-01-07	<1	<3	<10	<3	<10	<4	6	<10
NE54 3	83-03-14	<1	<3	<10	300	<10	<4	7	<10
OB14 2 36075	83-07-14	<1	<3	<10	<3	10	<4	5	<10
OB35 3 50625	83-08-15	<1	<3	<10	13	<10	<4	1	<10
OC1410	83-04-21	<1	<3	<10	12	<10	<4	2	<10
OD14 2 47832	83-07-13	<1	<3	<10	19	<10	<4	12	<10
OD23 7 335856	83-07-14	<1	<3	20	<3	<10	<4	120	<10
OD35 5	83-06-14	<1	<3	10	37	<10	<4	10	<10
OF11 1 52829	83-08-04	<1	<3	<10	12000	<10	<4	57	<10
OF41 1 50320	83-02-09	<1	<3	<10	67	<10	<4	7	<10
PC13 3	83-03-10	1	3	10	11	10	4	9	10
PC3211	83-03-24	<1	4	30	43	<10	<4	56	<10
PC3212	83-03-24	<1	4	<10	1600	<10	<4	110	<10
PD33 3 52084	83-02-18	2	17	<10	17	<10	<4	200	<10
PD33 4 52085	83-02-22	<1	7	<10	13	<10	<4	140	<10
PE25 2	83-08-05	<1	<3	90	120	20	<4	24	<10
QE31 2 37607	83-07-15	<1	<3	<10	9	<10	4	22	<10
RC22 5 50550	83-09-16	1	4	<10	14	<10	10	35	<10
RD35 5 48153	83-07-29	<1	<3	<10	<3	<10	<4	13	<10

QUALITY OF GROUND WATER

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

LOCAL IDENT- IFIER	DATE OF SAMPLE	STRON- TIUM, DIS- SOLVED (UG/L AS SR)	VANA- DIUM, DIS- SOLVED (UG/L AS V)	ZINC, DIS- SOLVED (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)
KENT COUNTY, DELAWARE--CONTINUED					
J831 1	83-06-09	71	6.0	180	1.4
K823 2	83-09-01	68	<6.0	40	3.0
K842 9	83-05-27	270	6.0	45	--
KC14 2	83-08-11	57	<6.0	--	3.1
KC41 1 40179	83-06-08	43	<6.0	150	1.8
L824 1 49799	83-08-10	35	<6.0	210	1.1
LC42 1 52077	83-02-28	74	<6.0	13	1.6
	83-09-27	69	<6.0	5	2.0
LC42 2 52078	83-02-28	85	<6.0	3	3.1
	83-09-27	91	<6.0	4	3.2
MB22 2 31884	83-06-29	200	<6.0	46	3.0
MC31 3 37575	83-09-11	110	<6.0	9	1.5
MC51 1	83-05-12	79	<6.0	--	3.0
MO31 4	83-04-29	78	<6.0	30	2.1
SUSSEX COUNTY, DELAWARE--CONTINUED					
ND55 2 50656	83-09-09	55	11	49	--
N834 4 48101	83-09-09	65	<6.0	59	1.2
NC2520	83-05-11	92	<6.0	22	7.2
ND25 3 52080	82-12-28	39	<6.0	51	3.3
ND25 4 52081	82-12-28	11	<6.0	7	1.4
ND25 5 52082	83-01-04	44	<6.0	11	1.6
ND25 6 52083	83-01-07	42	<6.0	14	1.1
NE54 3	83-03-14	30	<6.0	20	1.6
OB14 2 36075	83-07-14	66	<6.0	9	1.3
OB35 3 50625	83-08-15	62	<6.0	23	1.1
OC1410	83-04-21	48	<6.0	81	2.5
OD14 2 47832	83-07-13	48	<6.0	17	1.6
OD23 7 335856	83-07-14	160	<6.0	14	1.8
OD35 5	83-06-14	110	<6.0	86	3.0
OF11 1 52829	83-08-04	16	<6.0	220	2.3
OF41 1 50320	83-02-09	36	<6.0	320	.4
PC13 3	83-03-10	110	6.0	15	1.8
PC3211	83-03-24	35	<6.0	34	2.5
PC3212	83-03-24	25	<6.0	14	2.5
PD33 3 52084	83-02-18	260	<6.0	62	.4
PD33 4 52085	83-02-22	64	<6.0	13	1.1
PE25 2	83-08-05	110	<6.0	190	3.3
QE31 2 37607	83-07-15	230	<6.0	28	2.0
RC22 5 50550	83-09-16	360	<6.0	42	1.6
RD35 5 48153	83-07-29	42	<6.0	8	.8

QUALITY OF GROUND WATER

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WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

LOCAL IDENT- I- FIER	STATION NUMBER	GEO- LOGIC UNIT	DATE OF SAMPLE	DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET)	SAM- PLING DEPTH (FEET)	DEPTH OF WELL, TOTAL (FEET)	DEPTH TO BOT- TOM OF SAMPLE INTER- VAL (FT)	DEPTH TO TOP OF SAMPLE INTER- VAL (FT)	ELEV. OF LAND SURFACE DATUM (FT. ABOVE NGVD)	
BALTIMORE CITY, MARYLAND										
3S2E05 810087	391600076353301	217PTXN	82-11-30	--	142	147	147	137	15.00	
3S5E39 680002	391553076321401	217PTXN	82-10-04	60.00	--	391	303	281	15.00	
3S5E40	391554076321601	217PTXN	82-10-04	65.00	--	396	396	296	15.00	
3S5E42 730004	391552076321801	217PTXN	82-10-04	65.00	--	396	314	284	15.00	
3S5E44 730037	391559076321301	217PTXN	82-10-04	42.93	350	350	350	260	10.00	
3S5E46 810088	391556076315501	217PPSC	82-11-23	1.52	45.0	50	50	40	10.00	
5S2E24 810089	391347076354701	217PTXN	82-12-02	63.89	265	270	270	260	75.00	
5S2E25 810090	391347076354702	217PPSC	82-12-02	48.44	110	115	115	105	75.00	
LOCAL IDENT- I- FIER	DATE OF SAMPLE	PUMP OR FLOW PERIOD PRIOR TO SAM- PLING (MIN)	FLOW RATE, INSTAN- TANEOUS (GPM)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	DENSITY (GM/ML AT 20 C)	OXYGEN, DIS- SOLVED (MG/L)	HARD- NESS (MG/L AS CAC03)	HARD- NESS, NONCAR- BONATE (MG/L CAC03)
3S2E05 810087	82-11-30	90	25	1060	5.2	14.5	1.000	2.8	440	355
3S5E39 680002	82-10-04	--	100	52	5.1	14.5	--	6.8	--	--
3S5E40	82-10-04	--	680	1750	4.9	14.5	--	6.8	--	--
3S5E42 730004	82-10-04	--	300	5300	5.2	14.0	--	1.5	--	--
3S5E44 730037	82-10-04	--	--	86	4.6	14.0	.998	9.4	14	12
3S5E46 810088	82-11-23	210	10	--	5.4	16.0	.997	.6	15	5
5S2E24 810089	82-12-02	--	7.0	46	6.0	15.0	.997	5.3	9	0
5S2E25 810090	82-12-02	--	--	205	5.5	16.0	.997	8.9	53	43
LOCAL IDENT- I- FIER	DATE OF SAMPLE	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)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINEITY FIELD (MG/L AS CAC03)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)
3S2E05 810087	82-11-30	13	86	55	550	73	12	5.9	87	1060
3S5E39 680002	82-10-04	--	--	--	--	--	--	--	4.1	63
3S5E40	82-10-04	--	--	--	--	--	--	--	.2	4.9
3S5E42 730004	82-10-04	--	--	--	--	--	--	--	20	244
3S5E44 730037	82-10-04	11	3.4	1.4	6.5	48	.8	.8	2.0	97
3S5E46 810088	82-11-23	211	3.7	1.5	6.9	46	.8	1.5	10	77
5S2E24 810089	82-12-02	22	2.6	.6	3.4	43	.5	.9	13	25
5S2E25 810090	82-12-02	45	10	6.7	13	34	.8	2.1	9.8	60
LOCAL IDENT- I- FIER	DATE OF SAMPLE	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, 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)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)
3S2E05 810087	82-11-30	85	1200	<.10	.100	11	2080	2050	2.8	<.010
3S5E39 680002	82-10-04	--	--	--	--	--	--	--	--	--
3S5E40	82-10-04	--	--	--	--	--	--	--	--	--
3S5E42 730004	82-10-04	--	--	--	--	--	--	--	--	--
3S5E44 730037	82-10-04	2.0	12	<.10	<.010	8.4	70	36	.10	<.010
3S5E46 810088	82-11-23	9.0	9.4	<.10	.010	12	63	53	.09	<.010
5S2E24 810089	82-12-02	2.0	2.7	<.10	.010	7.2	30	28	.04	<.010
5S2E25 810090	82-12-02	17	24	<.10	.010	9.5	141	89	.19	<.010

Geologic unit (aquifer): 217PPSC - Patapsco Formation
217PTXN - Patuxent Formation

QUALITY OF GROUND WATER

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

LOCAL IDENT- IFIER	DATE OF SAMPLE	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	ANTI- MONY, DIS- SOLVED (UG/L AS SB)	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)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, DIS- SOLVED (UG/L AS CO)
BALTIMORE CITY, MARYLAND--CONTINUED										
3S2E05 810087	82-11-30	100	1	1	400	<10	10	1	4	68
3S5E39 680002	82-10-04	--	--	--	--	--	--	--	--	--
3S5E40	82-10-04	--	--	--	--	--	--	--	--	--
3S5E42 730004	82-10-04	--	--	--	--	--	--	--	--	--
3S5E44 730037	82-10-04	20	<1	2	26	1	50	1	<1	15
3S5E46 810088	82-11-23	600	2	1	27	<1	30	<1	<1	8
5S2E24 810089	82-12-02	20	2	<1	15	<1	<10	2	1	4
5S2E25 810090	82-12-02	<10	<1	1	99	<1	20	1	3	8

LOCAL IDENT- IFIER	DATE OF SAMPLE	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDE RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)	LITHIUM DIS- SOLVED (UG/L AS LI)	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)
3S2E05 810087	82-11-30	12	700	120	580	2	10	230	0	230
3S5E39 680002	82-10-04	--	--	--	--	--	--	--	--	--
3S5E40	82-10-04	--	--	--	--	--	--	--	--	--
3S5E42 730004	82-10-04	--	--	--	--	--	--	--	--	--
3S5E44 730037	82-10-04	8	80	80	3	3	5	50	10	39
3S5E46 810088	82-11-23	<1	1800	200	1600	2	10	90	0	98
5S2E24 810089	82-12-02	7	900	430	550	1	<4	60	7	53
5S2E25 810090	82-12-02	8	1000	700	300	12	<4	130	10	120

LOCAL IDENT- IFIER	DATE OF SAMPLE	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)	CARBON, ORGANIC TOTAL (MG/L AS C)
3S2E05 810087	82-11-30	1.8	<1	270	3	<1	420	580	.4
3S5E39 680002	82-10-04	--	--	--	--	--	--	--	--
3S5E40	82-10-04	--	--	--	--	--	--	--	--
3S5E42 730004	82-10-04	--	--	--	--	--	--	--	--
3S5E44 730037	82-10-04	.2	--	33	<1	<1	13	42	.8
3S5E46 810088	82-11-23	.7	<1	10	<1	<1	22	270	.8
5S2E24 810089	82-12-02	.7	<1	4	<1	<1	13	280	.2
5S2E25 810090	82-12-02	1.9	<1	6	3	<1	84	210	1.1

QUALITY OF GROUND WATER

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WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

LOCAL IDENT- IFIER	DATE OF SAMPLE	BENZENE TOTAL (UG/L)	BROM- OFORM TOTAL (UG/L)	CARBON- TETRA- CHLO- RIDE TOTAL (UG/L)	CHLORO- BENZENE TOTAL (UG/L)	CHLORO- ETHANE TOTAL (UG/L)	CHLORO- ETHYL- ENE TOTAL (UG/L)	CHLORO- DI- PROMO- METHANE TOTAL (UG/L)	CHLORO- OFORM TOTAL (UG/L)	DI- CHLORO- BROMO- METHANE TOTAL (UG/L)
BALTIMORE CITY, MARYLAND--CONTINUED										
3S2E05 810087	82-11-30	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
3S5E39 680002	82-10-04	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
3S5E40	82-10-04	61	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
3S5E42 730004	82-10-04	5.0	5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
3S5E44 730037	82-10-04	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
3S5E46 810088	82-11-23	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
5S2E24 810089	82-12-02	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
5S2E25 810090	82-12-02	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	8.0	<1.0

LOCAL IDENT- IFIER	DATE OF SAMPLE	DI- CHLORO- DI- FLUORO- METHANE TOTAL (UG/L)	ETHYL- BENZENE TOTAL (UG/L)	METHYL- BROMIDE TOTAL (UG/L)	METHYL- ENE CHLO- RIDE TOTAL (UG/L)	TETHA- CHLORO- ETHYL- ENE TOTAL (UG/L)	TOLUENE TOTAL (UG/L)	TRI- CHLORO- ETHYL- ENE TOTAL (UG/L)	TRI- CHLORO- FLUORO- METHANE TOTAL (UG/L)	VINYL CHLO- RIDE TOTAL (UG/L)
3S2E05 810087	82-11-30	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
3S5E39 680002	82-10-04	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
3S5E40	82-10-04	<1.0	2.0	<1.0	<1.0	<1.0	1.0	<1.0	<1.0	<1.0
3S5E42 730004	82-10-04	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
3S5E44 730037	82-10-04	<1.0	<1.0	<1.0	<1.0	2.0	<1.0	<1.0	<1.0	<1.0
3S5E46 810088	82-11-23	<1.0	<1.0	<1.0	4.0	<1.0	4.0	<1.0	<1.0	<1.0
5S2E24 810089	82-12-02	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
5S2E25 810090	82-12-02	<1.0	<1.0	<1.0	<1.0	<1.0	12	<1.0	<1.0	<1.0

LOCAL IDENT- IFIER	DATE OF SAMPLE	1,1,1- TRI- CHLORO- ETHANE TOTAL (UG/L)	1,1-DI- CHLORO- ETHANE TOTAL (UG/L)	1,1-DI- CHLORO- ETHYL- ENE TOTAL (UG/L)	1,1,2,2- TETRA- CHLORO- ETHANE TOTAL (UG/L)	1,1,2- TRI- CHLORO- ETHANE TOTAL (UG/L)	1,2-DI- CHLORO- ETHANE TOTAL (UG/L)	1,2-DI- CHLORO- PROPANE TOTAL (UG/L)	1,3-DI- CHLORO- PROPANE TOTAL (UG/L)	2- CHLORO- ETHYL- VINYL- ETHER TOTAL (UG/L)
3S2E05 810087	82-11-30	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
3S5E39 680002	82-10-04	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
3S5E40	82-10-04	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
3S5E42 730004	82-10-04	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
3S5E44 730037	82-10-04	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
3S5E46 810088	82-11-23	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
5S2E24 810089	82-12-02	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
5S2E25 810090	82-12-02	<1.0	<1.0	<1.0	8.0	<1.0	<1.0	<1.0	<1.0	<1.0

QUALITY OF GROUND WATER

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

LOCAL IDENT- I- FIER	STATION	NUMBER	GEO- LOGIC UNIT	DATE OF SAMPLE	DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET)	SAM- PLING DEPTH (FEET)	DEPTH OF WELL, TOTAL (FEET)	DEPTH TO BOT- TOM OF SAMPLE INTER- VAL (FT)	DEPTH TO TOP OF SAMPLE INTER- VAL (FT)	ELEV. OF LAND SURFACE DATUM (FT. ABOVE NGVD)
BALTIMORE COUNTY, MARYLAND										
GG 4	391417076215201	217PTXN	83-04-15	--	646	682	646	626	17.00	
LOCAL IDENT- I- FIER	DATE OF SAMPLE	PUMP OR FLOW PERIOD PRIOR TO SAM- PLING (MIN)	FLOW RATE, INSTAN- TANEOUS (GPM)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	DENSITY (GM/ML AT 20 C)	OXYGEN, DIS- SOLVED (MG/L)	HARD- NESS (MG/L AS CAC03)	HARD- NESS, NONCAR- BONATE (MG/L CAC03)
GG 4	83-04-15	24	104	107	6.5	17.5	.998	.0	10	0
LOCAL IDENT- I- FIER	DATE OF SAMPLE	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)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY FIELD (MG/L AS CAC03)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)
GG 4	83-04-15	--	1.4	1.5	11	67	1.6	1.8	41	25
LOCAL IDENT- I- FIER	DATE OF SAMPLE	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	IODIDE, DIS- SOLVED (MG/L AS I)	SILICA, DIS- SOLVED (MG/L AS SI02)	SOLIDS, RESIDUE AT 140 DEG. C SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)
GG 4	83-04-15	9.9	2.7	.20	<.010	8.7	56	72	.08	.430
LOCAL IDENT- I- FIER	DATE OF SAMPLE	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	ANTI- MONY, DIS- SOLVED (UG/L AS SB)	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)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, DIS- SOLVED (UG/L AS CO)
GG 4	83-04-15	100	<1	<1	<100	10	50	2	6	3
LOCAL IDENT- I- FIER	DATE OF SAMPLE	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDE RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)	LITHIUM DIS- SOLVED (UG/L AS LI)	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)
GG 4	83-04-15	3	9900	100	9800	22	10	220	0	230
LOCAL IDENT- I- FIER	DATE OF SAMPLE	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)	CARBON, ORGANIC TOTAL (MG/L AS C)	
GG 4	83-04-15	.2	<1	3	<1	<1	40	10	.9	

Geologic unit (aquifer): 217PTXN - Patuxent Formation

QUALITY OF GROUND WATER

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WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

		LOCAL IDENT- 1- FIER	STATION NUMBER	GEO- LOGIC UNIT	DATE OF SAMPLE	DEPTH OF WELL, TOTAL (FEET)	DEPTH TO BOT- TOM OF SAMPLE INTER- VAL (FT)	DEPTH TO TOP OF SAMPLE INTER- VAL (FT)	ELEV. OF LAND SURFACE DATUM (FT. ABOVE NGVD)	PUMP OR FLOW PERIOD PRIOR TO SAM- PLING (MIN)	FLOW RATE, INSTAN- TANEOUS (GPM)
CAROLINE COUNTY, MARYLAND											
BC	16	710075	390003075525901	112CLMB	82-12-08	66	66	54	62.00	10	24
BD	56		390042075495601	112PCPC	83-01-03	39	39	39	50.00	15	10
CB	15		390045075535201	112CLMB	83-01-03	35	35	30	30.00	10	7.5
CB	16		385623075555201	112CLMB	83-01-05	3	3.0	.5	45.00	5	4.4
CB	17		385536075553701	122FDBG	82-12-08	99	99	79	60.00	10	5.9
CC	55		385622075524501	112CLMB	83-01-04	70	61	59	50.00	5	7.0
CC	56		385700075544001	112CLMB	83-01-05	45	45	40	50.00	10	7.0
CC	57		385659075543501	112CLMB	83-01-05	38	38	32	55.00	5	2.3
CC	59		385500075514701	112CLMB	82-11-03	50	50	30	50.00	30	7.3
CC	90		385519075501201	112CLMB	83-01-18	22	32	18	30.00	--	--
CC	91		385632075511401	112CLMB	82-12-07	38	38	32	55.00	10	5.1
CC	92		385714075502901	122CSLD	82-12-07	168	168	97	54.00	10	5.7
CC	93		385705075513401	112CLMB	82-12-07	42	42	35	55.00	10	4.4
CC	94		385606075522401	112CLMB	82-12-06	27	27	23	50.00	5	3.9
CC	95	730902	385502075515301	112CLMB	82-12-06	33	33	27	55.00	5	5.7
CD	53		385859075493501	112CLMB	82-11-03	43	43	35	50.00	20	7.5
CD	54	730695	385557075481201	112CLMB	82-11-03	45	45	35	50.00	30	3.8
CD	58		385548075470401	112CLMB	82-11-30	58	58	48	60.00	10	3.4
CD	59		385810075464001	112CLMB	82-11-30	33	33	28	55.00	10	8.9
CD	60		385847075451101	112CLMB	82-11-30	34	34	30	50.00	10	10
CD	61	731144	385529075492201	112CLMB	82-11-29	24	24	20	30.00	10	6.2
DB	9		385213075553801	122CSLD	82-12-07	--	--	--	30.00	10	4.8
DC	139		385450075541001	112CLMB	82-12-06	55	55	48	55.00	10	3.8
DC	141		385204075541201	112CLMB	82-12-07	59	59	46	35.00	5	7.5
DC	143		385246075513901	112CLMB	82-11-29	46	46	40	50.00	10	2.2
DD	54	731290	385419075475001	112CLMB	82-11-30	42	42	36	50.00	10	7.3
DD	55		385124075452301	112CLMB	83-01-04	19	19	15	55.00	5	3.9
DD	56		385430075473001	112CLMB	82-11-30	44	44	38	50.00	10	6.7
DD	57		385339075493801	112CLMB	82-11-29	19	19	15	55.00	10	6.9
EB	11		384709075560301	122FDBG	83-01-17	148	148	138	5.00	--	5.9
EC	15		384712075542501	112CLMB	82-11-02	38	38	18	35.00	30	57
EC	29		384533075502701	112CLMB	82-12-15	50	50	42	55.00	10	14
ED	31		384724075475901	112CLMB	83-01-04	30	30	25	60.00	5	6.8
ED	32		384621075453001	112CLMB	83-01-04	28	28	18	45.00	10	4.7
ED	33		384927075473601	112CLMB	83-01-04	30	30	25	50.00	5	6.6
ED	34		384520075475601	112CLMB	82-12-15	34	34	29	50.00	10	12
EE	15		384634075443801	112CLMB	82-11-02	40	40	30	45.00	30	13
FB	28		384444075561701	112CLMB	82-12-13	50	50	44	45.00	10	2.6
FB	29		384451075564001	112CLMB	82-12-13	29	29	21	45.00	10	9.2
FC	30		384450075534001	112CLMB	82-11-02	28	28	20	50.00	30	2.1
FC	31		384445075511201	112CLMB	82-11-02	41	32	27	55.00	25	5.2
FC	33		384254075534801	112CLMB	82-12-14	62	62	52	40.00	5	7.7
FC	36		384425075543401	112CLMB	82-12-14	46	46	38	45.00	10	7.7
FC	37		384203075514101	112CLMB	82-12-14	55	55	50	50.00	--	--
FD	32		384101075453301	112CLMB	82-11-02	64	64	59	38.00	30	5.2
FD	34		384239075480801	112CLMB	82-12-14	29	29	23	35.00	5	6.2
FD	36		384157075454301	122FRDC	82-11-30	140	140	138	30.00	90	1.3
				122FRDC	83-07-06	140	140	138	30.00	50	130
FD	37		384157075454302	112CLMB	82-11-22	40	40	38	30.00	60	6.7
FE	11		384312075425401	112CLMB	82-11-02	56	56	51	45.00	20	4.9

