Water Resources Data for Maryland and Delaware

Part 1. Surface Water Records

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

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

CALENDAR FOR WATER YEAR 1971

OCTOBER 1970

S	M	T	W	T	F	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

NOVEMBER 1970

S	M	T	W	T	F	S
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29	30					

DECEMBER 1970

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JANUARY 1971

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31						

FEBRUARY 1971

S	M	T	W	T	F	S
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28						

MARCH 1971

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APRIL 1971

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MAY 1971

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JUNE 1971

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JULY 1971

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AUGUST 1971

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22	23	24	25	26	27	28
29	30	31				

SEPTEMBER 1971

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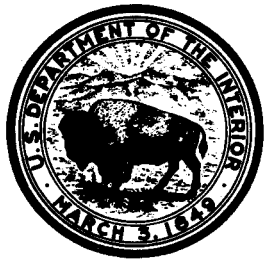
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30		

1971

Water Resources Data for Maryland and Delaware

Part 1. Surface Water Records



UNITED STATES
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GEOLOGICAL SURVEY

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

Prepared in cooperation with

Delaware Geological Survey
Delaware State Highway Department
Maryland Geological Survey
Maryland State Roads Commission
Maryland Department of Health
Maryland National Capital Park and Planning Commission
Washington Suburban Sanitary Commission
City of Baltimore
Corps of Engineers, U. S. Army
National Park Service, U. S. Department of the Interior
District of Columbia

Water resources records, 1971, for Maryland and Delaware are in the following reports of the U.S. Geological Survey:

1. Water Resources Data for Maryland and Delaware
   Part 1: Surface Water Records

2. Water Resources Data for Maryland and Delaware
   Part 2: Water Quality Records

Copies of this report may be obtained from
District Chief, Water Resources Division
U. S. Geological Survey
8809 Satyr Hill Road
Parkville, Maryland 21234

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PART 1. SURFACE WATER RECORDS

INTRODUCTION

Surface-water records for the 1971 water year for Maryland and Delaware, including records of streamflow or reservoir storage at gaging stations, partial-record stations, and miscellaneous sites, are given in this report and their locations shown in figure 2. Records for a few pertinent gaging stations in bordering States also are included. The records were collected and computed by the Water Resources Division of the U. S. Geological Survey under the direction of W. F. White, district chief. These data represent that portion of the National Water Data System collected by the U. S. Geological Survey and cooperating State and Federal agencies in Maryland and Delaware.

Through September 30, 1960, the records of discharge and stage of streams and contents and stage of lakes or reservoirs were published in an annual series of U. S. Geological Survey water-supply papers entitled "Surface Water Supply of the United States."

Beginning with the 1961 water year, surface-water records have been released by the Geological Survey in annual reports on a State-boundary basis. Distribution of these reports is limited; they are designed primarily for rapid release of data shortly after the end of the water year to meet local needs. The discharge and reservoir storage records for 1961-65 have been published in a Geological Survey water-supply paper series entitled "Surface Water Supply of the United States 1961-65." There will be a similar series of water supply papers for the water years 1966-70.

COOPERATION

Cooperative agreements between the U. S. Geological Survey and organizations of the State of Maryland for the systematic collection of streamflow records began in 1896, continued through 1909, and after a lapse of 15 years, resumed in 1924. Similar agreements between the Survey and organizations of the State of Delaware began in 1943. Organizations that supplied data are acknowledged in station descriptions. Organizations that assisted in collecting data through cooperative agreements with the Survey are:

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

Delaware Department of Highways and Transportation, E. A. Davidson, director of operations.

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

Maryland State Roads Commission, D. H. Fisher, commission chairman and director of highways.

Maryland Department of Health, W. J. Peeples, M.D., M.P.H., Commissioner.

Maryland National Capital Park and Planning Commission, R. C. McDonell, executive director.

Washington Suburban Sanitary Commission, R. J. McLeod, general manager and chief engineer.

District of Columbia Department of Sanitary Engineering, N. E. Jackson, director.

City of Baltimore, R. J. Kretzschmar, chief of water division.

Assistance in the form of funds or services was given by the Corps of Engineers, U. S. Army, in collecting records for 28 gaging stations published in this report.

Assistance was also furnished by the Weather Bureau, U. S. Department of Commerce; the National Park Service, U. S. Department of the Interior.

The following organizations aided in collecting records:

Maryland: Upper Potomac River Commission; Baltimore County; Harford County; municipalities of Bel Air, Cumberland, Frederick, and Salisbury; Celanese Fibers Co.; Congoleum-Nairn Inc.; W. J. Dickey and Sons, Inc.; Kelly Springfield Tire Co.; Potomac Edison Co.; Potomac Electric Power Co.; and West Virginia Pulp and Paper Co.

DEFINITION OF TERMS

Definition of terms related to streamflow and other hydrologic data, as used in this report, are defined as follows:

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 325,851 gallons.

Cfs-day is the volume of water represented by a flow of 1 cubic foot per second for 24 hours. It is equivalent to 86,400 cubic feet, 1,9835 acre-feet, or 646,317 gallons, and represents a runoff of 0.0372 inch from 1 square mile.

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.

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 (cfs) is the rate of discharge representing a volume of 1 cubic foot passing a given point during 1 second, and is equivalent to 7.48 gallons per second or 448.8 gallons per minute.

Discharge is the volume of water (or more broadly, total fluids), that passes a given point within a given period of time.

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 stream above the specified point. Figures of drainage area given herein include all closed basins, or non-contributing areas, within the area unless otherwise noted.

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 gage height or discharge are obtained. When used in connection with a discharge record, the term is applied only to those gaging stations where a continuous record of discharge is obtained.

Partial-record station ia a particular site where limited streamflow data are collected systematically over a period of years for use in hydrologic analyses.

Runoff in inches (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.

Stage-discharge relation is the relation between gage height and the amount of water flowing in a channel, expressed as volume per unit of time.

WRD is used as an abbreviation for "Water-Resources Data" in the summary REVISIONS paragraph to refer to previously published State annual basic-data reports.

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

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 man-made 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.

International Hydrological Decade (IHD) River Stations provide a general index of runoff and materials in the water balance (discharge of water, and dissolved and transported solids) of the world. In the United States, IHD Stations provide indices of runoff and of the general distribution of water in the principal river basins of the conterminous United States and Alaska.

DOWNSTREAM ORDER AND STATION NUMBERS

Records are listed in a downstream direction along the main stream, and stations on tributaries are listed between stations on the main stream in the order in which those tributaries enter the main stream. Stations on tributaries entering above all mainstream stations are listed before the first mainstream station. Stations on tributaries to tributaries are listed in a similar manner. In the list of gaging stations in the front of this report the rank of tributaries is indicated by indention, each indention representing one rank.

As an added means of identification, each gaging 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 continuous-record gaging 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 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 01646500, which appears just to the left of the station name, includes the 2-digit part number "01" and the 6-digit downstream order number, "646500." In this report, the records are listed in downstream order by parts. All records for a drainage basin encompassing more than one State could be arranged in downstream order by assembling pages from the various State reports by station number to include all records in the basin.

EXPLANATION OF SURFACE-WATER DATA

Collection and Computation of Data

The base data collected at gaging stations consists of records of stage and measurements of discharge of streams, 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 determing the daily flow or volume of water in storage. Records of stage are obtained from a water-stage recorder that gives a continuous graph of the fluctuations (for digital recorders, a tape punched at 15-, 30-, or 60-minute intervals) or from direct readings on a nonrecording gage. Measurements of discharge are made with a current meter, using the general methods adopted by the Geological Survey on the basis of experience in stream gaging since 1888. These methods are described in standard textbooks on the measurement of stream discharge. (See also SELECTED REFERENCES.) Surface areas of lakes or reservoirs are determined from instrument surveys using standard methods. The configuration of the reservoir bottom is determined by sounding at many points.

For a stream-gaging station rating tables giving the discharge for any stage are prepared from stage-discharge relation curves defined by discharge measurements. If extensions to the rating curves are necessary to define the extremes of discharge, 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), velocity-area studies, and logarithmic plotting. The application of the daily mean gage heights to the rating table gives the daily mean discharge, from which the monthly and the yearly mean discharge are computed. 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 determined by the shifting-control method, in which correction factors based on individual discharge measurements and notes by engineers and observers are used in applying the gage heights to the rating tables. If the stage-discharge relation for a station is temporarily changed by the presence of aquatic growth or debris on the control, the daily mean discharge is computed by what is basically the shifting-control method.

At some stream-gaging stations the stage-discharge relation is affected by 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 the gage-height record and occasional winter discharge measurements, consideration being 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. Discharge over spillways is computed from a stage-discharge relation curve defined by discharge measurements. 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, adjoining good record, discharge measurements, weather records, and comparison with other station records from the same or nearby basins. Likewise daily contents may be estimated on the basis of operator's log, adjoining good record, inflow-outflow studies, and other information.

The data in this report generally comprise a description of the station and tabulations of basic data. For gaging stations on streams 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. Records are published for the water year, which begin on October 1 and ends on September 30. A calendar for the 1969 water year is shown on the reverse side of the front cover to facilitate finding the day of the week for any date.

The description of the gaging station gives the location, drainage area, period of record, type and history of gages, average discharge, extremes of discharge or contents, and general remarks. The location of the gaging station and the drainage area are obtained from the 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." The type of gage currently in use, the datum of the present gage above mean sea level, and a condensed history of the types, locations, and datums of previous gages used during the period of record are given under "GAGE." In references to datum of gage, the phrase "mean sea level" denotes "Sea Level Datum of 1929" as used by the Topographic Division of the Geological Survey, unless otherwise qualified. 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. The maximum discharge (or contents) and the maximum gage height, the minimum discharge if there is little or no regulation (or the minimum contents), and the minimum gage height if it is significant are given under "EXTREMES." The minimum daily discharge is given if there is extensive regulation (also the minimum discharge and gage height if they are abnormally low). In the first paragraph headed "Current year:" the data given are for the complete current water year unless otherwise specified. In the second paragraph under "EXTREMES" headed "Period of record:" the data given are for the period of record given in the PERIOD OF RECORD paragraph. Reliable information concerning major floods that occurred outside the period of record is given in the third or last paragraph under "EXTREMES." Unless otherwise qualified, the maximum discharge (or contents) corresponds 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 at the same time as the maximum discharge or contents, it is given separately. Information pertaining to the

accuracy of the discharge records, to conditions that affect the natural flow at the gaging station, and availability of Water Quality records, 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 also given under "REMARKS."

Previously published 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 "REVISIONS (WATER YEARS)" 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, 1933 stands for the water year October 1, 1932, to September 30, 1933. If no daily, monthly, or annual figures of discharge were revised, that 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 daily tables for stream-gaging stations give the discharge corresponding to the daily mean gage height unless there are large or rapid changes in the discharge during a day. For days having large or rapid changes, discharge for the day is computed by averaging the mean discharge for several parts of a day. For digital recorders, the daily mean discharge is always the average of the discharges at each punched reading. For stations equipped with nonrecording gages, the daily discharge corresponds to once-daily readings of the gage or to the mean of twice-daily readings; but for periods of rapidly changing stage the discharge is determined from a gage-height graph based on gage readings.

The monthly summary is given below the daily table. For stream-gaging stations the line headed "TOTAL" gives the sum of the daily figures; it is the total cubic feet per second per day for the month. The line headed "MEAN" gives the average flow in cubic feet per second during the month. The lines head "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."). Figures of 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 rainfall on the drainage basin is usually less than 20 inches.

For reservoir stations the monthly summary gives the elevation (or gage height) at the end of the month and the change in contents during the month. If elevation or gage height is given in the daily table, the monthly summary gives the contents at the end of the month, rather than the elevation or gage height.

In the yearly summary below the monthly summary, the figures of maximum are the maximum discharges for the calendar and water years; likewise, the minimums in this summary are the minimum daily discharges.

For reservoir stations the yearly summary gives the change in contents for the calendar year and for the water year.

Peak discharges and their times of occurrence and corresponding gage heights for many stations are listed below the yearly summary. All independent peaks above the selected base are given. The base discharge, which is given in parentheses, is selected so that an average of about three peaks a year can 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 and 1:30 p.m. is 1330.

In a general footnote, introduced by the word "NOTE" certain periods are indicated 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 are indicated only if they are a month or more in length and the accuracy of the record is affected. Days on which the stage-discharge relation is affected by ice are not indicated. The method used in computing discharge for various unusual conditions have been explained in preceding paragraphs. Footnotes to reservoir tables may be used to explain the use of new capacity tables or for other special conditions.

Accuracy of Data

The accuracy of discharge 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 interpretation 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 is within 5 percent; "good" within 10 percent; and "fair" within 15 percent. "Poor" means that daily discharges have less than "fair" accuracy.

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

Discharge at many stations, as indicated by the monthly mean, may not reflect natural runoff due to the effects of diversion, consumptive use, regulation, evaporation, or other factors. For such stations, discharge in cubic feet per second per square mile and runoff in inches are not published

unless satisfactory adjustments can be made for such effects. 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 unadjusted losses (consumptive use, evaporation, seepage, etc.) are large in comparison with the observed discharge.

Publications

Each volume of the 1960 series of U.S. Geological Survey water-supply papers entitled "Surface Water Supply of the United States" contains a listing of the numbers of all water-supply papers in which records of surface-water data were published for the area covered by the individual volumes. Each volume also contains a list of water-supply papers that give detailed information on major floods for the area. A new series of water-supply papers containing surface-water records for the 5-year period October 1, 1960, to September 30, 1965, include lists of annual and special reports published as water-supply papers.

Records for the 5-year period October 1, 1960, to September 30, 1965, for the area covered by this report have been compiled and published in Water-Supply Papers 1902 (Pt. 1, vol. 2), 1903 (Pt. 1, vol. 3), and 1907 (Pt. 3, vol. 1).

Records through September 1950 for the area covered by this report have been compiled and published in Water-Supply Papers 1302 (1B), and 1305 (3A); records for October 1950 to September 1960 have been compiled and published in Water-Supply Papers 1722 (1B), and 1725 (3A). These reports contain summaries of monthly and annual discharge and monthend storage for all previously published records, as well as some records not contained in the annual series of water-supply papers. All records were reexamined and revised where warranted. Estimates of discharge were made to fill short gaps whenever practical. The yearly summary table for each gaging station lists the numbers of the water-supply papers in which daily records were published for that station.

Special reports on major floods or droughts or of other hydrologic studies for the area have been issued in publications other than water-supply papers. Information relative to these reports may be obtained from the district office.

Other Data Available

Data collected at partial-record stations and at miscellaneous sites are given in three tables at the end of the surface-water records in this report. The first is a table of discharge measurements at low-flow partial-record stations, the second is a table of annual maximum stage and discharge at crest-stage stations, and the third is a table of discharge measurements at miscellaneous sites.

More detailed information 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. Many gaging-station records in Maryland and Delaware through 1967 have been analyzed to give several statistical summaries: (1) the number of days in each year that the daily discharge was between selected limits (duration tables); (2) the lowest

mean discharge for selected numbers of consecutive days in each year; and (3) the highest mean discharge for selected numbers of consecutive days in each year.

At or near some gaging stations, water-quality records also are collected. Data are obtained on the chemical quality of the stream water, on water temperature, on suspended-sediment concentration, and on the particle-size distribution of suspended sediment and bed material. These data are given in Part 2 of this report. Under the "REMARKS" paragraph of the gaging-station description, reference is made to water-quality records collected on a regular basis.

HYDROLOGIC CONDITIONS

Streamflow was in the above normal range for most of the 1971 water year. Annual mean discharge at index stations within the district ranged from 100 to 200 percent of median. The monthly flow of the Potomac River near Washington, D. C., ranged from 402 percent of median in November to 64 percent in April, reference period, 1941-70. Monthly flows at the Washington station were excessive, upper 25 percent of recorded flows, from November to February and in June and September. Only in April was the flow deficient, lowest 25 percent of recorded flows.

Graphical illustrations of streamflow conditions during the year in comparison with previous records for two stations are shown on the following page. Data for the station, Potomac River at Point of Rocks, Md., a long-term record, reflects runoff conditions in the Potomac River basin excluding the coastal plain. Data for the station, Choptank River at Greensboro, Md., reflects runoff from a 113 square mile area (21.6 square miles in Delaware) in the central part of the Delmarva peninsula. Annual mean discharge is shown in figure 1 for the period of record of the two stations.

Wide-spread flooding occurred during the year, mostly as a result of thunderstorm activity during August and September. Intense rainfall caused flooding and highest discharges of record on several streams in the Baltimore, Md., Washington, D. C., and Wilmington Del. urban areas.

SELECTED REFERENCES

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Corbett, D. M., and others, 1943, Stream-gaging procedure, a manual describing methods and practices of the Geological Survey: U.S. Geol. Survey Water-Supply Paper 888, 245 p.

Langbein, W. B., and Iseri, K. T., 1960, General introduction and hydrologic definitions: U.S. Geol. Survey Water-Supply Paper 1541-A, 29 p.

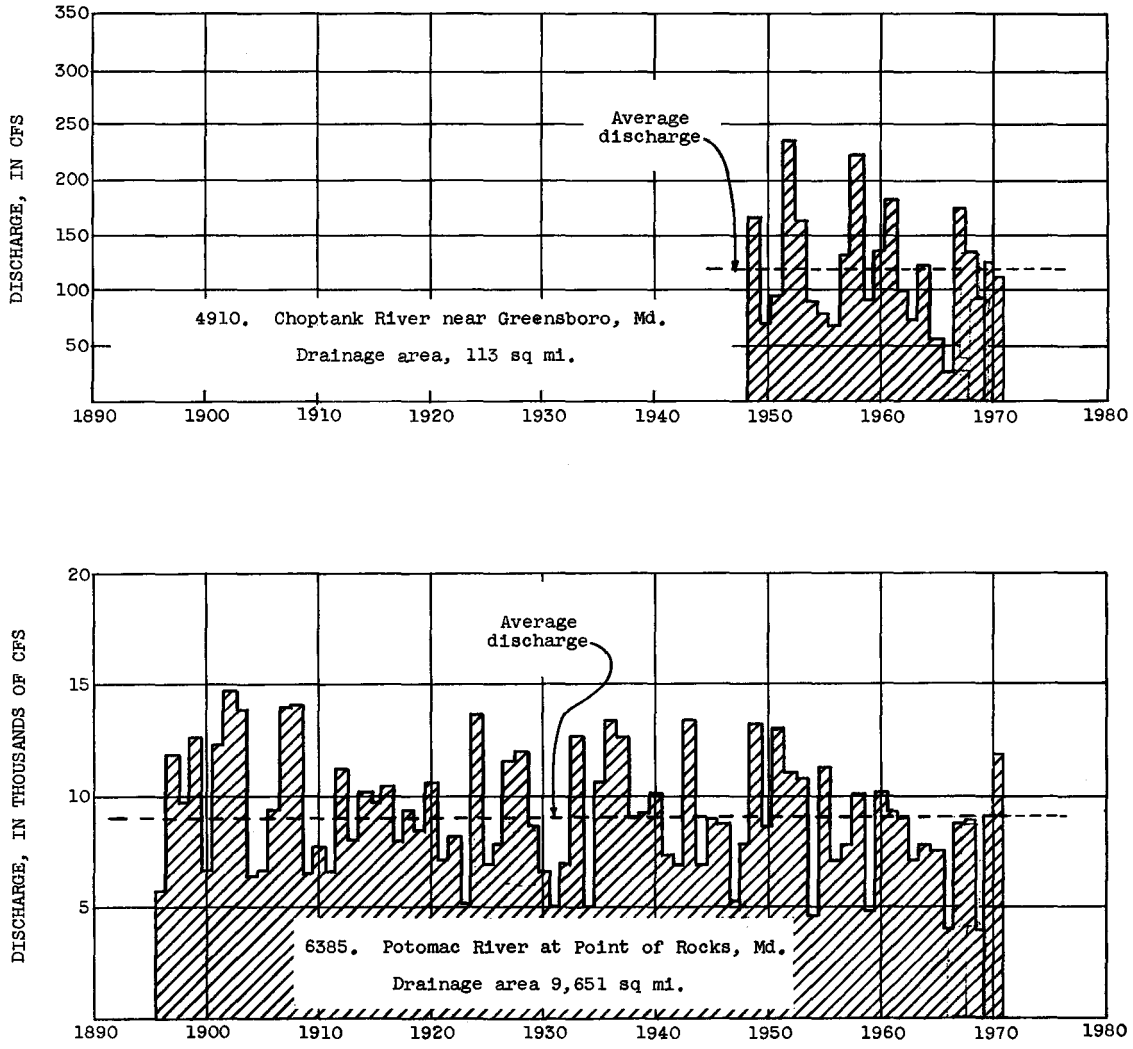

Figure 1.--Annual mean discharge at two gaging stations in Maryland.

DELAWARE RIVER BASIN

01477800 Shellpot Creek at Wilmington, Del.

LOCATION.--Lat 39°45'39", long 75°31'10", New Castle County, on right bank 100 ft east of intersection of Forty-fourth and Pine Streets in Clifton Park, 700 ft downstream from highway bridge on North Market Street in Wilmington, 0.2 mile downstream from Matson Run, and 2.3 miles upstream from mouth.

DRAINAGE AREA.--7.46 sq mi.

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

GAGE.--Water-stage recorder and concrete control. Datum of gage is 15.16 ft above mean sea level.

AVERAGE DISCHARGE.--25 years (1946-71), 9.19 cfs (16.73 inches per year).

EXTREMES.--Current year: Maximum discharge, 6,850 cfs Sept. 13 (gage height, 11.91 ft); minimum daily, 0.18 cfs Oct. 11.
Period of record: Maximum discharge, 6,850 cfs Sept. 13, 1971 (gage height, 11.91 ft), from rating curve extended above 620 cfs on basis of computation of flow over dam at gage height 6.52 ft, and contracted-opening measurements at gage heights 6.52, 7.97 ft (8.6 ft from floodmarks), Type V Culvert measurement at 9.10 ft, and contracted-opening measurement of peak flow; minimum daily, 0.09 cfs Oct. 2, 4, 1968.
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, from floodmarks.

REMARKS.--Records good.

REVISIONS (WATER YEARS).--WSP 1382: 1948(m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.28	.71	2.1	2.2	1.6	5.9	2.3	1.8	2.3	.75	7.7	1.4
2	.27	.93	1.9	2.3	1.5	4.7	2.4	3.8	1.6	3.8	4.0	1.2
3	.57	9.9	1.9	2.2	1.2	27	3.1	3.2	21	.91	1.7	1.2
4	1.1	103	1.9	39	1.4	80	2.2	3.2	2.8	.61	9.6	1.1
5	1.3	35	1.7	96	31	17	2.1	1.6	1.8	.82	22	1.0
6	1.9	4.0	1.7	13	5.9	11	23	11	6.1	.66	1.3	.74
7	2.4	2.5	2.0	4.9	94	26	134	2.8	1.9	.48	.67	.47
8	3.0	2.0	1.4	4.2	79	7.8	14	23	1.6	.44	.54	.35
9	.46	1.8	1.4	3.3	20	5.4	6.2	4.7	1.3	2.1	.51	.35
10	.25	1.9	1.5	3.1	5.1	4.4	4.4	2.7	1.1	3.3	.53	.39
11	.18	25	1.6	3.0	3.3	4.2	3.6	2.1	1.0	1.0	2.7	252
12	.19	62	11	3.0	3.1	3.8	3.3	2.0	1.1	1.3	2.3	57
13	.21	57	4.0	2.6	178	3.9	3.0	18	1.1	.46	.70	1,300
14	.20	9.5	2.2	8.5	23	3.5	2.8	12	1.9	.41	.39	59
15	.31	108	1.9	4.3	6.6	3.4	2.6	2.8	1.7	.34	.47	8.5
16	1.2	8.2	16	3.1	4.7	3.3	2.6	105	8.1	.32	.43	4.6
17	.40	4.0	85	2.3	4.6	2.8	2.8	11	1.2	.34	.28	7.4
18	.23	3.1	6.8	2.1	4.5	2.5	2.6	4.4	.85	.59	.25	3.4
19	.21	3.7	4.0	1.9	4.5	34	2.1	3.0	.75	.88	.35	2.3
20	.19	7.2	3.0	1.8	9.1	16	1.8	2.4	.76	.74	.35	2.0
21	30	5.3	2.7	1.8	9.7	5.7	1.7	14	.85	.39	.35	23
22	124	2.5	38	2.0	77	5.4	1.7	4.2	.84	.33	.29	2.3
23	40	2.2	34	5.5	98	16	1.5	2.5	.74	.32	.25	1.8
24	2.7	1.9	22	2.4	12	5.7	1.7	2.4	.70	.33	.36	2.0
25	1.6	1.9	6.1	6.5	7.2	3.9	1.6	2.4	.79	.36	.44	1.9
26	2.1	1.9	4.5	13	5.9	3.6	1.4	4.9	.81	.38	1.1	2.5
27	1.1	1.8	3.3	4.5	60	3.5	1.4	1.7	1.1	.38	220	4.5
28	3.3	1.7	2.8	2.5	9.7	3.3	2.0	1.6	2.2	.35	322	2.1
29	.90	3.1	2.4	1.8	------	3.2	8.6	1.5	.93	.39	5.0	2.0
30	.76	7.2	2.2	2.5	------	2.6	2.0	8.1	.65	49	2.5	1.9
31	.72	------	2.1	1.8	------	2.4	------	11	------	9.6	1.7	------
TOTAL	222.03	478.94	273.1	247.1	761.6	321.9	244.5	274.8	69.57	82.08	610.76	1,748.40
MEAN	7.16	16.0	8.81	7.97	27.2	10.4	8.15	8.86	2.32	2.65	19.7	58.3
MAX	124	108	85	96	178	80	134	105	21	49	322	1,300
MIN	.18	.71	1.4	1.8	1.2	2.4	1.4	1.5	.65	.32	.25	.35
CFSM	.96	2.14	1.18	1.07	3.65	1.39	1.09	1.19	.31	.36	2.64	7.82
IN.	1.11	2.39	1.36	1.23	3.80	1.61	1.22	1.37	.35	.41	3.05	8.72

CAL YR 1970 TOTAL 3,555.09 MEAN 9.74 MAX 240 MIN .18 CFSM 1.31 IN 17.73
WTR YR 1971 TOTAL 5,334.78 MEAN 14.6 MAX 1,300 MIN .18 CFSM 1.96 IN 26.60

PEAK DISCHARGE (BASE, 550 CFS)

DATE	TIME	G. H.	DISCHARGE	DATE	TIME	G. H.	DISCHARGE
2- 7	2130	3.85	760	9-11	1020	4.50	1,120
2-13	1235	3.91	796	9-13	1800	11.91	6,850
8-28	0350	6.29	2,020				

01478000 Christina River at Coochs Bridge, Del.

LOCATION.--Lat 39°38'16", long 75°43'46", New Castle County, on left bank 82 ft downstream from highway bridge, 0.3 mile south of Coochs Bridge, 3.3 miles upstream from Muddy Run, 3.5 miles south of Newark, and 23.0 miles upstream from mouth.

DRAINAGE AREA.--20.5 sq mi.

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

GAGE.--Water-stage recorder. Datum of gage is 25.6 ft above mean sea level. Prior to Sept. 14, 1944, non-recording gage on upstream side of bridge at same datum. Sept. 14, 1944 to May 13, 1969, recording gage at site 70 ft upstream at same datum.

AVERAGE DISCHARGE.--28 years, 25.2 cfs (16.69 inches per year).

EXTREMES.--Current year: Maximum discharge, 2,110 cfs Feb. 13 (gage height, 10.53 ft); minimum daily, 1.7 cfs July 25.
Period of record: Maximum discharge, 2,620 cfs May 1, 1947 (gage height, 12.41 ft); minimum daily, 0.2 cfs Aug. 7, 14, 18, 21, 27, 28, 1966.

REMARKS.--Records fair except those for period of no gage-height record, which are poor. Low and medium flow regulated by mill above station.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.4	4.1	12	14	10	22	14	12	17	5.1	18	13
2	3.6	8.0	11	13	8.5	20	14	12	13	11	65	12
3	2.5	18	10	12	10	41	15	12	22	5.6	20	11
4	4.1	16	11	20	11	178	13	12	19	4.6	18	10
5	5.1	64	10	200	60	29	13	10	12	4.6	129	9.0
6	4.9	14	9.0	45	25	25	34	18	11	2.6	14	8.0
7	3.4	9.5	8.5	25	133	32	247	15	13	6.1	9.0	8.5
8	4.1	7.6	8.5	20	407	23	29	28	9.5	4.9	6.6	8.0
9	3.9	8.0	9.0	19	103	20	21	19	9.5	5.1	6.1	8.0
10	3.0	8.5	10	19	21	18	19	14	7.6	4.4	4.1	7.6
11	2.6	9.0	9.0	18	16	19	17	12	7.6	9.0	12	73
12	4.9	17	16	18	16	17	16	12	8.0	7.6	14	181
13	3.4	22	14	18	533	17	16	46	7.6	7.1	8.0	150
14	6.1	14	11	22	161	17	15	33	8.5	5.6	3.6	40
15	4.1	177	10	23	26	17	14	16	9.5	3.9	4.1	22
16	5.1	23	11	19	21	17	14	233	14	3.0	4.1	17
17	3.9	15	150	16	20	16	14	31	9.0	4.1	4.9	24
18	3.4	12	24	14	20	15	14	20	11	4.4	4.6	21
19	4.9	12	16	14	20	70	13	15	6.6	6.1	2.6	15
20	4.9	15	14	15	23	50	13	13	6.1	7.6	5.1	14
21	17	20	13	12	26	22	13	24	18	4.9	6.6	22
22	32	14	31	15	242	19	13	18	14	3.4	3.6	15
23	13	12	35	20	367	24	12	14	6.6	4.9	3.6	15
24	8.5	11	38	17	30	19	12	12	7.6	3.6	3.4	15
25	4.6	10	20	21	25	16	12	12	11	1.7	3.0	12
26	7.1	10	16	32	22	16	12	20	16	4.6	3.4	13
27	9.5	10	15	28	115	16	11	12	20	3.9	525	17
28	6.1	10	14	15	27	15	13	13	6.6	2.5	521	14
29	5.1	10	13	12	------	15	17	11	4.6	4.6	25	13
30	6.6	15	12	16	------	15	13	16	6.1	82	18	12
31	4.9	------	12	15	------	13	------	34	------	45	14	------
TOTAL	195.7	595.7	593.0	767	2,502.5	853	693	769	332.0	273.5	1,479.4	800.1
MEAN	6.31	19.9	19.1	24.7	89.4	27.5	23.1	24.8	11.1	8.82	47.7	26.7
MAX	32	177	150	200	533	178	247	233	22	82	525	181
MIN	2.5	4.1	8.5	12	8.5	13	11	10	4.6	1.7	2.6	7.6
CFSM	.31	.97	.93	1.20	4.36	1.34	1.13	1.21	.54	.43	2.33	1.30
IN.	.36	1.08	1.08	1.39	4.54	1.55	1.26	1.40	.60	.50	2.68	1.45

CAL YR 1970 TOTAL 9,105.7 MEAN 24.9 MAX 607 MIN 1.5 CFSM 1.21 IN 16.52
WTR YR 1971 TOTAL 9,853.9 MEAN 27.0 MAX 533 MIN 1.7 CFSM 1.32 IN 17.88

PEAK DISCHARGE (BASE, 1,000 CFS)

DATE	TIME	G. H.	DISCHARGE	DATE	TIME	G. H.	DISCHARGE
2- 8	0215	10.34	1,770	2-23	1630	9.93	1,230
2-13	1630	10.53	2,110	8-28	0745	10.28	1,670

NOTE.--No gage-height record Nov. 22 to Jan. 13.