Geologic unit (aquifer):

- 112CLMB - Columbia Formation
- 112PCPC - Pleistocene-Pliocene Series
- 122CSLD - Cheswold Aquifer
- 122FDBG - Federalsburg Aquifer
- 122FRDC - Frederica Aquifer

QUALITY OF GROUND WATER

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

LOCAL IDENT- IFIER	DATE OF SAMPLE	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	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)	PERCENT SODIUM
CAROLINE COUNTY, MARYLAND--CONTINUED										
BC 16 710075	82-12-08	122	6.0	12.0	22	7	3.7	3.1	12	51
BD 56	83-01-03	245	7.1	11.0	100	0	38	1.5	3.7	7
CB 15	83-01-03	96	5.1	11.0	24	22	3.2	3.8	3.9	24
CB 16	83-01-05	300	7.6	7.0	130	0	38	8.4	6.1	9
CB 17	82-12-08	330	7.3	11.0	130	0	38	9.4	4.9	7
CC 55	83-01-04	97	5.7	10.0	20	14	5.4	1.5	7.7	43
CC 56	83-01-05	55	5.5	10.0	7	2	1.7	.7	6.0	60
CC 57	83-01-05	87	5.6	16.0	13	6	3.4	1.2	7.6	53
CC 59	82-11-03	83	5.2	14.0	16	11	2.1	2.5	5.9	40
CC 90	83-01-18	140	6.0	11.5	40	30	8.1	4.9	6.5	24
CC 91	82-12-07	91	5.5	9.5	18	13	4.0	1.9	4.9	34
CC 92	82-12-07	330	8.2	9.0	130	0	33	12	7.2	10
CC 93	82-12-07	200	5.1	9.0	52	50	6.5	8.7	4.8	16
CC 94	82-12-06	148	5.3	17.0	38	31	7.6	4.5	7.3	27
CC 95 730902	82-12-06	32	5.3	17.0	4	0	.6	.7	2.7	49
CD 53	82-11-03	84	5.2	14.0	14	5	3.0	1.5	7.6	51
CD 54 730695	82-11-03	34	5.2	14.0	3	0	.5	.4	3.5	65
CD 58	82-11-30	86	5.6	15.0	19	15	3.9	2.2	5.4	35
CD 59	82-11-30	220	5.5	15.0	77	70	16	9.0	2.2	6
CD 60	82-11-30	300	7.8	17.0	120	0	35	7.5	8.0	13
CD 61 731144	82-11-29	111	5.4	15.0	20	14	5.1	1.7	7.5	43
DB 9	82-12-07	440	8.1	14.0	66	0	15	6.9	68	67
DC 139	82-12-06	245	4.8	18.0	80	79	9.0	14	5.3	12
DC 141	82-12-07	93	5.5	11.0	21	16	4.9	2.2	6.0	36
DC 143	82-11-29	230	5.0	16.0	63	61	17	4.9	11	26
DD 54 731290	82-11-30	60	5.1	11.5	7	3	1.4	.8	4.6	54
DD 55	83-01-04	50	5.9	9.0	5	0	1.4	.3	5.8	67
DD 56	82-11-30	140	5.1	13.0	33	30	7.3	3.5	6.3	27
DD 57	82-11-29	205	4.7	16.0	65	64	17	5.5	3.1	9
EB 11	83-01-17	260	8.0	14.5	140	0	32	14	6.7	9
EC 15	82-11-02	225	4.4	15.5	68	68	9.2	11	4.0	11
EC 29	82-12-15	68	5.4	11.0	6	2	1.6	.5	8.6	71
ED 31	83-01-04	390	4.7	7.0	140	138	23	20	12	14
ED 32	83-01-04	215	4.6	9.0	69	68	9.4	11	3.8	10
ED 33	83-01-04	59	5.8	10.0	10	0	2.8	.6	6.8	58
ED 34	82-12-15	152	5.0	12.0	38	35	7.6	4.7	5.9	21
EE 15	82-11-02	240	4.6	16.5	64	63	5.7	12	7.1	18
FB 28	82-12-13	152	5.0	10.0	48	41	7.7	6.9	4.0	15
FB 29	82-12-13	148	5.0	12.0	38	34	6.8	5.0	4.0	17
FC 30	82-11-02	185	5.3	15.5	59	56	8.4	9.2	4.7	14
FC 31	82-11-02	215	5.9	15.0	31	21	4.6	4.8	4.0	11
FC 33	82-12-14	150	5.7	12.0	37	32	8.5	3.9	6.1	23
FC 36	82-12-14	156	5.0	11.0	57	55	4.8	11	3.3	10
FC 37	82-12-14	122	5.9	9.0	27	21	7.3	2.2	7.5	35
FD 32	82-11-02	70	5.0	14.5	11	9	2.2	1.4	4.7	42
FD 34	82-12-14	220	5.0	8.0	62	60	14	6.5	7.2	19
FD 36	82-11-30	308	7.9	20.5	110	0	26	12	16	22
	83-07-06	349	7.8	21.0	--	--	--	--	--	--
FD 37	82-11-22	124	5.6	14.4	29	20	6.2	3.2	9.1	39
FE 11	82-11-02	74	6.1	14.5	10	0	2.5	.9	5.5	52

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

LOCAL IDENT- IFIER	DATE OF SAMPLE	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE IT-FLD AS HCO3)	ALKA- LINITY, CARBON- ATE IT-FLD (MG/L - CACO3)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFIDE TOTAL (MG/L AS S)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	SILICA, DIS- SOLVED (MG/L AS SiO2)
CAROLINE COUNTY, MARYLAND--CONTINUED										
BC 16 710075	82-12-08	1.1	2.5	18	15	27	<.5	2.0	8.8	14
BD 56	83-01-03	.2	1.5	140	110	17	<.5	<5.0	2.9	25
CB 15	83-01-03	.4	2.3	2.0	2.0	26	<.5	<5.0	6.2	12
CB 16	83-01-05	.2	2.9	170	140	6.3	<.5	8.0	2.9	51
CB 17	82-12-08	.2	3.1	190	160	14	<.5	4.0	1.2	56
CC 55	83-01-04	.8	1.8	7.0	6.0	22	<.5	<5.0	7.1	22
CC 56	83-01-05	1.0	1.1	6.0	5.0	34	<.5	1.0	6.0	23
CC 57	83-01-05	.9	1.1	9.0	7.0	37	<.5	7.0	8.0	19
CC 59	82-11-03	.7	3.0	6.0	5.0	60	--	3.0	7.3	13
CC 90	83-01-18	.5	3.1	13	11	21	--	2.0	11	14
CC 91	82-12-07	.5	2.0	6.0	5.0	29	<.5	<1.0	6.1	15
CC 92	82-12-07	.3	3.0	190	160	2.0	<.5	2.0	1.4	61
CC 93	82-12-07	.3	3.0	2.0	1.0	28	<.5	<1.0	9.6	14
CC 94	82-12-06	.5	4.8	8.0	6.0	68	<.5	38	5.6	10
CC 95 730902	82-12-06	.6	1.3	6.0	5.0	49	<.5	<1.0	5.3	11
CD 53	82-11-03	.9	1.7	10	8.0	100	--	<1.0	8.3	14
CD 54 730695	82-11-03	.9	1.1	7.0	5.0	70	--	<1.0	5.4	10
CD 58	82-11-30	.6	2.6	5.0	4.0	18	--	<1.0	5.4	15
CD 59	82-11-30	.1	1.9	9.0	7.0	51	--	17	17	13
CD 60	82-11-30	.3	2.6	170	140	4.0	--	6.0	2.2	41
CD 61 731144	82-11-29	.8	1.5	7.0	5.0	49	--	15	13	8.6
DB 9	82-12-07	3.8	5.8	260	210	3.1	<.5	5.0	1.1	60
DC 139	82-12-06	.3	3.0	2.0	2.0	49	<.5	6.0	21	11
DC 141	82-12-07	.6	1.9	6.0	5.0	32	<.5	<1.0	5.0	17
DC 143	82-11-29	.6	4.4	2.0	2.0	30	--	6.0	16	16
DD 54 731290	82-11-30	.8	1.5	4.0	3.0	48	--	8.0	7.0	14
DD 55	83-01-04	1.2	1.1	18	15	38	<.5	<5.0	4.6	22
DD 56	82-11-30	.5	3.8	3.0	2.0	38	--	2.0	9.0	12
DD 57	82-11-29	.2	2.8	--	1.0	39	--	17	13	--
EB 11	83-01-17	.3	2.4	171	140	2.7	--	7.0	2.6	58
EC 15	82-11-02	.2	3.3	.0	.0	.0	--	3.0	23	8.9
EC 29	82-12-15	1.6	1.2	5.0	4.0	32	<.5	<1.0	6.8	22
ED 31	83-01-04	.5	12	--	--	83	.5	5.0	21	16
ED 32	83-01-04	.2	3.7	--	--	50	<.5	<5.0	16	13
ED 33	83-01-04	1.0	.9	14	11	39	<.5	<5.0	6.0	23
ED 34	82-12-15	.4	7.5	4.0	3.0	58	<.5	6.0	12	13
EE 15	82-11-02	.4	5.9	--	--	49	--	<1.0	20	11
FB 28	82-12-13	.3	2.9	8.0	7.0	116	<.5	7.0	16	14
FB 29	82-12-13	.3	3.2	4.0	3.0	68	<.5	<1.0	8.1	12
FC 30	82-11-02	.3	3.2	4.0	3.0	36	--	14	18	16
FC 31	82-11-02	.3	31	13	10	26	--	16	15	8.4
FC 33	82-12-14	.4	5.7	6.0	5.0	21	<.5	2.0	8.9	15
FC 36	82-12-14	.2	5.8	3.0	2.0	53	<.5	3.0	16	8.3
FC 37	82-12-14	.6	2.4	8.0	7.0	18	<.5	<1.0	9.3	20
FD 32	82-11-02	.6	2.2	3.0	3.0	48	--	3.0	1.2	12
FD 34	82-12-14	.4	3.2	2.0	2.0	34	<.5	<1.0	18	15
FD 36	82-11-30	.7	5.9	--	--	3.9	<.5	4.0	2.0	50
	83-07-06	--	--	--	--	--	--	--	--	--
FD 37	82-11-22	.8	1.7	--	--	44	<.5	3.0	11	11
FE 11	82-11-02	.8	.6	25	21	32	--	8.0	3.7	29

QUALITY OF GROUND WATER

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

LOCAL IDENT- IFIER	DATE OF SAMPLE	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS NH4)
CAROLINE COUNTY, MARYLAND--CONTINUED							
BC 16 710075	82-12-08	55	.08	<.010	6.3	<.010	.01
BD 56	83-01-03	--	--	<.010	.17	.130	.17
CB 15	83-01-03	--	--	<.010	7.2	<.010	.01
CB 16	83-01-05	201	.27	<.010	<.10	.100	.13
CB 17	82-12-08	210	.29	<.010	<.10	.070	.09
CC 55	83-01-04	--	--	<.010	6.7	.030	.04
CC 56	83-01-05	42	.06	<.010	2.4	<.010	.01
CC 57	83-01-05	53	.07	<.010	2.7	.020	.03
CC 59	82-11-03	40	.05	<.010	4.4	<.010	.01
CC 90	83-01-18	100	.13	.020	9.7	.060	.08
CC 91	82-12-07	--	--	<.010	4.9	.050	.06
CC 92	82-12-07	214	.29	<.010	.14	.210	.27
CC 93	82-12-07	--	--	<.010	13	<.010	.01
CC 94	82-12-06	82	.11	<.010	1.3	<.010	.01
CC 95 730902	82-12-06	--	--	<.010	.17	<.010	.01
CD 53	82-11-03	--	--	<.010	4.5	<.010	.01
CD 54 730695	82-11-03	--	--	<.010	<.10	<.010	.01
CD 58	82-11-30	--	--	<.010	6.2	.020	.03
CD 59	82-11-30	81	.11	<.010	9.7	<.010	.01
CD 60	82-11-30	186	.25	<.010	<.10	.120	.15
CD 61 731144	82-11-29	57	.08	<.010	.18	.030	.04
DB 9	82-12-07	290	.39	<.010	.24	.300	.39
DC 139	82-12-06	70	.10	<.010	17	<.010	.01
DC 141	82-12-07	--	--	<.010	7.2	.010	.01
DC 143	82-11-29	76	.10	<.010	17	.020	.03
DD 54 731290	82-11-30	40	.05	<.010	.16	<.010	.01
DD 55	83-01-04	--	--	<.010	.31	.020	.03
DD 56	82-11-30	46	.06	<.010	10	.010	.01
DD 57	82-11-29	--	--	<.010	11	.040	.05
EB 11	83-01-17	207	.28	<.010	<.10	.050	.06
EC 15	82-11-02	62	.09	--	--	--	--
EC 29	82-12-15	--	--	<.010	3.9	<.010	.01
ED 31	83-01-04	114	.15	.010	48	2.80	3.6
ED 32	83-01-04	--	--	<.010	18	.020	.03
ED 33	83-01-04	--	--	<.010	1.1	.010	.01
ED 34	82-12-15	59	.08	<.010	8.6	<.010	.01
EE 15	82-11-02	--	--	<.010	19	<.010	.01
FB 28	82-12-13	62	.09	<.010	7.5	<.010	.01
FB 29	82-12-13	--	--	<.010	11	<.010	.01
FC 30	82-11-02	75	.10	<.010	8.2	.010	.01
FC 31	82-11-02	90	.12	<.010	9.0	.050	.06
FC 33	82-12-14	53	.07	<.010	12	<.010	.01
FC 36	82-12-14	54	.07	<.010	13	<.010	.01
FC 37	82-12-14	--	--	<.010	8.1	<.010	.01
FD 32	82-11-02	28	.04	<.010	3.9	<.010	.01
FD 34	82-12-14	--	--	<.010	16	.020	.03
FD 36	82-11-30	212	.29	--	--	--	--
	83-07-06	--	--	<.010	<.10	.230	.30
FD 37	82-11-22	91	.12	.140	8.9	.310	.40
FE 11	82-11-02	67	.09	<.010	<.10	.040	.05

QUALITY OF GROUND WATER

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WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

LOCAL IDENT- IFIER	DATE OF SAMPLE	NITRO- GEN, ORGANIC DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC DIS- (MG/L AS N)	NITRO- GEN DIS- SOLVED (MG/L AS N)	IRON, DIS- SOLVED (UG/L AS FE)
CAROLINE COUNTY, MARYLAND--CONTINUED					
BC 16 710075	82-12-08	--	.20	6.5	7
BD 56	83-01-03	.27	.40	.57	5700
CB 15	83-01-03	--	.20	7.4	5
CB 16	83-01-05	.10	.20	--	460
CB 17	82-12-08	--	<.10	--	37
CC 55	83-01-04	.27	.30	7.0	83
CC 56	83-01-05	--	.10	2.5	<3
CC 57	83-01-05	.58	.60	3.3	1400
CC 59	82-11-03	--	1.3	5.7	<3
CC 90	83-01-18	.04	.10	9.8	490
CC 91	82-12-07	--	<.10	--	12
CC 92	82-12-07	.00	.20	.34	620
CC 93	82-12-07	--	<.10	--	23
CC 94	82-12-06	--	.20	1.5	5
CC 95 730902	82-12-06	--	<.10	--	31
CD 53	82-11-03	--	1.4	5.9	9
CD 54 730695	82-11-03	--	.60	--	18
CD 58	82-11-30	--	<.10	--	18
CD 59	82-11-30	--	.20	9.9	27
CD 60	82-11-30	--	<.10	--	280
CD 61 731144	82-11-29	--	<.10	--	950
DB 9	82-12-07	.00	.30	.54	<3
DC 139	82-12-06	--	<.10	--	100
DC 141	82-12-07	--	<.10	--	61
DC 143	82-11-29	--	<.10	--	95
DD 54 731290	82-11-30	--	<.10	--	1000
DD 55	83-01-04	.28	.30	.61	2200
DD 56	82-11-30	--	<.10	--	140
DD 57	82-11-29	--	<.10	--	--
EB 11	83-01-17	--	<.10	--	<3
EC 15	82-11-02	--	--	--	84
EC 29	82-12-15	--	.90	4.8	<3
ED 31	83-01-04	.00	--	50	26
ED 32	83-01-04	--	<.10	--	40
ED 33	83-01-04	.19	.20	1.3	54
ED 34	82-12-15	--	.70	9.3	150
EE 15	82-11-02	--	.10	19	200
FB 28	82-12-13	--	.40	7.9	23
FB 29	82-12-13	--	.20	11	4
FC 30	82-11-02	.29	.30	8.5	17
FC 31	82-11-02	.35	.40	9.4	15
FC 33	82-12-14	--	.20	12	3
FC 36	82-12-14	--	.10	13	<3
FC 37	82-12-14	--	.20	8.3	20
FD 32	82-11-02	--	.20	4.1	3
FD 34	82-12-14	--	<.10	--	6
FD 36	82-11-30	--	--	--	45
	83-07-06	.27	.50	--	--
FD 37	82-11-22	.39	.70	9.6	300
FE 11	82-11-02	.26	.30	--	4300

QUALITY OF GROUND WATER

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

LOCAL IDENT- I- FIER	STATION	NUMBER	DATE OF SAMPLE	AME- TRYNE TOTAL	ATRA- TONE TOTAL (UG/L)	ATRA- ZINE, TOTAL (UG/L)	CYAN- AZINE TOTAL (UG/L)	CYPRA- ZINE TOTAL (UG/L)	PROME- TONE TOTAL (UG/L)	PROME- TRYNE TOTAL (UG/L)
CAROLINE COUNTY, MARYLAND--CONTINUED										
BC 16	710075	390003075525901	83-09-23	<.10	<.10	<.10	<.10	<.10	<.1	<.1
CC 96		385649075531701	83-09-23	<.10	<.10	.40	<.10	<.10	<.1	<.1
CD 62	731832	385609075490001	83-09-22	<.10	<.10	<.10	<.10	<.10	<.1	<.1
DD 58	810011	385429075484401	83-09-22	<.10	<.10	<.10	<.10	<.10	<.1	<.1
DD 59		384853075471401	83-09-22	<.10	<.10	<.10	<.10	<.10	<.1	<.1
EC 31	731950	384844075525501	83-09-22	<.10	.10	<.10	<.10	<.10	<.1	<.1

LOCAL IDENT- I- FIER	STATION	NUMBER	DATE OF SAMPLE	PRO- PAZINE TOTAL (UG/L)	SIMA- ZINE TOTAL (UG/L)	SIME- TONE TOTAL (UG/L)	SIME- TRYNE TOTAL (UG/L)
BC 16	710075		83-09-23	<.10	<.10	<.10	<.1
CC 96			83-09-23	<.10	<.10	<.10	<.1
CD 62	731832		83-09-22	<.10	<.10	<.10	<.1
DD 58	810011		83-09-22	<.10	<.10	<.10	<.1
DD 59			83-09-22	<.10	<.10	<.10	<.1
EC 31	731950		83-09-22	<.10	<.10	<.10	<.1

LOCAL IDENT- I- FIER	STATION	NUMBER	DATE OF SAMPLE	DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET)	ELEV. OF LAND SURFACE DATUM (FT. ABOVE NGVD)	PUMP OR FLOW PERIOD PRIOR TO SAM- PLING (MIN)	FLOW RATE, INSTAN- TANEOUS (GPM)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)
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CARROLL COUNTY, MARYLAND										
BF 187		393941076533301	83-08-11	--	870.00	--	--	329	5.5	12.8
ED 119		392446077032101	83-08-17	--	800.00	10	18	96	5.2	12.9
EE 145		392224076591701	83-08-11	33.06	600.00	20	--	283	5.5	13.6

LOCAL IDENT- I- FIER	DATE OF SAMPLE	AME- TRYNE TOTAL	ATRA- TONE TOTAL (UG/L)	ATRA- ZINE, TOTAL (UG/L)	CYAN- AZINE TOTAL (UG/L)	CYPRA- ZINE TOTAL (UG/L)	PROME- TONE TOTAL (UG/L)	PROME- TRYNE TOTAL (UG/L)
BF 187	83-08-11	<.10	<.10	<.10	<.10	<.10	<.1	<.1
ED 119	83-08-17	<.10	<.10	<.10	<.10	<.10	<.1	<.1
EE 145	83-08-11	<.10	<.10	<.10	<.10	<.10	<.1	<.1

LOCAL IDENT- I- FIER	DATE OF SAMPLE	PRO- PAZINE TOTAL (UG/L)	SIMA- ZINE TOTAL (UG/L)	SIME- TONE TOTAL (UG/L)	SIME- TRYNE TOTAL (UG/L)
BF 187	83-08-11	<.10	<.10	<.10	<.1
ED 119	83-08-17	<.10	<.10	<.10	<.1
EE 145	83-08-11	<.10	<.10	<.10	<.1

QUALITY OF GROUND WATER

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WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

LOCAL IDENT- IFIER	STATION NUMBER	GEO- LOGIC UNIT	DATE OF SAMPLE	DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET)	DEPTH OF WELL, TOTAL (FEET)	DEPTH TO BOT- TOM OF SAMPLE INTER- VAL (FT)	DEPTH TO TOP OF SAMPLE INTER- VAL (FT)	ELEV. OF LAND SURFACE DATUM (FT. ABOVE NGVD)	PUMP OR FLOW PERIOD PRIOR TO SAM- PLING (MIN)
CECIL COUNTY, MARYLAND									
AC 38	394158076032004	300QZQZ	83-08-23	--	164	164	--	325.00	20
AC 91 690214	394022076044501	300PCSC	83-08-25	15.00	82	82	64	370.00	15
AD 39	394220075560501	300PLCG	83-04-21	--	114	114	--	430.00	E20
AD 51 014188	394201075555501	300MGAB	83-04-21	21.00	113	113	91	374.00	20
AD 52 733603	394203075591001	300PCSC	83-08-23	40.00	365	365	132	445.00	20
AE 49 015651	394126075515901	300GEMR	83-08-23	52.00	125	125	62	365.00	20
AF 27 730736	394120075474701	300GEMR	83-08-30	46.00	280	280	88	255.00	20
AF 30 732967	394307075474801	300PLCG	83-09-22	35.00	155	155	80	325.00	20
AF 31	394209075475801	300MGAB	83-09-22	--	52	52	--	215.00	20
BB 32 732225	393833076051001	300PRDP	83-08-23	64.00	228	228	103	465.00	15
BC 50 810308	393621076043001	300FHBP	83-09-15	50.00	310	310	107	420.00	20
BD 72 051499	393828075561201	300FHBP	83-08-25	4.00	230	230	39	250.00	15
BD 88 720164	393955075564401	300LFPF	83-04-27	27.00	64	64	13	342.00	20
BE 18 001026	393618075515901	217PTMC	83-04-28	18.00	63	63	53	30.00	25
BE 73 810464	393637075535001	217PTMC	82-11-30	84.00	152	152	147	163.00	240
BE 74 810464	393637075535002	217PTMC	82-12-07	84.00	115	115	110	163.00	420
BE 94 650273	393532075510601	217PTMC	83-09-13	16.00	70	70	65	18.00	E20
BE 98 732691	393547075544702	217PTMC	83-09-14	136.00	244	244	232	195.00	E20
BE 103 670312	393847075533501	300LFPF	83-09-20	12.00	162	162	55	245.00	20
BF 59 045556	393605075472303	217PTMC	83-08-26	15.00	157	157	126	75.00	20
BF 77 057157	393621075490301	300UFGB	83-03-31	--	201	201	135	40.00	20
BF 81 810537	393615075475901	217PTMC	83-01-26	38.00	55	55	50	90.00	135
BF 82 810470	393537075492001	217PTMC	83-02-01	57.00	125	125	120	70.00	200
BF 87 731660	393910075475501	217PTMC	83-03-31	26.00	68	68	38	140.00	1560
CD 44 045547	393244075563301	217PTMC	82-12-17	160.00	225	225	215	165.00	60
CD 48 731024	393438075550201	217PTMC	83-03-31	153.00	174	174	164	195.00	E20
CD 51 810440	393432075593601	217PTMC	83-02-22	51.00	125	125	120	70.00	335
CD 53 810463	393216075564201	217PTMC	82-12-21	128.00	350	350	345	135.00	315
CD 57 733203	393412075591701	217PTMC	83-09-14	18.00	98	98	93	45.00	20
CE 54 810461	393433075544901	217PTMC	82-12-07	136.00	250	250	245	180.00	240
CE 55 810465	3932410755500201	217PTMC	83-01-24	51.00	375	375	370	55.00	115
CE 56 810466	393026075523101	217PTMC	83-02-09	30.00	121	121	116	38.00	225
CE 57 733908	393330075531201	217PTMC	83-08-30	92.00	265	265	240	118.00	E20
CE 60 733929	393011075532101	217PTMC	83-08-18	52.00	112	112	107	65.00	20
CE 63 700265	393147075503301	217PTMC	83-08-24	49.00	108	108	100	50.00	15
CF 3	393138075482501	217PTMC	83-08-24	4.00	100	100	--	8.00	15
CF 62 731372	393346075483601	217PTMC	83-08-18	66.00	355	355	345	70.00	E20
CF 74 733192	393140075490501	217PTMC	83-09-01	35.00	267	267	247	36.00	20
DD 70	392542075592601	211MGTY	83-09-01	--	34	34	--	25.00	15
DD 71 680238	392820075585501	217PTMC	83-09-29	71.00	323	323	301	60.00	20
DD 81 810469	392536075593201	217PTMC	83-02-18	15.50	115	115	110	24.00	290
DD 82 733139	392543075574902	211MGTY	83-09-01	61.00	125	125	105	61.00	20
DD 84 730774	392726075581001	217PTMC	83-09-01	10.00	120	120	90	15.00	15
DD 87 730943	392519075565601	211MGTY	83-08-16	62.00	151	151	146	65.00	E20
DE 47 732925	392745075523602	217PTMC	83-04-26	13.00	162	162	157	16.00	E20
DE 50	392936075503201	211MCVL	83-08-18	--	33	33	--	84.00	20
DF 11	392643075462301	211MNMT	83-04-26	--	88	88	82	45.00	E20
DF 31	392942075465201	211MNMT	83-09-21	--	--	--	--	75.00	15
EC 21 650328	392342076021401	211MGTY	83-09-01	62.00	87	87	--	62.00	15
ED 23 730319	392455075550101	211MNMT	83-08-16	24.00	77	77	72	85.00	E20
EE 11 011551	392413075520301	211MGTY	83-09-20	65.00	274	274	264	80.00	E20
EE 35 733504	392327075544702	211MGTY	83-08-16	81.00	278	278	253	85.00	E20
EE 36 732332	392149075531101	211MNMT	83-09-01	14.00	96	96	88	18.00	15
EF 1 001853	392443075470701	125AQUI	83-09-22	9.00	31	31	26	72.00	15

Geologic unit (aquifer):

125AQUI - Aquia Formation
 211MCVL - Merchantville Formation
 211MGTY - Magothy Formation
 211MNMT - Monmouth Formation
 217PTMC - Potomac Group
 300FHBP - Felsite, Happy Valley Branch, Big Elk Creek, Principio Creek, Members, James Run Formation
 300GEMR - Gneisses, on Garrett Island, near Elk Mills, and Rolling Mill, Undivided
 300LFPF - Little Northeast Creek, Frenchtown, Principio Furnace, Members, James Run Formation, Undivided
 300MGAB - Metagraywacke with Amphibolite of Wissahickon (?) Formation
 300PCSC - Pelitic Schist of Wissahickon (?) Formation
 300PLCG - Pelitic Gneiss of Wissahickon (?) Formation
 300PRDP - Port Deposit Gneiss
 300QZQZ - Quartz Gabbro and Quartz Diorite Gneiss
 300UFGB - Ultramafic and Gabbroic Rocks

E: Estimated

QUALITY OF GROUND WATER

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

LOCAL IDENT- I- FIER		DATE OF SAMPLE	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	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)	PERCENT SODIUM
CECIL COUNTY, MARYLAND--CONTINUED											
AC	38	83-08-23	192	6.2	21.0	79	19	22	5.8	7.6	17
AC	91 690214	83-08-25	138	5.9	17.0	46	14	12	3.8	6.2	22
AD	39	83-04-21	98	6.2	13.0	39	0	7.8	4.7	3.3	15
AD	51 014188	83-04-21	154	5.8	13.0	58	3	15	5.1	9.0	24
AD	52 733603	83-08-23	151	7.8	29.0	65	0	15	6.7	6.6	18
AE	49 015651	83-08-23	230	5.6	24.0	69	51	16	7.0	15	32
AF	27 730736	83-08-30	214	7.0	18.0	81	6	24	5.0	9.1	19
AF	30 732967	83-09-22	75	6.3	15.0	16	0	3.5	1.8	6.7	44
AF	31	83-09-22	111	6.0	17.0	38	6	9.3	3.7	5.6	24
BB	32 732225	83-08-23	66	6.0	22.0	18	0	5.3	1.1	6.2	42
RC	50 810308	83-09-15	150	6.8	19.0	56	0	14	5.0	9.0	26
BD	72 051499	83-08-25	1840	5.4	23.0	330	324	49	51	230	60
BD	88 720164	83-04-27	143	5.5	14.5	40	27	7.9	5.0	8.7	32
BE	18 001026	83-04-28	206	4.8	16.0	28	25	5.3	3.6	24	64
BE	73 810464	82-11-30	37	7.3	12.2	6	0	1.4	.6	3.9	56
BE	74 810464	82-12-07	27	7.0	12.0	3	0	.8	.4	3.6	66
BE	94 650273	83-09-13	23	5.2	18.0	3	0	.7	.4	1.9	53
BE	98 732691	83-09-14	26	5.0	19.0	3	0	.6	.3	2.4	62
BE	103 670312	83-09-20	79	6.0	18.0	23	0	4.6	2.9	5.8	34
BF	59 045556	83-08-26	175	5.7	17.0	50	26	8.4	7.1	11	31
BF	77 057157	83-03-31	242	8.1	13.0	69	0	18	5.8	23	41
BF	81 810537	83-01-26	236	5.3	11.0	74	15	14	9.4	4.3	11
BF	82 810470	83-02-01	156	5.6	13.0	52	38	9.5	6.8	11	31
BF	87 731660	83-03-31	69	5.3	13.0	16	10	3.1	2.1	4.4	35
CD	44 045547	82-12-17	22	7.0	13.0	2	0	.5	.3	1.7	58
CD	48 731024	83-03-31	144	5.8	11.0	43	34	9.8	4.5	6.2	23
CD	51 810440	83-02-22	25	7.2	13.5	3	0	.8	.3	1.9	50
CD	53 810463	82-12-21	37	7.0	14.0	5	0	1.1	.5	3.4	58
CD	57 733203	83-09-14	29	5.1	15.0	3	0	.7	.4	2.5	59
CE	54 810461	82-12-07	33	5.6	15.0	6	0	1.5	.5	2.4	45
CE	55 810465	83-01-24	37	6.7	14.5	4	0	.9	.5	2.2	50
CE	56 810466	83-02-09	42	5.2	14.0	10	0	2.4	.9	3.6	42
CE	57 733908	83-08-30	20	5.0	20.0	3	0	.5	.3	1.9	58
CE	60 733929	83-08-18	204	4.8	21.0	34	30	7.0	3.9	21	56
CE	63 700265	83-08-24	120	5.6	20.0	17	16	3.5	2.1	3.6	30
CF	3	83-08-24	90	5.9	21.0	19	7	4.9	1.7	2.3	20
CF	62 731372	83-08-18	124	6.2	24.5	9	0	1.9	.9	22	72
CF	74 733192	83-09-01	155	5.7	17.0	29	17	7.5	2.4	2.4	15
DD	70	83-09-01	505	5.2	21.0	160	152	21	27	33	30
DD	71 680238	83-09-29	38	4.7	15.0	3	0	.6	.4	2.0	53
DD	81 810469	83-02-18	2050	5.2	15.0	610	--	100	87	57	17
DD	82 733139	83-09-01	60	5.0	18.0	11	6	2.4	1.3	4.7	44
DD	84 730774	83-09-01	44	5.2	18.0	8	4	2.0	.7	3.1	41
DD	87 730943	83-08-16	126	6.3	25.0	51	0	16	2.7	5.5	18
DE	47 732925	83-04-26	200	7.0	14.5	58	0	17	3.7	10	26
DE	50	83-08-18	236	5.7	28.0	30	14	7.2	2.8	31	68
DF	11	83-04-26	236	7.7	15.5	110	7	39	2.2	3.0	6
DF	31	83-09-21	241	5.2	18.0	77	67	17	8.3	6.3	15
ED	21 650328	83-09-01	110	6.2	21.0	17	4	1.5	3.2	12	57
ED	23 730319	83-08-16	61	5.4	23.0	9	3	2.1	1.0	5.4	49
EE	11 011551	83-09-20	329	7.5	17.0	75	0	23	4.2	37	50
EE	35 733504	83-08-16	243	7.6	21.0	67	0	21	3.6	25	43
EE	36 732332	83-09-01	315	7.5	19.0	150	10	59	1.8	3.0	4
EF	1 001853	83-09-22	452	5.8	18.0	180	96	36	21	28	25

QUALITY OF GROUND WATER

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WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

LOCAL IDENT- IFIER	DATE OF SAMPLE	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY LA0 (MG/L AS CAC03)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	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)
CECIL COUNTY, MARYLAND--CONTINUED										
AC 38	83-08-23	.4	.6	60	73	13	7.7	<.10	27	139
AC 91 690214	83-08-25	.4	.7	32	78	2.8	11	<.10	27	103
AD 39	83-04-21	.2	.7	42	51	<.2	2.4	<.10	26	78
AD 51 014188	83-04-21	.5	3.4	56	172	4.5	13	<.10	25	139
AD 52 733603	83-08-23	.4	1.6	71	2.2	7.4	1.7	<.10	17	97
AE 49 015651	83-08-23	.8	1.0	18	88	15	30	<.10	25	180
AF 27 730736	83-08-30	.5	3.5	75	15	27	3.5	.20	42	182
AF 30 732967	83-09-22	.7	1.9	22	21	.6	3.4	<.10	25	64
AF 31	83-09-22	.4	.7	33	64	13	4.0	<.10	25	80
BB 32 732225	83-08-23	.7	.8	30	58	3.7	3.0	<.10	32	65
BC 50 810308	83-09-15	.5	1.3	71	22	10	1.7	.20	54	123
BD 72 051499	83-08-25	5.6	3.4	9.0	69	1.4	590	<.10	28	1170
BD 88 720164	83-04-27	.6	.5	13	80	17	7.9	<.10	22	111
BE 18 001026	83-04-28	2.0	.9	3.0	92	6.0	42	<.10	9.3	132
BE 73 810464	82-11-30	.7	.4	7.0	.7	3.0	3.7	<.10	11	34
BE 74 810464	82-12-07	.9	.4	4.0	.8	3.0	3.8	<.10	8.2	33
BE 94 650273	83-09-13	.5	.4	8.0	98	1.2	2.3	<.10	7.7	20
BE 98 732691	83-09-14	.7	.4	8.0	155	1.0	3.1	<.10	7.1	18
BE 103 670312	83-09-20	.5	.9	30	58	2.2	2.6	<.10	32	61
BF 59 045556	83-08-26	.7	1.6	24	93	9.8	22	<.10	15	143
BF 77 057157	83-03-31	1.2	3.6	98	1.5	6.2	15	<.10	18	145
BF 81 810537	83-01-26	.2	1.4	59	573	16	5.7	<.10	23	97
BF 82 810470	83-02-01	.7	1.9	14	68	6.0	26	<.10	12	112
BF 87 731660	83-03-31	.5	.9	6.0	58	1.1	7.8	<.10	9.9	49
CD 44 045547	82-12-17	.5	.2	3.0	.6	1.0	2.6	<.10	8.0	20
CD 48 731024	83-03-31	.4	2.4	9.0	28	28	12	<.10	11	102
CD 51 810440	83-02-22	.5	.5	5.0	.6	6.3	2.4	<.10	7.5	16
CD 53 810463	82-12-21	.7	.4	4.0	.8	7.0	2.0	<.10	8.0	26
CD 57 733203	83-09-14	.6	.4	7.0	108	.8	3.3	<.10	7.6	20
CE 54 810461	82-12-07	.4	.4	5.0	24	3.0	2.2	<.10	8.0	30
CE 55 810465	83-01-24	.5	.5	6.0	2.3	5.0	1.6	<.10	8.1	25
CE 56 810466	83-02-09	.5	.6	10	122	6.0	3.6	<.10	9.0	29
CE 57 733908	83-08-30	.5	.3	3.0	58	2.4	2.0	<.10	7.2	42
CE 60 733929	83-08-18	1.6	1.5	4.0	123	.6	48	<.10	8.6	149
CE 63 700265	83-08-24	.4	.9	1.0	4.9	38	3.1	<.10	12	81
CF 3	83-08-24	.2	.9	12	29	12	2.1	<.10	9.5	41
CF 62 731372	83-08-18	3.4	8.0	63	77	1.6	2.1	<.10	8.0	105
CF 74 733192	83-09-01	.2	1.3	12	46	22	2.7	<.10	9.1	55
DD 70	83-09-01	1.1	1.7	12	147	130	69	<.10	23	353
DD 71 680238	83-09-29	.5	.7	4.0	155	7.2	2.2	<.10	8.2	34
DD 81 810469	83-02-18	1.0	6.2	<1.0	--	1200	52	.20	12	1980
DD 82 733139	83-09-01	.6	1.2	5.0	97	1.4	8.3	<.10	11	56
DD 84 730774	83-09-01	.5	1.2	4.0	49	2.2	4.4	<.10	9.0	43
DD 87 730943	83-08-16	.3	2.5	51	50	8.7	2.4	.40	12	110
DE 47 732925	83-04-26	.6	4.3	79	15	8.2	1.3	.30	7.6	105
DE 50	83-08-18	2.6	1.4	16	62	1.4	42	<.10	25	179
DF 11	83-04-26	.1	3.6	100	3.9	16	4.1	.50	22	167
DF 31	83-09-21	.3	3.3	10	122	8.0	33	<.10	12	160
EC 21 650328	83-09-01	1.3	2.0	13	16	8.0	12	<.10	13	70
ED 23 730319	83-08-16	.8	2.1	6.0	46	7.0	8.6	<.10	17	62
EE 11 011551	83-09-20	1.9	5.1	146	8.9	9.6	7.4	.40	7.9	179
EE 35 733504	83-08-16	1.4	4.4	114	5.5	8.6	3.3	.40	8.2	174
EE 36 732332	83-09-01	.1	1.9	145	8.9	11	5.7	.20	19	191
EF 1 001853	83-09-22	.9	2.8	81	249	69	56	<.10	9.9	289

QUALITY OF GROUND WATER

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

LOCAL IDENT- IFIER	DATE OF SAMPLE	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P)	PHOS- PHATE, ORTHO, DIS- SOLVED (MG/L AS PO4)	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	ARSENIC DIS- SOLVED (UG/L AS AS)	BORON, DIS- SOLVED (UG/L AS B)	CADMIUM DIS- SOLVED (UG/L AS CD)
CECIL COUNTY, MARYLAND--CONTINUED										
AC 38	83-08-23	120	.19	2.7	.020	.06	<100	2	40	<1
AC 91 690214	83-08-25	83	.14	<.10	.020	.06	100	2	<20	<1
AD 39	83-04-21	--	.11	1.6	.020	.06	<100	--	10	--
AD 51 014188	83-04-21	109	.19	2.2	<.010	--	<100	--	<10	--
AD 52 733603	83-08-23	99	.13	<.10	.010	.03	100	1	20	<1
AE 49 015651	83-08-23	120	.24	6.7	<.010	--	<100	1	20	<1
AF 27 730736	83-08-30	160	.25	.18	<.010	--	200	2	<20	<1
AF 30 732967	83-09-22	57	.09	2.3	.130	.40	300	1	30	<1
AF 31	83-09-22	82	.11	.76	.040	.12	300	1	<20	<1
BB 32 732225	83-08-23	70	.09	.13	.030	.09	<100	1	20	<1
BC 50 810308	83-09-15	140	.17	<.10	.020	.06	<100	1	<20	<1
BD 72 051499	83-08-25	959	1.6	1.3	<.010	--	200	1	<20	2
BD 88 720164	83-04-27	77	.15	6.1	<.010	--	<100	--	<10	--
BE 18 001026	83-04-28	93	.18	3.6	<.010	--	100	--	<10	--
BE 73 810464	82-11-30	28	.05	.23	<.010	--	<100	1	10	<1
BE 74 810464	82-12-07	23	.05	.35	.010	.03	<100	1	<10	<1
BE 94 650273	83-09-13	20	.03	.28	<.010	--	500	2	<20	<1
BE 98 732691	83-09-14	20	.03	.37	<.010	--	200	3	<20	<1
RE 103 670312	83-09-20	69	.08	1.0	.040	.12	100	1	<20	<1
BF 59 045556	83-08-26	89	.19	3.6	<.010	--	<100	3	<20	<1
BF 77 057157	83-03-31	149	.20	<.10	<.010	--	<100	1	80	<1
BF 81 810537	83-01-26	110	.13	.41	<.010	--	600	1	30	<1
BF 82 810470	83-02-01	82	.15	5.3	.020	.06	<100	1	20	<1
BF 87 731660	83-03-31	33	.07	3.5	<.010	--	<100	1	10	<1
CD 44 045547	82-12-17	16	.03	<.10	.010	.03	100	<1	70	<1
CD 48 731024	83-03-31	79	.14	1.1	<.010	--	<100	1	20	<1
CD 51 810440	83-02-22	23	.02	.10	.030	.09	<100	1	10	<1
CD 53 810463	82-12-21	26	.04	.15	<.010	--	100	<1	130	<1
CD 57 733203	83-09-14	20	.03	.55	<.010	--	100	2	20	<1
CE 54 810461	82-12-07	22	.04	.17	<.010	--	<100	1	30	<1
CE 55 810465	83-01-24	27	.03	<.10	.010	.03	900	1	10	<1
CE 56 810466	83-02-09	--	.04	.11	<.010	--	200	1	20	<1
CE 57 733908	83-08-30	17	.06	<.10	<.010	--	400	1	<20	<1
CE 60 733929	83-08-18	94	.20	2.4	<.010	--	<100	1	10	<1
CE 63 700265	83-08-24	72	.11	<.10	<.010	--	<100	2	30	1
CF 3	83-08-24	63	.06	.14	<.010	--	100	2	20	1
CF 62 731372	83-08-18	82	.14	.10	<.010	--	<100	1	20	<1
CF 74 733192	83-09-01	79	.08	<.10	<.010	--	100	2	<20	<1
DD 70	83-09-01	315	.48	3.4	.020	.06	200	2	<20	<1
DD 71 680238	83-09-29	26	.05	.20	<.010	--	200	1	20	<1
DD 81 810469	83-02-18	--	2.7	.13	<.010	--	200	1	70	20
DD 82 733139	83-09-01	33	.08	1.9	<.010	--	<100	2	<20	<1
DD 84 730774	83-09-01	25	.06	1.7	<.010	--	<100	4	<20	<1
DD 87 730943	83-08-16	93	.15	<.10	<.010	--	<100	2	20	1
DE 47 732925	83-04-26	106	.14	<.10	.050	.15	<100	--	80	--
DE 50	83-08-18	120	.24	4.9	<.010	--	<100	1	20	<1
DF 11	83-04-26	151	.23	<.10	<.010	--	<100	--	20	--
DF 31	83-09-21	95	.22	12	<.010	--	100	1	<20	<1
EC 21 650328	83-09-01	60	.10	3.1	<.010	--	<100	2	70	1
ED 23 730319	83-08-16	48	.08	.44	<.010	--	<100	2	<20	1
EE 11 011551	83-09-20	183	.24	<.10	.020	.06	100	1	200	1
EE 35 733504	83-08-16	144	.24	<.10	.020	.06	<100	2	150	1
EE 36 732332	83-09-01	189	.26	<.10	<.010	--	100	3	<20	<1
EF 1 001853	83-09-22	272	.39	5.4	<.010	--	100	1	50	<1