01478500 White Clay Creek above Newark, Del.

LOCATION.--Lat 39°42'52", long 75°45'34", New Castle County, on right bank at downstream wingwall of abandoned bridge, 0.9 mile downstream from small tributary, 1.7 miles southeast of Delaware-Maryland-Pennsylvania State corner, 2.1 miles downstream from Pennsylvania-Delaware State line, 2.2 miles north of Newark, and 12.8 miles upstream from mouth.

DRAINAGE AREA.--66.7 sq mi.

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

GAGE.--Water-stage recorder. Datum of gage is 78.6 ft above mean sea level.

AVERAGE DISCHARGE.--16 years, 73.3 cfs (14.92 inches per year).

EXTREMES.--Current year: Maximum discharge, 4,320 cfs Feb. 13 (gage height, 9.70 ft), minimum daily, 23 cfs Oct. 7-9.
Period of record: Maximum discharge, 4,540 cfs Aug. 10, 1967 (gage height, 9.97 ft), from rating curve extended above 1,800 cfs on basis of contracted-opening measurement of peak flow; minimum, 4.6 cfs Dec. 7, 1954 (gage height, 0.55 ft), result of freezeup; minimum daily, 5.6 cfs Sept. 10, 1966.

REMARKS.--Records poor. Records do not include a negligible diversion above station by plant of E. I. du Pont de Nemours & Co. Records of suspended-sediment loads for the water year 1971 are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	26	32	54	130	50	119	70	69	99	49	48	68
2	25	32	48	110	60	106	72	69	79	53	143	62
3	28	43	47	100	66	114	78	76	97	45	90	60
4	30	80	50	170	70	324	69	70	111	44	91	58
5	26	234	45	740	210	137	66	64	84	43	123	54
6	25	64	45	350	120	133	79	87	72	43	58	52
7	23	51	40	160	456	127	472	78	85	43	44	50
8	23	46	40	120	1,380	117	151	105	72	40	39	49
9	23	43	44	100	351	102	106	88	64	38	37	48
10	27	43	45	88	90	97	93	75	66	39	35	47
11	24	49	44	82	80	96	87	67	63	38	43	370
12	25	81	68	78	70	90	85	66	63	43	42	600
13	25	145	84	74	1,940	88	84	254	64	39	34	800
14	26	76	62	100	404	85	81	125	61	37	33	300
15	28	331	54	110	127	85	76	82	67	36	32	150
16	42	97	70	84	105	85	76	442	78	35	32	110
17	28	73	500	74	94	78	75	131	64	35	31	100
18	26	66	140	66	91	75	75	94	57	34	30	94
19	26	61	100	62	91	170	72	82	57	36	31	86
20	25	61	82	60	103	204	72	76	56	39	33	84
21	60	74	74	60	119	106	72	88	60	37	31	270
22	150	58	200	62	341	94	70	87	60	34	30	100
23	80	56	220	64	624	102	69	75	54	33	29	92
24	50	49	250	66	163	87	69	70	54	32	27	88
25	40	45	120	54	129	79	67	70	50	32	27	80
26	40	47	110	110	122	78	69	87	51	31	27	84
27	36	49	96	70	288	76	67	69	49	30	885	92
28	32	47	86	56	135	75	70	66	46	30	1,200	82
29	31	47	80	60	------	75	82	64	48	29	129	78
30	31	72	76	70	------	73	70	88	49	162	102	74
31	32	------	74	60	------	72	------	257	------	96	76	------
TOTAL	1,113	2,252	3,048	3,590	7,879	3,349	2,744	3,221	1,980	1,355	3,612	4,282
MEAN	35.9	75.1	98.3	116	281	108	91.5	104	66.0	43.7	117	143
MAX	150	331	500	740	1,940	324	472	442	111	162	1,200	800
MIN	23	32	40	54	50	72	66	64	46	29	27	47
CFSM	.54	1.13	1.47	1.74	4.21	1.62	1.37	1.56	.99	.66	1.75	2.14
IN.	.62	1.26	1.70	2.00	4.39	1.87	1.53	1.80	1.10	.76	2.01	2.39

CAL YR 1970 TOTAL 29,455 MEAN 80.8 MAX 887 MIN 19 CFSM 1.21 IN 16.45
WTR YR 1971 TOTAL 38,425 MEAN 105 MAX 1,940 MIN 23 CFSM 1.57 IN 21.43

PEAK DISCHARGE (BASE, 1,500 CFS)

DATE	TIME	G. H.	DISCHARGE	DATE	TIME	G. H.	DISCHARGE
2- 8	0230	8.52	3,490	8-28	0745	7.26	2,640
2-13	1845	9.70	4,320	9-12	(time and discharge unknown)		
2-23	0300	5.32	1,520				

NOTE.--No gage-height record Oct. 1-30, Nov. 21 to Jan. 19, July 11-26, and Sept. 1-30.

01479000 White Clay Creek near Newark, Del.

LOCATION.--Lat 39°42'01", long 75°41'00", New Castle County, on left bank 300 ft upstream from Baltimore & Ohio Railroad bridge, 0.4 mile downstream from Pike Creek, 3.5 miles east of Newark, and 5.5 miles upstream from mouth.

DRAINAGE AREA.--87.8 sq mi.

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.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 11.6 ft above mean sea level. Nov. 17, 1931, to Sept. 30, 1936, at site 15 ft downstream at same datum.

AVERAGE DISCHARGE.--31 years, 107 cfs (16.55 inches per year).

EXTREMES.--Current year: Maximum discharge, 5,170 cfs Feb. 13 (gage height, 14.82 ft, from high-water mark in well); minimum, 18 cfs Oct. 11 (gage height, 4.11 ft); minimum daily, 27 cfs Oct. 7-9.
Period of record: Maximum discharge, 6,640 cfs Aug. 10, 1967 (gage height, 16.41 ft); minimum, 4.7 cfs Sept. 11, 1966; minimum gage height, 3.66 ft July 26, 1954; minimum daily discharge, 5.0 cfs Sept. 10, 1966.
Maximum stage known, 23 ft in July 1937 (probably affected by backwater from railroad bridge which has since been raised and widened), from information by Baltimore & Ohio Railroad.

REMARKS.--Records good except those for January, February, July and August, which are poor. Slight diurnal fluctuation at low flow caused by mills above station. Records do not include a negligible diversion above station by plant of E. I. du Pont de Nemours & Co.

REVISIONS (WATER YEARS).--WSP 1051: 1933(M). WSP 1382: 1932, 1934.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	30	41	58	140	52	140	95	86	131	50	70	92
2	29	42	53	120	58	126	98	86	96	60	306	84
3	32	62	51	110	72	166	105	92	135	52	120	80
4	33	105	54	190	90	462	96	87	152	48	126	76
5	30	389	50	855	440	198	93	77	95	46	276	72
6	28	91	50	327	284	186	137	108	86	45	72	70
7	27	65	45	173	313	196	651	104	110	48	56	68
8	27	57	44	130	2,100	147	242	149	84	45	50	66
9	27	53	48	110	636	125	144	119	75	43	47	65
10	31	50	49	96	120	120	128	92	70	42	52	62
11	28	59	48	90	110	120	116	79	68	41	70	478
12	29	113	75	84	98	114	111	77	68	50	62	826
13	29	243	96	77	2,410	114	110	352	70	45	50	1,260
14	30	107	70	110	826	111	105	210	72	40	45	395
15	32	521	61	120	178	110	98	111	77	38	43	194
16	47	142	75	92	130	110	98	586	104	37	42	140
17	32	87	578	80	114	100	96	242	73	36	41	135
18	31	74	150	72	110	96	98	137	63	35	40	129
19	31	66	106	66	110	201	92	113	61	35	40	114
20	29	70	92	64	121	313	90	99	59	45	52	110
21	70	80	83	64	164	158	90	129	80	38	40	388
22	195	63	219	66	443	135	89	116	75	35	38	136
23	94	60	241	74	1,020	126	86	95	58	33	37	123
24	58	53	272	86	234	120	86	86	58	32	36	117
25	47	50	138	78	164	110	84	89	57	31	35	105
26	47	51	118	170	142	108	86	119	114	31	35	106
27	42	53	105	130	394	105	83	86	80	30	1,500	120
28	40	52	94	56	182	105	87	80	64	32	2,270	108
29	39	52	86	62	------	105	110	80	54	28	220	102
30	39	80	82	72	------	101	90	114	52	300	128	98
31	41	------	80	64	------	96	------	360	------	186	102	------
TOTAL	1,324	3,031	3,371	4,028	11,115	4,524	3,694	4,360	2,441	1,657	6,101	5,919
MEAN	42.7	101	109	130	397	146	123	141	81.4	53.5	197	197
MAX	195	521	578	855	2,410	462	651	586	152	300	2,270	1,260
MIN	27	41	44	56	52	96	83	77	52	28	35	62
CFSM	.49	1.15	1.24	1.48	4.52	1.66	1.40	1.61	.93	.61	2.24	2.24
IN.	.56	1.28	1.43	1.71	4.71	1.92	1.57	1.85	1.03	.70	2.58	2.51

CAL YR 1970 TOTAL 40,856 MEAN 112 MAX 1,330 MIN 26 CFSM 1.28 IN 17.31
WTR YR 1971 TOTAL 51,565 MEAN 141 MAX 2,410 MIN 27 CFSM 1.61 IN 21.85

PEAK DISCHARGE (BASE, 2,000 CFS)

DATE	TIME	G. H.	DISCHARGE	DATE	TIME	G. H.	DISCHARGE
2-08	*0430	14.56	4,930	8-28	0545	13.70	4,190
2-13	*1900	14.82	5,170	9-12	2215	11.17	2,360
2-23	0500	11.00	2,260				

* About.

01480000 Red Clay Creek at Wooddale, Del.

LOCATION.--Lat 39°45'52", long 75°38'08", New Castle County, on right bank 12 ft upstream from bridge on State Highway 48, 0.3 mile south of Wooddale, 2.3 miles north of Marshallton, and 4.9 miles upstream from mouth.

DRAINAGE AREA.--47.0 sq mi.

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

GAGE.--Water-stage recorder and concrete control. Datum of gage is 81.46 ft above mean sea level. Prior to Sept. 21, 1950, nonrecording gage at site 10 ft downstream at same datum.

AVERAGE DISCHARGE.--28 years, 60.4 cfs (17.45 inches per year).

EXTREMES.--Current year: Maximum discharge, 3,520 cfs Sept. 13 (gage height, 8.10 ft); minimum, 3.8 cfs July 8, result of regulation; minimum daily, 16 cfs Oct. 18, Aug. 24, 25.
Period of record: Maximum discharge, 4,780 cfs Sept. 12, 1960 (gage height, 9.93 ft); minimum, 2.9 cfs Sept. 4, 1966; minimum daily, 4.5 cfs Sept. 4, 1966.

REMARKS.--Records good. Some diurnal fluctuation at low flow caused by mills above station. Records of water temperatures for the water year 1971 are published in Part 2 of this report.

REVISIONS (WATER YEARS).--WSP 1141: 1948. WSP 1272: 1951(m). WSP 1432: 1944(M), 1945, 1946(M), 1948, 1949(M). WRD Md. and Del. 1969: 1960(M), 1964(M), 1966-67(M).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	19	21	37	46	33	79	55	53	72	30	44	49
2	18	21	35	42	39	72	55	51	58	43	162	46
3	19	25	34	41	49	86	60	53	72	31	48	43
4	19	76	35	87	60	250	55	48	67	28	94	39
5	17	190	31	381	220	119	52	45	53	28	101	37
6	18	44	30	162	93	113	60	65	49	26	43	36
7	17	34	28	85	201	119	402	56	55	33	32	34
8	17	29	28	65	982	95	190	90	49	25	27	34
9	17	28	30	64	277	79	103	66	46	27	26	32
10	17	27	31	61	65	76	87	55	44	23	24	32
11	17	34	30	60	54	76	77	49	42	24	26	273
12	17	81	51	61	52	72	72	47	41	33	27	538
13	18	191	50	60	1,130	76	69	215	41	24	22	1,450
14	18	66	37	63	265	69	68	115	44	24	22	715
15	23	308	33	75	88	67	63	65	46	23	21	212
16	21	76	35	61	72	69	62	354	55	23	22	137
17	17	53	284	54	65	60	60	125	42	23	21	145
18	16	46	68	49	63	58	60	82	39	23	20	129
19	17	43	53	48	64	145	59	70	36	25	20	106
20	17	46	44	47	72	174	57	62	36	27	22	101
21	30	57	42	49	86	81	57	92	41	24	19	438
22	139	42	98	50	201	69	56	81	42	23	18	112
23	54	39	111	55	426	84	54	64	36	22	18	97
24	31	35	123	57	107	72	54	58	35	22	16	89
25	26	34	64	56	86	64	53	59	34	22	16	80
26	26	34	56	111	76	63	52	76	32	21	17	81
27	24	34	49	86	186	63	52	56	31	21	668	93
28	23	34	46	37	98	60	52	54	30	19	1,020	80
29	22	34	42	40	------	60	64	52	30	20	113	75
30	22	50	40	44	------	59	60	69	32	108	71	72
31	21	------	39	40	------	56	------	158	------	80	56	------
TOTAL	777	1,832	1,714	2,237	5,210	2,685	2,320	2,585	1,330	925	2,856	5,405
MEAN	25.1	61.1	55.3	72.2	186	86.6	77.3	83.4	44.3	29.8	92.1	180
MAX	139	308	284	381	1,130	250	402	354	72	108	1,020	1,450
MIN	16	21	28	37	33	56	52	45	30	19	16	32
CFSM	.53	1.30	1.18	1.54	3.96	1.84	1.64	1.77	.94	.63	1.96	3.83
IN.	.61	1.45	1.36	1.77	4.12	2.13	1.84	2.05	1.05	.73	2.26	4.28

CAL YR 1970 TOTAL 22,730 MEAN 62.3 MAX 784 MIN 16 CFSM 1.33 IN 17.99
WTR YR 1971 TOTAL 29,876 MEAN 81.9 MAX 1,450 MIN 16 CFSM 1.74 IN 23.65

PEAK DISCHARGE (BASE, 1,200 CFS)

DATE	TIME	G. H.	DISCHARGE	DATE	TIME	G. H.	DISCHARGE
2- 8	0315	6.61	2,430	9-13	2230	8.10	3,520
2-13	1830	7.05	2,770	9-21	0945	5.28	1,500
8-28	0800	6.47	2,330				

01480100 Little Mill Creek at Elsmere, Del.

LOCATION.--Lat 39°44'05", long 75°35'14", New Castle County, on left bank at downstream side of highway bridge on North du Pont Road at Elsmere, 0.5 mile downstream from unnamed tributary, and 2.2 miles upstream from mouth.

DRAINAGE AREA.--6.70 sq mi.

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

GAGE.--Water-stage recorder. Prior to March 19, 1964, nonrecording gage at same site and datum. Datum of gage is 48.62 ft above mean sea level.

AVERAGE DISCHARGE.--8 years, 9.26 cfs (18.77 inches per year).

EXTREMES.--Current year: Maximum discharge, 2,650 cfs Sept. 13 (gage height, 7.79 ft), from rating curve extended above 1,000 cfs; minimum, 0.43 cfs Nov. 1, 2.
Period of record: Maximum discharge, 3,960 cfs Aug. 10, 1967 (gage height, 8.58 ft), from rating curve extended above 380 cfs on basis of contracted-opening measurement of peak flow; minimum, 0.10 cfs July 17, 18, Sept. 18, 19, 1966.

REMARKS.--Records fair.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.58	.43	4.3	5.5	3.2	6.7	3.6	2.5	3.2	1.6	9.5	3.0
2	.77	.58	4.7	5.1	3.6	5.9	3.9	3.2	2.5	3.7	6.7	2.8
3	.88	8.3	5.1	4.3	3.6	30	3.9	5.9	42	1.6	2.4	2.4
4	2.2	25	5.1	26	3.9	78	3.2	5.5	12	1.6	9.3	2.2
5	1.4	61	3.2	116	38	16	3.2	5.1	7.1	1.8	25	2.1
6	.77	6.7	2.5	22	10	12	35	11	6.3	2.2	2.6	2.1
7	.77	2.5	2.2	9.4	33	26	155	4.3	7.5	2.5	2.1	2.1
8	.67	1.4	2.2	6.7	121	10	16	14	5.9	2.5	1.7	2.1
9	.77	1.0	2.8	5.9	36	7.1	8.9	4.3	4.3	2.5	1.7	1.9
10	.67	.88	2.8	5.1	9.9	7.1	6.3	3.6	4.3	1.8	1.7	1.9
11	.58	5.9	2.5	5.1	8.0	8.0	5.9	3.2	4.3	3.7	5.8	135
12	.77	23	11	5.1	6.7	5.1	5.5	3.4	4.3	1.6	2.4	266
13	1.6	39	8.4	4.7	170	4.7	5.1	17	4.3	1.2	1.6	735
14	1.2	17	4.7	10	36	4.7	4.7	8.4	8.1	1.2	1.4	61
15	2.2	72	3.9	7.1	12	4.3	4.3	3.9	5.5	1.2	1.3	14
16	2.8	17	7.0	5.1	8.4	4.3	4.3	81	16	1.3	1.4	9.7
17	.77	8.9	76	3.9	8.0	3.9	3.9	8.4	2.8	1.3	1.4	16
18	.67	7.1	8.9	3.9	7.1	3.9	3.6	5.1	2.5	1.2	1.4	8.4
19	.77	5.9	6.3	3.9	7.1	24	3.2	3.9	2.5	1.7	1.9	7.2
20	.88	6.7	5.1	4.3	13	20	3.6	3.2	2.2	1.4	1.5	6.4
21	8.3	8.4	5.1	4.3	12	6.7	3.9	17	3.4	1.2	1.4	27
22	72	3.9	29	4.3	98	12	3.6	5.9	2.5	1.2	1.7	6.1
23	21	3.9	25	7.5	112	23	3.6	3.9	2.5	1.2	1.4	6.4
24	5.9	3.6	25	4.3	17	10	3.2	3.2	2.5	1.0	1.4	5.5
25	3.9	3.2	7.5	7.1	12	8.9	3.2	4.2	2.2	1.2	1.4	4.7
26	3.9	3.2	5.9	14	8.4	8.4	3.6	4.5	1.8	1.2	1.5	5.7
27	3.2	3.6	5.1	16	58	7.5	3.2	2.8	1.6	1.5	180	8.5
28	2.8	4.3	5.1	4.3	10	5.5	5.1	2.8	1.6	1.6	193	5.2
29	2.8	4.8	5.9	5.1	------	5.1	5.9	2.5	1.8	1.3	5.8	4.7
30	1.4	12	4.3	5.1	------	3.9	2.8	7.4	1.6	40	3.8	4.4
31	.50	------	3.9	3.6	------	3.6	------	9.9	------	10	3.1	------
TOTAL	147.42	361.19	290.5	334.7	865.9	376.3	321.2	261.0	169.1	99.0	477.3	1,352.5
MEAN	4.76	12.0	9.37	10.8	30.9	12.1	10.7	8.42	5.64	3.19	15.4	45.1
MAX	72	72	76	116	170	78	155	81	42	40	193	735
MIN	.50	.43	2.2	3.6	3.2	3.6	2.8	2.5	1.6	1.0	1.3	1.9
CFSM	.71	1.79	1.40	1.61	4.61	1.81	1.60	1.26	.84	.48	2.30	6.73
IN.	.82	2.01	1.61	1.86	4.81	2.09	1.78	1.45	.94	.55	2.65	7.51

CAL YR 1970 TOTAL 3,270.59 MEAN 8.96 MAX 166 MIN .21 CFSM 1.34 IN 18.16
WTR YR 1971 TOTAL 5,056.11 MEAN 13.9 MAX 735 MIN .43 CFSM 2.07 IN 28.07

PEAK DISCHARGE (BASE, 350 CFS)

DATE	TIME	G. H.	DISCHARGE	DATE	TIME	G. H.	DISCHARGE
2-13	1600	4.48	484	9-11	0830	4.71	674
2-23	0130	4.19	418	9-13	2000	7.79	2,650
8-28	0400	5.34	926				

01481000 Brandywine Creek at Chadds Ford, Pa

LOCATION.--Lat 39°52'11", long 75°35'37", Delaware County, on left bank 27 ft upstream from Penn Central Railroad bridge at Chadds Ford, 150 ft upstream from Harvey Run and 1,200 ft downstream from highway bridge on U.S. Highway 1.

DRAINAGE AREA.--287 sq mi, including that of Harvey Run.

PERIOD OF RECORD.--August 1911 to December 1953, October 1962 to current year. Monthly discharge only for some periods, published in WSP 1302.

GAGE.--Water-stage recorder. Datum of gage is 150.45 ft above mean sea level. Prior to May 21, 1927, non-recording gage at same site and datum.

AVERAGE DISCHARGE.--51 years, 376 cfs (17.79 inches per year).

EXTREMES.--Current year: Maximum discharge, 14,300 cfs Sept. 13 (gage height, 14.39 ft), from rating curve extended as explained below; minimum, 102 cfs Oct. 6, 7, 8, 10, 11, 14 (gage height, 1.14 ft).
Period of record: Maximum discharge, 17,200 cfs Mar. 5, 1920 (gage height, 15.0 ft, from floodmark), from rating curve extended above 7,000 cfs on basis of area-depth study; minimum, 4.9 cfs Oct. 2, 1941 (gage height, 0.28 ft); minimum daily, 42 cfs Sept. 12, 1966.

REMARKS.--Records good except those for winter periods which are fair. Records of chemical analyses, water temperature, and suspended sediment loads for the water year 1971 are published in Part 2 of the Pennsylvania annual report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	124	149	315	328	210	632	404	365	695	256	336	448
2	127	143	283	361	210	569	408	374	497	369	860	408
3	127	149	272	357	200	614	448	395	502	249	664	386
4	130	276	280	493	256	1,280	408	365	461	230	709	361
5	124	1,130	268	2,110	722	808	382	336	412	223	1,220	340
6	121	412	260	1,150	826	830	434	434	408	220	382	328
7	118	283	242	587	812	1,090	2,250	497	452	220	276	315
8	116	245	230	452	4,620	845	1,140	744	365	209	242	307
9	121	230	245	448	2,350	628	686	654	340	209	220	299
10	116	227	253	425	560	587	578	443	324	216	206	287
11	118	260	249	416	421	587	542	408	311	213	199	722
12	118	731	344	421	395	565	515	369	307	230	213	2,060
13	118	2,350	408	399	3,560	565	520	1,320	307	213	195	6,780
14	116	2,300	315	408	4,890	551	510	948	320	206	185	5,080
15	223	1,740	283	425	812	538	488	502	340	199	188	1,560
16	238	722	283	369	601	533	470	1,190	344	192	178	1,100
17	149	448	1,410	340	515	484	450	872	348	195	168	960
18	127	378	605	300	488	448	430	569	307	209	168	850
19	124	353	408	290	542	623	425	502	283	223	181	754
20	118	348	361	280	619	1,360	404	452	287	220	175	704
21	165	395	336	270	885	650	399	479	264	199	168	1,730
22	808	340	461	320	910	547	399	515	291	188	172	785
23	484	311	610	340	1,890	601	404	438	283	181	162	700
24	260	287	763	336	830	533	399	408	256	178	146	668
25	195	272	488	336	628	470	399	404	260	181	149	610
26	175	280	434	524	560	475	395	452	245	181	143	596
27	162	280	378	400	1,460	457	374	374	249	172	2,160	659
28	152	280	357	320	860	443	378	361	238	165	5,910	601
29	143	276	328	260		448	528	348	238	165	1,310	565
30	149	361	315	270	------	434	412	506	242	925	659	542
31	143	------	332	260	------	412	------	1,530	------	560	511	------
TOTAL	5,509	15,956	12,116	13,995	31,632	19,607	15,979	17,554	10,176	7,596	19,455	31,505
MEAN	178	532	391	451	1,130	632	533	566	339	245	628	1,050
MAX	808	2,350	1,410	2,110	4,890	1,360	2,250	1,530	695	925	6,910	6,780
MIN	116	143	230	260	200	412	374	336	238	165	143	287
CFSM	.62	1.85	1.36	1.57	3.94	2.20	1.86	1.97	1.18	.85	2.19	3.66
IN.	.71	2.07	1.57	1.81	4.10	2.54	2.07	2.28	1.32	.98	2.52	4.08

CAL YR 1970 TOTAL 151,347 MEAN 415 MAX 3,290 MIN 115 CFSM 1.45 IN 19.62
WTR YR 1971 TOTAL 201,080 MEAN 551 MAX 6,910 MIN 116 CFSM 1.92 IN 26.06

PEAK DISCHARGE (BASE, 3,500 CFS)

DATE	TIME	G. H.	DISCHARGE	DATE	TIME	G. H.	DISCHARGE
2-08	0945	10.61	7,360	8-28	1715	11.47	8,700
2-13	2345	12.84	11,200	9-13	2045	14.39	14,300

01481500 Brandywine Creek at Wilmington, Del.

LOCATION.--Lat 39°46'09", long 75°34'25", New Castle County, on right bank in Rockford Park, 0.2 mile downstream from Henry Clay Bridge, in Wilmington, and 4.2 miles upstream from mouth.

DRAINAGE AREA.--314 sq mi.

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

GAGE.--Water-stage recorder and concrete control. Datum of gage is 68.23 ft above mean sea level.

AVERAGE DISCHARGE.--25 years, 440 cfs (19.03 inches per year).

EXTREMES.--Current year: Maximum discharge, 21,300 cfs Sept. 13 (gage height, 13.83 ft); minimum, 120 cfs Oct. 8, 9, 10, 11; minimum daily, 137 cfs Oct. 8, 9.
Period of record: Maximum discharge, 21,300 cfs Sept. 13, 1971; maximum gage height, 13.89 ft Aug. 19, 1955; minimum discharge, about 30 cfs Dec. 26, 1948, during period of ice effect; minimum daily, 56 cfs Aug. 23, 24, 1957.

REMARKS.--Records good. Some diurnal fluctuation at low flow caused by mills above station. No diversion just above station by plant of E. I. du Pont de Nemours & Co. since June 13, 1960. Records of chemical analyses and suspended-sediment loads for the water year 1971 are published in Part 2 of this report.

REVISIONS (WATER YEARS).--WSP 1432: 1948, 1950.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	145	171	378	355	230	835	478	478	898	260	407	449
2	142	171	330	370	255	750	486	463	598	414	1,020	406
3	151	175	310	360	274	782	542	494	614	296	782	380
4	148	610	315	522	288	1,570	502	478	566	245	835	353
5	145	1,400	306	2,560	838	1,040	478	421	486	235	1,320	327
6	145	522	292	1,530	1,010	1,020	534	510	486	231	518	313
7	139	320	274	775	870	1,260	2,750	630	502	231	340	296
8	137	270	253	578	5,820	1,080	1,520	726	456	215	280	284
9	137	245	270	554	3,180	799	988	880	407	211	250	281
10	139	233	288	498	817	734	826	574	394	215	227	263
11	139	274	279	476	606	726	742	486	376	215	215	1,560
12	139	757	366	483	542	686	686	435	370	245	240	2,970
13	139	2,330	514	455	3,830	678	662	1,350	370	215	215	9,770
14	139	883	378	469	7,640	662	630	1,260	376	203	199	8,840
15	213	1,690	330	490	1,050	638	590	662	421	191	195	1,930
16	315	980	320	420	817	630	574	1,570	428	184	195	1,290
17	185	586	1,770	384	670	574	550	1,200	394	184	180	1,110
18	148	483	802	330	614	534	542	880	346	195	184	1,000
19	142	455	506	310	638	694	510	726	329	207	184	939
20	139	414	434	290	670	1,610	502	638	324	215	191	832
21	201	483	390	325	1,010	790	494	678	307	191	173	1,940
22	1,210	408	538	372	1,090	654	494	678	335	177	184	922
23	739	366	757	390	2,500	710	478	558	296	169	177	796
24	350	330	1,010	384	1,090	638	470	502	291	165	152	762
25	257	306	674	378	871	574	456	494	285	165	152	694
26	221	315	562	514	766	558	456	598	270	173	155	677
27	201	315	483	530	1,660	542	463	478	270	162	2,320	741
28	185	315	434	275	1,080	534	449	449	250	148	7,300	690
29	178	310	384	355	------	534	630	449	240	148	2,240	647
30	175	414	350	372	------	518	542	502	260	970	678	622
31	171	------	360	340	------	494	------	1,670	------	742	518	------
TOTAL	7,014	16,531	14,657	16,444	40,726	23,848	20,024	21,917	11,945	7,817	22,026	42,084
MEAN	226	551	473	530	1,455	769	667	707	398	252	711	1,403
MAX	1,210	2,330	1,770	2,560	7,640	1,610	2,750	1,670	898	970	7,300	9,770
MIN	137	171	253	275	230	494	449	421	240	148	152	263
CFSM	.72	1.75	1.51	1.69	4.63	2.45	2.12	2.25	1.27	.80	2.26	4.47
IN.	.83	1.96	1.74	1.95	4.82	2.83	2.37	2.60	1.42	.93	2.61	4.99

CAL YR 1970 TOTAL 175,309 MEAN 480 MAX 3,720 MIN 128 CFSM 1.53 IN 20.77
WTR YR 1971 TOTAL 245,033 MEAN 671 MAX 9,770 MIN 137 CFSM 2.14 IN 29.03

PEAK DISCHARGE (BASE, 4,000 CFS)

DATE	TIME	G. H.	DISCHARGE	DATE	TIME	G. H.	DISCHARGE
2- 8	1245	9.41	7,820	8-28	2115	9.85	8,700
2-14	0345	11.86	14,100	9-13	2315	13.83	21,300

01483200 Blackbird Creek at Blackbird, Del.

LOCATION.--Lat 39°21'58", long 75°40'10", New Castle County, on right bank 15 ft downstream from highway bridge, 0.5 mile upstream from Barlow Branch, 0.6 mile southwest of Blackbird, 5.6 miles northwest of Smyrna, and 13.8 miles upstream from mouth.