QUALITY OF GROUND WATER

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WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

LOCAL IDENT- IFIER	DATE OF SAMPLE	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY DIS- SOLVED (UG/L AS HG)	CARBON, ORGANIC TOTAL (MG/L AS C)
CECIL COUNTY, MARYLAND--CONTINUED							
AC 38	83-08-23	20	11	<10	<1	.2	1.6
AC 91 690214	83-08-25	20	29	<10	2	<.1	.4
AD 39	83-04-21	--	10	--	<1	--	--
AD 51 014188	83-04-21	--	23	--	28	--	--
AD 52 733603	83-08-23	<10	17	<10	46	.1	3.8
AE 49 015651	83-08-23	10	46	10	11	.1	.7
AF 27 730736	83-08-30	<10	690	<10	250	<.1	1.2
AF 30 732967	83-09-22	10	<3	<10	<1	<.1	.5
AF 31	83-09-22	20	9	<10	<1	<.1	.6
BB 32 732225	83-08-23	<10	29	<10	17	<.1	.6
BC 50 810308	83-09-15	40	1900	<10	300	<.1	.2
BD 72 051499	83-08-25	10	25	<10	140	.2	.5
BD 88 720164	83-04-27	--	6	--	1	--	--
BE 18 001026	83-04-28	--	100	--	22	--	--
BE 73 810464	82-11-30	10	34	10	30	<.1	--
BE 74 810464	82-12-07	10	35	<10	10	.1	--
BE 94 650273	83-09-13	10	25	<10	8	.1	.1
BE 98 732691	83-09-14	<10	13	<10	4	<.1	.2
BE 103 670312	83-09-20	10	23	<10	33	<.1	.6
BF 59 045556	83-08-26	10	5	<10	1	.2	.5
BF 77 057157	83-03-31	10	160	<10	10	<.1	--
BF 81 810537	83-01-26	10	40	<10	16	.1	--
BF 82 810470	83-02-01	<10	260	20	51	.4	--
BF 87 731660	83-03-31	10	12	<10	4	<.1	--
CD 44 045547	82-12-17	20	4	10	22	<.1	--
CD 48 731024	83-03-31	<10	<3	<10	12	.7	--
CD 51 810440	83-02-22	<10	58	<10	22	.3	--
CD 53 810463	82-12-21	10	820	<10	69	.1	--
CD 57 733203	83-09-14	<10	280	<10	6	<.1	.4
CE 54 810461	82-12-07	10	870	10	56	.2	--
CE 55 810465	83-01-24	<10	4000	<10	49	.2	--
CE 56 810466	83-02-09	<10	310	<10	16	.2	--
CE 57 733908	83-08-30	<10	290	<10	36	<.1	.6
CE 60 733929	83-08-18	10	670	<10	82	.6	1.2
CE 63 700265	83-08-24	<10	16000	<10	160	.1	.8
CF 3	83-08-24	50	22000	<10	110	.3	.8
CF 62 731372	83-08-18	<10	25	<10	41	.3	1.1
CF 74 733192	83-09-01	10	24000	10	170	<.1	.8
DD 70	83-09-01	10	1300	<10	2000	<.1	.8
DD 71 680238	83-09-29	10	1900	<10	36	.1	.4
DD 81 810469	83-02-18	10	230000	40	36000	.3	--
DD 82 733139	83-09-01	<10	30	<10	6	.1	.8
DD 84 730774	83-09-01	10	26	<10	9	.1	.3
DD 87 730943	83-08-16	<10	12000	<10	130	.4	1.9
DE 47 732925	83-04-26	--	5500	--	63	--	--
DE 50	83-08-18	10	7	<10	41	.2	1.7
DF 11	83-04-26	--	140	--	6	--	--
DF 31	83-09-21	<10	700	30	74	.7	.5
EC 21 650328	83-09-01	<10	83	<10	16	.1	.7
ED 23 730319	83-08-16	30	960	<10	86	.1	1.6
EE 11 011551	83-09-20	10	180	<10	16	<.1	.8
EE 35 733504	83-08-16	30	580	20	11	<.1	.7
EE 36 732332	83-09-01	<10	290	<10	13	<.1	1.8
EF 1 001853	83-09-22	<10	67	10	19	<.1	1.8

QUALITY OF GROUND WATER

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

LOCAL IDENT- IFIER	STATION NUMBER	GEO- LOGIC UNIT	DATE OF SAMPLE	DEPTH OF WELL, TOTAL (FEET)	DEPTH TO BOT- TOM OF SAMPLE INTER- VAL (FT)	DEPTH TO TOP OF SAMPLE INTER- VAL (FT)	ELEV. OF LAND SURFACE DATUM (FT. ABOVE NGVD)	PUMP OR FLOW PERIOD PRIOR TO SAM- PLING (MIN)	FLOW RATE, INSTAN- TANEOUS (GPM)
DORCHESTER COUNTY, MARYLAND									
AG 7	384132075531101	112CLMB	83-01-19	35	35	29	25.00	15	10
AG 11	384059075502901	112CLMB	82-11-16	54	54	44	45.00	5	6.0
AH 7	384130075492101	112CLMB	83-01-19	52	52	46	50.00	15	7.5
AH 8	384113075494201	112CLMB	82-11-16	45	45	35	50.00	10	3.2
AH 9	384033075473401	112CLMB	82-11-16	37	37	32	35.00	10	5.7
BF 40	383732075571301	112CLMB	82-11-15	50	50	40	25.00	5	5.3
BG 63	383718075545801	112CLMB	83-01-19	46	46	40	40.00	--	--
BG 69	383956075525001	122FRDC	82-11-23	162	162	160	30.00	90	10
		122FRDC	83-07-05	162	162	160	30.00	20	16
BG 70	383956075525002	112CLMB	82-11-23	68	68	66	30.00	90	3.3
		112CLMB	83-07-05	68	68	66	30.00	30	300
BG 71	383956075525003	112CLMB	82-11-23	50	50	48	30.00	90	15
		112CLMB	83-07-05	50	50	48	30.00	25	13
BH 14	383651075494901	112CLMB	83-01-19	95	95	85	25.00	10	12
BH 16	383848075492401	112PCPC	82-11-16	50	50	40	30.00	10	4.8
BH 17	383800075462201	112CLMB	82-11-17	44	44	33	40.00	15	3.9
BI 12 730890	383523075435301	112CLMB	83-01-18	80	80	70	27.00	20	6.3
BI 14 720023	383457075433801	112CLMB	83-01-18	58	58	50	25.00	15	6.4
BI 17	383543075432701	112CLMB	82-11-17	49	49	39	30.00	10	7.7
CG 43	383416075515801	112CLMB	82-11-17	100	100	60	45.00	10	4.9
CG 44	383404075505201	112CLMB	82-11-17	55	55	52	40.00	5	5.1
CH 29	383421075473201	112CLMB	83-01-19	54	54	44	25.00	5	--
CH 37	383417075480201	112CLMB	83-01-19	33	33	26	35.00	20	--
CI 6	383407075435301	112CLMB	83-01-18	49	49	39	19.00	--	--

LOCAL IDENT- IFIER	DATE OF SAMPLE	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD 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)	PERCENT SODIUM
AG 7	83-01-19	188	5.1	17.2	45	41	8.2	6.0	9.5	29
AG 11	82-11-16	160	4.8	13.0	49	47	9.5	6.1	7.4	23
AH 7	83-01-19	77	5.3	13.1	15	12	2.6	2.1	4.4	34
AH 8	82-11-16	142	5.2	15.0	34	31	7.1	3.9	7.4	30
AH 9	82-11-16	144	5.0	15.0	35	33	4.7	5.6	6.5	27
BF 40	82-11-15	260	5.0	14.0	79	75	15	10	3.4	8
BG 63	83-01-19	142	4.8	13.0	41	39	4.2	7.3	4.3	17
BG 69	82-11-23	252	7.8	15.4	110	0	26	12	7.4	12
	83-07-05	264	7.3	16.0	--	--	--	--	--	--
BG 70	82-11-23	115	6.3	15.0	36	0	10	2.7	7.6	30
	83-07-05	117	6.2	15.0	--	--	--	--	--	--
BG 71	82-11-23	106	5.4	13.9	29	19	7.6	2.5	6.3	29
	83-07-05	113	5.3	14.0	--	--	--	--	--	--
BH 14	83-01-19	61	6.1	14.3	9	0	2.3	.7	7.0	59
BH 16	82-11-16	190	5.4	10.0	59	57	7.0	10	4.5	13
BH 17	82-11-17	140	5.0	12.0	48	44	11	4.9	7.1	17
BI 12 730890	83-01-18	35	5.5	12.5	4	0	1.0	.4	4.1	59
BI 14 720023	83-01-18	33	4.8	13.9	4	0	.9	.4	4.2	63
BI 17	82-11-17	118	5.5	14.0	28	26	5.3	3.5	6.5	31
CG 43	82-11-17	37	5.9	10.0	3	0	1.0	.2	3.2	54
CG 44	82-11-17	230	5.4	12.0	63	61	6.9	11	8.3	20
CH 29	83-01-19	188	6.3	10.0	41	13	5.7	6.4	3.2	13
CH 37	83-01-19	145	4.8	13.5	43	--	9.8	4.5	3.7	14
CI 6	83-01-18	140	4.9	12.0	45	42	5.8	7.4	3.9	15

Geologic unit (aquifer):

112CLMB - Columbia Formation
 112PCPC - Pleistocene-Pliocene Series
 122FRDC - Frederica Aquifer

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

LOCAL IDENT- IFIER	DATE OF SAMPLE	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE IT-FLD (MG/L AS HCO3)	ALKA- LINITY, CARBON- ATE IT-FLD (MG/L - CAC03)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFIDE TOTAL (MG/L AS S)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	SILICA, DIS- SOLVED (MG/L AS SiO2)
DORCHESTER COUNTY, MARYLAND--CONTINUED										
AG 7	83-01-19	.6	4.3	5.0	4.0	63	<.5	<1.0	14	14
AG 11	82-11-16	.5	4.4	2.0	2.0	50	--	2.0	15	9.9
AH 7	83-01-19	.5	2.8	4.0	3.0	32	<.5	<1.0	5.6	11
AH 8	82-11-16	.6	3.2	4.0	3.0	40	--	2.0	15	13
AH 9	82-11-16	.5	2.1	2.0	2.0	32	--	16	15	13
BF 40	82-11-15	.2	4.3	4.0	3.0	64	--	43	15	12
BG 63	83-01-19	.3	4.0	--	--	61	--	1.0	14	11
BG 69	82-11-23	.3	1.7	--	--	3.9	<.5	7.0	3.3	56
BG 70	83-07-05	--	--	--	--	--	--	--	--	--
	82-11-23	.6	2.1	--	--	41	<.5	9.0	3.5	33
	83-07-05	--	--	--	--	--	--	--	--	--
BG 71	82-11-23	.5	3.4	12	9.0	76	<.5	27	7.1	14
	83-07-05	--	--	--	--	--	--	--	--	--
BH 14	83-01-19	1.1	1.3	13	11	16	<.5	1.0	5.2	23
BH 16	82-11-16	.3	3.5	2.0	2.0	14	--	1.0	19	11
BH 17	82-11-17	.5	21	4.0	3.0	64	--	5.0	24	10
BI 12 730890	83-01-18	.9	1.5	--	--	31	--	1.0	3.5	13
BI 14 720023	83-01-18	1.0	1.4	9.0	7.0	227	<.5	1.0	5.3	12
BI 17	82-11-17	.6	3.0	2.0	2.0	10	--	<1.0	7.7	11
CG 43	82-11-17	.8	2.0	4.0	3.0	8.0	--	2.0	2.8	9.8
CG 44	82-11-17	.5	6.0	2.0	2.0	13	--	<1.0	32	12
CH 29	83-01-19	.2	3.8	33	27	27	--	1.0	10	9.7
CH 37	83-01-19	.3	4.0	--	--	--	--	18	11	15
CI 6	83-01-18	.3	3.5	--	--	73	--	1.0	15	11

LOCAL IDENT- IFIER	DATE OF SAMPLE	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS NH4)
AG 7	83-01-19	--	--	<.010	14	<.010	.01
AG 11	82-11-16	55	.08	<.010	15	<.010	.01
AH 7	83-01-19	--	--	<.010	5.7	.040	.05
AH 8	82-11-16	54	.07	<.010	8.9	<.010	.01
AH 9	82-11-16	64	.09	<.010	5.0	<.010	.01
BF 40	82-11-15	105	.14	<.010	5.2	<.010	.01
BG 63	83-01-19	47	.06	<.010	9.2	.020	.03
BG 69	82-11-23	190	.26	--	--	--	--
BG 70	83-07-05	--	--	<.010	<.10	<.010	--
	82-11-23	97	.13	--	--	--	--
	83-07-05	--	--	<.010	<.10	<.010	--
BG 71	82-11-23	74	.10	--	--	--	--
	83-07-05	--	--	.010	8.0	.030	.04
BH 14	83-01-19	47	.06	<.010	2.2	.010	.01
BH 16	82-11-16	57	.08	<.010	13	<.010	.01
BH 17	82-11-17	86	.12	<.010	16	.040	.05
BI 12 730890	83-01-18	28	.04	<.010	1.6	.020	.03
BI 14 720023	83-01-18	30	.04	<.010	.59	<.010	.01
BI 17	82-11-17	--	--	<.010	9.8	<.010	.01
CG 43	82-11-17	23	.03	<.010	2.2	.010	.01
CG 44	82-11-17	--	--	<.010	12	.010	.01
CH 29	83-01-19	56	.08	<.010	10	.030	.04
CH 37	83-01-19	--	--	<.010	6.0	.030	.04
CI 6	83-01-18	49	.07	<.010	9.5	<.010	.01

QUALITY OF GROUND WATER

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

LOCAL IDENT- I- FIER	DATE OF SAMPLE	NITRO- GEN, ORGANIC DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N)	NITRO- GEN DIS- SOLVED (MG/L AS N)	IRON, DIS- SOLVED (UG/L AS FE)
DORCHESTER COUNTY, MARYLAND--CONTINUED					
AG 7	83-01-19	--	.30	14	8
AG 11	82-11-16	--	<.10	--	24
AH 7	83-01-19	.56	.60	6.3	10
AH 8	82-11-16	--	.30	9.2	29
AH 9	82-11-16	--	.20	5.2	28
BF 40	82-11-15	--	.60	5.8	170
BG 63	83-01-19	.58	.60	9.8	8
BG 69	82-11-23	--	--	--	65
	83-07-05	--	.10	--	--
BG 70	82-11-23	--	--	--	3500
	83-07-05	--	.30	--	--
BG 71	82-11-23	--	--	--	19
	83-07-05	.87	.90	8.9	--
BH 14	83-01-19	--	<.10	--	4
BH 16	82-11-16	--	.30	13	21
BH 17	82-11-17	.16	.20	16	600
BI 12 730890	83-01-18	--	<.10	--	8
BI 14 720023	83-01-18	--	<.10	--	11
BI 17	82-11-17	--	<.10	--	7
CG 43	82-11-17	.19	.20	2.4	190
CG 44	82-11-17	--	<.10	--	53
CH 29	83-01-19	.87	.90	11	180
CH 37	83-01-19	.37	.40	6.4	720
CI 6	83-01-18	--	.20	9.7	10

LOCAL
IDENT-
I-
FIER

STATION NUMBER	DATE OF SAMPLE	AME- TRYNE TOTAL	ATRA- TONE TOTAL (UG/L)	ATRA- ZINE, TOTAL (UG/L)	CYAN- AZINE TOTAL (UG/L)	CYPRA- ZINE TOTAL (UG/L)	PROME- TONE TOTAL (UG/L)	PROME- TRYNE TOTAL (UG/L)
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BG 72	383742075514801	83-09-23	<.10	<.10	<.10	<.10	<.10	<.1	<.1
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LOCAL
IDENT-
I-
FIER

DATE OF SAMPLE	PRO- PAZINE TOTAL (UG/L)	SIMA- ZINE TOTAL (UG/L)	SIME- TONE TOTAL (UG/L)	SIME- TRYNE TOTAL (UG/L)
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BG 72	83-09-23	<.10	<.10	<.10	<.1
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QUALITY OF GROUND WATER

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WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

LOCAL IDENT- IFIER	STATION NUMBER	GEO- LOGIC UNIT	DATE OF SAMPLE	DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET)	DEPTH OF WELL, TOTAL (FEET)	ELEV. OF LAND SURFACE DATUM (FT. ABOVE NGVD)	PUMP OR FLOW PERIOD PRIOR TO SAM- PLING (MIN)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD UNITS)
FREDERICK COUNTY, MARYLAND									
AD 12	394215077273601	400CTCN	83-04-07	5.00	200	1110.00	15	260	6.9
AD 36	394043077280801	400MTRL	83-06-16	--	(SPRING)	995.00	--	135	6.4
AE 50	394256077241101	400CTCN	83-04-07	15.00	85	660.00	15	79	5.8
AE 92	394129077242001	400CTCN	83-04-07	45.00	335	1060.00	15	83	6.6
AE 53	394136077233001	400CTCN	83-04-07	6.00	400	910.00	20	121	7.6
AF 38	394231077174201	231DIBS	83-04-08	20.00	100	395.00	15	284	6.8
BD 105	393832077293001	400MTRL	83-04-07	28.00	85	1485.00	20	70	5.9
BE 91	393634077235001	231GBRG	83-04-11	29.00	200	445.00	15	310	7.8
CB 19	393038077350401	400CTCN	83-06-20	40.00	302	820.00	15	231	7.3
CD 43	393433077253901	231GBRG	83-04-12	20.00	325	425.00	>1440	274	7.8
CD 71 730726	393131077254401	231GBRG	83-04-13	30.00	100	470.00	15	98	6.2
CD 88	393002077262901	231GBRG	83-01-12	30.00	69	410.00	15	209	6.7
		231GBRG	83-04-12	30.00	69	410.00	20	449	7.5
CE 89	393143077233401	231GBRG	83-04-12	25.00	200	390.00	15	380	7.8
CF 48	393151077183901	377FDCK	83-04-11	15.00	70	338.00	15	637	7.3
CF 52	393408077171701	231NOXF	83-04-11	16.00	176	490.00	15	304	7.5
CG 5	393436077134301	231NOXF	83-04-08	22.00	81	410.00	15	565	7.1
CG 29 738152	393100077123501	300IJMV	83-04-08	25.00	220	540.00	15	264	7.8
DC 39	392650077305201	400CTCN	83-04-14	10.00	160	640.00	>1440	86	6.6
DC 65	392721077333401	400CTCN	83-04-14	13.00	32	460.00	15	510	6.6
DD 146 720541	392735077263001	231NOXF	82-10-05	18.00	130	420.00	20	405	7.8
		231NOXF	83-04-12	18.00	130	420.00	15	385	7.5
DE 83	392843077214201	367GROV	83-04-12	13.00	300	290.00	270	536	7.7
DF 20	392932077184601	377FDCK	83-04-12	20.00	95	330.00	15	526	7.3
DE 21	392900077144301	300IJMV	83-04-12	30.00	114	500.00	15	775	6.5
EB 25	392151077373101	400PCMB	82-10-06	40.00	108	555.00	15	100	6.2
		400PCMB	83-04-14	40.00	108	555.00	15	64	5.7
EB 33 680108	392410077363402	400PCMB	83-04-14	20.00	87	530.00	15	216	6.2
EB 34	392054077370201	400PCMB	83-04-25	50.00	203	530.00	25	816	6.6
ED 9 021637	392228077271601	377FDCK	83-04-13	25.00	115	300.00	15	446	7.8
ED 89	392025077290401	231NOXF	82-10-05	45.00	245	420.00	15	339	8.0
		231NOXF	83-04-13	45.00	245	420.00	15	348	7.9
ED 99 735603	392431077282401	231NOXF	83-04-13	48.00	525	420.00	20	535	7.6
EE 126 737186	392354077221201	377FDCK	83-04-13	18.00	125	260.00	15	270	7.4
EF 1	392253077161501	300SMCK	83-04-13	15.00	75	550.00	15	546	7.1
EF 36 732439	392310077175201	300URBN	83-04-13	30.00	180	570.00	15	457	7.1
EF 40 670495	392056077162901	300URBA	83-04-15	45.00	77	565.00	15	100	6.5
EG 33 730148	392113077101901	300MRBG	83-04-13	45.00	120	840.00	15	118	5.9
FB 12	391846077370501	400PCMB	83-06-16	--	(SPRING)	300.00	--	335	6.9
FC 31 720029	391641077315601	377HRPR	83-04-14	70.00	583	310.00	>1440	310	8.0
FD 53	391602077280301	377FDCK	82-10-06	--	--	300.00	15	1040	6.8
		377FDCK	83-04-15	--	--	300.00	15	1070	6.8
FD 91	391832077282801	377FDCK	83-04-13	40.00	225	315.00	15	800	7.3
FF 13 733238	391842077175401	300SMCK	83-04-15	14.00	145	420.00	15	79	7.7