DRAINAGE AREA.--3.85 sq mi.

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 19.38 ft above mean sea level. Mar. 5, 1951, to Oct. 16, 1956, nonrecording gage and crest-stage gage at site 15 ft upstream at same datum.

AVERAGE DISCHARGE.--15 years, 4.16 cfs (14.67 inches per year).

EXTREMES.--Current year: Maximum discharge, 194 cfs Aug. 28 (gage height, 3.13 ft); minimum, 0.10 cfs Oct. 3, 5, 17 (gage height, 0.64 ft).
Period of record: Maximum discharge, 510 cfs Sept. 12, 1960 (gage height, 4.10 ft); no flow at times during 1964, 1965, 1966, 1969.

REMARKS.--Records good.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.29	.62	1.3	1.9	1.3	5.4	3.5	3.0	5.6	1.1	2.0	1.6
2	.35	.63	1.2	1.8	1.1	4.9	3.8	2.9	3.3	1.1	1.1	1.5
3	.32	1.0	1.2	1.8	1.1	7.9	4.6	3.0	4.8	.91	.90	1.4
4	.15	2.3	1.2	5.3	1.3	17	3.7	3.0	4.2	.73	4.6	1.3
5	.16	3.5	1.1	31	2.0	9.5	3.5	2.6	3.2	.62	38	1.2
6	.19	1.8	1.1	11	4.4	6.7	7.1	3.4	2.7	.63	6.2	1.1
7	.16	1.2	1.0	4.6	3.0	7.3	27	3.4	3.3	.60	1.6	1.0
8	.17	1.0	1.0	3.0	42	6.3	12	6.4	2.4	.50	1.2	1.0
9	.18	.95	1.1	2.9	25	5.2	6.3	4.7	2.1	.48	.96	1.0
10	.24	.98	1.2	2.9	9.0	4.9	5.2	3.2	1.9	.57	.86	.94
11	.20	1.1	1.1	2.9	4.5	4.9	4.7	2.8	1.9	.98	2.0	3.2
12	.21	1.3	1.7	2.6	3.7	4.6	4.5	2.6	1.8	1.1	6.8	17
13	.24	1.3	2.1	2.6	22	4.6	4.4	3.4	1.8	.75	1.6	30
14	.25	1.4	1.5	3.2	29	4.6	4.3	6.0	1.9	.48	1.2	52
15	.30	7.7	1.3	3.6	7.7	4.7	3.9	2.9	2.0	.36	1.0	9.1
16	.30	5.7	1.8	2.7	4.8	4.5	3.9	17	1.9	.36	.85	4.6
17	.15	1.9	11	2.3	4.2	4.1	3.9	13	1.7	.40	.83	4.5
18	.16	1.5	5.6	2.1	4.3	3.9	3.8	4.6	1.5	.25	.78	4.4
19	.16	1.4	2.4	1.8	4.2	5.6	3.5	3.3	1.4	.35	1.2	3.6
20	.20	1.5	1.9	1.7	4.4	8.4	3.5	2.9	1.3	.42	1.6	3.2
21	.72	1.8	1.8	1.8	4.1	5.2	3.5	5.6	1.3	.28	.97	2.9
22	3.7	1.5	5.3	2.3	15	4.6	3.4	5.1	1.3	.23	.77	2.7
23	2.5	1.3	5.7	3.1	35	6.9	3.2	3.2	1.3	.25	.68	3.4
24	1.3	1.2	4.2	2.5	9.9	5.3	3.2	2.7	1.3	.22	.48	3.4
25	.99	1.1	2.7	3.1	6.1	4.3	3.0	2.8	1.1	.23	.49	2.6
26	.91	1.2	2.3	3.9	5.5	4.1	3.1	4.8	.98	.27	.50	2.8
27	.67	1.2	1.9	2.4	12	4.0	3.0	2.8	1.0	.19	28	4.3
28	.60	1.2	1.8	1.5	8.0	3.9	3.2	2.5	1.3	.22	91	3.2
29	.60	1.2	1.7	1.7	------	4.0	3.9	3.2	1.3	.39	8.6	2.6
30	.61	1.4	1.6	2.0	------	3.8	3.2	5.2	1.3	3.7	2.3	2.5
31	.56	------	1.7	2.0	------	3.6	------	12	------	9.6	1.7	------
TOTAL	17.54	51.88	72.5	118.0	274.6	174.7	149.8	144.0	62.88	28.27	210.77	174.04
MEAN	.57	1.73	2.34	3.81	9.81	5.64	4.99	4.65	2.10	.91	6.80	5.80
MAX	3.7	7.7	11	31	42	17	27	17	5.6	9.6	91	52
MIN	.15	.62	1.0	1.5	1.1	3.6	3.0	2.5	.98	.19	.48	.94
CFSM	.15	.45	.61	.99	2.55	1.46	1.30	1.21	.55	.24	1.77	1.51
IN.	.17	.50	.70	1.14	2.65	1.69	1.45	1.39	.61	.27	2.04	1.68

CAL YR 1970 TOTAL 1,419.38 MEAN 3.89 MAX 65 MIN .10 CFSM 1.01 IN 13.71
WTR YR 1971 TOTAL 1,478.98 MEAN 4.05 MAX 91 MIN .15 CFSM 1.05 IN 14.29

PEAK DISCHARGE (BASE, 50 CFS)

DATE	TIME	G. H.	DISCHARGE	DATE	TIME	G. H.	DISCHARGE
2- 8	1345	2.42	80	8- 5	1145	2.49	89
2-13	2400	2.30	66	8-28	0915	3.13	194
2-23	0315	2.18	54	9-14	0215	2.68	115

01483700 St. Jones River at Dover, Del.

LOCATION.--Lat 39°09'49", long 75°31'10", Kent County, on left bank 150 ft upstream from Division Street Bridge in Dover, 1,950 ft downstream from Silver Lake, and 12.5 miles upstream from mouth.

DRAINAGE AREA.--31.9 sq mi.

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

GAGE.--Water-stage recorder and concrete control. Datum of gage is 0.50 ft above mean sea level.

AVERAGE DISCHARGE.--13 years, 30.5 cfs (12.98 inches per year).

EXTREMES.--Current year: Maximum discharge, 852 cfs Aug. 28 (gage height, 7.04 ft); minimum, 0.30 cfs Oct. 19. Period of record: Maximum discharge, 1,900 cfs Sept. 13, 1960 (gage height, 9.45 ft, from floodmark); no flow at times in 1959, 1961, 1962.

REMARKS.--Records good. Flow affected by Silver Lake. Records of chemical analyses for the water year 1971 are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.6	3.4	8.4	13	13	90	27	30	79	5.0	8.5	69
2	1.0	3.4	8.0	11	11	69	30	24	54	5.0	7.6	45
3	1.5	4.6	7.6	12	8.4	70	34	22	40	4.2	6.3	33
4	2.6	11	11	15	9.5	136	36	21	56	3.4	70	27
5	.80	16	3.7	55	15	166	32	19	83	3.2	286	23
6	.80	8.4	9.0	50	20	130	46	19	60	2.4	239	20
7	.90	9.0	3.7	81	54	100	107	18	33	3.4	90	18
8	1.2	8.0	2.9	50	180	83	158	28	23	2.9	30	19
9	1.3	6.7	5.5	31	241	70	126	32	18	2.1	13	18
10	1.9	7.1	7.1	22	133	57	79	28	15	2.1	8.4	16
11	2.1	11	6.3	20	79	52	53	22	13	7.3	41	19
12	2.1	12	12	20	53	45	42	19	12	8.4	86	106
13	2.4	13	13	19	74	44	37	18	12	5.9	63	364
14	2.4	9.5	12	20	152	42	36	18	11	5.0	34	273
15	3.2	42	10	21	150	40	30	15	12	2.9	15	134
16	7.1	31	11	20	98	40	29	56	12	2.1	9.5	77
17	2.9	26	44	16	62	37	27	86	11	2.6	8.0	98
18	.50	16	44	15	45	33	28	72	9.5	2.6	7.1	116
19	.34	14	32	13	39	39	25	40	9.0	5.3	29	108
20	.39	13	19	12	38	53	25	25	8.4	11	20	76
21	4.5	15	14	11	36	63	25	26	8.4	6.7	12	49
22	33	13	30	12	75	53	23	31	8.0	4.2	8.4	33
23	23	13	38	18	252	50	20	29	7.6	3.2	7.1	31
24	14	9.0	43	20	276	48	22	21	7.6	3.7	4.6	30
25	11	7.6	28	21	156	40	20	18	6.7	3.4	4.2	26
26	10	8.0	21	25	102	36	20	20	6.3	3.0	3.9	24
27	6.7	8.4	14	34	100	33	20	18	5.0	2.8	127	29
28	4.6	8.4	12	38	106	31	21	16	4.2	2.6	757	31
29	4.2	7.6	11	13	------	32	32	18	4.6	2.9	576	28
30	3.5	11	11	13	------	31	39	28	5.9	7.0	231	24
31	3.7	------	11	15	------	30	------	62	------	10	112	------
TOTAL	155.63	366.1	503.2	776	2,579.9	1,843	1,249	899	635.2	136.3	2,914.6	1,964
MEAN	5.02	12.2	16.2	25.0	92.1	59.5	41.6	29.0	21.2	4.40	94.0	65.5
MAX	33	42	44	90	276	166	158	86	83	11	757	364
MIN	.34	3.4	2.9	11	8.4	30	20	15	4.2	2.1	3.9	16
CFSM	.16	.38	.51	.78	2.89	1.87	1.30	.91	.66	.14	2.95	2.05
IN.	.18	.43	.59	.90	3.01	2.15	1.46	1.05	.74	.16	3.40	2.29

CAL YR 1970 TOTAL 11,322.59 MEAN 31.0 MAX 378 MIN .34 CFSM .97 IN 13.20
WTR YR 1971 TOTAL 14,021.93 MEAN 38.4 MAX 757 MIN .34 CFSM 1.20 IN 16.35

01484000 Murderkill River near Felton, Del.

LOCATION.--Lat 38°58'33", long 75°34'03", Kent County, on left bank 30 ft downstream from northbound lane of bridge on U.S. Highway 13, 400 ft downstream from Black Swamp Creek, 1.3 miles upstream from Killen Pond, 2.2 miles south of Felton, and 17.6 miles upstream from mouth.

DRAINAGE AREA.--13.6 sq mi.

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.

GAGE.--Water-stage recorder. Datum of gage is 22.18 ft above mean sea level. July 1931 to October 1933, nonrecording gage at bridge 200 ft upstream at datum 2.00 ft higher. March 1951 to May 1960, nonrecording gage and crest-stage gage at bridge 200 ft upstream at datum 2.00 ft higher.

AVERAGE DISCHARGE.--13 years (1931-33, 1960-71), 17.5 cfs (17.47 inches per year).

EXTREMES.--Current year: Maximum discharge, 260 cfs Feb. 23 (gage height, 5.36 ft); minimum, 2.4 cfs July 17, 18 (gage height, 2.34 ft).
Period of record: Maximum discharge, 2,090 cfs Aug. 4, 1967 (gage height, 8.83 ft); minimum, 0.80 cfs Aug. 28, Sept. 11, 1966.

REMARKS.--Records good.

REVISIONS (WATER YEARS).--WSP 1432: 1932.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.8	3.0	7.5	15	10	34	14	14	25	5.4	8.1	9.6
2	3.7	3.7	7.8	13	8.8	30	15	13	18	6.0	4.9	8.6
3	3.0	6.3	7.9	12	7.3	36	22	15	20	4.8	4.5	7.9
4	3.4	8.7	8.0	16	8.5	112	17	13	23	4.1	19	6.5
5	3.6	7.2	7.3	88	16	70	15	11	16	4.0	32	5.9
6	3.3	4.7	6.9	90	17	41	36	11	13	4.3	8.8	5.5
7	3.2	4.0	7.3	38	24	43	161	10	17	4.5	5.4	6.0
8	3.3	3.4	7.5	27	166	39	89	15	13	4.1	4.3	6.3
9	3.2	3.9	7.9	24	97	29	42	12	56	4.0	4.4	5.9
10	2.8	4.3	7.7	23	39	26	30	10	21	3.5	4.3	5.5
11	2.7	4.6	7.5	22	25	25	25	9.1	16	4.0	9.1	13
12	3.2	6.3	13	22	24	24	23	8.5	12	4.8	25	45
13	3.2	29	11	20	66	22	22	9.3	11	4.5	6.3	32
14	3.2	16	9.0	21	146	21	21	9.7	11	4.1	4.6	18
15	3.4	55	8.3	21	57	22	19	7.1	11	3.9	3.9	12
16	3.9	23	11	19	36	23	19	63	10	3.9	4.1	9.1
17	2.8	13	41	18	30	20	18	46	9.1	3.3	4.3	12
18	2.5	11	21	17	29	18	18	24	8.1	2.9	4.1	19
19	2.9	13	15	15	27	22	17	18	7.1	4.2	5.4	155
20	3.1	13	13	13	26	30	17	15	6.7	5.2	5.1	45
21	4.7	17	13	13	26	22	17	16	6.9	4.2	3.5	23
22	24	11	35	16	36	20	16	16	7.5	3.8	3.1	19
23	8.4	10	35	21	206	28	15	13	7.5	3.7	3.5	17
24	4.1	9.4	26	17	101	23	14	12	7.2	3.2	3.4	16
25	3.3	9.0	21	20	51	19	13	11	6.4	3.0	3.3	12
26	3.8	8.4	19	22	37	18	14	10	5.5	3.4	3.5	12
27	3.7	8.8	17	20	61	17	14	9.1	5.0	3.6	41	16
28	3.4	8.1	16	14	51	16	14	9.1	5.6	3.4	155	14
29	3.3	7.5	15	12	------	17	21	12	6.1	3.9	38	12
30	3.4	8.5	14	15	------	16	16	20	5.9	10	16	11
31	3.1	------	13	14	------	14	------	41	------	6.3	11	------
TOTAL	129.4	330.8	449.6	718	1,428.6	897	794	502.9	387.6	134.0	448.9	579.8
MEAN	4.17	11.0	14.5	23.2	51.0	28.9	26.5	16.2	12.9	4.32	14.5	19.3
MAX	24	55	41	90	206	112	161	63	56	10	155	155
MIN	2.5	3.0	6.9	12	7.3	14	13	7.1	5.0	2.9	3.1	5.5
CFSM	.31	.81	1.07	1.71	3.75	2.13	1.95	1.19	.95	.32	1.07	1.42
IN.	.35	.90	1.23	1.96	3.91	2.45	2.17	1.38	1.06	.37	1.23	1.59

CAL YR 1970 TOTAL 7,648.7 MEAN 21.0 MAX 250 MIN 2.5 CFSM 1.54 IN 20.92
WTR YR 1971 TOTAL 6,806.6 MEAN 18.6 MAX 206 MIN 2.5 CFSM 1.37 IN 18.60

PEAK DISCHARGE (BASE, 130 CFS)

DATE	TIME	G. H.	DISCHARGE	DATE	TIME	G. H.	DISCHARGE
1- 5	2130	4.63	144	3- 4	1500	4.78	151
2- 8	0815	5.17	215	4- 7	0900	4.91	189
2-14	0100	5.10	205	8-28	1130	5.08	221
2-23	0815	5.36	260	9-19	0600	5.05	215

01484100 Beaverdam Branch at Houston, Del.

LOCATION.--Lat 38°54'20", long 75°30'49", Kent County, on left bank 15 ft upstream from bridge on State Highway 384, 0.8 mile south of Houston, 2,000 ft upstream from unnamed stream, and 1.2 miles upstream from Blairs Pond and mouth.

DRAINAGE AREA.--2.83 sq mi.

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

GAGE.--Water-stage recorder and timber control. Datum of gage is 35.67 ft above mean sea level.

AVERAGE DISCHARGE.--13 years, 3.46 cfs (16.60 inches per year).

EXTREMES.--Current year: Maximum discharge, 35 cfs Feb. 23 (gage height, 3.32 ft); minimum daily, 0.93 cfs July 28.
Period of record: Maximum discharge, 176 cfs Sept. 12, 1960 (gage height, 5.55 ft); minimum daily, 0.20 cfs Sept. 18, 19, 1966.

REMARKS.--Records good.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.3	1.1	1.8	2.8	2.7	6.2	4.2	3.7	4.0	1.7	1.5	1.6
2	1.3	1.0	1.8	2.6	2.5	5.9	4.3	3.6	3.5	2.0	1.4	1.6
3	1.3	1.3	1.8	2.5	2.5	6.8	4.9	3.7	3.8	2.0	1.4	1.5
4	1.3	1.7	1.9	2.8	2.6	16	4.3	3.5	4.6	2.0	2.0	1.5
5	1.2	1.5	1.8	14	3.0	8.1	4.2	3.5	3.8	2.0	3.6	1.4
6	1.2	1.3	1.8	5.5	2.9	7.0	8.7	3.3	3.5	1.9	2.0	1.4
7	1.2	1.2	1.7	4.0	5.5	7.2	20	3.3	3.5	1.7	1.6	1.3
8	1.2	1.1	1.7	3.6	21	6.5	8.3	3.5	3.1	1.5	1.4	1.4
9	1.2	1.1	1.7	3.5	8.0	5.9	6.6	3.3	3.0	1.3	1.4	1.3
10	1.1	1.1	1.7	3.5	5.2	5.6	5.8	3.1	2.7	1.3	1.1	1.2
11	1.1	1.1	1.7	3.5	4.8	5.7	5.4	3.1	2.5	1.6	1.2	1.3
12	1.1	1.2	2.0	3.4	4.7	5.3	5.2	2.7	2.7	1.8	1.3	1.6
13	1.1	3.7	2.0	3.2	14	5.3	5.1	3.0	3.0	1.7	1.2	1.8
14	1.1	2.2	1.8	3.4	11	5.1	4.8	3.1	2.8	1.4	1.1	1.5
15	1.1	7.7	1.7	3.3	6.0	5.2	4.6	2.5	2.8	1.2	1.1	1.3
16	1.2	2.7	2.0	3.2	5.4	5.1	4.6	8.8	2.8	1.1	1.2	1.2
17	1.1	2.1	4.3	3.1	5.2	4.8	4.4	5.6	2.7	1.1	1.2	1.4
18	1.1	2.0	2.4	3.1	5.1	4.7	4.3	4.4	2.7	1.2	1.2	1.3
19	1.1	2.0	2.3	3.0	5.0	5.3	4.2	3.8	2.6	1.2	1.2	1.4
20	1.1	2.1	2.1	2.9	5.1	5.6	4.2	3.3	2.6	1.6	1.2	1.3
21	1.2	2.6	2.2	2.9	4.9	4.9	4.2	3.8	2.5	1.4	1.2	1.2
22	2.8	2.1	4.5	3.0	7.0	4.8	4.1	3.8	2.5	1.1	1.0	1.2
23	1.8	2.1	3.4	3.2	23	5.7	3.9	3.3	2.5	1.0	1.1	1.2
24	1.4	2.0	2.9	3.0	8.6	5.0	3.9	3.1	2.5	1.1	1.1	1.2
25	1.3	2.0	2.7	3.0	6.9	4.7	3.7	3.1	2.4	.97	1.1	1.2
26	1.2	2.0	2.7	3.2	6.3	4.6	3.8	3.0	2.2	1.4	1.1	1.2
27	1.1	2.0	2.7	3.0	9.3	4.6	3.6	2.7	2.0	1.2	2.3	1.3
28	1.1	1.9	2.6	2.7	7.1	4.5	3.7	2.8	1.9	.93	11	1.2
29	1.1	1.8	2.5	2.7	------	4.4	4.5	3.0	1.9	.98	2.5	1.2
30	1.1	1.8	2.5	2.9	------	4.3	3.9	4.4	1.7	2.4	1.8	1.2
31	1.1	------	2.6	2.8	------	4.2	------	5.6	------	1.5	1.7	------
TOTAL	38.6	59.5	71.3	109.3	195.3	179.0	157.4	113.4	84.8	45.28	55.2	40.4
MEAN	1.25	1.98	2.30	3.53	6.98	5.77	5.25	3.66	2.83	1.46	1.78	1.35
MAX	2.8	7.7	4.5	14	23	16	20	8.8	4.6	2.4	11	1.8
MIN	1.1	1.0	1.7	2.5	2.5	4.2	3.6	2.5	1.7	.93	1.0	1.2
CFSM	.44	.70	.81	1.25	2.47	2.04	1.86	1.29	1.00	.52	.63	.48
IN.	.51	.78	.94	1.44	2.57	2.35	2.07	1.49	1.11	.60	.73	.53

CAL YR 1970 TOTAL 1,517.80 MEAN 4.16 MAX 36 MIN 1.0 CFSM 1.47 IN 19.95
WTR YR 1971 TOTAL 1,149.48 MEAN 3.15 MAX 23 MIN .93 CFSM 1.11 IN 15.11

PEAK DISCHARGE (BASE, 30 CFS)

DATE	TIME	G. H.	DISCHARGE	DATE	TIME	G. H.	DISCHARGE
2-8	0515	3.28	34	2-23	0700	3.32	35

01484300 Sowbridge Branch near Milton, Del.

LOCATION.--Lat 38°48'51", long 75°19'39", Sussex County, on left bank at downstream side of highway bridge, 1 mile downstream from Reynolds Pond, 2.5 miles north of Milton, and 0.7 mile upstream from mouth.

DRAINAGE AREA.--7.08 sq mi.

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

GAGE.--Water-stage recorder. Concrete control since Oct. 28, 1968. Datum of gage is 3.43 ft above mean sea level.

AVERAGE DISCHARGE.--15 years, 9.66 cfs (18.53 inches per year).

EXTREMES.--Current year: Maximum discharge, 58 cfs Aug. 28 (gage height, 5.61 ft); minimum, 2.3 cfs Jan. 27 (gage height, 4.64 ft), result of freezeup.
Period of record: Maximum discharge, 134 cfs Aug. 5, 1967 (gage height, 6.33 ft); minimum, 0.47 cfs Feb. 10, 1969.

REMARKS.--Records good. Flow regulated by Reynolds Pond.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.7	7.3	9.5	17	12	21	12	13	18	9.3	20	3.4
2	3.7	7.4	9.1	15	9.1	23	13	13	17	9.1	11	4.5
3	3.7	7.4	8.8	14	8.2	19	14	13	16	9.3	4.8	5.4
4	3.6	7.8	8.3	13	7.8	20	14	12	15	9.1	5.3	8.8
5	3.3	7.8	6.4	18	7.5	19	13	12	13	9.1	6.7	7.2
6	3.3	5.9	7.9	18	7.3	19	16	11	13	8.8	6.7	6.9
7	3.3	6.0	7.9	17	11	19	19	11	13	7.7	6.2	6.7
8	3.2	6.2	7.6	14	19	19	21	12	17	7.8	5.7	6.5
9	3.3	6.4	8.3	13	31	21	19	12	20	7.1	5.6	6.4
10	3.3	6.5	9.5	16	20	19	17	11	9.9	6.6	5.6	6.3
11	3.3	7.0	8.9	15	9.7	18	16	11	7.7	7.1	5.1	6.4
12	3.4	7.4	9.9	14	10	17	16	11	7.0	7.2	4.7	11
13	3.4	10	9.9	13	14	16	15	11	7.2	7.0	4.6	26
14	3.4	20	9.5	9.8	16	16	15	11	8.2	6.4	4.8	32
15	3.4	11	9.0	11	15	16	14	11	8.9	5.3	5.0	11
16	14	13	9.6	10	17	17	14	17	9.4	4.0	5.0	9.3
17	25	18	14	9.8	19	16	13	20	10	4.2	7.1	10
18	8.2	12	16	9.3	11	16	13	19	11	4.3	11	11
19	5.7	5.5	9.6	9.3	12	16	13	17	11	4.8	3.8	11
20	5.4	6.1	9.7	9.3	13	16	13	15	11	5.3	3.6	9.5
21	5.4	7.1	11	10	13	15	13	15	10	5.3	3.6	9.3
22	12	7.6	12	14	15	14	13	14	6.9	5.4	3.9	9.3
23	19	7.9	14	13	28	15	12	13	7.5	5.5	4.8	9.5
24	23	8.4	17	11	34	15	12	12	9.2	5.7	4.5	9.3
25	8.2	8.3	9.8	12	25	14	12	12	9.5	5.6	4.5	9.0
26	7.8	9.1	9.2	13	20	14	12	11	9.4	5.3	4.4	9.2
27	7.8	11	9.5	8.3	14	14	12	11	9.8	4.6	8.5	9.4
28	7.6	8.0	10	9.0	16	13	12	10	9.6	4.3	41	9.4
29	7.4	7.9	10	9.6	------	13	14	10	9.9	4.9	38	8.4
30	7.4	8.5	10	12	------	13	13	14	10	18	14	8.6
31	7.4	------	11	15	------	13	------	18	------	26	3.4	------
TOTAL	222.6	262.5	312.9	392.4	434.6	516	425	403	335.1	230.1	262.9	290.7
MEAN	7.18	8.75	10.1	12.7	15.5	16.6	14.2	13.0	11.2	7.42	8.48	9.69
MAX	25	20	17	18	34	23	21	20	20	26	41	32
MIN	3.2	5.5	6.4	8.3	7.3	13	12	10	6.9	4.0	3.4	3.4
CFSM	1.01	1.24	1.43	1.79	2.19	2.34	2.01	1.84	1.58	1.05	1.20	1.37
IN.	1.17	1.38	1.64	2.06	2.28	2.71	2.23	2.12	1.76	1.21	1.38	1.53

CAL YR 1970 TOTAL 3,642.4 MEAN 9.98 MAX 29 MIN 3.2 CFSM 1.41 IN 19.14
WTR YR 1971 TOTAL 4,087.8 MEAN 11.2 MAX 41 MIN 3.2 CFSM 1.58 IN 21.48

01484500 Stockley Branch at Stockley, Del.

LOCATION.--Lat 38°38'19", long 75°20'31", Sussex County, on left bank at highway bridge in Stockley, 4.4 miles southeast of Georgetown, and 1.6 miles upstream from mouth.

DRAINAGE AREA.--5.24 sq mi.

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

GAGE.--Water-stage recorder and concrete control. Datum of gage is 24.54 ft above mean sea level. Prior to Aug. 16, 1950, nonrecording gage at same site and datum.

AVERAGE DISCHARGE.--28 years, 6.86 cfs (17.78 inches per year).

EXTREMES.--Current year: Maximum discharge, 75 cfs Aug. 28 (gage height, 3.35 ft); minimum, 1.2 cfs Oct 6. Period of record: Maximum discharge, 132 cfs June 4, 1948 (gage height, 5.0 ft, from graph based on gage readings), from rating curve extended above 50 cfs; minimum observed, 0.13 cfs Sept. 1-11, 1944.

REMARKS.--Records good.