Geologic unit (aquifer):

231DIBS - Diabase Dikes and Sills
 231GBRG - Gettysburg Shale
 231NOXF - New Oxford Formation
 300IJMV - Ijamsville Formation
 300MRBG - Marburg Formation
 300SMCK - Sams Creek Metabasalt
 300URBN - Urbana Formation
 367GROV - Grove Limestone
 377FDCK - Frederick Limestone
 377HRPR - Harpers Formation
 400CTCN - Catoclin Metabasalt
 400MTRL - Metarhyolite and Associated Pyroclastic Sediments
 400PCMB - Precambrian Evathem

QUALITY OF GROUND WATER

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

LOCAL IDENT- IFIER	DATE OF SAMPLE	TEMPER- ATURE, AIR (DEG C)	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)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO
FREDERICK COUNTY, MARYLAND--CONTINUED										
AD 12	83-04-07	11.0	11.3	110	54	18	16	6.2	11	.3
AD 36	83-06-16	28.5	11.0	63	8	14	6.7	6.3	18	.4
AE 50	83-04-07	13.0	10.5	33	18	6.1	4.2	2.1	12	.2
AE 52	83-04-07	13.0	10.3	36	4	6.2	5.0	3.1	16	.2
AE 53	83-04-07	12.0	11.2	58	0	12	6.9	5.9	18	.3
AF 38	83-04-08	15.5	11.1	140	24	27	17	4.5	7	.2
BD 105	83-04-07	9.5	11.4	23	10	5.5	2.2	3.4	24	.3
BE 91	83-04-11	11.0	13.1	150	12	39	13	7.9	10	.3
CB 19	83-06-20	24.0	12.5	110	0	33	7.6	4.8	8	.2
CD 43	83-04-12	12.0	12.2	130	6	35	11	4.9	7	.2
CD 71 730726	83-04-13	12.5	12.6	46	0	11	4.5	4.1	16	.3
CD 88	83-01-12	--	11.8	220	20	53	22	9.0	8	.3
	83-04-12	15.0	13.1	220	15	52	21	8.1	8	.2
CE 89	83-04-12	12.5	13.2	190	64	61	8.8	9.1	9	.3
CF 48	83-04-11	12.0	12.2	300	106	100	11	9.8	7	.3
CF 52	83-04-11	10.5	12.7	130	28	39	8.2	9.6	14	.4
C6 5	83-04-08	14.0	12.4	240	83	72	15	14	11	.4
C6 29 738152	83-04-08	13.5	12.3	130	14	41	5.5	5.2	8	.2
DC 39	83-04-14	12.5	10.0	34	15	6.7	4.2	3.1	16	.2
DC 65	83-04-14	14.0	12.9	190	119	47	18	17	16	.6
DD 146 720541	82-10-05	28.5	14.1	170	57	55	8.8	9.2	10	.3
	83-04-12	16.5	12.6	180	48	57	8.9	9.7	10	.3
DE 83	83-04-12	14.5	12.1	240	38	81	10	9.3	8	.3
DF 20	83-04-12	16.5	12.6	230	65	86	4.1	9.3	8	.3
D6 21	83-04-12	13.0	13.7	180	84	45	17	63	40	2.1
EB 25	82-10-06	20.0	13.7	36	12	8.5	3.6	4.7	22	.4
	83-04-14	18.0	13.0	36	7	8.5	3.6	4.9	22	.4
EB 33 680108	83-04-14	15.5	13.7	70	54	20	4.8	8.9	22	.5
EB 34	83-04-25	7.0	12.4	360	137	73	44	23	12	.5
ED 9 021637	83-04-13	17.0	12.5	220	38	70	10	4.0	4	.1
ED 89	82-10-05	24.5	14.7	150	84	55	4.1	4.1	--	.2
	83-04-13	16.0	13.6	150	73	55	4.0	4.4	6	.2
ED 99 735603	83-04-13	13.0	11.1	280	0	50	37	8.0	6	.2
EE 126 737186	83-04-13	16.5	17.5	120	13	42	2.8	5.1	8	.2
EF 1	83-04-13	20.0	13.3	240	45	69	17	18	14	.5
EF 36 732439	83-04-13	15.5	13.0	220	0	57	19	9.1	8	.3
EF 40 670495	83-04-15	12.0	13.4	38	16	9.6	3.4	2.9	14	.2
EG 33 730148	83-04-13	13.0	12.8	35	23	7.1	4.2	6.9	29	.5
FB 12	83-06-16	28.0	12.4	120	79	31	11	14	20	.6
FC 31 720029	83-04-14	16.0	13.7	150	8	33	16	2.8	4	.1
FD 53	82-10-06	21.0	14.2	490	0	160	23	12	5	.2
	83-04-15	11.5	12.7	500	0	160	25	12	5	.2
FD 91	83-04-13	17.0	13.2	380	39	92	37	16	8	.4
FF 13 733238	83-04-15	11.5	13.1	31	1	7.2	3.2	3.6	20	.3

QUALITY OF GROUND WATER

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WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

LOCAL IDENT- I- FIER	DATE OF SAMPLE	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LITY FIELD (MG/L AS CAC03)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	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)
FREDERICK COUNTY, MARYLAND--CONTINUED										
AD 12	83-04-07	.3	65	14	20	32	<.10	19	155	146
AD 36	83-06-16	1.0	55	42	10	11	.10	25	117	107
AE 50	83-04-07	.2	15	46	21	3.5	<.10	14	64	60
AE 52	83-04-07	.2	37	16	9.2	2.5	<.10	21	66	67
AE 53	83-04-07	.2	75	3.2	3.6	1.3	<.10	19	90	88
AF 38	83-04-08	.5	141	35	28	5.8	<.10	34	180	186
AD 105	83-04-07	.8	13	32	3.4	4.8	<.10	28	64	48
BE 91	83-04-11	.5	170	4.3	9.5	8.9	<.10	25	205	188
CB 19	83-06-20	.3	120	12	24	4.9	.20	21	178	168
CD 43	83-04-12	.5	153	3.9	10	9.8	<.10	19	170	167
CD 71	83-04-13	.7	54	56	1.4	2.8	<.10	18	77	70
CD 88	83-01-12	.4	245	78	21	9.6	.20	17	264	254
	83-04-12	.5	250	12	22	10	.20	17	253	252
CE 89	83-04-12	.8	152	3.8	32	38	<.10	20	269	245
CF 48	83-04-11	1.1	272	18	26	45	.10	12	427	319
CF 52	83-04-11	.6	124	6.3	14	9.2	<.10	25	207	168
CG 5	83-04-08	6.6	193	24	42	26	<.10	19	353	290
CG 29	83-04-08	1.4	134	3.4	10	4.9	<.10	12	151	147
DC 39	83-04-14	.6	21	9.2	8.9	8.1	<.10	16	66	59
DC 65	83-04-14	.8	95	36	34	87	.10	22	327	270
DD 146	82-10-05	.6	165	3.6	26	14	<.10	24	234	208
	83-04-12	.9	157	8.0	30	22	<.10	25	257	233
DE 83	83-04-12	2.7	250	7.9	20	15	<.10	8.3	313	270
DF 20	83-04-12	3.4	203	16	21	38	<.10	9.3	335	271
DG 21	83-04-12	21	145	61	55	110	<.10	5.3	436	376
ER 25	82-10-06	.4	34	29	8.0	3.1	.10	41	88	84
	83-04-14	.7	35	112	10	3.4	.10	39	88	88
ER 33	83-04-14	.7	21	20	36	21	<.10	26	159	127
ER 34	83-04-25	1.2	290	110	41	94	.20	32	500	445
ED 9	83-04-13	.8	216	5.4	27	9.5	<.10	8.9	264	237
ED 89	82-10-05	<.1	99	1.3	29	9.2	<.10	15	227	207
	83-04-13	.4	99	2.0	32	12	<.10	15	254	172
ED 99	83-04-13	2.8	350	14	12	9.8	.20	12	300	305
EE 126	83-04-13	3.6	127	8.0	13	5.0	<.10	12	159	146
EF 1	83-04-13	.5	257	30	35	21	.20	15	336	295
EF 36	83-04-13	.4	288	36	10	8.6	<.10	32	287	277
EF 40	83-04-15	.6	26	13	2.0	4.5	<.10	7.7	73	44
EG 33	83-04-13	.8	15	29	.3	10	<.10	6.4	86	43
FB 12	83-06-16	1.2	44	11	55	30	.10	23	230	192
FC 31	83-04-14	2.0	170	2.7	20	3.9	.20	12	166	174
FD 53	82-10-06	7.9	507	156	30	9.2	<.10	16	613	562
	83-04-15	8.7	510	157	35	52	<.10	17	641	616
FD 91	83-04-13	1.0	417	33	52	41	.30	15	439	461
FF 13	83-04-15	.1	36	1.2	1.4	1.8	<.10	16	59	51

QUALITY OF GROUND WATER

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

LOCAL IDENT- IFIER	DATE OF SAMPLE	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N)	NITRO- GEN DIS- SOLVED (MG/L AS N)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P)	PHOS- PHATE, ORTHO, DIS- SOLVED (MG/L AS PO4)	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	ARSENIC DIS- SOLVED (UG/L AS AS)
FREDERICK COUNTY, MARYLAND--CONTINUED										
AD 12	83-04-07	.21	1.2	.10	1.3	.020	.020	.06	100	--
AD 36	83-06-16	.16	1.5	<.10	--	.050	.060	.18	100	1
AE 50	83-04-07	.09	.11	.10	.21	<.010	<.010	--	<100	--
AE 52	83-04-07	.09	.35	<.10	--	.040	.040	.12	<100	--
AE 53	83-04-07	.12	.38	<.10	--	.020	.020	.06	<100	1
AF 38	83-04-08	.24	<.10	--	--	--	<.010	--	<100	<1
BD 105	83-04-07	.09	3.5	.20	3.7	.030	<.010	--	<100	--
BE 91	83-04-11	.28	3.1	--	--	--	.070	.21	200	--
CB 19	83-06-20	.24	.66	.10	.76	.020	<.010	--	<100	--
CD 43	83-04-12	.23	.74	--	--	--	.040	.12	<100	1
CD 71 730726	83-04-13	.10	2.4	--	--	--	.050	.15	200	--
CD 88	83-01-12	.36	2.2	.10	2.3	.050	.040	.12	<100	--
	83-04-12	.34	2.2	--	--	--	.050	.15	<100	--
CE 89	83-04-12	.37	2.5	<.10	--	.050	.050	.15	<100	--
CF 48	83-04-11	.58	5.8	--	--	--	<.010	--	<100	--
CF 52	83-04-11	.28	5.6	.10	5.7	.050	.050	.15	<100	--
CG 5	83-04-08	.48	13	.20	13	.070	<.070	--	<100	--
CG 29 738152	83-04-08	.21	2.6	--	--	--	.050	.15	<100	--
DC 39	83-04-14	.09	1.1	--	--	--	.020	.06	<100	<1
DC 65	83-04-14	.44	2.5	.10	2.6	.060	.060	.18	<100	--
DD 146 720541	82-10-05	.32	5.0	.20	5.2	.090	.070	.21	<100	--
	83-04-12	.35	5.6	--	--	--	.080	.25	200	--
DE 83	83-04-12	.43	8.1	--	--	--	.010	.03	<100	1
DF 20	83-04-12	.46	7.7	.20	7.9	.020	.010	.03	100	--
DG 21	83-04-12	.59	9.5	3.2	13	.020	.020	.06	<100	--
FB 25	82-10-06	.12	1.5	--	--	--	.100	.31	<100	--
	83-04-14	.12	1.5	.20	1.7	.090	.090	.28	100	--
EB 33 680108	83-04-14	.22	3.6	<.10	--	<.010	<.010	--	<100	--
EB 34	83-04-25	.68	5.7	--	--	--	.010	.03	200	--
ED 9 021637	83-04-13	.36	5.8	--	--	--	.020	.06	<100	--
ED 89	82-10-05	.31	11	.10	11	.060	.080	.25	<100	--
	83-04-13	.35	12	.10	12	.070	.080	.25	100	--
ED 99 735603	83-04-13	.41	<.10	.20	--	<.010	<.010	--	100	--
EE 126 737186	83-04-13	.22	4.3	--	--	--	.190	.58	<100	--
EF 1	83-04-13	.46	5.8	.10	5.9	<.010	<.010	--	200	--
EF 36 732439	83-04-13	.39	1.6	.20	1.8	.060	.060	.18	200	--
EF 40 670495	83-04-15	.10	5.3	<.10	--	.020	.020	.06	100	--
EG 33 730148	83-04-13	.12	7.6	--	--	--	.020	.06	300	1
FB 12	83-06-16	.31	6.3	.20	6.5	.120	.120	.37	<100	--
FC 31 720029	83-04-14	.23	<.10	--	--	--	<.010	--	<100	--
FD 53	82-10-06	.83	21	--	--	--	<.010	--	100	--
	83-04-15	.87	19	.20	19	<.010	<.010	--	<100	--
FD 91	83-04-13	.60	1.0	<.10	--	<.010	<.010	--	200	1
FF 13 733238	83-04-15	.08	1.9	--	--	--	.030	.09	<100	1

QUALITY OF GROUND WATER

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WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

LOCAL IDENT- IFIER	DATE OF SAMPLE	BORON, DIS- SOLVED (UG/L AS B)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY DIS- SOLVED (UG/L AS HG)
FREDERICK COUNTY, MARYLAND--CONTINUED								
AD 12	83-04-07	--	--	--	8	--	<1	--
AD 36	83-06-16	30	<1	10	3	<10	2	.4
AE 50	83-04-07	--	--	--	68	--	3	--
AE 52	83-04-07	--	--	--	3	--	1	--
AE 53	83-04-07	10	<1	10	49	<10	27	<.1
AF 38	83-04-08	20	<1	10	400	<10	200	.1
BD 105	83-04-07	--	--	--	<3	--	2	--
BE 91	83-04-11	--	--	--	<3	--	<1	--
CB 19	83-06-20	--	--	--	12	--	<1	--
CD 43	83-04-12	30	<1	<10	<3	<10	<1	<.1
CD 71 730726	83-04-13	--	--	--	13	--	9	--
CD 82	83-01-12	--	--	--	<3	--	<1	--
	83-04-12	--	--	--	4	--	1	--
CE 89	83-04-12	--	--	--	<3	--	<1	--
CF 48	83-04-11	--	--	--	7	--	1	--
CF 52	83-04-11	--	--	--	3	--	1	--
CG 5	83-04-08	--	--	--	10	--	<1	--
CG 29 738152	83-04-08	--	--	--	<3	--	<1	--
DC 39	83-04-14	10	<1	10	11	<10	<1	<.1
DC 65	83-04-14	--	--	--	8	--	2	--
DD 146 720541	82-10-05	--	--	--	<3	--	<1	--
	83-04-12	--	--	--	6	--	2	--
DE 83	83-04-12	20	<1	<10	<3	<10	<1	<.1
DF 20	83-04-12	--	--	--	6	--	<1	--
DG 21	83-04-12	--	--	--	<3	--	10	--
EB 25	82-10-06	--	--	--	3	--	<1	--
	83-04-14	--	--	--	7	--	<1	--
EB 33 680108	83-04-14	--	--	--	150	--	64	--
EB 34	83-04-25	--	--	--	<3	--	280	--
ED 9 021637	83-04-13	--	--	--	5	--	<1	--
ED 89	82-10-05	--	--	--	8	--	<1	--
	83-04-13	--	--	--	<3	--	<1	--
ED 99 735603	83-04-13	--	--	--	27	--	3	--
EE 126 737186	83-04-13	--	--	--	<3	--	9	--
EF 1	83-04-13	--	--	--	<3	--	<1	--
EF 36 732439	83-04-13	--	--	--	4	--	1900	--
EF 40 670495	83-04-15	--	--	--	26	--	6	--
EG 33 730148	83-04-13	50	<1	<10	5	<10	9	<.1
FB 12	83-06-16	--	--	--	6	--	<1	--
FC 31 720029	83-04-14	--	--	--	4	--	8	--
FD 53	82-10-06	--	--	--	8	--	6	--
	83-04-15	--	--	--	10	--	5	--
FD 91	83-04-13	30	<1	<10	16	20	2	<.1
FF 13 733238	83-04-15	<10	<1	<10	7	<10	1	<.1

QUALITY OF GROUND WATER

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

LOCAL IDENT- IFIER	STATION NUMBER	GEO- LOGIC UNIT	DATE OF SAMPLE	DEPTH OF WELL, TOTAL (FEET)	ELEV. OF LAND SURFACE DATUM (FT. ABOVE NGVD)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD UNITS)	TEMPER- ATURE, AIR (DEG C)	TEMPER- ATURE (DEG C)
FREDERICK COUNTY, MARYLAND--CONTINUED									
AD 1	394004077284001	400MTRL	83-06-06	(SPRING)	1140.00	68	6.0	24.0	24.0
		400MTRL	83-07-12	(SPRING)	1140.00	65	6.3	22.0	9.5
AD 44	394045077290401	400MTRL	83-04-19	(SPRING)	1420.00	62	6.2	3.0	6.0
		400MTRL	83-06-07	(SPRING)	1420.00	62	6.4	19.0	12.0
BD 3	393923077284301	400MTRL	83-06-01	(SPRING)	1395.00	80	6.3	17.0	9.0
BD 4	393923077284401	400MTRL	83-06-01	(SPRING)	1420.00	55	6.1	17.0	9.0
		400MTRL	83-07-28	(SPRING)	1420.00	59	5.8	23.0	9.0
BD 6	393848077282701	400MTRL	83-04-26	230	1750.00	150	5.8	22.0	9.0
		400MTRL	83-06-06	230	1750.00	245	5.8	24.0	9.0
BD 7	393835077264701	400CTCN	83-04-25	180	1140.00	46	6.1	5.0	11.0
		400CTCN	83-06-02	180	1140.00	51	6.4	17.0	10.0
BD 8	393837077264801	400CTCN	83-04-25	127	1140.00	47	6.1	3.0	9.0
		400CTCN	83-06-02	127	1140.00	59	6.4	17.0	10.0
BD 34	393804077270501	400CTCN	83-07-25	127	1140.00	46	5.5	22.0	11.0
		400CTCN	83-06-02	230	935.00	163	6.9	14.0	11.0
		400CTCN	83-07-13	230	935.00	168	6.6	26.0	12.5
BD 35	393840077291601	400MTRL	83-05-03	250	1514.00	200	5.5	18.0	15.0
		400MTRL	83-06-13	250	1514.00	206	5.4	25.5	--
		400MTRL	83-07-19	250	1514.00	230	5.5	--	--
BD 36	393837077291901	400MTRL	83-06-13	250	1511.00	205	6.2	25.5	--
		400MTRL	83-07-19	250	1511.00	200	5.9	--	--
BD 38	393855077290701	400MTRL	83-06-13	450	1525.00	161	6.6	25.5	--
		400MTRL	83-07-19	450	1525.00	168	6.2	--	--
BD 39	393859077292301	400CTCN	83-05-09	(SPRING)	1380.00	108	5.8	9.0	9.0
		400CTCN	83-06-14	(SPRING)	1380.00	112	5.7	31.0	10.0
		400CTCN	83-07-28	(SPRING)	1380.00	120	6.0	23.0	9.0
BD 40	393906077285101	400CTCN	83-05-02	180	1510.00	72	6.5	16.0	9.5
		400CTCN	83-06-13	180	1510.00	71	6.1	24.0	10.5
		400CTCN	83-07-18	180	1510.00	71	6.3	25.0	10.0
BD 41	393909077284801	400MTRL	83-05-02	(SPRING)	1505.00	79	7.1	16.0	9.5
		400MTRL	83-06-13	160	1505.00	84	7.8	24.5	10.5
		400MTRL	83-07-18	(SPRING)	1505.00	85	6.4	25.0	11.0
BD 43	393833077290001	400CTCN	83-04-27	120	1655.00	21	5.7	18.0	8.0
		400CTCN	83-06-07	120	1655.00	23	5.9	18.0	9.4
		400CTCN	83-07-25	120	1655.00	30	6.0	22.0	8.0
BD 44	393834077290601	400CTCN	83-04-27	247	1650.00	33	5.9	23.0	11.0
		400CTCN	83-06-07	247	1650.00	27	6.0	18.5	11.0
BD 49 71428	393734077262601	377WVRN	83-04-18	202	800.00	44	6.1	7.0	10.0
		377WVRN	83-06-06	202	800.00	50	6.4	24.0	13.0
		377WVRN	83-07-13	202	800.00	55	6.5	28.0	13.0
BD 72	393938077293401	400MTRL	83-05-10	(SPRING)	1330.00	53	6.9	9.0	8.0
		400MTRL	83-06-07	(SPRING)	1330.00	54	6.7	21.0	10.5
		400MTRL	83-07-12	(SPRING)	1330.00	50	6.5	19.0	11.0
BD 73	393939077293801	400MTRL	83-05-10	(SPRING)	1380.00	75	6.4	9.0	8.0
		400MTRL	83-06-07	(SPRING)	1380.00	72	6.5	21.0	10.5
		400MTRL	83-07-12	(SPRING)	1380.00	74	6.4	24.5	11.5
BD 106	393915077283801	400MTRL	83-06-01	(SPRING)	1460.00	49	5.8	15.0	9.5
		400MTRL	83-07-27	(SPRING)	1460.00	56	6.2	23.0	13.0
BD 107	393853077284801	400MTRL	83-04-05	(SPRING)	1480.00	390	6.4	--	9.0
		400MTRL	83-06-01	(SPRING)	1480.00	260	6.2	19.0	12.5
		400MTRL	83-07-19	(SPRING)	1480.00	163	6.2	28.5	13.0
BD 108	393850077292301	400MTRL	83-06-08	(SPRING)	1425.00	150	6.6	19.0	14.0
		400MTRL	83-08-03	(SPRING)	1425.00	165	6.6	26.0	14.0
BD 109	393849077292201	400MTRL	83-06-08	10	1425.00	162	6.5	19.0	10.1
		400MTRL	83-08-03	10	1425.00	165	6.2	26.0	15.0
BD 110	393904077290101	400MTRL	83-06-01	(SPRING)	1450.00	73	5.7	16.0	9.5
		400MTRL	83-07-28	(SPRING)	1450.00	77	6.2	23.0	9.0