REVISIONS (WATER YEARS).--WSP 1141: 1948(P). WSP 1432: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.6	1.9	2.1	8.9	5.7	12	7.3	6.9	9.3	3.2	4.6	3.7
2	1.6	1.9	2.1	6.2	5.2	11	7.4	7.3	8.1	5.2	2.7	3.5
3	1.6	1.9	2.1	5.8	5.2	13	8.0	7.8	7.7	3.7	2.5	3.2
4	1.4	2.7	2.1	6.8	5.5	26	7.5	7.1	7.3	3.1	5.5	3.1
5	1.4	2.3	2.0	18	7.4	17	7.2	6.4	7.0	3.0	5.2	3.0
6	1.4	1.9	2.1	11	7.0	14	17	6.1	6.6	3.0	3.1	2.9
7	1.4	1.9	2.0	9.4	8.5	14	30	6.1	6.3	3.0	2.8	2.9
8	1.4	1.9	2.0	8.7	23	12	17	6.7	6.1	2.8	2.7	2.8
9	1.4	1.8	2.1	8.5	15	11	17	6.4	5.5	2.7	2.5	2.8
10	1.4	1.8	2.1	8.4	10	10	13	5.9	5.3	2.7	2.5	2.6
11	1.4	1.9	2.0	8.2	9.2	9.7	11	5.7	5.0	2.8	2.4	2.8
12	1.4	2.1	2.7	8.1	8.9	9.2	11	5.6	5.1	2.7	2.5	8.6
13	1.4	2.1	2.6	7.9	15	9.0	10	6.4	5.0	2.7	2.3	18
14	1.4	2.0	2.3	8.1	16	8.7	9.7	8.3	4.8	2.6	2.3	15
15	1.4	3.1	2.2	8.1	12	8.8	9.1	6.2	4.6	2.5	2.3	8.5
16	1.5	2.3	2.8	7.7	10	8.7	9.0	28	4.5	2.5	2.3	7.1
17	1.4	2.1	7.0	7.6	9.7	8.3	8.7	17	4.2	2.5	2.3	6.5
18	1.4	2.1	3.1	7.5	9.4	7.9	8.4	11	4.0	2.4	2.3	5.9
19	1.4	2.8	2.8	7.1	9.2	9.2	8.1	9.4	4.0	4.6	2.4	5.4
20	1.4	2.6	2.7	6.9	9.3	11	8.1	8.3	3.9	3.3	2.3	4.9
21	1.5	3.2	2.9	6.8	9.0	9.5	8.0	8.2	4.1	2.5	2.1	5.1
22	14	2.4	6.8	7.0	13	9.1	7.8	8.0	3.9	2.3	2.1	4.6
23	3.7	2.3	4.6	7.3	29	10	7.5	7.5	3.8	2.3	2.1	4.2
24	2.4	2.2	4.0	6.7	17	8.8	7.5	7.0	3.7	2.3	2.0	4.2
25	2.2	2.2	3.8	6.7	14	8.2	7.2	6.8	3.6	2.4	2.0	4.2
26	2.1	2.2	3.9	7.0	12	8.1	7.1	6.4	3.6	2.3	2.0	4.2
27	2.1	2.1	3.8	6.6	16	8.3	6.9	6.0	3.6	2.3	3.8	4.2
28	2.0	2.1	3.8	6.1	14	8.2	7.0	6.0	3.4	2.2	30	4.0
29	2.0	2.1	3.8	5.9	------	8.2	8.0	6.2	3.4	2.3	5.1	3.9
30	2.0	2.2	3.8	6.5	------	7.9	7.1	11	3.3	3.9	4.1	3.9
31	1.9	------	3.8	6.4	------	7.5	------	11	------	2.5	3.9	------
TOTAL	64.6	66.1	95.9	241.9	325.2	324.3	298.6	256.7	150.7	88.3	116.7	155.7
MEAN	2.08	2.20	3.09	7.80	11.6	10.5	9.95	8.28	5.02	2.85	3.76	5.19
MAX	14	3.2	7.0	18	29	26	30	28	9.3	5.2	30	18
MIN	1.4	1.8	2.0	5.8	5.2	7.5	6.9	5.6	3.3	2.2	2.0	2.6
CFSM	.40	.42	.59	1.49	2.21	2.00	1.90	1.58	.96	.54	.72	.99
IN.	.46	.47	.68	1.72	2.31	2.30	2.12	1.82	1.07	.63	.83	1.11

CAL YR 1970 TOTAL 2,404.7 MEAN 6.59 MAX 32 MIN 1.4 CFSM 1.26 IN 17.07
WTR YR 1971 TOTAL 2,184.7 MEAN 5.99 MAX 30 MIN 1.4 CFSM 1.14 IN 15.51

PEAK DISCHARGE (BASE, 45 CFS)

DATE	TIME	G. H.	DISCHARGE	DATE	TIME	G. H.	DISCHARGE
4- 6	2200	2.90	45	8-28	0430	3.35	75
5-16	1315	3.03	54				

01485000 Pocomoke River near Willards, Md.

LOCATION.--Lat 38°23'20", long 75°19'30", Worcester County, on left bank 30 ft downstream from bridge on State Highway 346, 0.6 mile upstream from Burnt Mill Branch, 1.3 miles east of Willards, 1.3 miles west of Whaleysville, and 50.3 miles upstream from mouth.

DRAINAGE AREA.--60.5 sq mi.

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

GAGE.--Water-stage recorder. Datum of gage is 13.95 ft above mean sea level.

AVERAGE DISCHARGE.--21 years (1950-71), 65.6 cfs (14.72 inches per year).

EXTREMES.--Current year: Maximum discharge, 452 cfs May 16 (gage height, 10.03 ft); minimum, 4.4 cfs Oct. 13, 14.
Period of record: Maximum discharge, 884 cfs Jan. 8, 1962; maximum gage height, 12.03 ft Mar. 21, 1958; minimum discharge, 2.2 cfs Aug. 18, 19, 1957 (gage height, 1.91 ft).

REMARKS.--Records fair.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.6	12	22	183	42	148	51	53	160	15	14	56
2	5.6	12	21	205	38	125	49	48	117	19	12	45
3	5.4	12	20	147	33	120	59	47	94	23	11	38
4	5.6	14	20	124	33	242	62	44	76	18	28	32
5	5.2	39	20	247	51	201	57	40	63	16	141	29
6	5.2	28	19	278	78	151	121	37	54	16	83	26
7	4.9	22	18	198	79	131	393	35	47	21	55	23
8	4.9	20	17	144	321	116	312	41	43	18	41	22
9	4.9	19	16	118	295	98	222	44	38	15	32	21
10	4.9	17	16	104	209	87	159	41	35	13	26	20
11	4.9	18	16	97	146	83	126	37	32	14	23	21
12	4.7	22	18	95	122	75	107	34	32	17	21	24
13	4.7	25	22	88	170	70	93	36	33	15	18	54
14	4.9	25	22	86	258	66	83	151	30	13	17	108
15	5.4	35	21	90	187	64	72	85	29	12	15	90
16	7.7	42	21	88	146	67	66	286	28	12	14	65
17	6.6	33	113	74	121	63	60	421	27	12	13	52
18	5.9	30	94	66	109	57	57	316	24	11	13	45
19	5.9	40	67	57	96	55	52	213	23	14	12	40
20	5.6	48	56	49	87	67	49	144	22	17	12	35
21	6.1	54	50	44	81	64	47	115	21	12	11	32
22	16	48	137	43	82	58	44	101	20	11	11	30
23	33	42	200	48	254	62	41	84	20	11	11	28
24	20	36	142	49	220	64	40	70	19	11	9.8	27
25	16	31	105	51	163	58	38	62	18	11	9.1	24
26	15	28	94	55	132	55	36	55	17	10	8.8	23
27	15	27	81	54	195	58	34	49	18	10	11	23
28	15	25	71	42	192	64	34	44	17	10	299	22
29	14	24	61	38	------	66	61	45	16	10	230	21
30	14	23	54	40	------	62	59	100	15	17	113	20
31	13	------	50	48	------	56	------	230	------	14	74	------
TOTAL	285.6	851	1,684	3,050	3,939	2,753	2,684	3,108	1,188	438	1,388.7	1,096
MEAN	9.21	28.4	54.3	98.4	141	88.8	89.5	100	39.6	14.1	44.8	36.5
MAX	33	54	200	278	321	242	393	421	160	23	299	108
MIN	4.7	12	16	38	33	55	34	34	15	10	8.8	20
CFSM	.15	.47	.90	1.63	2.33	1.47	1.48	1.65	.65	.23	.74	.60
IN.	.18	.52	1.04	1.88	2.42	1.69	1.65	1.91	.73	.27	.85	.67

CAL YR 1970 TOTAL 26,343.3 MEAN 72.2 MAX 481 MIN 4.7 CFSM 1.19 IN 16.20
WTR YR 1971 TOTAL 22,465.3 MEAN 61.5 MAX 421 MIN 4.7 CFSM 1.02 IN 13.81

PEAK DISCHARGE (BASE, 500 CFS).--No peak above base.

01485500 Nassawango Creek near Snow Hill, Md.

LOCATION.--Lat 38°13'44", long 75°28'19", Worcester County, on right bank 15 ft downstream from bridge on State Highway 12, 0.5 mile upstream from Furnace Branch, 0.6 mile downstream from Millville Creek, 5.5 miles northwest of Snow Hill, and 7.3 miles upstream from mouth.

DRAINAGE AREA.--44.9 sq mi.

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

GAGE.--Water-stage recorder and concrete control. Datum of gage is 12.29 ft above mean sea level.

AVERAGE DISCHARGE.--21 years (1950-71), 49.4 cfs (14.94 inches per year).

EXTREMES.--Current year: Maximum discharge, 347 cfs May 18 (gage height, 6.01 ft); minimum, 1.7 cfs Oct. 8, 10, 12, 13, 14, 15.
Period of record: Maximum discharge, 988 cfs Aug. 16, 1953 (gage height, 7.82 ft); minimum, 0.80 cfs Sept. 8, 9, 10, 1966.

REMARKS.--Records good.

REVISIONS (WATER YEARS).--WSP 1332: 1953.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.3	7.0	19	49	33	172	52	24	111	5.0	17	70
2	2.2	6.2	18	57	32	134	50	22	126	7.0	11	39
3	2.2	6.2	17	87	26	111	58	21	103	11	7.4	29
4	2.2	10	17	101	24	134	57	19	72	8.2	12	20
5	2.2	14	16	97	41	174	55	18	46	6.2	38	16
6	2.1	14	15	104	58	177	83	17	34	5.0	45	12
7	1.9	17	14	132	73	135	188	15	30	5.6	53	10
8	1.8	23	13	117	119	109	322	35	38	6.2	40	8.7
9	1.8	23	13	87	202	92	271	38	27	5.9	24	7.8
10	1.8	20	13	73	224	79	178	35	20	4.5	13	6.6
11	1.8	17	12	63	163	68	124	32	16	16	8.2	14
12	1.8	18	15	58	122	60	97	27	14	34	6.6	22
13	1.8	17	19	53	111	55	81	26	13	28	5.9	38
14	1.7	17	19	52	155	51	67	36	12	17	5.0	40
15	1.8	32	18	53	226	49	57	41	13	9.7	4.5	44
16	2.1	32	19	52	187	54	51	115	16	6.2	3.8	40
17	3.2	32	47	43	132	54	52	274	16	4.8	3.6	34
18	3.0	33	46	44	106	51	50	329	12	4.0	3.6	28
19	2.5	38	68	37	91	46	46	230	11	8.7	4.0	19
20	2.3	34	74	34	81	51	43	140	9.2	25	3.8	15
21	2.3	34	60	29	72	50	37	98	7.8	14	3.4	12
22	12	35	70	30	70	52	34	75	7.0	9.7	3.0	11
23	18	36	80	35	97	51	32	56	7.4	7.0	3.2	9.7
24	17	34	113	35	129	46	30	44	12	5.6	3.4	8.7
25	19	32	116	38	153	43	27	37	11	4.5	3.2	7.8
26	19	29	94	40	124	41	25	32	8.2	4.0	3.0	7.0
27	16	26	75	37	124	44	23	28	7.0	4.0	11	8.2
28	13	23	59	34	164	50	22	24	6.2	3.6	114	9.7
29	10	21	46	31	------	53	25	24	6.2	3.4	139	9.2
30	8.7	19	39	30	------	60	25	43	5.6	20	172	9.7
31	7.8	------	37	35	------	58	------	95	------	21	115	------
TOTAL	185.3	699.4	1,281	1,767	3,139	2,404	2,262	2,050	817.6	314.8	879.6	606.1
MEAN	5.98	23.3	41.3	57.0	112	77.5	75.4	66.1	27.3	10.2	28.4	20.2
MAX	19	38	116	132	226	177	322	329	126	34	172	70
MIN	1.7	6.2	12	29	24	41	22	15	5.6	3.4	3.0	6.6
CFSM	.13	.52	.92	1.27	2.49	1.73	1.68	1.47	.61	.23	.63	.45
IN.	.15	.58	1.06	1.46	2.60	1.99	1.87	1.70	.68	.26	.73	.50

CAL YR 1970 TOTAL 18,081.7 MEAN 49.5 MAX 356 MIN 1.7 CFSM 1.10 IN 14.98
WTR YR 1971 TOTAL 16,405.8 MEAN 44.9 MAX 329 MIN 1.7 CFSM 1.00 IN 13.59

PEAK DISCHARGE (BASE, 280 CFS)

DATE	TIME	G. H.	DISCHARGE	DATE	TIME	G. H.	DISCHARGE
4-8	1400	5.96	338	5-18	0600	6.01	347

01486000 Manokin Branch near Princess Anne, Md.

LOCATION.--Lat 38°12'50", long 75°40'18", Somerset County, on right bank 5 ft downstream from farm bridge, 1.4 miles northeast of Princess Anne, and 1.6 miles upstream from confluence with Loretto Branch.

DRAINAGE AREA.--5.8 sq mi, approximately.

PERIOD OF RECORD.--April 1951 to September 1971 (discontinued).

GAGE.--Water-stage recorder above gage height 1.4 ft; nonrecording gage below. Datum of gage is 7.03 ft above mean sea level. Prior to Nov. 26, 1968, recording gage at datum 1.0 ft higher.

AVERAGE DISCHARGE.--20 years, 4.14 cfs (9.69 inches per year).

EXTREMES.--Current year: Maximum discharge, 194 cfs Aug. 28 (gage height, 2.72 ft), from rating curve extended as explained below; minimum daily, 0.30 cfs Oct. 9-15, 17-20, Oct. 25 to Nov. 1, Nov. 24-27.
Period of record: Maximum discharge, 547 cfs Aug. 20, 1969 (gage height, 5.44 ft), from rating curve extended above 27 cfs based on channel-conveyance study; no flow at times in 1954, 1963, 1964, 1966.

REMARKS.--Records poor.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.39	.30	.80	3.2	3.0	5.6	2.8	1.6	22	.64	1.2	7.0
2	.39	.39	.80	1.6	1.6	5.3	2.2	1.6	14	7.3	.51	6.6
3	.39	.51	.80	1.8	.64	9.4	6.0	1.6	9.4	3.5	.51	6.0
4	.51	.80	.80	1.8	.64	37	4.3	1.6	7.7	1.2	2.0	6.0
5	.51	.80	.96	4.9	4.6	19	3.0	1.4	5.6	.80	4.3	5.6
6	.51	.80	1.2	4.0	4.9	14	22	2.0	4.0	.80	1.8	4.9
7	.39	.90	1.2	2.8	12	11	22	2.0	4.0	.80	1.2	4.3
8	.39	.64	1.2	1.8	33	9.8	20	6.0	11	.51	.80	4.0
9	.39	.51	1.2	2.8	22	8.4	15	7.0	6.3	.51	.80	4.0
10	.30	.51	1.2	1.8	9.4	7.7	11	4.9	4.0	.51	.64	4.0
11	.39	.51	1.2	1.4	6.6	5.6	8.4	3.0	3.0	.80	.80	4.9
12	.30	.64	1.6	1.8	5.6	5.3	7.7	2.0	3.5	.80	2.0	15
13	.30	.51	1.6	1.4	37	4.3	6.0	2.8	3.5	.51	1.4	18
14	.30	.64	1.6	1.4	25	3.5	5.6	4.6	3.2	.51	1.2	12
15	.30	3.2	1.2	3.0	12	3.0	4.0	3.0	2.5	.51	1.4	10
16	.39	.39	1.2	4.0	9.0	6.6	4.3	58	2.5	.51	1.8	8.4
17	.30	.39	2.5	1.4	6.0	6.0	3.5	37	2.5	.51	3.0	8.0
18	.30	.39	1.6	2.0	4.6	4.0	4.0	20	2.0	.51	3.8	8.0
19	.30	.64	1.6	1.4	3.5	4.3	4.0	11	1.8	2.5	5.3	12
20	.30	.64	1.6	.64	3.0	6.0	3.5	7.7	1.8	1.8	3.8	9.4
21	.39	.39	2.8	.64	2.2	4.3	3.0	6.0	1.4	.96	3.5	8.4
22	.64	.51	5.3	.64	5.3	3.5	2.8	4.9	1.4	.96	3.5	8.0
23	.51	.51	2.0	.64	19	4.6	2.5	4.0	1.6	.96	10	8.0
24	.39	.30	1.4	.64	9.0	3.0	2.5	2.2	1.2	.96	6.3	9.0
25	.30	.30	.80	.64	6.0	2.5	2.0	2.0	.96	.96	4.0	8.0
26	.30	.30	.80	.96	6.0	2.8	2.0	1.8	.96	.96	3.5	8.0
27	.30	.30	.64	.64	21	4.9	2.0	1.6	.96	.96	14	8.0
28	.30	.51	.64	.64	8.7	6.0	2.0	1.4	1.6	.96	91	8.0
29	.30	.80	.64	.39	------	5.6	1.8	2.2	.96	.96	22	7.3
30	.30	.30	.39	.64	------	5.6	1.6	23	.64	3.5	12	7.3
31	.30	------	.51	3.8	------	4.0	------	38	------	1.2	8.4	------
TOTAL	11.20	18.73	41.78	55.21	280.28	222.6	181.5	265.9	125.98	38.87	216.46	237.1
MEAN	.36	.62	1.35	1.78	10.0	7.18	6.05	8.58	4.20	1.25	6.98	7.90
MAX	.64	3.2	5.3	4.9	37	37	22	58	22	7.3	91	18
MIN	.30	.30	.39	.39	.64	2.5	1.6	1.4	.64	.51	.51	4.0
CFSM	.06	.11	.23	.31	1.72	1.24	1.04	1.48	.72	.22	1.20	1.36
IN.	.07	.12	.27	.35	1.80	1.43	1.16	1.71	.81	.25	1.39	1.52

CAL YR 1970 TOTAL 1,831.74 MEAN 5.02 MAX 105 MIN .30 CFSM .87 IN 11.75
WTR YR 1971 TOTAL 1,695.61 MEAN 4.65 MAX 91 MIN .30 CFSM .80 IN 10.88

PEAK DISCHARGE (BASE, 50 CFS)

DATE	TIME	G. H.	DISCHARGE	DATE	TIME	G. H.	DISCHARGE
2- 7	2200	1.85	66	5-16	1030	2.10	113
2-13	1500	1.87	82	5-30	2000	1.90	88
4- 6	1830	1.66	64	8-28	0230	2.72	194

01486500 Beaverdam Creek near Salisbury, Md.

LOCATION.--Lat 38°21'05", long 75°34'11", Wicomico County, on upstream side of Schumaker Dam between spillway and emergency floodgate, 0.6 mile upstream from Beaglin Branch, 2 miles southeast of Salisbury, and 0.8 mile upstream from mouth.

DRAINAGE AREA.--19.5 sq mi.

PERIOD OF RECORD.--October 1929 to August 1933, May 1934 to September 1935, May 1936 to current year. Prior to October 1948, published as East Branch Wicomico River near Salisbury.

GAGE.--Water-stage recorder and concrete spillway of dam for control. Datum of gage is 8.93 ft above mean sea level (city of Salisbury bench mark). Prior to Sept. 28, 1938, at site on left bank at datum 9.02 ft higher.

AVERAGE DISCHARGE.--36 years (1929-32, 1938-71), 23.3 cfs (16.23 inches per year).

EXTREMES.--Current year: Maximum discharge, 212 cfs May 17 (gage height, 11.33 ft); minimum daily, 0.90 cfs Mar. 3, Aug. 30 (leakage under dam following closing of floodgate).
Period of record: Maximum discharge not determined, occurred Aug. 23, 1933, when dam was partly washed out; maximum gage height, 14.31 ft Aug. 4, 1948, from high-water mark in well; minimum daily discharge recorded, 0.40 cfs Dec. 17, 1963 (leakage under dam following closing of floodgate).

REMARKS.--Records good except those for periods below 1 cfs, which are poor. Records represent total flow and include flow over spillway, through spillway valve, over or through floodgate, and leakage under dam. Occasional regulation at low and medium flow caused by mill above station. Records of chemical analyses for the water year 1971 are published in Part 2 of this report.

REVISIONS (WATER YEARS).--WSP 741: 1931(m). WSP 1232: Drainage area. WSP 1432: 1931, 1936-37, 1940.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.3	9.3	9.6	45	17	48	29	22	92	12	26	7.7
2	8.0	9.3	13	47	15	26	25	25	54	16	16	12
3	8.0	9.3	9.0	35	13	.90	34	22	38	17	12	12
4	7.7	12	9.3	32	13	54	26	21	29	12	29	11
5	7.4	13	14	58	20	69	25	20	28	11	62	11
6	7.4	12	13	65	31	54	46	18	24	12	31	10
7	7.4	11	8.6	50	32	45	125	19	24	20	22	11
8	7.4	11	8.3	37	100	40	119	28	25	15	14	11
9	7.4	10	9.0	34	110	34	58	26	20	12	12	11
10	7.4	10	9.6	31	80	31	46	25	17	12	12	11
11	7.4	10	10	31	86	29	39	22	18	17	11	25
12	7.4	11	13	30	60	28	35	18	20	20	12	32
13	7.4	11	17	29	70	28	34	26	25	14	11	1.0
14	7.4	11	15	28	110	32	31	72	22	12	10	6.2
15	7.4	18	13	28	50	26	31	66	18	11	10	14
16	13	16	12	28	44	28	27	113	20	10	10	12
17	9.0	14	35	29	42	25	26	194	18	11	10	12
18	8.0	13	31	28	41	24	27	79	16	9.2	10	12
19	7.7	18	29	62	38	25	25	69	15	16	11	11
20	7.4	17	26	32	35	34	24	48	15	34	10	11
21	8.0	20	25	10	34	31	24	41	14	17	9.2	12
22	40	19	40	12	37	28	24	35	12	12	9.2	11
23	38	16	52	14	62	31	22	29	12	11	11	11
24	16	16	45	16	67	31	15	26	12	11	10	10
25	14	15	36	18	57	29	16	25	12	14	8.4	9.2
26	12	9.3	32	20	42	29	19	20	12	12	9.2	10
27	11	11	29	20	53	31	20	20	12	12	71	11
28	11	14	25	18	59	31	21	26	12	11	106	10
29	10	14	23	15	------	31	24	32	12	11	54	9.6
30	9.6	11	21	16	------	31	23	51	12	24	.90	11
31	9.6	------	21	19	------	30	------	83	------	20	1.0	------
TOTAL	337.7	391.2	653.4	937	1,418	1,013.90	1,040	1,321	660	448.2	630.90	348.7
MEAN	10.9	13.0	21.1	30.2	50.6	32.7	34.7	42.6	22.0	14.5	20.4	11.6
MAX	40	20	52	65	110	69	125	194	92	34	106	32
MIN	7.4	9.3	8.3	10	13	.90	15	18	12	9.2	.90	1.0
CFSM	.56	.67	1.08	1.55	2.59	1.68	1.78	2.18	1.13	.74	1.05	.59
IN.	.64	.75	1.25	1.79	2.71	1.93	1.98	2.52	1.26	.86	1.20	.67

CAL YR 1970 TOTAL 9,150.80 MEAN 25.1 MAX 161 MIN .80 CFSM 1.29 IN 17.46
WTR YR 1971 TOTAL 9,200.00 MEAN 25.2 MAX 194 MIN .90 CFSM 1.29 IN 17.55

NOTE.--No gage-height record Jan. 1-7, Jan. 17 to Feb. 18.

01487000 Nanticoke River near Bridgeville, Del.

LOCATION.--Lat 38°43'45", long 75°33'41", Sussex County, on left bank 300 ft downstream from highway bridge, 1,100 ft downstream from Gum Branch, 2.5 miles southeast of Bridgeville, and 50.5 miles upstream from mouth.

DRAINAGE AREA.--75.4 sq mi.

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

GAGE.--Water-stage recorder. Datum of gage is 13.64 ft above mean sea level (levels by Soil Conservation Service). Prior to Apr. 19, 1947 nonrecording gage, and Apr. 20, 1947 to Dec. 18, 1969 recording gage at site 300 ft upstream at same datum. Timber control Sept. 3, 1947 to Dec. 18, 1969.

AVERAGE DISCHARGE.--28 years, 90.5 cfs (16.30 inches per year).

EXTREMES.--Current year: Maximum discharge, 700 cfs Feb. 23 (gage height, 6.71 ft); minimum, 26 cfs Oct. 7, 8, 10-12.
Period of record: Maximum discharge, 2,360 cfs Aug. 5, 1967 (gage height, 8.86 ft); minimum observed, 6.3 cfs Sept. 29, 1943.
Maximum stage known, about 11.0 ft in September 1935, from information by local residents.

REMARKS.--Records fair. Records of chemical analyses for the water year 1971 are published in Part 2 of this report.

REVISIONS (WATER YEARS).--WSP 1111: 1947. WSP 1232: 1945-49.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	28	38	43	72	75	224	108	95	148	57	40	46
2	28	39	43	66	72	202	108	94	122	63	37	44
3	28	40	43	62	70	203	119	98	120	59	35	43
4	29	43	47	65	71	362	112	94	122	55	48	42
5	27	44	45	224	80	294	108	91	115	54	57	40
6	27	42	44	219	82	238	154	90	105	51	44	39
7	27	40	44	137	86	225	427	88	100	51	39	38
8	27	39	43	117	349	212	289	91	97	49	37	38
9	27	40	43	110	222	187	216	89	93	47	36	37
10	27	40	43	106	151	173	185	86	89	46	34	36
11	27	41	43	103	128	169	164	84	87	45	34	39
12	27	45	47	100	121	160	154	83	86	46	33	51
13	27	44	46	96	236	154	148	85	85	45	32	120
14	27	44	43	96	356	148	142	92	83	44	32	150
15	27	84	42	96	218	148	133	82	81	42	32	94
16	78	66	44	93	176	151	130	177	80	41	31	78
17	38	53	82	90	157	140	126	198	77	41	31	74
18	33	50	66	89	152	132	122	137	74	39	32	70
19	31	50	56	86	144	134	117	120	73	40	36	68
20	31	51	52	83	142	149	115	110	73	42	36	66
21	33	58	53	81	139	138	114	107	70	40	33	64
22	70	53	90	82	146	131	112	107	68	38	31	62
23	64	52	78	86	572	144	107	100	66	37	35	62
24	45	50	68	81	354	138	105	95	66	36	32	60
25	41	49	65	82	259	129	101	93	63	36	32	60
26	40	48	65	86	223	126	99	91	64	37	31	60
27	40	48	65	86	286	124	97	88	66	36	65	62
28	39	45	65	80	269	120	97	85	62	34	188	58
29	39	43	64	78	------	119	105	88	61	34	91	54
30	39	43	61	82	------	116	98	102	60	65	57	54
31	39	------	61	80	------	111	------	162	------	43	49	------
TOTAL	1,110	1,422	1,654	3,014	5,336	5,201	4,212	3,202	2,556	1,393	1,380	1,809
MEAN	35.8	47.4	54.6	97.2	191	168	140	103	85.2	44.9	44.5	60.3
MAX	78	84	90	224	572	362	427	198	148	65	188	150
MIN	27	38	42	62	70	111	97	82	60	34	31	36
CFSM	.47	.63	.72	1.29	2.53	2.23	1.86	1.37	1.13	.60	.59	.80
IN.	.55	.70	.84	1.49	2.63	2.57	2.08	1.58	1.26	.69	.68	.89

CAL YR 1970 TOTAL 35,978 MEAN 98.6 MAX 400 MIN 27 CFSM 1.31 IN 17.75
WTR YR 1971 TOTAL 32,329 MEAN 88.6 MAX 572 MIN 27 CFSM 1.18 IN 15.95

PEAK DISCHARGE (BASE, 360 CFS)

DATE	TIME	G. H.	DISCHARGE	DATE	TIME	G. H.	DISCHARGE
2- 8	0600	6.10	450	3-4	1300	6.04	426
2-13	2300	6.15	470	4-7	0700	6.14	466
2-23	0800	6.71	700				

NOTE.--No gage-height record Nov. 27 to Dec. 3, Dec. 18-29, and Sept. 12-30.

01487500 Trap Pond Outlet near Laurel, Del.

LOCATION.--Lat 38°31'40", long 75°28'58", Sussex County, on left bank at downstream end of concrete spillway channel, 200 ft downstream from Trap Pond Dam and 5 miles southeast of Laurel.

DRAINAGE AREA.--16.7 sq mi.

PERIOD OF RECORD.--June 1951 to September 1971 (discontinued).

GAGE.--Water-stage recorder and concrete control. Datum of gage is 27.57 ft above mean sea level.

AVERAGE DISCHARGE.--20 years, 15.9 cfs (12.93 inches per year).

EXTREMES.--Current year: Maximum discharge, 172 cfs May 17 (gage height, 2.61 ft); minimum, 0.40 cfs Oct. 17. Period of record: Maximum discharge, 608 cfs Aug. 25, 1967 (gage height, 4.09 ft); no flow Aug. 12-14, Sept. 6, 1957, Sept. 11-13, 1966, Apr. 20, 21, 1969.

REMARKS.--Records good except those for April to September, which are fair. Bypass channel with gate valve installed in 1968 by Delaware Division of Parks, Recreation and Forestry. Records represent total flow through spillway channel and through bypass channel. Flow regulated by Trap Pond.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.65	2.5	5.7	32	15	37	17	18	41	3.6	2.8	13
2	.67	2.4	5.2	40	13	31	16	18	30	3.6	3.0	11
3	.69	2.9	5.3	32	12	33	21	23	23	3.8	3.1	9.1
4	.67	4.0	3.4	26	13	60	20	20	18	3.6	9.6	8.0
5	.72	4.6	5.5	52	18	63	18	16	16	3.6	24	7.2
6	.76	4.9	2.9	64	21	44	32	15	13	3.6	15	6.6
7	.82	3.7	4.7	43	26	36	101	15	12	3.6	11	5.9
8	.88	3.4	4.6	32	76	31	81	20	11	3.5	9.2	5.5
9	.94	3.2	4.3	28	78	28	50	22	9.8	3.5	7.9	5.3
10	.85	3.3	4.0	24	54	25	28	18	9.9	3.3	6.8	4.9
11	.86	4.4	4.3	23	37	22	21	16	8.7	3.1	5.9	5.7
12	.88	5.8	7.8	22	30	22	17	14	10	3.1	5.9	12
13	.88	4.6	8.0	21	47	21	14	16	10	3.1	5.4	18
14	.90	5.0	5.7	22	76	20	14	29	10	2.8	5.3	10
15	.88	6.6	5.3	21	57	20	18	33	9.5	2.7	5.4	8.1
16	.71	5.7	8.8	22	40	20	16	89	9.7	2.4	5.3	6.4
17	.71	5.3	18	20	33	18	16	146	8.8	2.3	5.3	5.5
18	.72	5.1	18	19	29	18	15	88	7.7	2.2	5.4	6.6
19	.81	8.2	15	17	27	20	14	54	7.0	2.0	5.6	7.1
20	.88	8.7	12	15	24	22	14	36	6.8	2.0	5.3	6.6
21	.87	9.2	13	15	23	22	13	28	6.2	2.0	5.1	6.1
22	1.1	8.6	23	15	31	20	12	25	6.2	1.8	4.8	6.1
23	2.0	5.4	31	18	88	22	12	22	6.2	2.1	5.1	5.9
24	2.9	6.5	26	17	76	21	12	19	6.3	2.5	4.9	5.4
25	2.9	6.6	22	17	51	20	11	17	5.9	2.7	4.7	4.7
26	2.5	6.0	20	16	40	20	11	15	5.2	2.5	4.5	4.7
27	2.6	5.7	18	14	43	20	11	13	5.2	2.3	5.5	5.3
28	2.8	5.6	16	16	46	21	11	13	3.9	2.3	65	5.1
29	2.6	5.6	14	15	------	21	21	16	3.6	2.2	43	4.6
30	2.8	5.9	13	15	------	19	22	31	3.6	2.3	23	4.6
31	2.4	------	13	17	------	18	------	44	------	2.5	16	------
TOTAL	41.35	159.4	357.5	750	1,124	815	679	949	324.2	86.6	328.8	215.0
MEAN	1.33	5.31	11.5	24.2	40.1	26.3	22.6	30.6	10.8	2.79	10.6	7.17
MAX	2.9	9.2	31	64	88	63	101	146	41	3.8	65	18
MIN	.65	2.4	2.9	14	12	18	11	13	3.6	1.8	2.8	4.6
CFSM	.08	.32	.69	1.45	2.40	1.57	1.35	1.83	.65	.17	.63	.43
IN.	.09	.36	.80	1.67	2.50	1.82	1.51	2.11	.72	.19	.73	.48

CAL YR 1970 TOTAL 5,739.96 MEAN 15.7 MAX 115 MIN .49 CFSM .94 IN 12.79
WTR YR 1971 TOTAL 5,825.85 MEAN 16.0 MAX 146 MIN .65 CFSM .96 IN 12.99

PEAK DISCHARGE (BASE, 100 CFS)

DATE	TIME	G. H.	DISCHARGE	DATE	TIME	G. H.	DISCHARGE
2-23	1730	2.26	104	5-17	0330	2.61	172
4- 7	1315	2.33	115				

01488600 Marshyhope Creek at Adamsville, Del.

LOCATION.--Lat 38°49'52", long 75°41'12", Kent County, on left bank under upstream side of bridge on State Highway 16, at Adamsville, 0.2 mile downstream from Cattail Branch, 5.0 miles northwest of Greenwood, and 29.7 miles upstream from mouth.

DRAINAGE AREA.--60.4 sq mi.

PERIOD OF RECORD.--April 1969 to September 1971 (discontinued).

GAGE.--Water-stage recorder. Datum of gage is 18.15 ft above mean sea level.

EXTREMES.--Current year: Maximum discharge, 1,120 cfs Feb. 23 (gage height, 11.07 ft); minimum, 11 cfs Oct. 17, 18.
Period of record: Maximum discharge, 1,340 cfs July 10, 1970 (gage height, 11.96 ft); minimum, 11 cfs July 1, 1969, Sept. 27, Oct. 17, 18, 1970.

REMARKS.--Records good.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13	12	24	54	55	142	57	42	93	27	25	41
2	13	12	24	50	54	120	57	40	67	28	18	39
3	14	14	24	48	52	128	72	40	71	27	15	36
4	13	18	23	49	49	463	67	40	109	25	29	34
5	12	16	22	574	56	251	62	38	81	25	41	33
6	12	13	21	440	64	171	121	36	64	24	25	31
7	12	12	21	238	132	169	664	35	58	22	18	30
8	12	12	21	148	623	150	339	37	52	21	16	29
9	12	12	21	120	319	118	195	37	59	21	14	29
10	13	12	21	104	168	105	138	34	49	21	14	27
11	13	13	21	98	114	97	110	32	46	21	14	27
12	13	13	23	92	101	90	92	31	44	21	42	36
13	12	20	24	86	450	86	84	32	43	21	21	40
14	12	23	23	85	567	82	77	32	41	20	17	33
15	13	97	22	86	261	82	71	29	40	18	16	30
16	13	50	23	84	171	80	66	193	39	18	15	29
17	12	34	102	78	138	75	62	185	37	18	15	31
18	12	30	60	74	126	71	58	106	36	18	14	42
19	12	28	48	67	113	76	54	73	34	18	14	433
20	12	29	43	63	109	98	51	56	33	19	14	120
21	14	41	41	59	105	85	51	55	33	18	14	73
22	23	34	114	59	150	77	47	58	33	17	13	56
23	19	30	135	65	887	96	44	52	32	17	13	49
24	14	28	94	65	375	89	43	45	32	16	12	47
25	13	28	77	65	217	78	40	41	30	18	12	43
26	12	27	70	72	157	73	40	38	29	17	12	41
27	12	26	63	59	263	71	40	35	30	15	56	42
28	12	26	57	59	195	66	40	34	29	14	460	40
29	12	25	53	69	------	64	48	36	29	16	114	38
30	12	24	50	64	------	63	45	51	28	26	59	37
31	12	------	48	60	------	59	------	113	------	19	46	------
TOTAL	405	759	1,413	3,334	6,071	3,475	2,935	1,706	1,401	626	1,208	1,616
MEAN	13.1	25.3	45.6	108	217	112	97.8	55.0	46.7	20.2	39.0	53.9
MAX	23	97	135	574	887	463	664	193	109	28	460	433
MIN	12	12	21	48	49	59	40	29	28	14	12	27
CFSM	.22	.42	.76	1.79	3.59	1.85	1.62	.91	.77	.33	.65	.89
IN.	.25	.47	.87	2.05	3.74	2.14	1.81	1.05	.86	.39	.74	1.00

CAL YR 1970 TOTAL 28,315 MEAN 77.6 MAX 958 MIN 12 CFSM 1.28 IN 17.44
WTR YR 1971 TOTAL 24,949 MEAN 68.4 MAX 887 MIN 12 CFSM 1.13 IN 15.37

PEAK DISCHARGE (BASE, 580 CFS)

DATE	TIME	G. H.	DISCHARGE	DATE	TIME	G. H.	DISCHARGE
1- 6	0100	8.80	580	3- 4	0800	9.46	648
2- 8	0200	10.44	942	4- 7	0600	9.85	765
2-13	2100	10.72	1,030	8-28	0800	10.28	894
2-23	0500	11.07	1,120	9-19	0400	10.40	930

01489000 Faulkner Branch at Federalsburg, Md.

LOCATION.--Lat 38°42'44", long 75°47'34", Caroline County, on right bank 25 ft downstream from highway bridge on Nichols Road, 1 mile northwest of Federalsburg, and 0.9 mile upstream from mouth.

DRAINAGE AREA.--7.10 sq mi.

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

GAGE.--Water-stage recorder and concrete control. Datum of gage is 16.70 ft above mean sea level.

AVERAGE DISCHARGE.--21 years, 8.48 cfs (16.22 inches per year).

EXTREMES.--Current year: Maximum discharge, 156 cfs Feb. 23 (gage height, 3.05 ft); no flow part of each day Oct. 1, 2, July 12, 13, 14 (result of pumpage for irrigation).
Period of record: Maximum discharge, 792 cfs Aug. 25, 1967 (gage height, 5.03 ft), from rating curve extended above 210 cfs on basis of slope-area measurement at gage height 4.10 ft; no flow at times during many years (result of pumpage for irrigation).

REMARKS.--Records good. Diversion for irrigation of about 100 acres above station during some years.

REVISIONS (WATER YEARS).--WSP 1552: 1952.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.72	1.1	1.3	4.2	4.7	17	6.7	4.7	13	2.2	3.7	3.4
2	.76	1.2	1.3	3.4	4.4	15	7.3	4.9	9.4	2.4	2.0	3.1
3	.91	1.2	1.3	3.2	4.4	18	9.7	5.0	18	2.2	1.6	3.0
4	.86	1.3	1.4	3.8	4.4	40	8.2	4.5	12	2.0	18	2.8
5	.90	1.3	1.3	28	5.8	21	7.5	4.2	9.3	1.9	7.4	2.6
6	.87	1.2	1.3	16	5.8	17	12	4.1	7.9	2.0	3.8	2.4
7	.87	1.2	1.3	10	11	18	23	4.0	7.1	2.0	2.9	2.4
8	.89	1.2	1.3	8.8	44	15	16	4.8	6.4	1.9	2.4	2.4
9	.91	1.3	1.3	8.3	20	13	13	4.4	5.8	1.8	2.1	2.2
10	.91	1.3	1.3	7.9	13	12	11	3.9	5.3	1.8	1.9	2.0
11	.92	1.5	1.3	7.6	11	12	9.7	3.6	5.0	1.8	1.8	2.0
12	.95	1.5	1.9	7.2	11	11	9.2	3.4	4.9	1.5	1.7	5.5
13	.91	2.0	1.8	6.7	51	10	8.8	4.6	4.8	.16	1.6	8.2
14	.92	1.5	1.5	7.0	47	9.7	8.4	5.0	4.6	1.4	1.5	5.5
15	1.0	4.7	1.4	7.1	21	10	7.6	3.6	4.4	1.4	1.5	4.2
16	1.1	2.1	1.8	6.5	17	10	7.3	41	4.4	1.3	1.4	3.4
17	.95	1.6	5.8	6.3	15	9.1	7.0	22	3.9	1.3	1.4	4.0
18	.95	1.5	2.9	6.1	15	8.3	6.8	14	3.5	1.2	1.4	3.7
19	.97	1.5	2.4	5.6	14	10	6.4	10	3.4	1.6	1.4	3.4
20	1.0	2.1	2.2	5.1	14	12	6.3	8.6	3.3	1.8	1.3	3.0
21	1.4	2.4	2.3	5.2	13	9.8	6.3	10	3.2	1.3	1.2	2.8
22	1.8	1.7	6.1	5.3	19	9.1	6.0	10	3.1	1.2	1.1	2.8
23	1.4	1.6	5.1	6.2	89	11	5.6	8.1	3.2	1.1	1.2	2.8
24	1.2	1.5	4.4	5.3	27	9.7	5.6	7.1	3.0	1.1	1.1	2.6
25	1.1	1.4	4.0	5.6	20	8.3	5.3	6.6	2.7	1.1	1.0	2.4
26	1.1	1.3	4.0	6.3	17	8.8	5.1	6.0	2.7	1.1	1.1	2.4
27	1.1	1.3	3.7	5.6	31	8.7	4.9	5.4	2.8	1.1	7.5	2.4
28	1.1	1.3	3.4	5.1	22	8.3	5.2	5.2	3.7	1.1	37	2.4
29	1.1	1.3	3.1	4.8	------	8.3	6.0	5.9	3.3	1.3	6.5	2.4
30	1.1	1.4	3.1	5.4	------	7.7	4.9	8.4	2.8	4.0	4.5	2.2
31	1.1	------	3.4	5.1	------	7.2	------	20	------	2.1	3.8	------
TOTAL	31.77	47.5	78.7	218.7	571.5	385.0	246.8	253.0	166.9	50.16	126.8	94.4
MEAN	1.02	1.58	2.54	7.05	20.4	12.4	8.23	8.16	5.56	1.62	4.09	3.15
MAX	1.8	4.7	6.1	28	89	40	23	41	18	4.0	37	8.2
MIN	.72	1.1	1.3	3.2	4.4	7.2	4.9	3.4	2.7	.16	1.0	2.0
CFSM	.14	.22	.36	.99	2.87	1.75	1.16	1.15	.78	.23	.58	.44
IN.	.17	.25	.41	1.15	2.99	2.02	1.29	1.33	.87	.26	.66	.49

CAL YR 1970 TOTAL 2,660.95 MEAN 7.29 MAX 60 MIN .12 CFSM 1.03 IN 13.94
WTR YR 1971 TOTAL 2,271.23 MEAN 6.22 MAX 89 MIN .16 CFSM .88 IN 11.90

PEAK DISCHARGE (BASE, 60 CFS)

DATE	TIME	G. H.	DISCHARGE	DATE	TIME	G. H.	DISCHARGE
2- 8	0530	2.40	83	5-16	1515	2.33	76
2-13	2030	2.86	131	8-28	1015	2.29	72
2-23	0400	3.05	156				

01490000 Chicamacomico River near Salem, Md.

LOCATION.--Lat 38°30'43", long 75°52'51", Dorchester County, on left bank 30 ft downstream from Big Mill Pond dam, 1.6 miles east of Salem, 3.5 miles northwest of Vienna, and 13 miles upstream from mouth.

DRAINAGE AREA.--15.0 sq mi.

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

GAGE.--Water-stage recorder. Altitude of gage is 10 ft (from topographic map).

AVERAGE DISCHARGE.--20 years, 17.0 cfs (15.39 inches per year).

EXTREMES.--Current year: Maximum discharge, 210 cfs Aug. 5 (gage height, 3.50 ft); minimum daily, 4.5 cfs July 28.
Period of record: Maximum discharge, 518 cfs Aug. 25, 1967 (gage height, 4.42 ft); minimum, 0.4 cfs May 23, 1964, June 11, 1965, result of regulation; minimum daily, 0.5 cfs June 11, 1965.

REMARKS.--Records fair. Occasional regulation by Big Mill Pond.

REVISIONS (WATER YEARS).--WSP 1332: 1952.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.0	8.8	9.5	22	16	40	23	18	31	7.6	8.5	10
2	6.0	8.6	9.7	18	15	35	24	18	20	8.5	6.5	10
3	7.8	8.8	9.2	16	14	42	35	19	19	9.4	5.8	9.7
4	7.2	10	9.8	16	14	79	31	16	16	7.7	42	9.1
5	5.5	12	9.0	71	19	62	26	14	13	6.9	155	8.8
6	5.2	9.0	9.2	72	23	46	32	14	11	6.8	47	8.4
7	5.2	8.7	8.8	39	28	41	51	13	11	7.1	22	8.0
8	5.2	8.5	8.7	28	118	38	44	20	11	6.5	14	8.5
9	5.2	8.4	9.1	25	85	33	33	19	10	6.1	12	8.2
10	5.2	9.0	8.8	24	53	30	29	15	9.2	6.0	11	7.7
11	5.5	12	8.6	24	39	30	25	13	9.1	5.9	11	10
12	5.5	20	13	24	35	29	24	13	10	5.9	11	27
13	5.6	14	14	22	69	28	23	15	10	5.9	9.2	46
14	5.5	12	11	22	131	26	22	16	9.7	6.0	8.8	31
15	5.9	31	9.7	24	72	23	20	13	9.6	5.5	8.8	16
16	15	19	11	21	52	33	20	66	11	5.4	8.8	13
17	9.0	12	31	19	44	27	19	80	11	5.6	8.6	13
18	6.7	10	16	19	40	24	20	42	9.7	5.2	8.6	14
19	6.2	10	13	17	37	27	18	26	8.8	5.9	9.4	14
20	6.0	12	11	16	35	32	18	19	8.4	7.2	9.4	12
21	6.9	18	13	16	34	27	18	18	8.1	5.6	8.5	12
22	11	11	32	17	37	25	18	20	8.2	5.1	8.0	11
23	9.5	9.5	30	21	78	31	16	16	8.1	5.0	8.0	11
24	8.1	9.5	20	19	61	28	16	13	8.2	5.0	7.5	11
25	7.5	9.2	17	19	46	24	15	13	8.0	5.0	7.0	9.4
26	7.4	9.2	16	20	40	25	15	12	7.6	4.8	7.0	9.4
27	7.5	9.5	15	19	50	27	14	10	7.1	4.6	12	10
28	7.9	9.5	14	16	48	31	14	9.7	8.7	4.5	53	10
29	8.6	9.5	13	15	------	30	35	12	9.7	5.3	30	9.7
30	8.7	9.7	13	17	------	28	24	18	8.2	39	13	9.6
31	9.0	------	13	19	------	25	------	34	------	18	11	------
TOTAL	221.5	348.4	426.1	737	1,333	1,026	722	644.7	330.4	233.0	582.4	387.5
MEAN	7.15	11.6	13.7	23.8	47.6	33.1	24.1	20.8	11.0	7.52	18.8	12.9
MAX	15	31	32	72	131	79	51	80	31	39	155	46
MIN	5.2	8.4	8.6	15	14	23	14	9.7	7.1	4.5	5.8	7.7
CFSM	.48	.77	.91	1.59	3.17	2.21	1.61	1.39	.73	.50	1.25	.86
IN.	.55	.86	1.06	1.83	3.31	2.54	1.79	1.60	.82	.58	1.44	.96

CAL YR 1970 TOTAL 7,102.3 MEAN 19.5 MAX 100 MIN 5.2 CFSM 1.30 IN 17.61
WTR YR 1971 TOTAL 6,992.0 MEAN 19.2 MAX 155 MIN 4.5 CFSM 1.28 IN 17.34

01491000 Choptank River near Greensboro, Md.

LOCATION.--Lat 38°59'50", long 75°47'09", Caroline County, on left bank at highway bridge, 0.1 mile upstream from Gravelly Branch, 2 miles northeast of Greensboro, and 60 miles upstream from mouth.

DRAINAGE AREA.--113 sq mi.

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

GAGE.--Water-stage recorder and concrete control. Datum of gage is 3.51 ft above mean sea level.

AVERAGE DISCHARGE.--23 years, 120 cfs (14.42 inches per year).

EXTREMES.--Current year: Maximum discharge, 1,570 cfs Feb. 24, Aug. 29 (gage height, 7.92 ft); minimum, 4.6 cfs July 29; minimum daily, 5.9 cfs July 29.
Period of record: Maximum discharge, 6,970 cfs Aug. 4, 1967 (gage height, 14.47 ft) from rating curve extended above 3,600 cfs; minimum, 1.2 cfs Aug. 29, 1966.

REMARKS.--Records good. Slight diurnal fluctuation at low flow caused by mill above station. Records of chemical analyses for the water year 1971 are published in Part 2 of this report.

REVISIONS (WATER YEARS).--WSP 1622: 1948.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	16	27	54	55	343	98	78	244	26	28	226
2	12	16	27	54	52	263	94	84	235	25	25	122
3	11	15	27	49	52	238	104	81	187	28	23	110
4	11	17	27	50	56	427	109	69	167	21	34	105
5	11	22	26	140	60	654	108	65	171	17	132	95
6	10	20	26	372	66	397	112	63	134	13	189	85
7	11	18	25	351	78	318	412	60	125	15	217	78
8	10	18	24	221	357	307	879	65	138	14	120	72
9	10	18	24	160	735	265	480	69	139	15	62	68
10	11	18	24	125	417	212	320	56	104	15	44	50
11	12	18	24	113	260	181	201	49	74	18	35	43
12	12	19	27	106	201	138	163	46	65	27	43	108
13	11	23	31	100	230	126	153	45	62	21	43	254
14	12	32	28	95	801	130	143	51	59	20	41	315
15	12	60	27	95	653	131	131	58	58	19	41	256
16	12	71	27	89	362	148	119	103	57	18	39	165
17	12	46	59	52	266	140	100	249	53	17	36	122
18	11	33	68	50	224	120	92	229	49	14	35	179
19	12	30	48	45	206	117	89	163	45	12	36	219
20	11	30	40	45	190	158	85	132	43	19	34	193
21	12	33	36	41	181	196	84	106	40	15	29	148
22	19	31	67	55	195	175	82	89	38	9.0	29	105
23	22	30	138	83	914	141	71	82	37	8.1	30	85
24	20	28	154	85	1,340	139	52	70	36	7.5	28	82
25	17	28	115	87	650	139	51	63	32	7.9	27	57
26	17	28	82	92	377	130	50	62	31	7.9	26	43
27	16	28	74	97	360	123	50	58	31	8.3	127	61
28	15	28	68	75	426	118	49	53	31	7.0	850	65
29	15	28	63	80	------	112	63	54	30	5.9	1,350	47
30	15	28	59	81	------	108	63	81	28	18	609	45
31	16	------	54	79	------	103	------	161	------	32	349	------
TOTAL	410	830	1,546	3,221	9,764	6,297	4,607	2,694	2,543	500.6	4,711	3,603
MEAN	13.2	27.7	49.9	104	349	203	154	86.9	84.8	16.1	152	120
MAX	22	71	154	372	1,340	654	879	249	244	32	1,350	315
MIN	10	15	24	41	52	103	49	45	28	5.9	23	43
CFSM	.12	.25	.44	.92	3.09	1.80	1.36	.77	.75	.14	1.35	1.06
IN.	.13	.27	.51	1.06	3.21	2.07	1.52	.89	.84	.16	1.55	1.19

CAL YR 1970 TOTAL 39,515.3 MEAN 108 MAX 1,260 MIN 7.1 CFSM .96 IN 13.01
WTR YR 1971 TOTAL 40,726.6 MEAN 112 MAX 1,350 MIN 5.9 CFSM .99 IN 13.41

PEAK DISCHARGE (BASE, 1,000 CFS)

DATE	TIME	G. H.	DISCHARGE	DATE	TIME	G. H.	DISCHARGE
2-14	1515	6.74	1,030	8-29	0300	7.92	1,570
2-24	0030	7.92	1,570				

01492000 Beaverdam Branch at Matthews, Md.

LOCATION.--Lat 38°48'41", long 75°58'15", Talbot County, on left bank 50 ft upstream from bridge on State Highway 328, 1 mile west of Matthews, 6 miles northeast of Easton, and 1.2 miles upstream from mouth.

DRAINAGE AREA.--5.85 sq mi.

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

GAGE.--Water-stage recorder and concrete control. Datum of gage is 2.33 ft above mean sea level.

AVERAGE DISCHARGE.--21 years, 6.46 cfs (15.00 inches per year).

EXTREMES.--Current year: Maximum discharge, 562 cfs Aug. 27 (gage height, 5.55 ft); minimum, 0.04 cfs Oct. 5, 6, 7, 8, 13.
Period of record: Maximum discharge, 2,200 cfs Sept. 12, 1960 (gage height, 10.24 ft, from high-water mark in gage shelter) from rating curve extended above 440 cfs on basis of contracted-opening measurement at gage height 7.15 ft; no flow at times during many years.

REMARKS.--Records good.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.24	.30	.97	2.2	2.1	9.1	4.1	3.1	6.6	.40	.67	4.5
2	.21	.30	.95	2.1	1.6	8.0	5.3	2.8	3.2	.75	.34	3.9
3	.16	.37	.88	2.1	1.1	17	13	3.7	13	.68	.27	3.2
4	.09	.39	.92	3.0	1.4	43	7.0	2.6	6.2	.42	172	2.7
5	.08	.46	.86	75	3.8	13	5.5	2.3	3.2	.33	50	2.4
6	.07	.21	.80	17	4.7	9.7	12	2.1	2.4	2.8	5.6	2.1
7	.07	.18	.77	6.6	22	12	31	2.1	2.1	.94	2.0	1.9
8	.09	.18	.76	4.0	74	9.5	13	3.5	1.8	.43	1.2	3.1
9	.11	.22	.77	4.0	30	7.4	8.4	3.0	1.7	.35	.90	2.1
10	.12	.24	.86	3.8	7.0	6.9	7.2	2.1	1.6	.34	.67	1.8
11	.12	.32	.81	3.8	5.1	6.9	6.0	1.8	1.3	.35	2.7	1.8
12	.09	.91	1.6	3.5	5.3	6.6	5.6	1.6	1.3	.35	2.5	15
13	.08	4.6	2.3	3.0	59	6.4	5.3	2.4	1.2	.28	.89	14
14	.10	2.3	1.5	3.2	43	6.2	4.8	3.0	1.1	.27	.69	11
15	.18	25	1.2	2.8	11	6.7	4.0	1.7	1.1	.22	.59	4.7
16	.39	4.5	1.6	2.4	8.4	7.1	4.0	53	1.2	.22	.52	2.9
17	.23	1.8	15	2.1	7.5	5.7	3.8	13	.98	.18	.54	5.4
18	.28	1.3	4.1	1.8	7.3	4.9	4.2	5.4	.74	.17	.53	5.6
19	.28	1.2	2.4	1.6	6.8	7.8	3.5	3.5	.64	.22	.60	3.0
20	.29	1.2	1.9	1.4	7.1	11	3.4	2.4	.61	.27	.55	2.4
21	.40	1.5	1.8	1.6	6.5	7.0	3.3	4.4	.53	.22	.43	2.1
22	.52	1.2	17	1.8	21	6.1	3.0	5.4	.50	.18	.39	2.0
23	.42	1.1	11	2.8	88	10	2.8	2.6	.54	.18	.39	2.1
24	.21	.95	5.6	2.4	16	7.0	2.7	2.1	.55	.22	.30	2.0
25	.18	.86	3.4	4.4	10	5.6	2.5	1.8	.45	.76	.30	1.6
26	.25	.88	2.9	5.8	8.4	5.5	2.5	1.6	.96	.29	.31	1.7
27	.26	.95	2.4	3.2	42	5.2	2.4	1.3	.64	.23	288	2.3
28	.25	.90	2.2	2.0	14	5.0	3.0	1.3	.56	.22	217	2.0
29	.27	.87	2.0	2.2	------	5.3	7.6	2.3	.58	.56	23	1.7
30	.29	.99	1.8	2.7	------	4.9	3.9	5.8	.49	1.0	8.9	1.5
31	.28	------	1.7	2.7	------	4.2	------	19	------	.62	5.9	------
TOTAL	6.61	56.18	92.75	177.0	514.1	270.7	184.8	162.7	57.77	14.45	788.68	112.5
MEAN	.21	1.87	2.99	5.71	18.4	8.73	6.16	5.25	1.93	.47	25.4	3.75
MAX	.52	25	17	75	88	43	31	53	13	2.8	288	15
MIN	.07	.18	.76	1.4	1.1	4.2	2.4	1.3	.45	.17	.27	1.5
CFSM	.04	.32	.51	.98	3.15	1.49	1.05	.90	.33	.08	4.34	.64
IN.	.04	.36	.59	1.13	3.27	1.72	1.18	1.03	.37	.09	5.02	.72

CAL YR 1970 TOTAL 2,003.79 MEAN 5.49 MAX 76 MIN .07 CFSM .94 IN 12.74
WTR YR 1971 TOTAL 2,438.24 MEAN 6.68 MAX 288 MIN .07 CFSM 1.14 IN 15.50

PEAK DISCHARGE (BASE, 120 CFS)

DATE	TIME	G. H.	DISCHARGE	DATE	TIME	G. H.	DISCHARGE
2- 7	2215	2.80	124	8- 4	0900	4.75	387
2-23	0545	3.02	146	8-27	1315	5.55	562

01493000 Unicorn Branch near Millington, Md.

LOCATION.--Lat 39°14'59", long 75°51'40", Kent County, on right bank 20 ft upstream from bridge on State Highway 313, 1.4 miles southwest of Millington, and 0.9 mile upstream from mouth.

DRAINAGE AREA.--22.3 sq mi.

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

GAGE.--Water-stage recorder and concrete control. Datum of gage is 3.57 ft above mean sea level.

AVERAGE DISCHARGE.--23 years, 22.9 cfs (13.95 inches per year).

EXTREMES.--Current year: Maximum discharge, 524 cfs Aug. 28 (gage height, 5.18 ft); minimum, 0.75 cfs Jan. 18 (result of regulation).
Period of record: Maximum discharge, 1,060 cfs Sept. 12, 1960 (gage height, 7.17 ft); no flow for part of each day June 13, 14, 1965, caused by regulation at Unicorn Lake dam.

REMARKS.--Records good. Occasional regulation at low flow by fish hatchery above station.

REVISIONS (WATER YEARS).--WSP 1382: 1952(P).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.5	6.5	7.0	10	5.0	40	18	15	25	9.5	9.9	37
2	6.5	6.5	6.8	8.7	4.9	32	19	15	18	9.5	8.7	31
3	6.5	7.0	6.8	8.5	4.9	34	21	15	17	9.0	8.2	28
4	6.2	8.5	6.5	10	11	68	20	15	20	8.5	24	26
5	6.2	9.0	6.5	37	22	75	18	14	18	8.0	46	24
6	5.9	7.0	6.2	64	22	50	25	14	15	8.0	27	22
7	5.9	6.5	6.4	28	22	42	86	14	20	8.0	14	22
8	5.9	6.5	6.6	21	102	40	97	21	15	7.0	11	21
9	6.2	6.2	6.5	18	94	34	57	19	16	6.5	9.9	21
10	6.2	6.5	6.5	17	43	27	39	16	14	6.2	9.4	20
11	6.2	7.5	6.6	20	25	28	30	15	13	8.5	22	45
12	6.5	8.0	7.9	23	20	27	26	14	12	10	49	305
13	6.2	7.0	8.4	22	45	25	25	15	12	9.0	17	144
14	6.5	7.0	7.2	22	144	24	22	18	12	8.0	13	92
15	6.5	22	6.9	21	67	24	21	14	12	8.0	11	61
16	6.5	14	8.1	21	39	24	20	33	13	7.0	11	45
17	6.2	9.5	22	19	30	22	19	47	11	6.5	10	41
18	6.2	8.5	13	9.0	26	22	18	28	11	6.5	10	51
19	6.2	8.2	9.8	16	24	24	18	20	11	6.2	28	44
20	6.2	8.8	8.7	12	23	34	17	16	10	6.2	31	37
21	9.0	8.2	8.6	3.9	23	30	17	20	10	5.9	14	34
22	14	7.8	14	8.7	34	27	16	23	10	5.5	12	31
23	9.5	7.0	18	13	175	29	16	19	10	5.5	12	30
24	7.5	6.7	15	13	125	27	16	16	10	6.5	11	29
25	7.0	6.9	12	18	64	24	15	15	9.5	7.5	11	27
26	7.0	6.9	11	23	45	22	15	16	9.0	7.0	11	27
27	6.5	6.8	9.8	22	51	21	15	14	8.5	7.5	156	30
28	6.5	6.8	9.2	20	54	21	16	13	9.0	7.0	457	29
29	6.5	6.9	8.9	20	------	21	17	15	9.5	7.0	232	27
30	6.5	8.0	8.5	13	------	20	16	17	10	16	85	25
31	6.2	------	8.5	5.2	------	19	------	27	------	27	52	------
TOTAL	211.4	242.7	287.9	567.0	1,344.8	957	775	573	390.5	258.5	1,423.1	1,406
MEAN	6.82	8.09	9.29	18.3	48.0	30.9	25.8	18.5	13.0	8.34	45.9	46.9
MAX	14	22	22	64	175	75	97	47	25	27	457	305
MIN	5.9	6.2	6.2	3.9	4.9	19	15	13	8.5	5.5	8.2	20
CFSM	.31	.36	.42	.82	2.15	1.39	1.16	.83	.58	.37	2.06	2.10
IN.	.35	.40	.48	.95	2.24	1.60	1.29	.96	.65	.43	2.37	2.35

CAL YR 1970 TOTAL 7,607.5 MEAN 20.8 MAX 209 MIN 3.7 CFSM .93 IN 12.69
WTR YR 1971 TOTAL 8,436.9 MEAN 23.1 MAX 457 MIN 3.9 CFSM 1.04 IN 14.07

PEAK DISCHARGE (BASE, 180 CFS)

DATE	TIME	G. H.	DISCHARGE	DATE	TIME	G. H.	DISCHARGE
2-14	0500	3.81	182	8-28	1400	5.18	524
2-23	1400	4.07	234	9-12	1130	4.86	430

01493500 Morgan Creek near Kennedyville, Md.

LOCATION.--Lat 39°16'48", long 76°00'54", Kent County, on right bank 200 ft upstream from highway bridge, 2 miles southwest of Kennedyville, and 4.5 miles upstream from mouth.