Geologic unit (aquifer):

377WVRN - Weverton Formation

400CTCN - Catocin Metabasalt

400MTRL - Metarhyolite and Associated Pyroclastic Sediments

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

LOCAL IDENT- IFIER	DATE OF SAMPLE	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 DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO
FREDERICK COUNTY, MARYLAND--CONTINUED										
AD 1	83-06-06	<1	85	20	5	4.7	1.9	3.3	26	.3
	83-07-12	--	--	20	3	4.9	1.9	3.9	28	.4
AD 44	83-04-19	<1	47	20	9	4.2	2.3	1.8	16	.2
	83-06-07	<1	K6	24	9	5.2	2.7	2.6	19	.2
BD 3	83-06-01	K1	K8	29	5	7.1	2.8	3.9	22	.3
BD 4	83-06-01	<1	K14	18	0	4.2	1.8	2.4	22	.3
	83-07-28	<1	22	19	8	4.6	1.9	2.5	21	.3
BD 6	83-04-26	<1	K15	68	50	14	8.2	13	29	.7
	83-06-06	<1	>200	--	--	--	--	--	--	--
BD 7	83-04-25	<1	K3	18	0	3.1	2.5	1.7	17	.2
	83-06-02	<1	K4	23	0	4.7	2.8	1.7	13	.2
BD 8	83-04-25	<1	23	19	0	3.2	2.6	1.7	16	.2
	83-06-02	<1	<1	25	0	4.0	3.6	2.1	15	.2
	83-07-25	<1	36	18	0	3.1	2.5	2.0	19	.2
BD 34	83-06-02	<1	K1	69	14	11	9.9	6.0	16	.3
	83-07-13	<1	<1	70	5	11	10.0	6.1	16	.3
BD 35	83-05-03	<1	--	49	27	12	4.8	10	30	.6
	83-06-13	<1	<1	60	33	15	5.6	12	30	.7
	83-07-19	--	--	54	15	11	6.5	11	30	.7
BD 36	83-06-13	<1	<1	77	15	25	3.2	8.5	19	.4
	83-07-19	<1	<1	86	28	29	3.0	8.9	18	.4
BD 38	83-06-13	<1	<1	64	3	21	3.1	6.0	16	.3
	83-07-19	<1	<1	66	5	21	3.1	7.7	20	.4
BD 39	83-05-09	K14	94	38	10	9.3	3.5	4.8	21	.4
	83-06-14	<1	<1	40	18	9.9	3.7	4.9	21	.3
	83-07-28	<1	<1	41	18	10	3.7	5.3	22	.4
BD 40	83-05-02	<1	K12	27	0	6.8	2.3	2.7	18	.2
	83-06-13	<1	<1	26	0	6.7	2.2	2.4	16	.2
	83-07-18	--	--	28	0	7.3	2.3	2.7	17	.2
BD 41	83-05-02	<1	K15	31	0	7.2	3.3	3.7	20	.3
	83-06-13	<1	<1	32	0	7.4	3.3	3.0	16	.2
	83-07-18	<1	<1	32	0	7.4	3.4	3.9	20	.3
BD 43	83-04-27	<1	K2	4	0	1.0	.4	1.7	39	.4
	83-06-07	<1	<1	5	0	1.2	.4	2.4	45	.5
	83-07-25	<1	K8	7	0	1.8	.7	3.1	44	.5
BD 44	83-04-27	<1	36	10	0	2.5	.9	2.3	32	.3
	83-06-07	<1	<1	10	4	2.4	.9	2.4	33	.3
BD 49 71428	83-04-18	<1	27	12	0	3.6	.7	2.6	30	.3
	83-06-06	<1	47	13	0	3.9	.7	3.0	30	.4
	83-07-13	<1	<1	15	0	4.6	.8	3.8	33	.4
BD 72	83-05-10	<1	K19	20	0	4.6	2.1	2.8	22	.3
	83-06-07	<1	K6	19	0	4.4	2.1	2.7	23	.3
	83-07-12	K4	<1	18	0	4.1	2.0	3.0	25	.3
BD 73	83-05-10	<1	K17	26	10	6.1	2.7	2.9	19	.3
	83-06-07	K4	140	26	10	5.9	2.7	3.3	21	.3
	83-07-12	<1	32	26	9	6.0	2.7	5.3	30	.5
BD 106	83-06-01	<1	51	25	15	6.3	2.3	2.2	15	.2
	83-07-27	<1	K2	19	9	4.5	1.8	2.5	22	.3
BD 107	83-04-05	K4	K8	91	59	23	8.5	12	22	.6
	83-06-01	K3	23	16	0	4.0	1.5	18	67	2.0
	83-07-19	<1	<1	48	7	12	4.6	11	34	.7
BD 108	83-06-08	24	25	--	--	--	--	--	--	--
	83-08-03	K6	<1	50	19	13	4.3	11	32	.7
BD 109	83-06-08	<1	20	45	11	10	4.6	12	36	.8
	83-08-03	<1	<1	49	19	13	4.3	10	31	.7
BD 110	83-06-01	<1	>200	--	--	--	--	--	--	--
	83-07-28	<1	K7	26	10	6.6	2.3	2.7	18	.2

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

QUALITY OF GROUND WATER

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

LOCAL IDENT- IFIER	DATE OF SAMPLE	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE IT-LAB (MG-L - HCO3)	ALKA- LINITY FIELD (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)
FREDERICK COUNTY, MARYLAND--CONTINUED							
AD 1	83-06-06	.8	17	15	25	6.6	2.7
	83-07-12	.9	20	17	17	7.3	1.7
AD 44	83-04-19	.4	13	11	14	6.5	1.9
	83-06-07	.6	19	15	12	5.3	2.2
BD 3	83-06-01	.8	29	24	23	6.1	2.1
BD 4	83-06-01	.5	12	23	15	4.4	3.4
	83-07-28	.5	14	11	36	1.8	4.6
BD 6	83-04-26	1.0	22	19	56	5.9	31
	83-06-06	--	--	20	61	--	--
BD 7	83-04-25	.4	25	22	34	.1	1.5
	83-06-02	.4	32	--	20	.1	1.3
BD 8	83-04-25	.3	22	21	32	.4	3.6
	83-06-02	.4	33	--	21	1.9	2.3
	83-07-25	.5	22	19	112	.2	2.4
BD 34	83-06-02	.3	67	--	13	2.4	13
	83-07-13	.4	68	65	27	2.4	16
BD 35	83-05-03	2.1	24	22	122	7.1	17
	83-06-13	1.6	32	27	201	6.0	19
	83-07-19	1.0	45	39	226	5.3	16
BD 36	83-06-13	1.4	77	62	77	4.0	11
	83-07-19	1.6	70	58	139	2.0	14
BD 38	83-06-13	1.4	74	61	30	4.3	10
	83-07-19	1.0	75	61	75	4.3	11
BD 39	83-05-09	.6	27	28	68	4.9	8.5
	83-06-14	.5	29	22	93	5.4	8.7
	83-07-28	.4	29	23	46	5.6	6.2
BD 40	83-05-02	.6	30	29	15	.3	2.1
	83-06-13	.3	31	25	39	.9	1.5
	83-07-18	.5	32	27	26	.3	2.9
BD 41	83-05-02	.8	39	33	4.5	.2	1.8
	83-06-13	.6	42	34	1.0	.8	2.7
	83-07-18	.6	42	35	24	.1	2.8
BD 43	83-04-27	.9	8.1	6.0	28	1.1	1.7
	83-06-07	1.2	9.8	6.0	20	.4	1.7
	83-07-25	1.1	14	9.0	24	.5	1.6
BD 44	83-04-27	.8	14	12	30	.6	2.1
	83-06-07	.8	14	6.0	25	.2	2.1
BD 49 71428	83-04-18	1.1	16	12	20	3.4	1.6
	83-06-06	1.8	20	14	13	3.9	1.7
	83-07-13	1.8	23	19	13	3.3	2.5
BD 72	83-05-10	.7	24	20	4.6	2.0	2.3
	83-06-07	.6	24	21	8.5	2.2	2.3
	83-07-12	.8	24	19	12	2.1	1.7
BD 73	83-05-10	.8	20	16	12	6.2	2.2
	83-06-07	.7	20	16	9.2	6.5	2.4
	83-07-12	1.3	20	17	13	6.0	2.5
BD 106	83-06-01	.5	11	10	27	4.3	6.3
	83-07-27	.4	14	10	13	4.3	6.3
BD 107	83-04-05	2.3	39	32	23	12	31
	83-06-01	2.3	42	34	43	7.5	17
	83-07-19	1.3	34	41	36	4.7	21
BD 108	83-06-08	--	--	34	17	--	--
	83-08-03	1.0	40	31	18	9.4	7.5
BD 109	83-06-08	1.7	41	34	19	12	9.2
	83-08-03	1.3	38	30	34	7.9	9.8
BD 110	83-06-01	--	--	17	66	--	--
	83-07-28	1.0	22	16	21	1.9	3.7

QUALITY OF GROUND WATER

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WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

LOCAL IDENT- IFIER	DATE OF SAMPLE	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC DIS- (MG/L AS N)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P)	PHOS- PHATE, ORTHO, DIS- SOLVED (MG/L AS P04)
FREDERICK COUNTY, MARYLAND--CONTINUED					
AD 1	83-06-06	.56	.10	.386	1.2
	83-07-12	.68	.20	.209	.64
AD 44	83-04-19	1.2	--	.209	.64
	83-06-07	1.5	.20	.345	1.1
BD 3	83-06-01	1.1	.20	.101	.31
BD 4	83-06-01	.76	.20	--	--
	83-07-28	.53	.20	.066	.20
BD 6	83-04-26	1.2	--	.000	.00
	83-06-06	--	--	--	--
BD 7	83-04-25	.04	--	.006	.02
	83-06-02	.05	.20	.107	.33
BD 8	83-04-25	.10	--	--	--
	83-06-02	.11	<.10	.091	.28
	83-07-25	.10	<.10	.177	.54
BD 34	83-06-02	.09	.20	--	--
	83-07-13	.20	<.10	--	--
BD 35	83-05-03	3.6	--	--	--
	83-06-13	4.3	.30	.802	2.5
	83-07-19	4.1	<.10	.183	.56
BD 36	83-06-13	3.3	.20	.139	.43
	83-07-19	2.5	.20	--	--
BD 38	83-06-13	2.3	.10	--	--
	83-07-19	2.3	.10	--	--
BD 39	83-05-09	2.4	--	--	--
	83-06-14	3.1	.20	--	--
	83-07-28	3.1	<.10	.034	.10
BD 40	83-05-02	1.7	--	.047	.14
	83-06-13	1.7	.20	--	--
	83-07-18	1.5	--	.187	.57
BD 41	83-05-02	1.3	--	--	--
	83-06-13	1.5	.10	.095	.29
	83-07-18	1.3	.20	.266	.82
BD 43	83-04-27	.08	--	--	--
	83-06-07	.08	.20	--	--
	83-07-25	.10	<.10	.244	.75
BD 44	83-04-27	.59	--	.202	.62
	83-06-07	.38	.10	.190	.58
BD 49 71428	83-04-18	.06	--	--	--
	83-06-06	.08	.50	.446	1.4
	83-07-13	.02	<.10	.364	1.1
BD 72	83-05-10	.55	--	.038	.12
	83-06-07	.46	.60	--	--
	83-07-12	.53	.10	--	--
BD 73	83-05-10	2.0	--	.019	.06
	83-06-07	1.9	--	.519	1.6
	83-07-12	2.4	<.10	--	--
BD 106	83-06-01	1.1	.20	.513	1.6
	83-07-27	1.1	.20	.456	1.4
BD 107	83-04-05	2.5	--	--	--
	83-06-01	2.4	.10	.152	.47
	83-07-19	2.4	.50	.266	.82
BD 108	83-06-08	--	.40	--	--
	83-08-03	4.5	.30	.041	.13
BD 109	83-06-08	3.7	.40	.098	.30
	83-08-03	--	.50	.079	.24
BD 110	83-06-01	--	.20	--	--
	83-07-28	1.7	<.10	.131	.40

QUALITY OF GROUND WATER

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

LOCAL IDENT- IFIER	STATION NUMBER	GEO- LOGIC UNIT	DATE OF SAMPLE	DEPTH OF WELL, TOTAL (FEET)	DEPTH TO BOT- TOM OF SAMPLE INTER- VAL (FT)	DEPTH TO TOP OF SAMPLE INTER- VAL (FT)	ELEV. OF LAND SURFACE DATUM (FT. ABOVE NGVD)	PUMP OR FLOW PERIOD PRIOR TO SAM- PLING (MIN)	FLOW RATE, INSTAN- TANEOUS (GPM)
GARRETT COUNTY, MARYLAND									
CR 76	393305079213201	331GRBR	83-05-18	60	60	40	2480.00	20	10
CR 77	393254079211101	331GRBR	83-05-18	90	90	--	2490.00	2	5.0
CR 78	393030079202001	331GRBR	83-05-18	120	120	120	2600.00	--	.5
CC 35	730069 393107079185302	331GRBR	83-05-18	167	167	107	2480.00	30	15
CC 64	393101079193701	331GRBR	83-05-17	90	90	60	2485.00	30	5.0
CC 65	393114079191001	331GRBR	83-05-17	120	120	118	2480.00	1440	15
FA 35	391619079252701	321CNMG	83-03-14	--	--	--	--	--	--
FB 22	732146 391530079244401	324ALGN	83-06-22	640	640	148	--	4	2.0
GA 3	391316079284301	324ALGN	83-03-17	--	--	--	2640.00	--	2.0
GA 7	391247079290501	321CNMG	83-03-17	--	--	--	2900.00	--	--

LOCAL IDENT- IFIER	DATE OF SAMPLE	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	COLOR (PLAT- INUM- COBALT UNITS)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L AS CACO3)	ACIDITY (MG/L AS H)	ACIDITY (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)
CR 76	83-05-18	144	7.1	10.6	2	70	10	--	--	26
CR 77	83-05-18	202	7.1	10.8	1	94	21	--	--	35
CR 78	83-05-18	250	8.0	5.8	1	99	13	--	--	25
CC 35	730069 83-05-18	124	6.9	--	<1	58	0	--	--	21
CC 64	83-05-17	74	5.8	10.6	2	33	20	--	--	11
CC 65	83-05-17	45	5.8	9.7	3	19	14	--	--	5.2
FA 35	83-03-16	2530	6.5	11.0	--	2400	--	3.7	184	820
FB 22	732146 83-06-22	249	7.6	13.4	--	47	0	--	--	14
GA 3	83-03-17	630	3.4	10.3	--	180	--	3.1	154	44
GA 7	83-03-17	80	6.9	4.9	--	38	20	--	--	11

LOCAL IDENT- IFIER	DATE OF SAMPLE	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY FIELD (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)
CR 76	83-05-18	1.2	.7	2	.0	.5	60	9.2	4.4	1.5
CR 77	83-05-18	1.5	1.2	3	.0	.4	73	11	2.4	4.4
CR 78	83-05-18	8.9	12	21	.5	.8	86	1.7	35	1.0
CC 35	730069 83-05-18	1.3	.6	2	.0	.4	64	16	.6	.6
CC 64	83-05-17	1.3	1.0	6	.0	.6	13	40	14	2.7
CC 65	83-05-17	1.4	.9	9	.0	.5	5.0	15	11	1.3
FA 35	83-03-16	94	7.5	0	.0	11	--	--	2000	3.5
FB 22	732146 83-06-22	3.0	30	55	2.0	5.2	--	6.0	1.1	4.4
GA 3	83-03-17	18	4.9	5	.2	2.8	--	--	340	2.4
GA 7	83-03-17	2.6	.5	3	.0	.8	--	4.4	8.5	1.3

Geologic unit (aquifer):

321CNMG - Conemaugh Formation
 324ALGN - Allegheny Formation
 331GRBR - Greenbrier Formation

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

LOCAL IDENT- I- FIER	DATE OF SAMPLE	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)	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)
		GARRETT COUNTY, MARYLAND--CONTINUED								
CR 76	83-05-18	<.10	5.6	106	76	.14	1.0	--	<.010	--
CR 77	83-05-18	<.10	6.4	154	95	.21	3.6	--	.020	.06
CR 78	83-05-18	.20	11	142	145	.19	<.10	--	<.010	--
CC 35	730069 83-05-18	<.10	7.1	92	70	.13	<.10	--	.030	.09
CC 64	83-05-17	<.10	5.1	79	44	.11	2.1	--	<.010	--
CC 65	83-05-17	<.10	5.9	49	29	.07	1.2	--	.010	.03
FA 35	83-03-16	.10	19	2870	--	3.9	--	<.10	--	--
FB 22	732146 83-06-22	.50	7.0	133	139	.18	--	<.10	--	--
GA 3	83-03-17	.30	32	597	--	.81	--	<.10	--	--
GA 7	83-03-17	<.10	3.7	72	40	.10	--	3.0	--	--

LOCAL IDENT- I- FIER	DATE OF SAMPLE	PHOS-	PHOS-	ALUM-	ALUM-	ALUM-	COPPER,	IRON,	IRON,	IRON,
		PHORUS, ORTHO, DIS- SOLVED (MG/L AS P)	PHATE, ORTHO, DIS- SOLVED (MG/L AS P04)	INUM, TOTAL RECOV- ERABLE (UG/L AS AL)	INUM, SUS- PENDE RECOV. (UG/L AS AL)	INUM, DIS- SOLVED (UG/L AS AL)	DIS- SOLVED (UG/L AS CU)	TOTAL RECOV- ERABLE (UG/L AS FE)	SUS- PENDE RECOV- ERABLE (UG/L AS FE)	DIS- SOLVED (UG/L AS FE)
CR 76	83-05-18	--	--	--	--	--	--	100	90	9
CR 77	83-05-18	--	--	--	--	--	--	300	290	6
CR 78	83-05-18	--	--	--	--	--	--	40	--	<3
CC 35 730069	83-05-18	--	--	--	--	--	--	100	100	3
CC 64	83-05-17	--	--	--	--	--	--	190	170	23
CC 65	83-05-17	--	--	--	--	--	--	190	70	120
FA 35	83-03-16	<.010	--	--	--	500	1	92000	92000	130
FR 22 732146	83-06-22	<.010	--	--	--	<100	--	--	--	<3
GA 3	83-03-17	.050	.15	7200	2300	4900	2	43000	2000	41000
GA 7	83-03-17	<.010	--	--	--	<100	3	2700	2100	560

LOCAL IDENT- I- FIER	DATE OF SAMPLE	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, SUS- PENDE RECOV. (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	STRON- TIUM, DIS- SOLVED (UG/L AS SR)	ZINC, DIS- SOLVED (UG/L AS ZN)
CR 76	83-05-18	--	10	--	<1	--	--
CR 77	83-05-18	--	<10	--	<1	--	--
CR 78	83-05-18	--	10	--	<1	--	--
CC 35 730069	83-05-18	--	10	9	1	--	--
CC 64	83-05-17	--	10	7	3	--	--
CC 65	83-05-17	--	10	4	6	--	--
FA 35	83-03-16	5	4600	200	4400	3300	100
FR 22 732146	83-06-22	--	--	--	16	--	--
GA 3	83-03-17	7	1600	200	1400	290	490
GA 7	83-03-17	6	520	490	28	40	43

QUALITY OF GROUND WATER

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

LOCAL IDENT- IFIER	STATION NUMBER	GEO- LOGIC UNIT	DATE OF SAMPLE	DEPTH OF WELL, TOTAL (FEET)	DEPTH TO BOT- TOM OF SAMPLE INTER- VAL (FT.)	DEPTH TO TOP OF SAMPLE INTER- VAL (FT.)	ELEV. OF LAND SURFACE DATUM (FT. ABOVE NGVD)	PUMP OR FLOW PERIOD PRIOR TO SAM- PLING (MIN)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)
QUEEN ANNES COUNTY, MARYLAND									
DB 10	390011076184401	125AQUI	83-08-16	136	--	--	15.00	--	1060
DB 15 733144	390022076191801	125AQUI	83-07-08	103	103	96	15.00	15	960
DB 23 732961	390033076184501	125AQUI	83-07-06	185	185	165	18.00	15	440
DB 25 733478	390212076181501	125AQUI	83-07-06	145	45	37	19.00	15	370
DB 26	390207076180901	125AQUI	83-07-06	60	--	--	5.00	15	3450
DB 27	390117076191301	125AQUI	83-07-14	145	--	--	15.00	15	--
EA 36 731637	385819076202701	125AQUI	83-07-05	140	140	120	18.00	15	2050
EA 37 733317	385822076202501	125AQUI	83-07-05	92	92	85	17.00	15	350
EA 41 732871	385822076202801	125AQUI	83-08-18	125	--	--	20.00	--	1590
EA 45 732731	385554076213801	125AQUI	83-08-17	210	--	--	15.00	--	360
EA 60 731361	385701076212501	125AQUI	83-08-18	185	--	--	7.00	--	860
EB 117 730904	385900076170001	125AQUI	83-07-13	165	165	155	10.00	15	480
EB 132 732651	385915076175401	125AQUI	83-08-16	220	--	--	10.00	--	500
EB 135 730900	385823076155801	125AQUI	83-07-13	240	240	230	10.00	15	370
EB 136 733392	385617076161801	125AQUI	83-07-14	260	260	240	4.00	15	460
EB 144 731817	385847076184801	125AQUI	83-07-13	240	240	220	10.00	150	440
FA 50 732309	385452076202201	125AQUI	83-07-07	245	245	238	8.00	15	320
FA 60 732330	385254076201901	125AQUI	83-07-07	240	240	230	12.00	15	415
FA 64 732736	385454076214901	125AQUI	83-07-07	231	--	--	5.00	15	725
FA 67 732158	385013076221701	125AQUI	83-07-07	270	270	250	10.00	15	345
FA 68 810069	385328076211301	125AQUI	83-08-18	250	--	--	10.00	--	465
FB 1 731517	385435076175801	125AQUI	83-07-14	250	--	230	10.00	15	420

LOCAL IDENT- IFIER	DATE OF SAMPLE	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	HARD- NESS (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)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO
DB 10	83-08-16	7.2	16.0	.0	440	150	17	43	17	.9
DB 15 733144	83-07-08	>7.2	16.6	.0	460	170	9.4	23	10	.5
DB 23 732961	83-07-06	7.4	15.5	.1	220	81	4.6	7.7	7	.2
DB 25 733478	83-07-06	5.7	15.0	.5	45	9.9	4.8	45	68	3.0
DB 26	83-07-06	6.6	18.0	.0	710	>00	50	460	58	7.8
DB 27	83-07-14	7.2	14.5	.0	590	210	17	13	5	.2
EA 36 731637	83-07-05	7.4	15.5	.1	750	270	19	56	14	.9
EA 37 733317	83-07-05	7.6	17.0	--	150	54	3.9	8.1	10	.3
EA 41 732871	83-08-18	7.3	17.0	.3	590	210	15	40	13	.8
EA 45 732731	83-08-17	7.4	17.0	.0	150	48	7.7	15	17	.6
EA 60 731361	83-08-18	7.6	18.0	.0	290	91	15	44	24	1.2
EB 117 730904	83-07-13	7.8	15.5	.3	3	.7	.2	100	98	27
EB 132 732651	83-08-16	7.5	17.0	.0	190	60	9.1	38	30	1.3
EB 135 730900	83-07-13	7.9	15.5	.2	130	33	12	15	18	.6
EB 136 733392	83-07-14	7.9	16.5	.1	2	.4	.2	100	99	33
EB 144 731817	83-07-13	7.8	16.0	.6	140	48	6.0	38	36	1.4
FA 50 732309	83-07-07	7.9	17.0	.2	100	30	6.0	30	38	1.4
FA 60 732330	83-07-07	7.9	15.5	.6	68	21	3.7	68	67	3.7
FA 64 732736	83-07-07	7.6	17.0	.2	210	62	14	52	34	1.6
FA 67 732158	83-07-07	>7.7	16.5	.0	130	37	9.7	20	24	.8
FA 68 810069	83-08-18	7.6	17.0	.1	170	51	11	22	21	.8
FB 1 731517	83-07-14	7.9	15.5	--	78	21	6.3	44	51	2.2

Geologic unit (aquifer):

125AQUI - Aquia Formation

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

LOCAL IDENT- IFIER	DATE OF SAMPLE	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINIT- FIELD (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)	IODIDE, DIS- SOLVED (MG/L AS I)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)
QUEEN ANNES COUNTY, MARYLAND--CONTINUED										
DB 10	83-08-16	3.9	200	24	230	88	.30	--	39	696
DB 15 733144	83-07-08	5.6	220	--	170	100	<.10	.020	45	659
DB 23 732961	83-07-06	3.9	200	15	7.9	21	.10	<.010	39	286
DB 25 733478	83-07-06	.7	26	100	19	66	.10	<.010	27	188
DB 26	83-07-06	7.6	140	68	82	1100	.20	<.010	31	2020
DB 27	83-07-14	4.4	220	27	17	320	.20	--	30	748
EA 36 731637	83-07-05	4.4	160	12	8.0	560	.10	.010	24	1040
EA 37 733317	83-07-05	2.0	160	7.8	1.9	4.4	.20	<.010	30	201
EA 41 732871	83-08-18	3.1	160	16	9.7	360	<.10	--	29	766
EA 45 732731	83-08-17	6.8	190	15	2.1	4.7	.20	--	31	230
EA 60 731361	83-08-18	5.8	150	7.3	9.4	190	<.10	--	20	466
EB 117 730904	83-07-13	1.3	230	7.0	8.6	7.9	.20	--	33	290
EB 132 732651	83-08-16	4.0	270	17	2.2	9.3	<.10	--	26	311
EB 135 730900	83-07-13	9.5	180	4.4	.4	2.0	1.0	--	18	199
EB 136 733392	83-07-14	.9	230	5.6	5.5	2.5	1.0	--	17	265
EB 144 731817	83-07-13	2.4	220	6.7	7.6	6.3	.20	--	21	262
FA 50 732309	83-07-07	5.4	110	2.7	.9	2.9	.50	<.010	15	157
FA 60 732330	83-07-07	4.4	200	4.9	5.3	11	1.1	.010	19	254
FA 64 732736	83-07-07	6.5	150	7.3	1.2	130	.30	<.010	18	375
FA 67 732158	83-07-07	7.1	160	--	5.2	15	.30	<.010	16	207
FA 68 810069	83-08-18	6.6	220	11	17	4.3	.20	--	21	265
FB 1 731517	83-07-14	10	200	4.9	.9	2.2	.80	--	14	219

LOCAL IDENT- IFIER	DATE OF SAMPLE	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AM- MONIA + ORGANIC DIS. (MG/L AS N)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P)	PHOS- PHATE, ORTHO, DIS- SOLVED (MG/L AS P04)	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	BARIUM, DIS- SOLVED (UG/L AS BA)	IRON, DIS- SOLVED (UG/L AS FE)
DB 10	83-08-16	.94	<.10	--	<.010	--	<100	--	4800
DB 15 733144	83-07-08	.89	<.10	190	<.010	--	<100	130	4200
DB 23 732961	83-07-06	.39	<.10	--	.020	.06	<100	210	890
DB 25 733478	83-07-06	.26	2.9	27	.060	.18	<100	35	73
DB 26	83-07-06	2.7	<.10	--	<.010	--	<100	100	3700
DB 27	83-07-14	1.0	<.10	190	<.010	--	<100	--	4500
EA 36 731637	83-07-05	1.4	<.10	98	<.010	--	100	600	4600
EA 37 733317	83-07-05	.27	<.10	160	.030	.09	100	72	600
EA 41 732871	83-08-18	1.0	<.10	--	<.010	--	<100	--	3400
EA 45 732731	83-08-17	.31	<.10	--	.030	.09	<100	--	660
EA 60 731361	83-08-18	.63	<.10	--	<.010	--	<100	--	1100
EB 117 730904	83-07-13	.39	<.10	230	.070	.21	100	--	21
EB 132 732651	83-08-16	.42	<.10	--	.060	.18	<100	--	560
EB 135 730900	83-07-13	.27	<.10	170	.010	.03	100	--	370
EB 136 733392	83-07-14	.36	<.10	220	.010	.03	<100	--	7
EB 144 731817	83-07-13	.36	<.10	220	.050	.15	<100	--	440
FA 50 732309	83-07-07	.21	<.10	170	.050	.15	<100	110	190
FA 60 732330	83-07-07	.34	<.10	200	.030	.09	<100	66	350
FA 64 732736	83-07-07	.51	<.10	--	<.010	--	<100	180	770
FA 67 732158	83-07-07	.28	<.10	160	<.010	--	<100	47	300
FA 68 810069	83-08-18	.36	<.10	--	.030	.09	<100	--	360
FB 1 731517	83-07-14	.30	<.10	160	.020	.06	<100	--	300

QUALITY OF GROUND WATER

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

LOCAL IDENT- IFIER	DATE OF SAMPLE	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	STRON- TIUM, DIS- SOLVED (UG/L AS SR)	C-13/ C-12 STABLE ISOTOPE RATIO PER MIL	CARRON, ORGANIC DIS- SOLVED (MG/L AS C)
QUEEN ANNES COUNTY, MARYLAND--CONTINUED					
DB 10	83-08-16	26	--	--	5.5
DB 15 733144	83-07-08	18	170	-13.6	2.5
DB 23 732961	83-07-06	8	110	-13.7	1.2
DB 25 733478	83-07-06	69	34	-21.8	1.0
DB 26	83-07-06	5700	440	-14.9	1.0
DB 27	83-07-14	150	--	--	4.0
EA 36 731637	83-07-05	70	550	-16.1	1.6
EA 37 733317	83-07-05	8	73	-17.8	1.9
EA 41 732871	83-08-18	100	--	--	1.8
EA 45 732731	83-08-17	4	--	--	3.3
EA 60 731361	83-08-18	6	--	--	3.3
EB 117 730904	83-07-13	<1	--	--	2.3
EB 132 732651	83-08-16	6	--	--	3.3
EB 135 730900	83-07-13	2	--	--	1.5
EB 136 733392	83-07-14	2	--	--	1.4
EB 144 731817	83-07-13	3	--	--	1.9
FA 50 732309	83-07-07	2	230	-16.0	2.1
FA 60 732330	83-07-07	4	200	-11.4	1.0
FA 64 732736	83-07-07	5	440	-16.0	2.1
FA 67 732158	83-07-07	5	490	-12.5	1.3
FA 68 810069	83-08-18	8	--	--	1.9
FB 1 731517	83-07-14	2	--	--	1.3

LOCAL IDENT- IFIER	STATION	NUMBER	GEO- LOGIC UNIT	DATE OF SAMPLE	DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET)	DEPTH OF WELL, TOTAL (FEET)	DEPTH TO BOT- TOM OF SAMPLE INTER- VAL (FT)	DEPTH TO TOP OF SAMPLE INTER- VAL (FT)	ELEV. OF LAND SURFACE DATUM (FT. ABOVE NGVD)	PUMP OR FLOW PERIOD PRIOR TO SAM- PLING (MIN)
ST MARYS COUNTY, MARYLAND										
DF 84 810119	381548076272102	210CRCS	83-01-05	115.70	920	910	829	105.00	1338	
LOCAL IDENT- IFIER	DATE OF SAMPLE	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	DENSITY (GM/ML AT 20 C)	OXYGEN, DIS- SOLVED (MG/L)	HARD- NESS (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)
DF 84 810119	83-01-05	261	8.4	20.5	.999	.4	3	.6	.3	68
LOCAL IDENT- IFIER	DATE OF SAMPLE	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	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)	IODIDE, DIS- SOLVED (MG/L AS I)	SILICA, DIS- SOLVED (MG/L AS SiO2)
DF 84 810119	83-01-05	96	18	2.5	1.2	6.0	1.8	.30	.010	12
LOCAL IDENT- IFIER	DATE OF SAMPLE	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)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AM- MONIA + ORGANIC DIS- SOLVED (MG/L AS N)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	ANTI- MONY, DIS- SOLVED (UG/L AS SB)	ARSENIC DIS- SOLVED (UG/L AS AS)
DF 84 810119	83-01-05	171	186	.23	<.10	.60	.380	60	1	1

Geologic unit (aquifer): 210CRCS - Cretaceous System

QUALITY OF GROUND WATER

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WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

LOCAL IDENT- I- FIER	DATE OF SAMPLE	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)	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- PENDE RECOV- ERABLE (UG/L AS FE)
ST MARYS COUNTY, MARYLAND--CONTINUED										
DF 84 810119	83-01-05	9	<1	160	<1	<1	5	3	90	60

LOCAL IDENT- I- FIER	DATE OF SAMPLE	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)	LITHIUM DIS- SOLVED (UG/L AS LI)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, SUS- PENDE RECOV. (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY DIS- SOLVED (UG/L AS HG)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO)	NICKEL, DIS- SOLVED (UG/L AS NI)
DF 84 810119	83-01-05	30	4	<4	10	0	11	.3	1	5

LOCAL IDENT- I- FIER	DATE OF SAMPLE	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)	CARBON, ORGANIC TOTAL (MG/L AS C)
DF 84 810119	83-01-05	<1	<1	10	<3	.4

LOCAL IDENT- I- FIER	STATION	NUMBER	GEO- LOGIC UNIT	DATE OF SAMPLE	ELEV. OF LAND SURFACE DATUM (FT. ABOVE NGVD)	PUMP OR FLOW PERIOD PRIOR TO SAM- PLING (MIN)	FLOW RATE, INSTAN- TANEOUS (GPM)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)
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WASHINGTON COUNTY, MARYLAND										
CJ 67	393150077395801	377TMSN	83-08-17	520.00	15	10	687	7.1	13.1	

LOCAL IDENT- I- FIER	DATE OF SAMPLE	AME- TRYNE TOTAL	ATRA- TONE TOTAL (UG/L)	ATRA- ZINE, TOTAL (UG/L)	CYAN- AZINE TOTAL (UG/L)	CYPRA- ZINE TOTAL (UG/L)	PROME- TONE TOTAL (UG/L)
CJ 67	83-08-17	<.10	<.10	.40	<.10	<.10	<.1

LOCAL IDENT- I- FIER	DATE OF SAMPLE	PROME- TRYNE TOTAL (UG/L)	SIMA- ZINE TOTAL (UG/L)	SIME- TONE TOTAL (UG/L)	SIME- TRYNE TOTAL (UG/L)
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CJ 67	83-08-17	<.1	<.10	<.10	<.1
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Geologic unit (aquifer): 377TMSN - Tomstown Dolomite

QUALITY OF GROUND WATER

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

LOCAL IDENT- I- FIER	STATION	NUMBER	GEO- LOGIC UNIT	DATE OF SAMPLE	DEPTH OF WELL, TOTAL (FEET)	DEPTH TO BOT- TOM OF SAMPLE INTER- VAL (FT)	DEPTH TO TOP OF SAMPLE INTER- VAL (FT)	ELEV. OF LAND SURFACE DATUM (FT. ABOVE NGVD)	PUMP OR FLOW PERIOD PRIOR TO SAM- PLING (MIN)	FLOW RATE, INSTAN- TANEOUS (GPM)
WICOMICO COUNTY, MARYLAND										
BD 68	382748075441201		112CLMB	82-11-29	100	100	98	25.00	75	6.7
BD 69	382748075441202		112CLMB	82-11-29	60	60	58	25.00	75	6.0
BD 70	382748075441203		122MNKN	82-11-29	35	35	33	25.00	75	30
BF 64	383742075333701		112CLMB	82-10-19	98	98	88	50.00	15	11
BF 65	382643075334201		112CLMB	82-10-19	49	49	39	50.00	15	6.0
BF 66	382643075334501		112CLMB	82-10-20	55	55	55	50.00	15	6.3
BF 67	382638075334601		112CLMB	82-10-20	70	70	60	50.00	15	8.8
CD 67	382541075401501		112CLMB	82-10-12	60	60	50	45.00	20	65
CE 233	382224075370001		112CLMB	82-10-25	69	69	64	25.00	15	3.6
CE 234	382024075355801		112CLMB	82-10-26	58	58	48	30.00	10	13
CE 235	382024075362001		112CLMB	82-10-26	60	60	50	25.00	15	4.2
CE 236	382004075365101		112CLMB	82-10-27	72	72	67	15.00	10	3.6
CE 239	382052075380001		112CLMB	82-10-13	55	55	50	10.00	20	7.3
CE 240	382456075381801		112CLMB	82-10-12	80	60	60	50.00	15	6.0
CF 84	382417075340401		112CLMB	82-10-18	61	61	53	50.00	20	7.0
			112CLMB	82-10-25	61	61	53	50.00	20	--
			112CLMB	82-10-26	61	61	53	50.00	20	--
CF 186	382411075340301		112CLMB	82-10-19	99	99	89	43.00	15	4.9
CF 187	382332075330101		112CLMB	82-10-26	59	59	54	50.00	15	7.2
CF 192	382351075331301		112CLMB	82-10-13	75	75	65	43.00	20	9.1
CG 56	382348075292801		112CLMB	83-01-05	60	60	50	60.00	15	4.3
CH 45	382446075204201		112CLMB	83-01-05	--	--	--	40.00	15	9.0
CH 47	382454075200701		122PCMK	82-11-17	149	149	147	42.00	60	15
			122PCMK	83-07-06	149	149	147	42.00	40	27
CH 48	382454075200702		112CLMB	83-07-06	149	105	103	42.00	30	30
CH 49	382454075200703		112CLMB	82-11-17	44	44	42	42.00	60	6.7
			112CLMB	83-07-06	44	44	42	42.00	35	23
DC 32	381650075491801		112CLMB	83-01-05	110	110	100	5.00	15	7.5
DE 72	381947075365301		112CLMB	82-10-26	58	58	53	30.00	15	2.4
DG 13	381951075272001		112CLMB	83-01-05	60	60	50	45.00	15	8.1
LOCAL IDENT- I- FIER	DATE OF SAMPLE	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	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)	PERCENT SODIUM
BD 68	82-11-29	67	6.4	15.6	12	0	2.9	1.2	9.9	61
BD 69	82-11-29	59	6.5	15.6	7	0	1.9	.6	6.7	64
BD 70	82-11-29	88	6.4	15.8	8	5	2.1	.8	5.5	56
BF 64	82-10-19	62	5.3	17.0	8	1	2.4	.5	8.0	65
BF 65	82-10-19	142	5.3	21.5	28	23	8.7	1.6	12	46
BF 66	82-10-20	146	5.2	19.5	26	20	8.0	1.5	13	49
BF 67	82-10-20	84	5.4	22.0	9	0	2.7	.4	10	69
CD 67	82-10-12	68	5.3	16.1	14	1	4.2	.7	8.3	55
CE 233	82-10-25	110	5.5	13.0	22	14	6.5	1.3	9.4	46
CE 234	82-10-26	127	6.0	16.3	31	20	9.6	1.6	9.9	40
CE 235	82-10-26	220	5.7	15.0	72	63	22	4.2	8.1	19
CE 236	82-10-27	158	5.5	18.4	30	15	8.0	2.5	14	48
CE 239	82-10-13	72	6.1	15.5	--	--	--	--	--	--
CE 240	82-10-12	86	4.6	15.0	17	15	5.0	1.2	7.9	45
CF 84	82-10-18	403	6.9	19.3	31	0	9.2	2.0	72	81
	82-10-25	377	6.8	16.5	--	--	--	--	--	--
	82-10-26	370	6.7	25.5	--	--	--	--	--	--
CF 186	82-10-19	105	6.2	17.5	13	0	3.5	1.0	20	76
CF 187	82-10-26	76	5.6	15.1	14	7	4.4	.7	9.3	58
CF 192	82-10-13	313	5.2	15.3	93	87	30	4.4	16	26
CG 56	83-01-05	97	5.7	14.2	12	0	3.6	.8	15	70
CH 45	83-01-05	79	5.3	15.1	7	0	1.8	.7	8.4	68
CH 47	82-11-17	212	6.6	9.0	41	0	11	3.4	12	37
	83-07-06	232	6.6	15.0	--	--	--	--	--	--
CH 48	83-07-06	226	6.6	15.0	36	0	12	1.5	9.5	36
CH 49	82-11-17	119	6.3	15.0	30	0	9.6	1.4	8.4	37
	83-07-06	117	6.2	16.0	--	--	--	--	--	--
DC 32	83-01-05	583	6.8	14.8	--	--	.0	<.0	140	6
DE 72	82-10-26	243	5.5	16.0	51	32	14	3.9	21	45
DG 13	83-01-05	151	6.2	15.2	8	0	2.0	.7	7.6	64

Geologic unit (aquifer): 112CLMB - Columbia Formation; 122MNKN - Manokin Aquifer; 122PCMK - Pocomoke Aquifer