DRAINAGE AREA.--10.5 sq mi.

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

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 15 ft (from topographic map).

AVERAGE DISCHARGE.--20 years, 9.15 cfs (11.83 inches per year).

EXTREMES.--Current year: Maximum discharge, 760 cfs Sept. 11 (gage height, 6.90 ft); minimum, 2.0 cfs July 22-24, 26-29.
Period of record: Maximum discharge, 1,530 cfs Sept. 12, 1960 (gage height, 8.88 ft), from rating curve extended above 440 cfs; minimum, 0.60 cfs Aug. 28, 29, 1966.

REMARKS.--Records good.

REVISIONS (WATER YEARS).--WSP 1552: 1952, 1953(P), 1954(M), 1955, 1956-57(M). WRD Md. and Del. 1970: 1969.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.9	4.1	5.3	3.8	3.5	5.7	4.1	4.5	7.2	2.9	3.2	3.8
2	2.9	4.1	4.9	5.7	2.9	4.9	4.5	4.5	4.1	3.2	2.9	3.8
3	2.9	4.5	4.5	5.3	3.2	10	5.3	4.5	74	2.7	3.2	3.8
4	2.7	5.7	4.9	9.0	3.5	30	4.1	4.1	88	2.7	48	3.5
5	2.7	15	4.1	55	12	15	4.1	3.8	18	2.4	42	3.2
6	2.7	8.4	4.5	53	23	7.2	9.7	4.9	7.6	2.9	10	3.2
7	2.7	4.5	4.1	16	40	6.7	44	4.9	31	4.1	3.5	2.9
8	2.7	4.1	3.8	6.7	255	5.7	20	11	6.7	2.7	2.9	3.2
9	2.7	4.1	4.5	6.2	122	4.9	7.2	6.2	4.1	2.7	2.4	3.2
10	2.9	4.1	4.5	6.2	35	4.9	6.2	4.5	3.8	2.7	2.4	2.9
11	2.9	5.3	4.5	6.7	8.4	5.3	5.3	4.1	3.5	4.1	26	103
12	2.9	9.0	6.7	7.2	7.8	4.9	5.3	3.8	3.5	4.1	66	397
13	2.9	7.2	7.8	6.2	142	5.3	5.3	6.7	3.5	2.9	6.2	101
14	2.9	5.7	5.3	8.4	157	5.3	5.3	11	3.5	2.7	3.2	20
15	2.9	35	4.5	9.7	29	5.3	4.9	4.5	3.8	2.2	2.7	6.2
16	4.5	17	6.7	5.7	11	5.3	4.9	47	4.9	2.2	2.7	4.9
17	3.5	6.7	27	4.9	7.2	4.5	4.9	32	3.8	2.4	2.7	6.2
18	2.9	5.3	11	4.5	6.6	4.5	4.9	6.7	3.2	2.4	2.4	6.2
19	2.9	4.9	5.7	3.8	6.4	9.7	4.5	4.5	2.9	2.7	2.7	4.9
20	3.2	5.7	5.3	4.1	6.4	17	4.5	4.1	2.9	2.7	2.9	4.5
21	4.9	9.0	4.9	4.5	6.8	5.7	4.5	5.7	2.9	2.2	2.7	4.1
22	14	5.3	19	5.3	47	4.9	4.5	5.7	3.2	2.2	2.4	4.1
23	8.4	4.9	19	8.4	181	8.4	4.5	4.1	2.9	2.2	2.7	4.1
24	5.3	4.5	11	6.7	31	5.3	4.1	3.8	3.2	2.2	2.2	4.1
25	4.1	4.1	6.7	9.0	13	4.5	4.1	3.8	2.9	2.2	2.2	3.8
26	4.1	4.5	5.7	12	6.2	4.5	4.1	7.2	2.9	2.2	2.2	4.5
27	3.8	4.9	4.9	7.2	22	4.5	4.5	4.1	2.9	2.2	229	6.7
28	3.8	4.5	4.5	3.8	12	4.5	4.5	3.5	2.9	2.2	316	5.3
29	3.8	4.5	4.1	4.5	------	4.5	5.3	5.7	2.9	2.2	49	4.9
30	3.8	7.8	3.8	5.3	------	4.5	4.5	6.7	3.2	7.2	11	4.5
31	4.1	------	3.8	5.3	------	4.1	------	16	------	10	4.5	------
TOTAL	119.4	214.4	217.0	300.1	1,200.9	217.5	203.6	243.6	309.9	94.4	861.9	733.5
MEAN	3.85	7.15	7.00	9.68	42.9	7.02	6.79	7.86	10.3	3.05	27.8	24.5
MAX	14	35	27	55	255	30	44	47	88	10	316	397
MIN	2.7	4.1	3.8	3.8	2.9	4.1	4.1	3.5	2.9	2.2	2.2	2.9
CFSM	.37	.68	.67	.92	4.09	.67	.65	.75	.98	.29	2.65	2.33
IN.	.42	.76	.77	1.06	4.25	.77	.72	.86	1.10	.33	3.05	2.60

CAL YR 1970 TOTAL 3,276.3 MEAN 8.98 MAX 244 MIN 2.4 CFSM .86 IN 11.61
WTR YR 1971 TOTAL 4,716.2 MEAN 12.9 MAX 397 MIN 2.2 CFSM 1.23 IN 16.71

PEAK DISCHARGE (BASE, 200 CFS)

DATE	TIME	G. H.	DISCHARGE	DATE	TIME	G. H.	DISCHARGE
2- 8	0145	5.67	424	8-27	1845	6.28	565
2-13	2215	5.81	452	9-11	2315	6.90	760
2-23	0415	5.20	335				

01495000 Big Elk Creek at Elk Mills, Md.

LOCATION.--Lat 39°39'26", long 75°49'20", Cecil County, on right bank 100 ft downstream from highway bridge at Elk Mills, 3.5 miles north of Elkton, and 7 miles upstream from confluence with Little Elk Creek.

DRAINAGE AREA.--52.6 sq mi.

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

GAGE.--Water-stage recorder. Datum of gage is 68.5 ft above mean sea level. Apr. 10, 1932 to May 16, 1946, nonrecording gage at bridge 100 ft upstream at same datum.

AVERAGE DISCHARGE.--39 years, 66.4 cfs (17.14 inches per year).

EXTREMES.--Current year: Maximum discharge, 4,030 cfs Feb. 13 (gage height, 8.53 ft); maximum gage height, 11.70 ft Feb. 7 (backwater from ice jam); minimum, 18 cfs Oct. 7, 8, 9, 10, 12, 13, 14; minimum daily, 19 cfs Oct. 5-14.
Period of record: Maximum discharge, 10,600 cfs July 5, 1937 (gage height, 14.5 ft, from floodmarks), from rating curve extended above 1,700 cfs on basis of velocity-area and conveyance studies; minimum, 4.5 cfs Jan. 21, 1955 (result of freezeup); minimum daily, 4.8 cfs Sept. 8-10, 1966; minimum gage height observed, 2.09 ft Sept. 19, 22-24, 1932.
Maximum stage known, about 19 ft in June 1884, from information by local residents.

REMARKS.--Records good except those for January and February, which are fair. Slight diurnal fluctuation caused by mills above station.

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

DISCHARGE, IN CUBIC FEET PER SECCND, WATER YEAR CCTOBER 1970 TO SEPTEMBER 1971

DAY	CCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	21	27	39	41	28	77	50	48	75	30	50	56
2	20	26	36	47	31	71	51	47	55	38	330	53
3	21	40	34	44	35	86	57	50	92	31	67	52
4	22	54	37	84	40	221	50	48	94	28	124	48
5	19	186	34	524	250	102	48	43	58	26	183	46
6	19	53	34	133	200	101	66	61	51	26	61	44
7	19	40	30	77	300	104	345	61	74	28	46	43
8	19	36	30	64	1,010	82	124	78	52	25	40	43
9	19	34	38	58	266	69	80	68	45	24	36	41
10	19	32	35	53	59	66	70	53	42	46	34	40
11	19	40	34	52	47	67	65	47	40	35	56	395
12	19	59	51	51	44	63	62	45	39	37	41	988
13	19	109	60	48	1,780	64	61	208	42	30	32	288
14	19	56	40	55	397	62	59	103	41	28	31	129
15	22	245	36	63	89	61	55	59	46	25	30	123
16	31	75	40	50	68	62	55	301	57	25	29	86
17	26	53	277	44	62	55	53	107	43	25	29	88
18	22	44	70	38	59	52	54	70	37	24	28	106
19	21	42	53	35	60	103	51	59	35	27	29	76
20	21	42	47	35	71	161	50	53	34	31	31	73
21	29	48	43	36	89	75	51	60	55	27	29	213
22	93	40	118	37	301	66	50	58	39	25	27	82
23	76	38	123	41	456	75	49	49	33	24	26	74
24	39	34	131	47	106	64	48	46	33	24	24	73
25	30	32	67	41	90	58	47	47	30	24	23	66
26	29	34	58	100	81	58	47	61	43	24	23	66
27	28	35	52	50	205	56	47	45	52	22	716	74
28	26	34	50	30	98	55	49	43	31	21	1,180	69
29	26	33	47	32	------	55	59	43	30	21	103	66
30	26	52	46	35	------	53	50	58	31	189	72	64
31	26	------	44	32	------	50	------	247	------	135	61	------
TOTAL	845	1,673	1,834	2,077	6,322	2,394	2,003	2,366	1,429	1,125	3,591	3,665
MEAN	27.3	55.8	59.2	67.0	226	77.2	66.8	76.3	47.6	36.3	116	122
MAX	93	245	277	524	1,780	221	345	301	94	189	1,180	988
MIN	19	26	30	30	28	50	47	43	30	21	23	40
CFSM	.52	1.06	1.13	1.27	4.30	1.47	1.27	1.45	.90	.69	2.21	2.32
IN.	.60	1.18	1.30	1.47	4.47	1.69	1.42	1.67	1.01	.80	2.54	2.59

CAL YR 1970 TOTAL 22,882 MEAN 62.7 MAX 790 MIN 18 CFSM 1.19 IN 16.18
WTR YR 1971 TOTAL 29,324 MEAN 80.3 MAX 1,780 MIN 19 CFSM 1.53 IN 20.74

PEAK DISCHARGE (BASE, 1,700 CFS)

DATE	TIME	G. H.	DISCHARGE	DATE	TIME	G. H.	DISCHARGE
2- 5	2115	*9.86	-	2-13	1630	8.53	4,030
2- 7	2130	*11.70	-	8-28	0415	7.16	2,670
2- 8	0100	7.82	3,320	9-12	1745	7.08	2,600

* Backwater from ice.

01495900 Elk River near Town Point, Md.

LOCATION.--Lat 39°30'09", long 75°54'58", Cecil County, at site of Old Town Point Wharf, at the Corps of Engineers substation, on left bank of Elk River, 1.8 miles downstream from Courthouse Point and mouth of Back Creek, 0.7 mile west of Port Herman, 5.8 miles southwest of Chesapeake City, and 1.1 miles northwest of Town Point.

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

GAGE.--Water-stage recorder. Datum of gage is 12.99 ft below mean sea level (Corps of Engineers bench mark). Gage-height record converted to elevation above or below (-) mean sea level for publication.

Summaries of tide elevations during year are as follows:

TIDE ELEVATIONS, IN FEET, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

		Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
Maximum	Elev			3.92	3.75			3.67	3.84	3.49		2.93	
high tide	Date			13	26			28	25	15		11	
Minimum	Elev			-1.81	-2.59			-1.89	- .83	- .97		-1.26	
low tide	Date			7	28			6	7,26,27	9		12	
Mean high tide				1.94	1.49			1.97	2.16	2.30		2.11	
Mean water level				.87	.48			.84	1.00	1.12		.95	
Mean low tide				- .18	- .55			- .23	- .12	- .02		- .19	

01496000 Northeast Creek at Leslie, Md.

LOCATION.--Lat 39°37'38", long 75°56'40", Cecil County, on left bank at downstream side of highway bridge, 0.7 mile northeast of Leslie, 1.5 miles southeast of Bay View, and 1.7 miles upstream from confluence with Little Northeast Creek.

DRAINAGE AREA.--24.3 sq mi.

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

GAGE.--Water-stage recorder and concrete control. Datum of gage is 115.0 ft above mean sea level.

AVERAGE DISCHARGE.--23 years, 32.3 cfs (18.05 inches per year).

EXTREMES.--Current year: Maximum discharge, 2,040 cfs Aug. 28 (gage height, 5.68 ft); minimum, 3.3 cfs Oct. 12, 13 (gage height, 1.50 ft); minimum daily, 3.5 cfs Oct. 13.
Period of record: Maximum discharge, 4,060 cfs Aug. 10, 1967 (gage height, 7.74 ft), on basis of contracted-opening measurement of peak flow; minimum, 1.2 cfs Sept. 8, 9, 10, 11, 12, 13, 14, 1966; minimum daily, 1.2 cfs Sept. 9, 10, 12, 13, 1966.

REMARKS.--Records good. Slight diurnal fluctuation at low flow caused by powerplant above station.

REVISIONS (WATER YEARS).--WSP 1232: 1949-51.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.1	6.8	16	27	11	33	18	17	43	13	18	19
2	5.6	6.5	14	23	12	29	19	16	24	13	241	18
3	5.4	12	13	21	13	40	24	18	37	12	29	17
4	5.4	27	14	72	15	242	20	17	45	11	73	16
5	5.0	57	13	466	92	58	18	15	28	9.5	152	15
6	4.8	20	12	183	75	57	34	24	22	8.8	28	14
7	4.8	13	11	38	97	47	366	26	23	8.8	18	14
8	4.4	10	11	27	752	35	137	40	20	8.0	14	14
9	4.4	9.6	13	23	284	26	37	31	17	7.9	13	13
10	4.4	8.8	14	22	33	25	29	22	15	54	12	13
11	4.6	11	14	21	26	26	25	17	14	16	14	283
12	3.8	17	20	20	19	24	24	16	14	15	16	773
13	3.5	27	30	21	586	24	23	188	15	9.5	11	291
14	4.6	18	20	23	728	23	22	87	15	8.3	10	57
15	5.0	156	18	32	43	23	19	30	16	7.2	9.7	33
16	6.7	33	22	23	28	24	20	308	16	6.8	9.3	26
17	5.7	17	240	21	24	21	19	115	15	7.0	9.6	24
18	4.7	14	40	19	27	19	19	34	13	6.5	8.9	24
19	4.5	12	24	18	28	64	17	25	12	6.8	8.6	22
20	4.5	12	20	17	41	168	17	22	12	8.0	10	21
21	6.7	15	17	17	49	37	17	23	17	7.2	8.9	22
22	31	12	106	18	204	28	17	24	16	6.5	9.0	20
23	22	11	94	26	484	35	16	21	12	5.9	7.5	19
24	14	9.9	102	30	60	27	16	18	12	5.8	7.6	20
25	8.4	9.0	33	22	38	23	16	19	11	6.0	6.6	18
26	7.2	9.4	25	47	33	23	16	21	11	6.3	6.9	18
27	7.6	10	21	40	165	22	16	17	129	5.7	268	20
28	6.6	9.8	20	19	54	21	16	16	19	5.3	1,270	20
29	6.4	9.8	19	14	------	21	21	16	14	4.8	69	19
30	6.3	17	18	16	------	20	18	23	14	57	28	18
31	6.3	------	17	15	------	19	------	221	------	40	21	------
TOTAL	219.4	600.6	1,051	1,381	4,021	1,284	1,076	1,487	671	387.6	2,407.6	1,901
MEAN	7.08	20.0	33.9	44.5	144	41.4	35.9	48.0	22.4	12.5	77.7	63.4
MAX	31	156	240	466	752	242	366	308	129	57	1,270	773
MIN	3.5	6.5	11	14	11	19	16	15	11	4.8	6.6	13
CFSM	.29	.82	1.40	1.83	5.93	1.70	1.48	1.98	.92	.51	3.20	2.61
IN.	.34	.92	1.61	2.11	6.16	1.97	1.65	2.28	1.03	.59	3.69	2.91

CAL YR 1970 TOTAL 11,817.9 MEAN 32.4 MAX 580 MIN 3.5 CFSM 1.33 IN 18.09
WTR YR 1971 TOTAL 16,487.2 MEAN 45.2 MAX 1,270 MIN 3.5 CFSM 1.86 IN 25.24

PEAK DISCHARGE (BASE, 800 CFS)

DATE	TIME	G. H.	DISCHARGE	DATE	TIME	G. H.	DISCHARGE
2- 8	0845	4.95	1,480	8-28	1245	5.68	2,040
2-13	2230	5.58	1,960	9-12	1530	5.05	1,560

01496200 Principio Creek near Principio Furnace, Md.

LOCATION.--Lat 39°37'34", long 76°02'27", Cecil County, on left bank, 55 ft downstream from highway bridge on Belvedere Road, 3.5 miles north of Principio Furnace, and 4.9 miles upstream from mouth.

DRAINAGE AREA.--9.03 sq mi.

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

GAGE.--Water-stage recorder. Altitude of gage is 215 ft (from topographic map).

EXTREMES.--Current year: Maximum discharge, 1,260 cfs Aug. 28 (gage height, 7.35 ft), from rating curve extended as explained below; minimum, 2.3 cfs July 29, 30 (gage height, 1.78 ft).
Period of record: Maximum discharge, 7,060 cfs Aug. 4, 1969 (gage height, 9.26 ft), from rating curve extended above 170 cfs on basis of slope-area measurements at gage heights 8.89 and 9.26 ft; minimum, 1.6 cfs Oct. 4, 5, 1968, July 17, 18, 1969.

REMARKS.--Records good.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.4	4.0	5.3	7.6	5.4	13	8.0	7.8	12	5.0	7.2	5.8
2	3.3	4.0	5.1	7.3	5.4	12	8.8	7.8	9.2	5.1	43	5.4
3	3.4	14	5.0	7.0	5.9	22	9.5	8.0	27	4.5	6.0	5.1
4	3.5	8.8	5.1	42	5.6	60	8.1	7.5	15	4.1	16	4.7
5	3.3	22	4.6	120	36	20	7.8	7.0	11	4.0	34	4.5
6	3.3	6.6	4.6	22	18	18	22	11	9.0	4.1	6.9	4.3
7	3.2	5.5	4.3	13	113	17	90	8.6	9.6	4.1	5.2	4.1
8	3.2	4.9	4.2	11	128	13	21	18	8.2	3.7	4.4	4.1
9	3.2	4.7	4.7	9.1	29	11	14	10	7.3	3.6	3.9	3.9
10	3.3	4.9	4.8	8.7	8.2	11	12	7.8	7.0	3.9	3.7	3.8
11	3.3	9.1	4.7	8.8	7.3	11	11	6.9	6.7	5.7	3.7	70
12	3.3	18	10	9.0	7.0	10	10	6.9	6.7	4.9	3.7	123
13	3.3	14	7.5	8.2	184	10	9.7	49	6.8	4.0	3.4	25
14	3.5	8.2	5.6	13	46	9.7	9.1	18	7.0	3.9	3.3	13
15	4.5	57	5.1	11	13	10	8.7	9.5	7.1	3.6	3.2	10
16	5.0	10	12	8.2	10	9.5	8.6	75	6.9	3.6	3.2	8.2
17	3.8	7.3	53	7.9	9.7	8.7	8.5	20	6.4	3.6	3.1	8.1
18	3.6	6.4	10	7.6	9.9	8.5	8.3	12	6.0	3.4	3.1	8.0
19	3.7	6.0	7.9	7.0	10	37	7.9	9.8	5.9	3.4	3.4	7.2
20	3.7	6.1	6.8	6.2	17	23	8.3	8.8	5.8	3.8	3.5	6.9
21	10	6.6	6.5	6.4	14	13	8.7	9.4	5.9	3.3	3.2	7.0
22	19	5.6	38	6.5	100	11	8.4	8.8	6.1	3.0	3.1	6.1
23	8.2	5.3	27	9.5	78	14	8.1	7.7	5.3	3.0	3.0	6.4
24	4.7	4.8	23	7.6	19	11	8.1	7.4	5.3	3.0	2.7	6.3
25	4.0	4.8	10	9.2	15	9.6	7.8	7.7	5.0	3.0	2.9	5.7
26	4.0	5.0	9.0	26	13	9.4	7.9	8.6	5.0	2.8	2.9	6.2
27	3.8	5.0	7.7	14	44	9.2	7.7	7.1	6.1	2.7	118	7.0
28	3.7	4.8	7.0	11	17	9.0	8.6	6.9	5.1	2.5	215	6.4
29	3.7	5.1	7.0	7.9	------	9.0	9.2	6.9	4.9	2.4	11	6.0
30	3.9	7.3	6.7	7.0	------	8.5	7.9	13	5.1	20	7.6	5.8
31	4.0	------	5.9	6.7	------	8.1	------	53	------	9.8	6.2	------
TOTAL	139.8	275.8	318.1	446.4	968.4	446.2	373.7	445.9	234.4	137.5	539.5	388.0
MEAN	4.51	9.19	10.3	14.4	34.6	14.4	12.5	14.4	7.81	4.44	17.4	12.9
MAX	19	57	53	120	184	60	90	75	27	20	215	123
MIN	3.2	4.0	4.2	6.2	5.4	8.1	7.7	6.9	4.9	2.4	2.7	3.8
CFSM	.50	1.02	1.14	1.59	3.83	1.59	1.38	1.59	.86	.49	1.93	1.43
IN.	.58	1.14	1.31	1.84	3.99	1.84	1.54	1.84	.97	.57	2.22	1.60

CAL YR 1970 TOTAL 4,133.1 MEAN 11.3 MAX 186 MIN 2.9 CFSM 1.25 IN 17.03
WTR YR 1971 TOTAL 4,713.7 MEAN 12.9 MAX 215 MIN 2.4 CFSM 1.43 IN 19.42

PEAK DISCHARGE (BASE, 300 CFS)

DATE	TIME	G. H.	DISCHARGE	DATE	TIME	G. H.	DISCHARGE
2- 7	2315	6.60	790	8-28	0415	7.35	1,260
2-13	1930	5.59	458	9-12	0545	5.16	372

01578500 Octoraro Creek near Rising Sun, Md.

LOCATION.--Lat 39°41'24", long 76°07'45", Cecil County, on right bank at downstream side of Porter Bridge, 300 ft downstream from Love Run, 3.5 miles west of Rising Sun, and 3.5 miles upstream from mouth.

DRAINAGE AREA.--193 sq mi.

PERIOD OF RECORD.--April 1932 to September 1958, annual maximum, water years 1963-68, December 1968 to current year. Monthly discharge only for some periods, published in WSP 1302.

GAGE.--Water-stage recorder. Datum of gage is 73.77 ft above mean sea level.

AVERAGE DISCHARGE.--28 years (1932-58, 1969-71), 258 cfs (18.15 inches per year), adjusted for storage and diversion since October 1951.

EXTREMES.--Current year: Maximum discharge, 11,800 cfs Feb. 13 (gage height, 11.49 ft); minimum, 29 cfs Oct. 20; minimum daily, 30 cfs Oct. 20.
Period of record: Maximum discharge, 35,000 cfs Aug. 9, 1942 (gage height, 17.57 ft), from rating curve extended above 5,000 cfs on basis of velocity-area studies; minimum, 18 cfs July 30, 31, Aug. 2, 1954; minimum daily, 22 cfs Aug. 2, 1954.
Floods of 1884 and 1918 reached stages of 24.3 and 16.5 ft, respectively, from floodmarks.

REMARKS.--Records good. Slight diurnal fluctuation caused by mills above station. Flow regulated by Chester-Octoraro Reservoir (formerly Pine Grove Reservoir) beginning Feb. 22, 1951 (capacity, 2,800,000,000 gal). Diversion above station by Octoraro Water Co., and from Chester-Octoraro Reservoir beginning November 1951 by Chester Municipal Authority for municipal supply of Chester and surrounding boroughs.

REVISIONS (WATER YEARS).--WSP 1051: Drainage area. WSP 1432: 1933, 1935, 1936(M), 1937-38, 1939(M), 1944-45, 1947(M), 1949.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	66	73	142	139	148	325	180	167	547	118	194	182
2	64	74	132	155	148	274	190	159	300	151	677	163
3	67	88	121	168	146	290	250	171	302	158	334	153
4	67	152	120	250	148	644	200	173	298	127	377	144
5	59	741	115	1,300	271	442	190	156	272	115	576	135
6	55	326	108	921	620	413	207	177	228	110	285	129
7	47	180	102	397	533	415	706	208	344	103	177	124
8	44	138	99	264	3,330	365	612	251	285	101	136	120
9	43	121	100	245	1,750	293	335	308	218	93	119	117
10	50	113	97	220	400	262	275	224	187	117	106	112
11	58	158	97	209	228	256	241	187	174	110	98	516
12	58	219	129	205	192	245	229	166	170	112	101	2,800
13	55	339	174	198	3,430	228	224	687	183	103	92	879
14	43	297	154	206	3,730	236	221	576	175	92	84	407
15	50	604	131	225	519	231	202	311	237	87	79	290
16	64	414	128	203	307	233	196	647	235	80	74	240
17	54	234	510	183	257	217	196	489	215	83	73	215
18	48	181	321	186	309	201	195	310	178	80	70	261
19	45	165	205	186	246	288	187	250	161	84	67	221
20	30	155	170	178	154	624	189	226	150	67	72	198
21	60	172	150	170	305	368	173	221	148	64	75	433
22	156	160	257	160	610	250	167	233	147	63	70	313
23	410	143	333	177	1,390	270	164	214	140	61	69	223
24	376	132	443	169	591	250	167	195	138	58	68	200
25	177	120	284	160	365	220	162	185	130	55	67	181
26	122	114	228	215	297	220	159	210	158	58	62	173
27	94	114	200	367	604	210	161	197	200	53	962	183
28	80	118	175	231	484	210	159	179	127	55	4,000	180
29	73	115	160	206	------	210	188	170	127	53	705	171
30	69	140	152	170	------	200	184	202	121	278	305	165
31	71	------	143	158	------	190	------	1,040	------	263	216	------
TOTAL	2,755	6,100	5,684	8,221	21,512	9,080	6,909	8,889	6,295	3,152	10,390	9,628
MEAN	88.9	203	183	265	768	293	230	287	210	102	335	321
MAX	410	741	510	1,300	3,730	644	706	1,040	547	278	4,000	2,800
MIN	30	73	97	139	146	190	159	156	121	53	62	112
(†)	+60.8	+43.8	+45.5	+47.6	+53.2	+38.8	+42.1	+54.1	+30.5	+51.7	+44.8	+44.0
MEAN‡	150	247	228	313	821	332	272	341	240	154	380	365
CFSM‡	.78	1.28	1.18	1.62	4.25	1.72	1.41	1.77	1.24	.80	1.97	1.89
IN‡	.89	1.43	1.37	1.87	4.43	1.98	1.57	2.04	1.39	.92	2.27	2.11

CAL YR 1970 TOTAL 76,622 MEAN 210 MAX 1,960 MIN 30 MEAN‡ 257 CFSM‡ 1.33 IN‡ 18.10
WTR YR 1971 TOTAL 98,615 MEAN 270 MAX 4,000 MIN 30 MEAN‡ 316 CFSM‡ 1.64 IN‡ 22.27

† Diversion above station and diversion from and change in contents in Chester-Octoraro Reservoir, equivalent in cubic feet per second; furnished by Octoraro Water Co. and Chester Municipal Authority, respectively.
‡ Adjusted for diversion and change in reservoir contents.

01580000 Deer Creek at Rocks, Md.

LOCATION.--Lat 39°37'49", long 76°24'13", Harford County, on right bank 0.3 mile upstream from highway bridge on Cherry Hill Road, 0.8 mile southeast of Rocks, 1.2 miles upstream from Stirrup Run, and 23.5 miles upstream from mouth.

DRAINAGE AREA.--94.4 sq mi.

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

GAGE.--water-stage recorder. Concrete control since Sept. 7, 1938. Datum of gage is 250.40 ft above mean sea level (city of Baltimore bench mark).

AVERAGE DISCHARGE.--45 years, 118 cfs (16.98 inches per year).

EXTREMES.--Current year: Maximum discharge, 4,520 cfs Aug. 2 (gage height, 10.05 ft); minimum, 33 cfs Jan. 28, result of freezeup.
Period of record: Maximum discharge, 13,600 cfs Aug. 23, 1933 (gage height, 17.7 ft from floodmarks), from rating curve extended above 3,000 cfs on basis of slope-area measurements at gage heights 13.3 and 17.7 ft; minimum, 8 cfs Dec. 16, 1930, Jan. 26, 1939, result of regulation; minimum daily, 8.6 cfs Sept. 11, 12 1966.
Maximum stage known since at least 1888, that of Aug. 23, 1933.

REMARKS.--Records good.