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

LOCAL IDENT- IFIER	DATE OF SAMPLE	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE IT-FLD AS (MG/L HCO3)	ALKA- LINITY, CARBON- ATE IT-FLD (MG/L - CACO3)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFIDE TOTAL (MG/L AS S)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	SILICA, DIS- SOLVED (MG/L AS SiO2)
WICOMICO COUNTY, MARYLAND--CONTINUED										
BD 68	82-11-29	1.3	1.3	--	--	19	<.5	6.0	5.9	25
BD 69	82-11-29	1.1	.9	--	--	8.6	<.5	2.0	5.2	24
BD 70	82-11-29	.9	.7	--	--	2.3	<.5	7.0	8.3	26
BF 64	82-10-19	1.3	1.0	8.0	6.6	64	--	2.0	6.1	26
BF 65	82-10-19	1.0	1.5	6.0	5.0	47	--	3.0	9.1	27
BF 66	82-10-20	1.2	2.2	7.0	6.0	67	--	8.0	11	23
BF 67	82-10-20	1.6	.8	13	11	84	--	11	7.2	28
CD 67	82-10-12	1.0	1.1	15	12	119	--	<1.0	6.3	29
CE 233	82-10-25	.9	1.7	9.0	7.0	47	--	5.0	12	26
CE 234	82-10-26	.8	1.2	13	11	21	--	5.0	12	22
CE 235	82-10-26	.4	1.6	11	9.0	36	--	23	11	22
CE 236	82-10-27	1.1	2.6	19	16	95	--	2.0	19	21
CE 239	82-10-13	--	--	21	17	27	--	--	--	--
CE 240	82-10-12	.9	3.1	--	--	97	--	1.0	9.6	14
CF 84	82-10-18	5.8	3.6	--	--	29	--	12	25	17
	82-10-25	--	--	133	109	33	--	--	--	--
	82-10-26	--	--	130	107	41	--	--	--	--
CF 186	82-10-19	2.5	.6	56	46	56	--	2.0	6.5	40
CF 187	82-10-26	1.1	.6	9.0	7.0	36	--	<1.0	8.7	25
CF 192	82-10-13	.8	2.8	8.0	6.0	80	--	4.0	14	25
CG 56	83-01-05	1.9	1.2	44	36	139	<.5	<1.0	6.9	24
CH 45	83-01-05	1.4	.9	--	--	68	--	7.0	10	33
CH 47	82-11-17	.8	1.7	--	--	27	<.5	4.0	6.7	32
	83-07-06	--	--	--	--	--	--	--	--	--
CH 48	83-07-06	.7	1.0	--	--	23	--	19	11	41
CH 49	82-11-17	.7	1.4	--	--	29	<.5	9.0	9.5	33
	83-07-06	--	--	--	--	--	--	--	--	--
DC 32	83-01-05	--	.3	--	--	51	--	15	60	--
DE 72	82-10-26	1.3	3.1	23	19	116	--	10	30	23
DG 13	83-01-05	1.2	1.1	80	65	80	<.5	3.0	6.4	25

LOCAL IDENT- IFIER	DATE OF SAMPLE	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS NH4)
BD 68	82-11-29	69	.09	.060	.16	.140	.18
BD 69	82-11-29	56	.07	<.010	<.10	.060	.08
BD 70	82-11-29	66	.07	<.010	.15	.220	.28
BF 64	82-10-19	62	.08	.010	2.7	.040	.05
BF 65	82-10-19	108	.15	.010	9.4	.050	.06
BF 66	82-10-20	70	.10	<.010	9.6	<.010	.01
BF 67	82-10-20	67	.09	<.010	2.7	<.010	.01
CD 67	82-10-12	--	--	<.010	3.2	<.010	.01
CE 233	82-10-25	66	.09	<.010	5.3	.020	.03
CE 234	82-10-26	98	.13	.010	6.8	.020	.03
CE 235	82-10-26	155	.21	.010	13	.020	.03
CE 236	82-10-27	81	.11	<.010	7.3	.060	.08
CE 239	82-10-13	--	--	.020	1.9	.060	.08
CE 240	82-10-12	43	.06	<.010	5.7	<.010	.01
CF 84	82-10-18	250	.34	.130	8.6	.640	.82
	82-10-25	--	--	--	--	--	--
	82-10-26	--	--	--	--	--	--
CF 186	82-10-19	104	.14	.010	.39	.060	.08
CF 187	82-10-26	--	--	<.010	4.7	<.010	.01
CF 192	82-10-13	313	.43	.020	48	.070	.09
CG 56	83-01-05	--	--	<.010	.13	.020	.03
CH 45	83-01-05	72	.09	.010	.18	.370	.48
CH 47	82-11-17	131	.14	--	--	--	--
	83-07-06	--	--	.010	<.10	.560	.72
CH 48	83-07-06	152	.17	.010	<.10	.680	.88
CH 49	82-11-17	95	.12	--	--	--	--
	83-07-06	--	--	.030	.12	1.20	1.5
DC 32	83-01-05	--	--	.070	.12	.050	.06
DE 72	82-10-26	156	.21	.010	9.0	<.010	.01
DG 13	83-01-05	114	.12	.020	.11	.300	.39

QUALITY OF GROUND WATER

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

LOCAL IDENT- I- FIER	DATE OF SAMPLE	NITRO- GEN, ORGANIC DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N)	NITRO- GEN DIS- SOLVED (MG/L AS N)	IRON, DIS- SOLVED (UG/L AS FE)
WICOMICO COUNTY, MARYLAND--CONTINUED					
BD 68	82-11-29	.06	.20	.36	1900
BD 69	82-11-29	--	<.10	--	6100
BD 70	82-11-29	.00	.10	.25	14000
BF 64	82-10-19	--	<.10	--	65
BF 65	82-10-19	--	<.10	--	17
BF 66	82-10-20	--	.50	10	4
BF 67	82-10-20	--	.30	3.0	4
CD 67	82-10-12	--	<.10	--	<3
CE 233	82-10-25	.48	.50	5.8	21
CE 234	82-10-26	.38	.40	7.2	<3
CE 235	82-10-26	.58	.60	14	37
CE 236	82-10-27	.14	.20	7.5	2100
CE 239	82-10-13	1.2	1.3	3.2	--
CE 240	82-10-12	--	<.10	--	3
CF 84	82-10-18	.00	.60	9.2	22
	82-10-25	--	--	--	--
	82-10-26	--	--	--	--
CF 186	82-10-19	--	<.10	--	720
CF 187	82-10-26	--	.70	5.4	<3
CF 192	82-10-13	--	<.10	--	4
CG 56	83-01-05	.38	.40	.53	31
CH 45	83-01-05	.23	.60	.78	4700
CH 47	82-11-17	--	--	--	27000
	83-07-06	.54	1.1	--	--
CH 48	83-07-06	.52	1.2	--	27000
CH 49	82-11-17	--	--	--	4300
	83-07-06	.50	1.7	1.8	--
DC 32	83-01-05	.25	.30	.42	65
DE 72	82-10-26	--	.90	9.9	48
DG 13	83-01-05	.00	.20	.31	28000

LOCAL IDENT- I- FIER	STATION NUMBER	DATE OF SAMPLE	AME- TRYNE TOTAL	ATRA- TONE TOTAL (UG/L)	ATRA- ZINE, TOTAL (UG/L)	CYAN- AZINE TOTAL (UG/L)	CYPRA- ZINE TOTAL (UG/L)	PROME- TONE TOTAL (UG/L)	PROME- TRYNE TOTAL (UG/L)
BD 71	382458075413401	83-09-20	<.10	<.10	<.10	<.10	<.10	<.1	<.1
BF 78	382717075323501	83-09-19	<.10	<.10	<.10	<.10	<.10	<.1	<.1
CD 68	382036075414301	83-09-19	<.10	<.10	<.10	<.10	<.10	<.1	<.1

LOCAL IDENT- I- FIER	DATE OF SAMPLE	PRO- PAZINE TOTAL (UG/L)	SIMA- ZINE TOTAL (UG/L)	SIME- TONE TOTAL (UG/L)	SIME- TRYNE TOTAL (UG/L)
BD 71	83-09-20	<.10	<.10	<.10	<.1
BF 78	83-09-19	<.10	<.10	<.10	<.1
CD 68	83-09-19	<.10	<.10	<.10	<.1

QUALITY OF GROUND WATER

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WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

LOCAL IDENT- IFIER	STATION NUMBER	GEO- LOGIC UNIT	DATE OF SAMPLE	DEPTH OF WELL, TOTAL (FEET)	DEPTH TO BOT- TOM OF SAMPLE INTER- VAL (FT)	DEPTH TO TOP OF SAMPLE INTER- VAL (FT)	ELEV. OF LAND SURFACE DATUM (FT. ABOVE NGVD)	PUMP OR FLOW PERIOD PRIOR TO SAM- PLING (MIN)	FLOW RATE, INSTAN- TANEOUS (GPM)
WORCESTER COUNTY, MARYLAND									
AE 26	382541075191701	112CLMB	82-12-14	50	50	45	35.00	15	5.3
AF 30	382639075114001	122PCMK	82-12-07	220	220	218	22.00	60	38
AF 31	382639075114002	122PCMK	82-12-07	145	145	143	22.00	60	4.3
AF 32	382639075114003	112CLMB	82-12-07	65	65	63	22.00	60	20
AG 17	382659075084001	112CLMB	82-12-14	40	40	35	20.00	15	9.0
BE 32	382305075165201	112CLMB	83-01-04	55	55	55	35.00	15	3.0
BF 68	382145075121501	112CLMB	82-12-14	70	70	60	35.00	30	5.8
BF 69	382453075141201	112CLMB	82-12-15	44	44	39	30.00	25	4.0
BF 70	382416075100801	112CLMB	82-12-14	50	50	5.0	10.00	15	6.5
BF 71	382206075134501	112CLMB	82-12-15	43	43	38	30.00	20	7.0
BG 52	382452075072801	112PCPC	82-10-05	43	43	38	5.00	15	3.3
CA 3	381615075360601	112CLMB	83-01-05	30	30	20	45.00	2	2.0
CB 10	381556075325201	112CLMB	83-01-05	35	35	30	55.00	15	8.6
CD 21	381756075210501	112CLMB	83-01-03	43	43	38	20.00	20	3.5
CD 22	381657075210801	112CLMB	82-12-15	65	65	40	25.00	45	9.0
CD 23	381612075233001	112CLMB	82-12-15	35	35	29	35.00	25	2.9
CE 30	381756075172801	112CLMB	82-12-15	38	38	33	30.00	15	6.5
CF 52	381737075131501	112CLMB	82-12-15	25	25	5.0	25.00	15	1.3
DB 4	381115075321801	112CLMB	83-01-04	40	40	34	25.00	15	6.4
DC 29	381244075253401	112CLMB	83-01-04	65	60	50	35.00	10	2.5
DC 30	381323075275801	112CLMB	83-01-04	60	60	50	40.00	15	4.5
DE 37	381133075175701	112CLMB	83-01-03	67	57	47	20.00	15	3.5
DE 38	381211075175001	112CLMB	83-01-03	60	60	55	35.00	15	5.3
DF 3	381454075105101	112CLMB	82-12-14	--	--	20	10.00	30	4.8
DF 36	381342075160901	112CLMB	83-01-03	25	25	5.0	10.00	15	--

LOCAL IDENT- IFIER	DATE OF SAMPLE	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD 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)	PERCENT SODIUM
AE 26	82-12-14	589	4.8	16.6	99	94	29	6.5	11	15
AF 30	82-12-07	80	5.9	14.5	11	0	2.8	.9	7.5	57
AF 31	82-12-07	85	6.3	15.0	11	0	3.1	.9	7.0	55
AF 32	82-12-07	417	5.4	14.8	110	47	29	8.2	28	35
AG 17	82-12-14	118	5.3	15.2	16	9	3.8	1.5	15	64
BE 32	83-01-04	168	4.9	14.0	49	45	9.8	6.0	6.6	21
BF 68	82-12-14	329	5.8	13.6	5	0	.0	1.3	66	96
BF 69	82-12-15	185	6.3	15.0	49	0	16	2.1	11	32
BF 70	82-12-14	195	5.6	13.1	42	33	11	3.5	14	41
BF 71	82-12-15	97	6.0	15.1	11	0	3.1	.9	13	70
BG 52	82-10-05	199	6.4	19.6	44	0	11	4.1	18	45
CA 3	83-01-05	148	5.0	11.0	32	29	6.5	3.9	8.4	71
CB 10	83-01-05	95	5.9	13.7	21	0	5.1	2.1	11	51
CD 21	83-01-03	161	5.5	12.2	42	37	10	4.2	11	35
CD 22	82-12-15	284	5.7	13.3	72	64	15	8.3	20	37
CD 23	82-12-15	72	6.2	15.0	9	0	2.0	1.0	9.7	68
CE 30	82-12-15	177	6.4	13.8	39	0	9.3	3.9	16	46
CF 52	82-12-15	64	5.5	13.8	18	0	3.9	1.9	13	40
DB 4	83-01-04	102	6.1	11.0	16	0	4.3	1.3	9.7	55
DC 29	83-01-04	240	6.0	11.0	66	48	17	5.8	16	74
DC 30	83-01-04	62	6.0	12.0	12	0	3.5	.8	7.8	57
DE 37	83-01-03	84	5.6	14.1	10	0	2.2	1.0	12	70
DE 38	83-01-03	145	5.2	12.7	--	--	.0	<.0	35	--
DF 3	82-12-14	272	5.9	15.8	49	29	7.5	7.3	29	56
DF 36	83-01-03	544	5.1	12.1	190	157	49	16	17	16

Geologic unit (aquifer):

112CLMB - Columbia Formation
112PCPC - Pleistocene-Pliocene Series
122PCMK - Pocomoke Aquifer

QUALITY OF GROUND WATER

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

LOCAL IDENT- IFIER	DATE OF SAMPLE	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	RICAR- BONATE IT-FLD (MG/L AS HCO3)	ALKA- LINITY, CARBON- ATE IT-FLD (MG/L - CAC03)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFIDE TOTAL (MG/L AS S)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	SILICA, DIS- SOLVED (MG/L AS SiO2)
WORCESTER COUNTY, MARYLAND--CONTINUED										
AE 26	82-12-14	.5	27	7.0	8.0	176	<.5	22	25	6.8
AF 30	82-12-07	1.0	1.1	85	70	170	<.5	3.0	8.8	23
AF 31	82-12-07	.9	1.0	203	168	162	<.5	2.0	7.8	21
AF 32	82-12-07	1.2	4.1	72	59	455	<.5	110	42	23
AG 17	82-12-14	1.7	2.0	--	--	68	<.5	5.0	15	21
BE 32	83-01-04	.4	3.4	5.0	4.0	100	<.5	50	7.1	12
BF 68	82-12-14	12	.2	32	26	81	<.5	44	28	25
BF 69	82-12-15	.7	1.0	--	--	60	<.5	5.0	9.4	47
BF 70	82-12-14	1.0	1.6	11	9.0	44	<.5	4.0	13	22
BF 71	82-12-15	1.7	.7	35	29	56	<.5	3.0	11	37
BG 52	82-10-05	1.2	3.1	98	81	62	--	4.0	13	25
CA 3	83-01-05	.7	5.9	4.0	3.0	64	<.5	3.0	11	16
CB 10	83-01-05	1.1	1.0	51	42	102	<.5	2.0	5.2	51
CD 21	83-01-03	.8	1.8	7.0	6.0	35	<.5	20	8.9	22
CD 22	82-12-15	1.1	2.1	--	--	31	<.5	10	22	22
CD 23	82-12-15	1.4	.6	28	23	28	<.5	4.0	8.5	28
CE 30	82-12-15	1.1	.9	150	120	95	<.5	19	14	41
CF 52	82-12-15	1.4	.8	24	20	121	<.5	9.0	15	23
DB 4	83-01-04	1.1	.9	41	34	52	<.5	<5.0	11	40
DC 29	83-01-04	.9	1.1	22	18	35	<.5	28	23	24
DC 30	83-01-04	1.0	.7	15	12	24	<.5	<5.0	6.6	23
DE 37	83-01-03	1.7	1.2	14	11	56	<.5	<5.0	9.7	24
DE 38	83-01-03	--	<.1	34	28	341	<.5	16	14	32
DF 3	82-12-14	1.8	1.1	24	20	48	<.5	19	43	22
DF 36	83-01-03	.6	6.6	39	32	492	<.5	52	30	10

LOCAL IDENT- IFIER	DATE OF SAMPLE	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS NH4)
AE 26	82-12-14	131	.18	--	--	--	--
AF 30	82-12-07	96	.12	<.010	<.10	.220	.28
AF 31	82-12-07	151	.19	<.010	<.10	.220	.28
AF 32	82-12-07	288	.38	<.010	1.2	.400	.52
AG 17	82-12-14	68	.09	--	--	--	--
BE 32	83-01-04	100	.13	<.010	.65	.070	.09
BF 68	82-12-14	229	.31	.020	11	.040	.05
BF 69	82-12-15	140	.18	<.010	.20	1.40	1.8
BF 70	82-12-14	75	.10	--	--	--	--
BF 71	82-12-15	89	.12	<.010	<.10	.060	.08
BG 52	82-10-05	126	.17	.020	<.10	.030	.04
CA 3	83-01-05	57	.08	<.010	11	.210	.27
CB 10	83-01-05	103	.14	<.010	<.10	.010	.01
CD 21	83-01-03	82	.11	<.010	8.2	.030	.04
CD 22	82-12-15	105	.14	--	--	--	--
CD 23	82-12-15	72	.09	--	--	--	--
CE 30	82-12-15	183	.24	--	--	--	--
CF 52	82-12-15	78	.11	--	--	--	--
DB 4	83-01-04	--	--	.010	.17	.830	1.1
DC 29	83-01-04	141	.21	.020	7.2	.040	.05
DC 30	83-01-04	--	--	<.010	1.6	.010	.01
DE 37	83-01-03	--	--	<.010	1.5	.020	.03
DE 38	83-01-03	--	--	<.010	.15	.030	.04
DF 3	82-12-14	143	.19	<.010	2.6	.600	.77
DF 36	83-01-03	358	.49	.020	35	2.50	3.2

QUALITY OF GROUND WATER

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WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

LOCAL IDENT- I- FIER	DATE OF SAMPLE	NITRO- GEN. ORGANIC DIS- SOLVED (MG/L AS N)	NITRO- GEN. AM- MONIA + ORGANIC DIS. (MG/L AS N)	NITRO- GEN DIS- SOLVED (MG/L AS N)	IRON. DIS- SOLVED (UG/L AS FE)
WORCESTER COUNTY, MARYLAND--CONTINUED					
AE 26	82-12-14	--	--	--	490
AF 30	82-12-07	.18	.40	--	7100
AF 31	82-12-07	.08	.30	--	8600
AF 32	82-12-07	.10	.50	1.7	7600
AG 17	82-12-14	--	--	--	200
BE 32	83-01-04	.93	1.0	1.7	2300
BF 68	82-12-14	--	<.10	--	3
BF 69	82-12-15	.70	2.1	2.3	9500
BF 70	82-12-14	--	--	--	58
BF 71	82-12-15	.04	.10	--	3000
BG 52	82-10-05	.37	.40	--	3
CA 3	83-01-05	.59	.80	12	95
CB 10	83-01-05	.59	.60	--	300
CD 21	83-01-03	.37	.40	8.6	290
CD 22	82-12-15	--	--	--	800
CD 23	82-12-15	--	--	--	4600
CE 30	82-12-15	--	--	--	4700
CF 52 731148	82-12-15	--	--	--	31
DB 4	83-01-04	.37	1.2	1.4	6900
DC 29	83-01-04	.36	.40	7.6	2800
DE 30	83-01-04	.09	.10	1.7	<3
DE 37	83-01-03	.28	.30	1.8	190
DE 38	83-01-03	.27	.30	.45	<3
DF 3	82-12-14	.20	.80	3.4	1100
DF 36	83-01-03	.80	3.3	38	34

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FACTORS FOR CONVERTING INCH-POUND UNITS TO INTERNATIONAL SYSTEM UNITS (SI)

The following factors may be used to convert the inch-pound units published herein to the International System of Units (SI). This report contains both the inch-pound and SI unit equivalents in the station manuscript descriptions.

Multiply inch-pound units	By	To obtain SI units
<i>Length</i>		
inches (in)	2.54×10^1	millimeters (mm)
	2.54×10^{-2}	meters (m)
feet (ft)	3.048×10^{-1}	meters (m)
miles (mi)	1.609×10^0	kilometers (km)
<i>Area</i>		
acres	4.047×10^3	square meters (m ²)
	4.047×10^{-1}	square hectometers (hm ²)
	4.047×10^{-3}	square kilometers (km ²)
square miles (mi ²)	2.590×10^0	square kilometers (km ²)
<i>Volume</i>		
gallons (gal)	3.785×10^0	liters (L)
	3.785×10^0	cubic decimeters (dm ³)
	3.785×10^{-3}	cubic meters (m ³)
million gallons	3.785×10^3	cubic meters (m ³)
	3.785×10^{-3}	cubic hectometers (hm ³)
cubic feet (ft ³)	2.832×10^1	cubic decimeters (dm ³)
	2.832×10^{-2}	cubic meters (m ³)
cfs-days	2.447×10^3	cubic meters (m ³)
	2.447×10^{-3}	cubic hectometers (hm ³)
acre-feet (acre-ft)	1.233×10^3	cubic meters (m ³)
	1.233×10^{-3}	cubic hectometers (hm ³)
	1.233×10^{-6}	cubic kilometers (km ³)
<i>Flow</i>		
cubic feet per second (ft ³ /s)	2.832×10^1	liters per second (L/s)
	2.832×10^1	cubic decimeters per second (dm ³ /s)
	2.832×10^{-2}	cubic meters per second (m ³ /s)
gallons per minute (gal/min)	6.309×10^{-2}	liters per second (L/s)
	6.309×10^{-2}	cubic decimeters per second (dm ³ /s)
	6.309×10^{-5}	cubic meters per second (m ³ /s)
million gallons per day	4.381×10^1	cubic decimeters per second (dm ³ /s)
	4.381×10^{-2}	cubic meters per second (m ³ /s)
<i>Mass</i>		
tons (short)	9.072×10^{-1}	megagrams (Mg) or metric tons

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