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

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	54	71	95	95	80	201	130	112	228	113	401	152
2	52	63	90	100	80	189	134	114	184	118	1,540	156
3	52	108	85	110	80	202	143	123	194	104	594	139
4	54	201	88	200	90	324	130	111	203	98	1,190	132
5	51	520	83	500	250	233	126	105	184	95	761	127
6	52	144	81	247	400	238	144	150	157	95	276	123
7	49	110	79	180	600	240	315	138	159	94	213	119
8	49	92	85	160	1,500	210	223	167	165	90	181	118
9	49	83	79	144	625	180	175	143	140	88	159	116
10	49	79	79	136	200	177	159	121	130	92	147	113
11	47	100	79	131	165	175	149	112	125	100	142	401
12	47	210	102	131	160	167	143	109	122	107	142	491
13	47	159	112	127	1,760	167	140	384	121	93	127	288
14	54	118	90	138	615	161	136	222	329	89	121	304
15	71	318	81	144	240	160	130	165	226	85	118	180
16	73	171	88	120	192	156	128	290	164	84	114	159
17	56	135	297	110	173	145	127	216	140	84	112	154
18	52	120	147	100	184	139	129	176	127	80	108	151
19	52	110	122	95	193	207	122	156	120	93	122	144
20	51	112	110	95	208	269	120	144	118	96	124	150
21	79	168	97	100	201	184	121	147	113	85	111	258
22	213	110	182	110	505	170	119	150	112	81	106	164
23	90	102	200	120	550	178	117	135	108	78	104	150
24	73	92	224	120	265	159	116	126	107	76	97	146
25	67	88	165	113	223	148	114	126	103	78	95	135
26	65	88	150	162	204	147	114	140	119	73	93	138
27	60	90	132	110	321	143	113	121	236	76	1,120	163
28	56	85	120	90	228	141	113	117	126	63	814	149
29	56	85	110	100	------	141	128	116	118	69	233	139
30	60	122	100	120	------	138	115	179	119	224	184	135
31	79	------	95	95	------	133	------	660	------	241	162	------
TOTAL	1,959	4,054	3,647	4,303	10,292	5,622	4,173	5,275	4,597	3,042	9,811	5,294
MEAN	63.2	135	118	139	368	181	139	170	153	98.1	316	176
MAX	213	520	297	500	1,760	324	315	660	329	241	1,540	491
MIN	47	63	79	90	80	133	113	105	103	63	93	113
CFSM	.67	1.43	1.25	1.47	3.90	1.92	1.47	1.80	1.62	1.04	3.35	1.86
IN.	.77	1.60	1.44	1.70	4.06	2.22	1.64	2.08	1.81	1.20	3.87	2.09

CAL YR 1970 TOTAL 48,039 MEAN 132 MAX 1,220 MIN 47 CFSM 1.40 IN 18.93
WTR YR 1971 TOTAL 62,069 MEAN 170 MAX 1,760 MIN 47 CFSM 1.80 IN 24.46

PEAK DISCHARGE (BASE, 1,900 CFS)

DATE	TIME	G. H.	DISCHARGE	DATE	TIME	G. H.	DISCHARGE
2- 8	2030	7.78	3,010	8- 4	0200	9.48	4,130
2-13	1600	8.69	3,570	8- 5	0500	6.00	1,940
8- 2	0330	10.05	4,520	8-27	1900	7.16	2,640

01580200 Deer Creek near Kalmia, Md.

LOCATION.--Lat 39°37'16", long 76°17'57", Harford County, on left bank 50 ft upstream from bridge on U. S. Highway 1, 1 mile north of Kalmia, 6.5 miles northeast of Bel Air, and 12.5 miles upstream from mouth.

DRAINAGE AREA.--125 sq mi.

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

GAGE.--Water-stage recorder. Altitude of gage is 145 ft (from topographic map).

EXTREMES.--Current year: Maximum discharge, 4,850 cfs Aug. 2 (gage height, 9.32 ft); minimum, 55 cfs Jan. 28, result of freezeup.
Period of record: Maximum discharge, 6, 130 cfs Aug. 27, 1967 (gage height, 10.45); minimum, 29 cfs Dec. 7, 1969 result of freezeup.

REMARKS.--Records good.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	78	104	128	120	110	253	164	144	306	127	442	184
2	75	94	118	130	110	235	169	144	226	130	2,200	187
3	75	124	113	140	110	258	186	158	258	119	398	172
4	78	203	118	260	120	471	165	144	296	112	1,730	164
5	74	653	109	701	300	304	160	136	234	109	1,030	156
6	75	193	109	363	441	302	176	174	198	108	393	153
7	70	141	103	237	708	306	430	182	200	108	291	148
8	70	123	105	200	2,080	264	304	208	205	103	245	145
9	70	111	104	190	1,040	233	221	192	176	100	218	143
10	70	106	104	174	250	220	201	158	164	104	202	139
11	68	143	104	165	200	218	188	144	156	127	198	686
12	68	255	126	166	177	207	181	141	153	128	202	793
13	68	215	159	161	2,160	206	177	543	152	110	180	420
14	80	159	123	174	1,020	202	168	319	330	104	172	352
15	100	445	112	191	317	198	165	212	316	98	167	230
16	105	237	119	150	245	195	162	463	198	96	163	197
17	80	175	455	140	211	182	165	309	171	97	160	189
18	75	155	204	130	216	174	159	228	154	92	156	186
19	75	143	163	120	236	276	154	200	145	98	160	175
20	74	141	147	120	252	399	153	184	142	115	179	175
21	110	209	136	130	255	238	153	186	136	98	159	284
22	320	147	244	140	606	214	150	189	135	92	151	197
23	163	134	285	150	841	226	146	173	130	88	149	178
24	112	122	323	150	364	202	143	161	130	87	140	172
25	99	117	215	142	289	189	147	161	126	86	138	161
26	96	116	193	211	259	186	144	183	123	88	136	161
27	89	117	171	150	419	181	144	158	263	93	1,240	189
28	83	114	159	120	300	179	144	151	142	91	1,190	178
29	82	113	140	130	------	178	164	150	131	97	300	164
30	85	157	130	150	------	175	150	221	130	288	225	158
31	108	------	120	120	------	167	------	923	------	296	198	------
TOTAL	2,875	5,266	4,939	5,625	13,636	7,238	5,333	7,039	5,626	3,589	12,912	6,836
MEAN	92.7	176	159	181	487	233	178	227	188	116	417	228
MAX	320	653	455	701	2,160	471	430	923	330	296	2,200	793
MIN	68	94	103	120	110	167	143	136	123	86	136	139
CFSM	.74	1.41	1.27	1.45	3.90	1.86	1.42	1.82	1.50	.93	3.34	1.82
IN.	.86	1.57	1.47	1.67	4.06	2.15	1.59	2.09	1.67	1.07	3.84	2.03

CAL YR 1970 TOTAL 64,395 MEAN 176 MAX 2,060 MIN 68 CFSM 1.41 IN 19.16
WTR YR 1971 TOTAL 80,914 MEAN 222 MAX 2,200 MIN 68 CFSM 1.78 IN 24.08

PEAK DISCHARGE (BASE, 2,500 CFS)

DATE	TIME	G. H.	DISCHARGE	DATE	TIME	G. H.	DISCHARGE
2- 8	0030	8.55	4,000	8-4	0600	8.83	4,310
2-13	1730	9.06	4,570	8-27	2130	7.41	2,910
8- 2	0830	9.32	4,850	9-11	1030	7.08	2,640

01581700 Winters Run near Benson, Md.

LOCATION.--Lat 39°31'12", long 76°22'24", Harford County, on left bank 30 ft downstream from bridge on U. S. Highway 1, 0.1 mile upstream from Heavenly Waters, 1.2 miles northeast of Benson, 1.8 miles southwest of Bel Air, and 10.5 miles upstream from mouth.

DRAINAGE AREA.--34.8 sq mi.

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

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

EXTREMES.--Current year: Maximum discharge, 5,350 cfs Sept. 11 (gage height, 8.96 ft) from rating curve extended above 2,200 cfs; minimum, 13 cfs Oct. 7, 8.
Period of record: Maximum discharge, 5,350 cfs Sept. 11, 1971 (gage height, 8.96 ft), from rating curve extended above 2,200 cfs; minimum, 7.2 cfs July 5, 1969.

REMARKS.--Records good.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15	21	25	30	30	56	40	34	65	38	530	57
2	15	21	24	36	28	53	45	36	54	48	723	55
3	15	39	24	34	26	68	49	38	137	32	144	54
4	14	44	24	128	28	112	42	34	119	30	246	51
5	14	93	22	262	100	69	40	32	79	29	376	51
6	14	32	22	90	120	67	59	48	58	29	85	50
7	14	26	20	55	423	66	118	40	63	32	67	49
8	14	24	24	50	687	56	61	55	52	28	59	48
9	15	23	21	45	157	50	50	42	46	28	55	48
10	15	22	22	43	60	50	46	36	44	30	53	48
11	15	45	21	40	60	50	43	34	42	49	96	798
12	15	108	36	42	54	49	43	34	41	39	65	355
13	15	63	32	38	718	49	42	200	41	31	53	130
14	16	38	25	54	157	48	42	74	121	30	50	84
15	17	159	24	49	71	49	40	52	68	28	49	70
16	18	46	51	38	61	46	40	196	51	28	46	61
17	16	33	169	34	57	44	38	75	45	29	46	63
18	16	30	48	30	58	42	38	58	42	26	45	60
19	16	28	38	28	60	112	36	51	39	30	50	60
20	16	30	33	28	67	85	36	46	38	30	49	64
21	35	36	32	30	62	57	36	51	36	26	46	71
22	61	28	93	30	256	53	36	52	34	26	46	60
23	28	26	75	40	231	56	36	44	33	25	45	61
24	22	24	82	38	74	49	34	42	33	25	44	60
25	20	23	46	37	63	46	34	48	31	25	44	58
26	20	23	40	70	58	46	34	59	37	27	43	63
27	19	23	36	37	100	45	34	42	36	27	646	76
28	18	23	34	36	64	44	34	39	33	25	242	64
29	18	23	32	34	------	45	36	39	33	41	75	60
30	21	33	32	36	------	43	34	65	33	112	64	59
31	24	------	30	32	------	41	------	246	------	64	58	------
TOTAL	591	1,187	1,237	1,574	3,930	1,746	1,296	1,942	1,584	1,067	4,240	2,888
MEAN	19.1	39.6	39.9	50.8	140	56.3	43.2	62.6	52.8	34.4	137	96.3
MAX	61	159	169	262	718	112	118	246	137	112	723	798
MIN	14	21	20	28	26	41	34	32	31	25	43	48
CFSM	.55	1.14	1.15	1.46	4.02	1.62	1.24	1.80	1.52	.99	3.94	2.77
IN.	.63	1.27	1.32	1.68	4.20	1.87	1.39	2.08	1.69	1.14	4.53	3.09

CAL YR 1970 TOTAL 15,398 MEAN 42.2 MAX 444 MIN 14 CFSM 1.21 IN 16.46
WTR YR 1971 TOTAL 23,282 MEAN 63.8 MAX 798 MIN 14 CFSM 1.83 IN 24.89

PEAK DISCHARGE (BASE, 1,000 CFS)

DATE	TIME	G. H.	DISCHARGE	DATE	TIME	G. H.	DISCHARGE
2- 7	2145	6.69	2,870	8- 4	0100	4.23	1,080
2- 8	1915	5.80	2,100	8- 5	0300	4.81	1,410
2-13	1430	5.61	1,950	8-27	1030	4.94	1,500
8- 1	2200	7.35	3,500	9-11	0930	8.96	5,350

01582000 Little Falls at Blue Mount, Md.

LOCATION.--Lat 39°36'16", long 76°37'16", Baltimore County, on left bank at downstream side of Pennsylvania Railroad bridge, 0.2 mile north of Blue Mount, 0.6 mile upstream from mouth, 0.9 mile downstream from First Mine Branch, and 1.2 miles south of White Hall.

DRAINAGE AREA.--52.9 sq mi.

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

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

AVERAGE DISCHARGE.--27 years, 63.0 cfs (16.17 inches per year).

EXTREMES.--Current year: Maximum discharge, 3,450 cfs Aug. 3 (gage height, 8.50 ft), from rating curve extended as explained below; minimum, 24 cfs part of each day Oct. 7-11
Period of record: Maximum discharge, 5,730 cfs Sept. 10, 1950 (gage height, 11.93 ft in gage well, 13.32 ft from floodmark), from rating curve extended above 1,300 cfs on basis of contracted-opening measurement of peak flow; minimum, 1.9 cfs Aug. 29, 1966; minimum daily, 4.5 cfs Sept. 11, 1966.
Flood of August 1933 reached a stage of about 14 ft, from information by Pennsylvania Railroad.

REMARKS.--Records good. Slight diurnal fluctuation at low flow caused by mill above station.

REVISIONS (WATER YEARS).--WSP 1111: 1944(M), 1945-47(P).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	28	39	48	50	44	98	68	61	105	56	91	82
2	27	36	45	65	42	92	72	65	91	56	615	79
3	28	62	44	55	40	106	73	65	113	49	521	75
4	27	118	45	125	42	158	67	60	101	47	500	71
5	26	243	42	180	118	116	66	58	83	46	422	69
6	26	65	40	102	149	117	89	88	79	51	150	67
7	25	51	39	80	299	117	176	70	80	49	116	65
8	25	45	38	79	708	101	115	96	79	44	98	64
9	25	41	39	65	242	92	95	75	69	61	89	63
10	25	40	39	61	93	89	87	65	66	54	82	61
11	25	49	39	60	98	88	81	60	64	57	81	186
12	25	83	59	60	102	85	79	61	63	53	80	289
13	25	75	52	57	945	86	78	192	63	46	71	211
14	26	55	44	65	230	83	75	105	145	44	68	305
15	43	160	42	63	110	83	72	84	107	42	66	117
16	35	79	47	58	92	80	71	137	81	43	64	100
17	28	61	114	50	93	75	70	103	70	41	62	99
18	27	54	63	46	104	72	70	87	64	39	61	94
19	27	50	55	44	101	132	66	79	61	56	72	91
20	26	64	51	44	111	121	66	74	60	46	67	92
21	79	73	50	46	101	93	67	82	59	41	62	163
22	88	53	94	46	244	89	65	84	57	39	59	92
23	43	49	95	60	229	92	63	71	55	38	58	87
24	37	45	103	55	127	82	63	67	55	38	55	84
25	34	43	75	55	110	77	62	70	53	40	54	80
26	33	43	69	90	101	77	62	75	94	38	53	86
27	32	43	61	55	152	75	61	64	88	40	567	100
28	31	42	56	55	109	74	61	62	60	36	361	87
29	31	42	54	55	------	75	68	62	58	47	114	83
30	36	71	55	55	------	72	62	99	57	202	94	80
31	51	------	50	50	------	69	------	266	------	94	84	------
TOTAL	1,044	1,974	1,747	2,031	4,936	2,866	2,270	2,687	2,280	1,633	4,937	3,222
MEAN	33.7	65.8	56.4	65.5	176	92.5	75.7	86.7	76.0	52.7	159	107
MAX	88	243	114	180	945	158	176	266	145	202	615	305
MIN	25	36	38	44	40	69	61	58	53	36	53	61
CFSM	.64	1.24	1.07	1.24	3.33	1.75	1.43	1.64	1.44	1.00	3.01	2.02
IN.	.73	1.39	1.23	1.43	3.47	2.02	1.60	1.89	1.60	1.15	3.47	2.27

CAL YR 1970 TOTAL 23,658 MEAN 64.8 MAX 430 MIN 25 CFSM 1.23 IN 16.64
WTR YR 1971 TOTAL 31,627 MEAN 86.6 MAX 945 MIN 25 CFSM 1.64 IN 22.24

PEAK DISCHARGE (BASE, 1,000 CFS)

DATE	TIME	G. H.	DISCHARGE	DATE	TIME	G. H.	DISCHARGE
2- 7	2400	5.52	1,710	8- 5	0330	4.93	1,420
2- 8	2130	5.50	1,700	8-27	1900	5.80	1,850
2-13	2000	5.63	1,760	9-12	0030	4.15	1,050
8- 2	0130	6.25	2,100	9-14	0030	5.60	1,750
8- 3	2330	8.50	3,450				

01583000 Slade Run near Glyndon, Md.

LOCATION.--Lat 39°29'40", long 76°47'45", Baltimore County, on left bank at downstream side of bridge on Longnecker Road, 1.1 miles upstream from mouth, 1.6 miles northeast of Glyndon, and 2.6 miles northeast of Reisterstown.

DRAINAGE AREA.--2.09 sq mi.

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

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 420 ft (from topographic map).

AVERAGE DISCHARGE.--24 years, 2.07 cfs (13.45 inches per year).

EXTREMES.--Current year: Maximum discharge, 192 cfs Feb. 13 (gage height, 3.81 ft); minimum, 0.31 cfs part of each day Oct. 6-8
Period of record: Maximum discharge, 485 cfs July 21, 1956 (gage height, 4.68 ft), from rating curve extended above 92 cfs on basis of slope-area measurement at gage height 3.96 ft; no flow many days in August and September 1966.

REMARKS.--Records fair.

REVISIONS.--WSP 1502: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.41	.62	.71	1.2	.90	3.0	2.2	1.6	3.8	1.6	6.3	2.9
2	.41	.54	.71	1.4	.90	2.8	2.2	1.8	3.2	2.2	22	2.8
3	.41	1.1	.62	1.1	.90	3.7	2.4	1.8	2.8	1.6	17	2.7
4	.41	3.8	.71	4.7	.90	5.0	2.2	1.8	2.6	1.4	16	2.5
5	.36	4.9	.62	5.6	1.5	3.5	2.0	1.6	2.2	1.4	17	2.4
6	.36	1.4	.54	3.2	2.5	3.3	3.2	2.4	2.2	1.3	5.2	2.3
7	.36	.80	.54	2.5	16	3.3	5.7	2.0	3.0	1.3	4.2	2.2
8	.36	.62	.54	2.0	26	2.8	3.0	2.6	2.6	1.3	3.7	2.1
9	.36	.62	.62	2.0	5.0	2.4	2.4	2.2	2.0	1.6	3.3	2.0
10	.36	.62	.62	2.0	2.2	2.4	2.2	2.0	2.0	1.4	3.0	1.9
11	.54	1.1	.54	2.0	2.2	2.4	2.2	1.8	1.8	2.6	3.3	15
12	.47	2.2	1.1	2.0	2.0	2.2	2.0	1.6	2.4	1.6	3.1	8.4
13	.41	1.6	.90	2.0	30	2.2	2.0	7.9	2.0	1.4	2.6	6.8
14	.41	1.0	.71	2.1	5.5	2.2	2.0	3.2	2.0	1.3	2.4	4.1
15	.54	4.7	.62	2.0	2.8	2.4	1.8	2.4	2.8	1.3	2.3	3.5
16	.54	2.2	1.4	1.8	2.4	2.4	1.8	6.4	2.2	1.6	2.5	3.3
17	.47	1.5	3.8	1.7	2.6	2.4	1.8	3.2	2.0	1.3	2.2	3.5
18	.47	1.1	2.1	1.5	2.8	2.2	1.8	2.4	1.8	1.1	2.1	3.2
19	.41	.90	1.7	1.4	2.8	4.4	1.8	2.2	1.8	2.0	2.6	3.1
20	.41	1.4	1.4	1.2	3.2	3.7	1.6	2.0	1.6	1.4	2.4	2.9
21	1.7	1.5	1.2	1.2	3.0	2.8	1.6	2.4	1.6	1.3	2.0	3.5
22	1.5	1.0	3.2	1.4	8.2	2.8	1.6	2.2	1.6	1.3	2.0	2.7
23	.54	.90	2.8	2.0	6.2	2.8	1.6	2.0	1.6	1.1	1.9	2.7
24	.54	.71	3.1	1.6	3.5	2.6	1.6	1.8	1.6	1.3	1.7	2.6
25	.47	.71	2.2	1.8	3.0	2.4	1.6	3.7	1.6	1.3	1.7	2.3
26	.47	.71	2.0	2.6	3.0	2.4	1.6	2.8	1.6	1.1	1.7	3.1
27	.47	.71	1.7	1.6	4.6	2.4	1.6	2.2	1.6	1.1	18	3.6
28	.47	.71	1.5	1.4	3.2	2.4	1.6	2.0	1.6	1.1	9.1	2.9
29	.47	.71	1.2	1.2	------	2.4	1.8	2.0	1.6	3.6	4.2	2.6
30	.62	.71	1.1	1.4	------	2.4	1.8	4.8	1.6	11	3.5	2.5
31	1.0	------	1.1	1.0	------	2.2	------	16	------	4.9	3.1	------
TOTAL	16.72	41.09	41.60	60.6	147.80	86.3	62.7	94.8	62.8	59.8	172.1	106.1
MEAN	.54	1.37	1.34	1.95	5.28	2.78	2.09	3.06	2.09	1.93	5.55	3.54
MAX	1.7	4.9	3.8	5.6	30	5.0	5.7	16	3.8	11	22	15
MIN	.36	.54	.54	1.0	.90	2.2	1.6	1.6	1.6	1.1	1.7	1.9
CFSM	.26	.66	.64	.93	2.53	1.33	1.00	1.46	1.00	.92	2.66	1.69
IN.	.30	.73	.74	1.08	2.63	1.54	1.12	1.69	1.12	1.06	3.06	1.89

CAL YR 1970 TOTAL 566.83 MEAN 1.55 MAX 15 MIN .35 CFSM .74 IN 10.09
WTR YR 1971 TOTAL 952.41 MEAN 2.61 MAX 30 MIN .36 CFSM 1.25 IN 16.95

PEAK DISCHARGE (BASE, 90 CFS)

DATE	TIME	G. H.	DISCHARGE	DATE	TIME	G. H.	DISCHARGE
2- 7	2000	3.31	96	8- 3	2115	3.65	160
2- 8	1830	3.41	112	9-11	1800	3.42	114
2-13	1815	3.81	192				

01583500 Western Run at Western Run, Md.

LOCATION.--Lat 39°30'38", long 76°40'37", Baltimore County, on right bank 100 ft downstream from bridge on Western Run Road, 0.3 mile southeast of Western Run, 2.5 miles northwest of Cockeysville, 3.2 miles upstream from Beaverdam Run, and 5 miles upstream from mouth.

DRAINAGE AREA.--59.8 sq mi.

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

GAGE.--Water-stage recorder. Datum of gage is 262.78 ft (Baltimore County bench mark).

AVERAGE DISCHARGE.--27 years, 61.6 cfs (13.99 inches per year).

EXTREMES.--Current year: Maximum discharge, 3,010 cfs Feb. 8 (gage height, 8.08 ft); minimum, 16 cfs Oct. 8. Period of record: Maximum discharge, 5,590 cfs July 21, 1956 (gage height, 10.84 ft); from rating curve extended above 3,200 cfs on basis of slope-area measurements at gage heights 8.55 and 9.88 ft; minimum, 2.4 cfs Sept. 12, 1966.

REMARKS.--Records good.

REVISIONS (WATER YEARS).--WSP 1502: 1945-46, 1948 (M).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	19	29	27	36	34	80	52	46	114	70	95	75
2	18	26	27	45	33	75	54	48	90	104	550	70
3	18	37	26	41	31	90	56	50	159	52	278	65
4	18	48	29	90	33	150	52	45	169	48	726	65
5	17	195	26	204	73	100	50	43	86	46	634	60
6	17	44	25	98	158	95	65	65	76	45	134	60
7	17	33	24	67	358	90	190	53	109	44	99	60
8	16	28	24	58	1,160	85	99	71	97	42	83	55
9	17	27	25	52	311	80	76	57	68	46	75	55
10	17	26	25	49	94	75	68	50	63	44	70	55
11	17	33	25	47	75	70	63	46	59	62	69	200
12	18	58	34	47	72	67	61	46	61	52	71	350
13	18	48	36	45	1,030	66	60	228	58	44	63	200
14	18	38	29	51	305	64	57	97	121	41	61	110
15	22	126	27	55	90	63	54	68	90	39	58	95
16	22	58	30	45	75	61	54	177	84	49	59	85
17	20	44	104	40	75	57	52	103	67	42	56	87
18	19	39	51	36	85	55	53	77	62	38	55	83
19	19	36	43	34	80	118	50	67	59	53	60	80
20	19	37	38	34	90	124	49	61	58	46	61	79
21	32	54	36	36	80	76	49	69	57	40	55	99
22	56	38	74	36	300	70	48	60	56	38	53	77
23	28	34	76	47	290	75	47	55	54	36	52	75
24	24	30	82	44	110	65	47	53	53	36	49	74
25	22	29	59	43	90	61	46	68	51	36	48	70
26	22	29	53	70	80	60	46	101	50	36	48	74
27	21	29	46	44	140	58	45	56	51	36	987	87
28	21	28	43	43	90	57	46	53	50	34	750	77
29	21	28	38	44	------	57	50	53	50	42	100	73
30	23	29	38	41	------	55	46	102	55	250	85	72
31	37	------	36	37	------	53	------	422	------	85	75	------
TOTAL	673	1,338	1,256	1,659	5,442	2,352	1,785	2,590	2,277	1,676	5,659	2,767
MEAN	21.7	44.6	40.5	53.5	194	75.9	59.5	83.5	75.9	54.1	183	92.2
MAX	56	195	104	204	1,160	150	190	422	169	250	987	350
MIN	16	26	24	34	31	53	45	43	50	34	48	55
CFSM	.36	.75	.68	.89	3.24	1.27	1.00	1.40	1.27	.90	3.06	1.54
IN.	.42	.83	.78	1.03	3.39	1.46	1.11	1.61	1.42	1.04	3.52	1.72

CAL YR 1970 TOTAL 18,852 MEAN 51.6 MAX 562 MIN 15 CFSM .86 IN 11.73
WTR YR 1971 TOTAL 29,474 MEAN 80.8 MAX 1,160 MIN 16 CFSM 1.35 IN 18.33

PEAK DISCHARGE (BASE, 1,000 CFS)

DATE	TIME	G. H.	DISCHARGE	DATE	TIME	G. H.	DISCHARGE
2- 8	0200	8.08	3,010	8- 4	0330	7.64	2,690
2-13	2400	7.21	2,390	8- 5	0700	6.05	1,720
5-31	0600	4.90	1,180	8-27	2100	7.48	2,580
8- 2	*0500	7.04	2,270	9-12	*0400	7.41	2,530

* About.

01585100 Whitemarsh Run at White Marsh, Md.

LOCATION.--Lat 39°22'15", long 76°26'46", Baltimore County, on left bank at upstream side of bridge on State Highway 7, 1 mile southwest of White Marsh, and 3 miles upstream from mouth.

DRAINAGE AREA.--7.61 sq mi.

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

GAGE.--Water-stage recorder and concrete control. Datum of gage is 38.96 ft above mean sea level.

AVERAGE DISCHARGE.--12 years, 9.45 cfs (16.86 inches per year).

EXTREMES.--Current year: Maximum discharge, 8,000 cfs Aug. 1 (gage height, 14.05 ft), from rating curve extended as explained below; minimum, 0.13 cfs Dec. 6 result of regulation (gage height, 1.16 ft), minimum daily, 0.70 cfs Oct. 18, 19.
Period of record: Maximum discharge, 8,000 cfs Aug. 1, 1971 (gage height, 14.05), from rating curve extended above 1,300 cfs on basis of computation of peak flow through culvert and flow-over-road measurement; no flow for part of Mar. 20, 1965, caused by construction work above station; minimum daily, 0.10 cfs, Sept. 11, 1966.

REMARKS.--Records good. Low flow affected by operations of sand and gravel plant in vicinity of gage.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.5	2.2	2.2	2.6	2.0	9.8	3.8	3.2	12	12	770	7.6
2	1.6	1.8	2.2	3.8	1.8	8.1	5.8	3.6	7.2	11	730	6.5
3	1.6	26	2.0	3.2	1.8	46	7.0	3.6	44	2.9	42	6.1
4	1.3	21	2.2	60	2.0	72	4.6	2.9	12	2.3	142	5.2
5	1.5	38	1.8	111	26	16	4.2	2.7	6.3	2.0	151	4.3
6	1.5	4.2	1.5	19	14	12	38	7.0	5.2	2.2	9.5	3.9
7	1.6	2.9	1.4	9.0	125	10	95	3.9	11	2.9	7.5	4.0
8	1.5	2.6	1.6	6.6	130	7.5	13	14	7.3	2.7	6.9	4.6
9	1.8	2.9	2.0	5.4	26	7.0	8.7	5.3	4.0	3.2	6.5	4.5
10	1.2	2.2	1.8	5.0	8.0	6.2	6.6	3.3	3.4	2.1	5.4	4.5
11	.90	25	2.0	5.0	7.0	6.2	5.8	3.6	3.2	7.3	44	632
12	1.5	45	9.8	5.0	6.2	5.4	5.8	3.7	3.9	2.9	19	172
13	1.6	10	4.6	4.6	188	5.4	5.4	119	3.1	2.0	8.6	64
14	1.8	5.4	2.6	10	49	5.4	4.6	17	97	2.4	7.2	20
15	2.4	79	2.2	8.0	13	5.8	4.2	7.6	30	1.4	6.6	12
16	2.2	8.1	23	5.0	11	5.4	3.9	99	9.5	6.4	4.7	9.9
17	.80	4.6	63	3.8	11	4.6	4.4	17	5.3	3.4	3.4	25
18	.70	3.5	8.1	3.5	10	4.2	4.5	8.4	3.9	2.6	2.9	9.7
19	.70	3.2	5.4	3.5	8.7	42	3.6	6.3	3.5	4.3	7.8	7.9
20	1.6	3.8	4.2	3.2	13	18	4.2	5.5	3.3	2.4	4.4	10
21	37	3.5	4.2	2.9	9.2	7.6	3.9	10	3.0	1.6	3.1	8.5
22	29	2.6	70	3.8	160	6.6	4.4	6.8	3.3	1.5	2.8	7.0
23	3.5	2.6	20	6.6	107	10	4.5	4.5	3.2	1.3	2.4	5.8
24	2.0	2.0	18	3.5	18	5.8	3.4	4.5	2.7	1.4	2.4	6.1
25	1.8	2.2	7.6	8.1	12	5.4	3.1	7.3	2.4	1.9	2.9	6.4
26	3.5	2.2	6.6	18	9.8	5.4	3.3	12	22	3.2	2.8	10
27	2.2	2.2	4.0	6.0	54	5.0	3.4	4.9	6.5	5.9	657	13
28	1.3	2.2	3.0	4.0	13	4.6	4.6	3.9	14	1.6	105	6.4
29	1.3	2.2	2.9	2.2	------	4.6	5.2	4.3	5.3	10	15	5.6
30	3.2	2.9	2.6	3.8	------	4.2	3.4	24	3.5	55	9.8	5.3
31	4.6	------	2.6	2.6	------	3.8	------	109	------	11	9.2	------
TOTAL	118.70	316.0	285.1	338.7	1,036.5	360.0	272.3	527.8	341.0	172.8	2,791.8	1,087.8
MEAN	3.83	10.5	9.20	10.9	37.0	11.6	9.08	17.0	11.4	5.57	90.1	36.3
MAX	37	79	70	111	188	72	95	119	97	55	770	632
MIN	.70	1.8	1.4	2.2	1.8	3.8	3.1	2.7	2.4	1.3	2.4	3.9
CFSM	.50	1.38	1.21	1.43	4.86	1.52	1.19	2.23	1.50	.73	11.8	4.77
IN.	.58	1.54	1.39	1.66	5.07	1.76	1.33	2.58	1.67	.84	13.65	5.32

CAL YR 1970 TOTAL 2,780.20 MEAN 7.62 MAX 148 MIN .54 CFSM 1.00 IN 13.59
WTR YR 1971 TOTAL 7,648.50 MEAN 21.0 MAX 770 MIN .70 CFSM 2.76 IN 37.39

PEAK DISCHARGE (BASE, 500 CFS REVISED)

DATE	TIME	G. H.	DISCHARGE	DATE	TIME	G. H.	DISCHARGE
2- 7	2100	4.39	767	8-11	1900	3.71	548
5-13	0715	3.76	566	8-27	0845	7.53	1,550
6-14	1615	5.73	1,090	8-27	2300	7.64	1,580
8- 1	2300	14.05	8,000	9-11	0900	11.46	3,760
8- 4	0045	7.73	1,610	9-11	2200	6.54	1,260
8- 5	0315	5.75	1,090				

01585200 West Branch Herring Run at Idlewylde, Md.

LOCATION.--Lat 39°22'25", long 76°35'05", Baltimore County, on left bank 40 ft downstream from bridge on Regester Avenue, at Idlewylde, 0.1 mile north of Baltimore city limits, 1 mile upstream from mouth, and 1.3 miles east of State Highway 45.

DRAINAGE AREA.--2.13 sq mi.

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

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

AVERAGE DISCHARGE.--12 years (1957-64, 1966 to current year), 2.28 cfs (14.54 inches per year).

EXTREMES.--Current year: Maximum discharge, 1,740 cfs Sept. 11 (gage height, 6.80 ft); from rating curve extended as explained; minimum daily, 0.16 cfs Oct. 5, 6, 8, 9, 19, 20.
Period of record: Maximum discharge, 1,740 cfs Sept. 11, 1971 (gage height, 6.80 ft), from rating curve extended above 90 cfs on basis of slope-area measurement at gage height 6.37 ft; no flow Aug. 14-24, 1957.

REMARKS.--Records good. Diurnal fluctuation (Occasionally extensive) caused by ready-mixed concrete plant above station.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.18	.36	.60	.60	.50	1.5	.95	.98	2.1	14	93	2.0
2	.18	.26	.45	.80	.44	1.4	3.1	1.3	5.0	1.8	52	1.9
3	2.2	9.1	.45	.98	.45	12	1.4	.87	4.0	.87	29	1.7
4	.48	8.0	.39	20	1.9	8.8	1.0	.82	1.9	.81	13	1.7
5	.16	4.5	.36	14	12	2.4	.96	1.1	1.6	.88	28	1.6
6	.16	.54	.34	1.4	4.4	2.0	13	3.7	1.9	.73	3.0	1.8
7	.22	.39	.34	1.0	24	1.9	8.0	1.2	4.4	.74	2.3	1.8
8	.16	.36	.34	.98	21	1.5	1.6	6.5	1.5	.72	2.3	1.5
9	.16	.32	.36	.91	2.3	1.3	1.4	.97	1.1	.72	1.7	9.4
10	.65	.42	.36	.86	1.0	1.2	1.2	.86	1.0	.72	1.6	1.4
11	.37	7.3	.45	.95	.93	1.3	1.5	.83	1.0	3.1	23	102
12	.20	5.4	5.8	.89	.88	1.1	1.2	.94	3.5	.67	2.7	17
13	.26	2.6	.64	.81	36	1.2	1.1	25	1.0	.61	1.8	28
14	.24	1.8	.36	4.0	4.5	1.1	1.1	1.6	8.0	.58	1.6	5.5
15	2.1	11	.48	.94	1.9	1.2	1.1	1.2	2.5	.53	1.4	3.4
16	1.4	.84	12	.73	1.4	1.1	1.0	22	1.8	.94	1.8	2.7
17	.22	.68	4.6	.70	2.0	.96	1.4	2.0	1.5	1.7	1.0	5.9
18	.20	.60	.84	.70	1.1	1.0	.99	1.5	1.4	1.3	1.2	2.5
19	.16	.54	.64	.60	1.1	16	.90	1.3	1.3	2.5	12	3.8
20	.16	1.9	.60	.60	2.3	2.0	1.1	1.2	1.2	.64	1.6	6.3
21	12	.58	2.1	.60	1.2	1.4	1.1	4.5	1.2	.53	1.5	3.2
22	3.6	.45	13	.76	26	2.1	.92	1.8	1.2	.58	1.5	2.3
23	.57	.39	3.0	3.2	8.3	2.5	.88	1.1	1.1	.53	1.3	2.2
24	.42	.42	2.2	.78	2.3	1.3	.89	1.0	1.1	.65	1.3	2.1
25	.36	.39	.92	3.3	2.0	1.1	.93	4.1	1.0	.64	1.1	1.9
26	1.4	.39	.88	3.4	2.1	1.2	.90	1.5	1.3	6.4	2.9	6.1
27	.32	.39	.72	.85	7.1	1.1	.90	.98	1.2	1.2	79	2.8
28	.24	.45	.60	.70	1.7	1.1	1.6	.93	3.8	.58	7.0	1.9
29	.28	.60	.60	.70	------	1.1	1.7	1.2	.88	6.4	3.2	1.7
30	3.8	1.0	.60	.90	------	.99	1.0	14	.89	12	2.4	1.7
31	1.4	------	.54	.60	------	1.0	------	15	------	2.2	2.2	------
TOTAL	34.25	61.97	55.56	68.24	170.80	75.85	54.82	121.98	61.37	66.27	377.4	227.8
MEAN	1.10	2.07	1.79	2.20	6.10	2.45	1.83	3.93	2.05	2.14	12.2	7.59
MAX	12	11	13	20	36	16	13	25	8.0	14	93	102
MIN	.16	.26	.34	.60	.44	.96	.88	.82	.88	.53	1.0	1.4
CFSM	.52	.97	.84	1.03	2.86	1.15	.86	1.85	.96	1.00	5.73	3.56
IN.	.60	1.08	.97	1.19	2.98	1.32	.96	2.13	1.07	1.16	6.59	3.98

CAL YR 1970 TOTAL 676.52 MEAN 1.85 MAX 22 MIN .12 CFSM .87 IN 11.82
WTR YR 1971 TOTAL 1,376.31 MEAN 3.77 MAX 102 MIN .16 CFSM 1.77 IN 24.04

PEAK DISCHARGE (BASE, 290 CFS REVISED)

DATE	TIME	G. H.	DISCHARGE	DATE	TIME	G. H.	DISCHARGE
7-1	2100	4.38	558	8-11	1715	4.23	509
8-1	1945	6.51	1,570	8-27	1600	3.54	315
8-2	0115	4.11	473	9-11	0715	6.80	1,740
8-3	2045	3.83	389	9-11	2000	4.67	668
8-5	0130	3.91	413	9-13	2030	4.57	628

01585300 Stemmers Run at Rossville, Md.

LOCATION.--Lat 39°20'20", long 76°29'15", Baltimore County, on left bank at downstream side of bridge on State Highway 7, at Rossville, 0.8 mile upstream from Brien Run, and 2 miles upstream from mouth.

DRAINAGE AREA.--4.94 sq mi.

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

GAGE.--Water-stage recorder and concrete control. Datum of gage is 19.24 ft above mean sea level (Baltimore County bench mark).

AVERAGE DISCHARGE.--12 years (1959-71), 6.10 cfs (16.77 inches per year).

EXTREMES.--Current year: Maximum discharge, 5,950 cfs Aug. 1 (gage height, 11.34 ft from high-water mark in well), from rating curve extended as explained below; minimum, 0.12 cfs Oct. 6 (gage height, 1.20 ft).
Period of record: Maximum discharge, 5,950 cfs Aug. 1, 1971 (gage height, 11.34 ft from high-water mark in well), from rating curve extended above 1,100 cfs on basis of contracted-opening and flow-over-road measurement of peak flow; minimum daily, 0.10 cfs many days in 1962, 1964, and 1966.

REMARKS.--Records good except those for period of no gage-height record, which are poor. Slight diurnal fluctuation at times from unknown source.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.20	.69	.76	1.1	1.0	4.0	1.7	1.4	5.2	9.6	600	2.7
2	.19	.57	.76	1.5	.90	2.7	3.3	1.4	3.8	4.7	160	2.5
3	.18	19	.76	1.7	.90	35	3.6	1.5	40	1.3	38	2.3
4	.51	23	.80	48	.90	37	1.9	1.2	4.3	1.1	82	2.0
5	.21	15	.70	62	15		6.1	1.7	1.2	3.0	.93	110	1.9
6	.16	1.4	.70	7.3	5.1	4.8	34	3.0	2.5	.91	6.2	1.7
7	.16	.96	.67	3.6	98	4.2	47	1.5	6.8	.88	4.0	1.6
8	.16	.85	.71	2.7	75	3.0	4.8	6.5	3.4	.78	3.0	1.5
9	.16	.84	.73	2.1	9.7	2.5	3.0	1.7	2.0	.79	2.6	1.7
10	.23	.82	.64	1.9	2.8	2.3	2.5	1.2	1.7	.82	2.2	1.9
11	.23	16	.72	1.9	2.3	2.3	2.1	1.0	1.7	5.8	18	330
12	.31	24	6.7	2.1	1.9	2.1	1.9	1.2	3.0	1.1	5.2	79
13	.29	4.8	1.4	1.7	130	2.1	1.9	79	1.7	.80	2.4	26
14	.31	2.3	.87	5.4	15	1.9	1.7	7.1	21	.81	2.1	7.2
15	.98	59	.76	3.3	4.2	1.9	1.5	3.2	10	.64	2.0	5.5
16	1.6	3.1	38	1.7	3.0	1.9	1.7	82	2.5	.90	2.1	4.9
17	.33	1.7	29	1.5	3.3	1.7	1.9	7.5	1.9	2.1	1.8	28
18	.24	1.4	3.0	1.4	2.7	1.5	1.9	3.9	1.6	5.4	1.6	6.3
19	.21	1.2	1.9	1.2	3.0	24	1.5	3.0	1.5	3.1	6.8	5.3
20	.21	1.4	1.5	1.2	5.7	6.9	1.5	2.5	1.3	1.2	2.6	6.9
21	50	1.3	2.5	1.2	3.9	2.7	1.7	7.0	1.3	.80	1.5	5.0
22	21	.97	58	1.4	125	2.5	1.5	3.6	1.3	.78	1.4	4.3
23	1.1	.92	8.5	3.6	51	4.8	1.5	2.2	1.2	.81	1.3	4.3
24	.70	.90	8.7	1.5	6.5	2.3	1.5	2.1	1.2	.80	1.2	4.2
25	.61	.90	2.9	5.4	4.5	1.7	1.4	7.6	1.1	1.3	1.1	4.0
26	1.2	.90	2.3	6.1	3.6	1.7	1.4	5.1	1.5	3.3	1.1	7.8
27	.48	.85	1.7	2.0	30	1.7	1.4	2.0	1.3	3.4	490	7.0
28	.46	.87	1.3	1.5	4.8	1.5	2.3	1.8	27	.64	31	4.4
29	.50	.91	1.2	1.3	------	1.9	2.1	2.0	2.0	12	5.4	4.1
30	2.9	1.2	1.1	1.5	------	1.7	1.4	18	1.5	49	3.8	3.9
31	2.0	------	1.1	1.0	------	1.5	------	89	------	4.8	3.0	------
TOTAL	87.82	187.75	180.38	179.8	609.70	171.9	137.3	351.4	158.3	121.29	1,593.4	567.9
MEAN	2.83	6.26	5.82	5.80	21.8	5.55	4.58	11.3	5.28	3.91	51.4	18.9
MAX	50	59	58	62	130	37	47	89	40	49	600	330
MIN	.16	.57	.64	1.0	.90	1.5	1.4	1.0	1.1	.64	1.1	1.5
CFSM	.57	1.27	1.18	1.17	4.41	1.12	.93	2.29	1.07	.79	10.4	3.83
IN.	.66	1.41	1.36	1.35	4.59	1.29	1.03	2.65	1.19	.91	12.00	4.28

CAL YR 1970 TOTAL 1,725.04 MEAN 4.73 MAX 96 MIN .15 CFSM .96 IN 12.99
WTR YR 1971 TOTAL 4,346.94 MEAN 11.9 MAX 600 MIN .16 CFSM 2.41 IN 32.73

PEAK DISCHARGE (BASE, 500 CFS REVISED)

DATE	TIME	G. H.	DISCHARGE	DATE	TIME	G. H.	DISCHARGE
10-21	1630	4.57	528	8- 5	0315	5.84	858
2- 7	2030	5.18	687	8-27	*0830	7.35	1,410
2-22	1715	4.56	526	8-27	1800	6.45	1,030
5-13	0800	4.63	544	8-27	2300	6.40	1,010
7-30	1115	4.64	551	9-11	0900	9.85	3,650
8- 1	*2300	11.34	5,950	9-11	2200	5.97	892
8- 4	0015	6.95	1,200				

* About.

Note.--No gage-height record part of each day Aug. 1-2.

01585400 Brien Run at Stemmers Run, Md.

LOCATION.--Lat 39°20'01", long 76°28'23", Baltimore County, on right bank 0.2 mile upstream from mouth and 0.3 mile north of Stemmers Run.

DRAINAGE AREA.--1.97 sq mi.

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

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 10 ft (from topographic map).

AVERAGE DISCHARGE.--13 years, 2.22 cfs (15.30 inches per year).

EXTREMES.--Current year: Maximum discharge, 3,500 cfs Aug. 1 (gage height, 10.75 ft from high-water mark in well), from rating curve extended as explained below; minimum, 0.21 cfs part of each day Oct. 3-7, 12.
Period of record: Maximum discharge, 3,500 cfs Aug. 1, 1971 (gage height, 10.75 ft from high-water mark in well), from rating curve extended above 180 cfs on basis of culvert and flow-over-road measurement of peak flow at site 0.8 mile upstream, adjusted for flow from intervening area; no flow at times many years.

REMARKS.--Records good except those for period of no gage-height record, which are poor.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.26	.50	.58	.67	.30	1.1	.50	.58	1.9	3.8	360	.85
2	.31	.50	.58	.67	.30	.85	.76	.58	1.1	1.6	160	.95
3	.26	9.2	.50	.76	.30	13	.85	.67	20	.50	6.0	.85
4	.26	8.1	.50	17	.30	19	.50	.58	1.3	.43	14	.76
5	.26	8.8	.50	30	.30	2.5	.43	.58	.67	.43	31	.67
6	.26	.95	.50	3.8	.30	1.6	10	.76	.58	.43	1.9	.67
7	.26	.67	.50	1.4	29	1.3	17	.58	.95	.37	.95	.85
8	.26	.50	.50	.85	32	1.1	1.9	2.1	.76	.37	.76	.76
9	.26	.50	.50	.76	6.9	.85	.95	.76	.50	.43	.67	.67
10	.26	.50	.50	.67	1.3	.76	.76	.67	.43	.43	.67	.67
11	.26	6.4	.50	.67	.85	.76	.58	.58	.43	2.1	.67	85
12	.26	9.1	1.7	.67	.85	.76	.58	.67	.43	.50	3.5	17
13	.26	1.4	.76	.58	45	.67	.58	24	.43	.43	.76	8.3
14	.31	.81	.58	1.6	8.8	.58	.58	3.5	21	.43	.76	2.0
15	.31	19	.50	1.3	1.6	.67	.50	1.1	6.4	.37	.67	1.6
16	.37	1.4	9.4	.76	1.4	.67	.50	26	1.4	.37	1.7	1.4
17	.31	.76	17	.58	1.1	.58	.50	3.0	.76	.58	.76	8.8
18	.31	.67	1.7	.50	.95	.50	.50	1.4	.67	.95	.67	1.1
19	.31	.50	.85	.40	1.1	6.4	.43	1.4	.58	.95	.76	.85
20	.31	.58	.67	.40	1.9	3.0	.43	.76	.50	.50	.85	.95
21	6.9	.50	.88	.40	1.3	1.1	.43	2.1	.50	.43	.67	.95
22	6.4	.50	26	.37	42	.85	.43	.95	.50	.43	.58	.85
23	.76	.45	4.8	.76	26	1.7	.43	.76	.43	.43	.67	.85
24	.50	.50	4.0	.43	2.8	.76	.50	.67	.43	.43	.67	.85
25	.43	.50	1.6	1.7	1.6	.58	.43	1.6	.43	.50	.67	.67
26	.58	.50	1.1	1.9	1.3	.58	.50	1.3	4.0	.43	.67	1.7
27	.50	.50	.85	.76	13	.58	.50	.67	.67	.43	183	1.7
28	.43	.50	.76	.43	1.9	.58	.76	.67	5.2	.37	33	.95
29	.43	.58	.76	.40	------	.58	.67	.76	.85	.76	1.7	.85
30	.76	.67	.67	.50	------	.58	.58	5.2	.58	14	1.1	.85
31	.76	------	.67	.40	------	.50	------	29	------	2.5	.95	------
TOTAL	24.11	76.04	80.91	72.09	224.45	65.04	44.06	113.95	74.38	36.68	810.73	144.92
MEAN	.78	2.53	2.61	2.33	8.02	2.10	1.47	3.68	2.48	1.18	26.2	4.83
MAX	6.9	19	26	30	45	19	17	29	21	14	360	85
MIN	.26	.45	.50	.37	.30	.50	.43	.58	.43	.37	.58	.67
CFSM	.40	1.28	1.32	1.18	4.07	1.07	.75	1.87	1.26	.60	13.3	2.45
IN.	.46	1.44	1.53	1.36	4.24	1.23	.83	2.15	1.40	.69	15.31	2.74

CAL YR 1970 TOTAL 780.29 MEAN 2.14 MAX 53 MIN .26 CFSM 1.09 IN 14.73
WTR YR 1971 TOTAL 1,767.36 MEAN 4.84 MAX 360 MIN .26 CFSM 2.46 IN 33.37

PEAK DISCHARGE (BASE, 120 CFS)

DATE	TIME	G. H.	DISCHARGE	DATE	TIME	G. H.	DISCHARGE
2- 7	2145	2.86	173	8- 5	0330	2.85	172
2-22	2330	2.56	137	8-27	0945	4.59	430
6- 3	0130	2.48	128	8-27	2300	4.39	396
6-14	1645	2.63	146	9-11	1000	5.65	630
8- 1	*2300	10.75	3,500				

* About.
Note.--No gage-height record Aug. 1-3.

01585500 Cranberry Branch near Westminster, Md.

LOCATION.--Lat 39°35'35", long 76°58'05", Carroll County, on left bank 80 ft upstream from small wooden bridge, 0.7 mile upstream from mouth, and 1.8 miles northeast of Westminster.

DRAINAGE AREA.--3.29 sq mi.

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

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

AVERAGE DISCHARGE.--22 years, 3.26 cfs (13.46 inches per year, unadjusted for storage).

EXTREMES.--Current year: Maximum discharge, 133 cfs Aug. 3 (gage height, 3.62 ft); minimum daily, 0.72 cfs Nov. 7.
Period of record: Maximum discharge, 1,070 cfs July 9, 1970 (gage height, 5.54 ft), from rating curve extended above 200 cfs on the basis of computation of peak flow through culvert; minimum daily, 0.27 cfs Dec. 3, 1969.
Flood of July 12, 1949, reached a stage of 5.2 ft, from floodmarks (discharge, 750 cfs).

REMARKS.--Records good. Occasional small diversions to and releases from Cranberry Reservoir located offstream 1 mile above station since August 1957 (capacity, 113,700,000 gal).

REVISIONS (WATER YEARS).--WSP 1432: Drainage area, 1954-55.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.5	2.3	2.5	2.6	1.9	5.2	3.7	3.4	3.5	2.4	3.7	3.0
2	1.5	1.9	2.4	2.8	1.8	4.7	4.0	3.9	4.0	2.4	12	2.8
3	1.5	1.8	2.5	2.8	1.8	6.6	3.9	3.5	6.1	2.0	21	3.2
4	1.4	8.9	2.7	9.8	1.8	9.0	3.7	3.4	4.7	2.0	13	2.7
5	1.4	7.0	2.5	13	4.0	7.3	3.4	3.2	3.5	1.9	11	2.7
6	1.3	1.2	2.4	6.0	7.8	7.3	3.0	6.4	3.5	1.9	3.4	2.7
7	1.3	.72	2.3	4.3	20	7.3	8.0	4.0	3.7	1.9	1.2	2.5
8	1.4	1.1	2.2	3.6	30	5.4	3.2	6.4	2.4	1.8	1.1	2.5
9	1.5	2.3	2.3	3.4	7.3	4.9	1.8	4.0	.98	2.0	.98	2.5
10	1.5	2.3	2.4	3.4	3.7	4.9	1.4	3.5	.98	1.9	.89	2.4
11	1.5	1.9	2.4	3.4	3.5	4.9	1.2	3.4	.98	2.4	1.2	6.4
12	1.5	4.2	4.6	3.7	6.1	4.7	1.9	3.4	.98	2.1	2.1	7.6
13	1.5	1.8	3.1	3.4	50	4.7	4.0	7.3	.98	2.0	2.7	8.3
14	1.5	.84	2.6	3.9	8.3	4.4	3.7	4.4	1.2	1.9	2.7	3.9
15	3.2	7.0	2.4	3.6	4.7	4.9	3.7	3.7	2.2	1.8	2.7	3.4
16	1.2	1.4	4.6	3.1	4.2	4.4	3.7	7.5	3.0	1.8	2.7	3.0
17	1.2	.87	7.7	2.9	4.9	4.0	3.7	4.0	2.7	1.8	2.5	3.4
18	1.6	.80	3.6	2.8	5.4	4.0	3.7	3.4	2.5	1.6	2.4	3.2
19	1.6	.74	3.1	2.5	5.4	8.6	3.5	3.2	2.4	2.2	3.2	3.0
20	1.6	3.9	2.8	2.5	6.6	6.4	3.5	3.0	2.4	1.9	2.8	3.0
21	4.0	2.8	2.8	2.5	5.6	4.9	3.5	3.4	2.4	1.8	2.5	4.2
22	3.6	3.2	7.6	2.7	18	4.7	3.5	3.0	2.1	1.6	2.4	3.0
23	1.8	2.9	6.4	3.4	10	4.9	3.5	2.7	2.2	1.6	2.4	3.0
24	1.8	2.6	5.7	2.9	6.4	4.2	3.4	2.7	2.2	1.9	2.2	2.8
25	1.6	2.5	3.8	3.2	5.6	4.2	3.4	2.8	2.1	1.9	2.1	2.7
26	1.6	2.6	3.4	4.5	5.4	4.2	3.4	2.7	2.4	1.8	2.1	3.2
27	1.6	2.7	3.0	2.8	10	4.0	3.4	2.5	2.2	1.6	9.6	2.7
28	1.6	2.5	2.8	2.2	5.9	4.0	3.5	2.5	2.2	1.6	7.0	.89
29	1.6	2.5	2.6	2.4	------	4.0	3.5	2.7	2.2	2.7	3.4	.80
30	2.6	2.7	2.4	2.9	------	3.9	3.4	5.2	2.2	11	3.0	1.2
31	3.5	------	2.4	2.0	------	3.7	------	11	------	3.9	3.0	------
TOTAL	56.0	79.97	104.0	115.0	246.1	160.3	103.2	126.2	74.90	71.1	132.97	96.69
MEAN	1.81	2.67	3.35	3.71	8.79	5.17	3.44	4.07	2.50	2.29	4.29	3.22
MAX	4.0	8.9	7.7	13	50	9.0	8.0	11	6.1	11	21	8.3
MIN	1.2	.72	2.2	2.0	1.8	3.7	1.2	2.5	.98	1.6	.89	.80
CFSM	.55	.81	1.02	1.13	2.67	1.57	1.05	1.24	.76	.70	1.30	.98
IN.	.63	.90	1.18	1.30	2.78	1.81	1.17	1.43	.85	.80	1.50	1.09

CAL YR 1970 TOTAL 1,316.71 MEAN 3.61 MAX 103 MIN .72 CFSM 1.10 IN 14.89
WTR YR 1971 TOTAL 1,366.43 MEAN 3.74 MAX 50 MIN .72 CFSM 1.14 IN 15.45

PEAK DISCHARGE (BASE, 80 CFS)

DATE	TIME	G. H.	DISCHARGE	DATE	TIME	G. H.	DISCHARGE
2-7	2145	3.60	131	2-13	2015	3.27	107
2-8	1945	3.24	105	8- 3	2400	3.62	133

01586000 North Branch Patapsco River at Cedarhurst, Md.

LOCATION.--39°30'00", long 76°53'00", Carroll County, on left bank at downstream side of private footbridge at Cedarhurst, 0.8 mile downstream from Roaring Run, 8 miles southeast of Westminster, and 16.5 miles upstream from mouth.

DRAINAGE AREA.--56.6 sq mi.

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

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

AVERAGE DISCHARGE.--26 years, 58.3 cfs (13.99 inches per year).

EXTREMES.--Current year: Maximum discharge, 3,340 cfs Aug. 4 (gage height, 9.35 ft); minimum, 5.5 cfs July 19 (gage height 1.23 ft), result of filling pond above station; minimum daily, 14 cfs Oct. 8.
Period of record: Maximum discharge, 4,130 cfs Aug. 13, 1955 (gage height, 10.38 ft), minimum, 1.9 cfs Sept. 10, 1966, result of filling pond above station; minimum daily, 3.1 cfs Sept. 10, 12, 1966.

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). Records do not include a mean discharge of 1.67 cfs diverted above station for municipal supply of Westminster; sewage effluent discharged into Little Pipe Creek in Monocacy River basin.

REVISIONS (WATER YEARS).--WSP 1903: 1959-60.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17	31	32	41	29	99	56	44	87	34	80	45
2	17	25	31	47	27	92	59	49	70	48	430	44
3	16	48	31	44	30	104	61	51	87	32	498	44
4	16	72	36	130	32	174	54	44	90	29	773	42
5	15	293	30	250	57	125	53	41	62	29	386	40
6	15	55	30	119	116	125	69	80	59	28	119	40
7	15	38	27	83	302	125	171	56	68	28	89	38
8	14	33	27	67	776	101	102	89	62	26	69	38
9	15	30	29	67	232	89	77	60	47	26	62	37
10	15	30	30	62	61	84	68	50	44	28	56	35
11	16	42	29	60	56	86	64	44	41	32	58	123
12	16	90	57	61	84	78	60	43	44	32	62	298
13	15	59	46	58	1,110	77	62	131	43	26	53	167
14	15	41	35	64	312	73	58	81	43	25	49	83
15	30	169	34	65	108	73	55	59	74	23	49	68
16	21	66	41	51	85	71	54	131	65	25	54	60
17	16	50	160	49	87	64	54	89	47	24	47	64
18	16	42	63	42	94	61	55	69	42	21	44	59
19	16	38	52	37	95	136	50	61	40	35	51	57
20	16	60	46	38	110	121	49	56	38	28	53	54
21	47	79	43	40	102	84	50	62	37	25	44	81
22	72	48	113	45	363	78	48	54	37	23	44	54
23	31	42	102	55	262	87	47	48	36	22	42	52
24	24	38	105	51	133	72	47	46	35	22	39	54
25	22	35	69	50	111	67	45	61	33	27	38	46
26	21	35	64	67	102	69	45	63	33	22	38	52
27	20	35	55	42	189	63	44	46	35	22	292	63
28	19	34	49	34	114	63	46	44	33	20	256	53
29	18	34	43	36	------	62	49	45	34	35	63	47
30	23	35	40	47	------	59	45	99	36	266	53	45
31	51	------	42	41	------	56	------	304	------	60	49	------
TOTAL	680	1,727	1,591	1,943	5,179	2,718	1,797	2,200	1,502	1,123	4,040	1,983
MEAN	21.9	57.6	51.3	62.7	185	87.7	59.9	71.0	50.1	36.2	130	66.1
MAX	72	293	160	250	1,110	174	171	304	90	266	773	298
MIN	14	25	27	34	27	56	44	41	33	20	38	35
CFSM	.39	1.02	.91	1.11	3.27	1.55	1.06	1.25	.89	.64	2.30	1.17
IN.	.45	1.14	1.05	1.28	3.40	1.79	1.18	1.45	.99	.74	2.66	1.30

CAL YR 1970 TOTAL 21,235 MEAN 58.2 MAX 788 MIN 13 CFSM 1.03 IN 13.96
WTR YR 1971 TOTAL 26,483 MEAN 72.6 MAX 1,110 MIN 14 CFSM 1.28 IN 17.41

PEAK DISCHARGE (BASE, 1,000 CFS)

DATE	TIME	G. H.	DISCHARGE	DATE	TIME	G. H.	DISCHARGE
2- 8	2100	6.88	1,860	8- 4	0030	9.35	3,340
2-13	2130	7.64	2,240	8-27	1930	5.11	1,060
8- 2	0130	6.37	1,600	9-12	0100	5.31	1,140

01587500 South Branch Patapsco River at Henryton, Md.

LOCATION.--Lat 39°21'05", long 76°54'50", Howard County, on right bank at downstream side of bridge on Henryton Road at Henryton, 1.3 miles upstream from Piney Run, 2.5 miles upstream from confluence with North Branch, and 3.2 miles southeast of Sykesville.

DRAINAGE AREA.--64.4 sq mi.

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

GAGE.--Water-stage recorder and concrete control. Datum of gage is 289.15 ft above mean sea level.

AVERAGE DISCHARGE.--23 years, 64.4 cfs (13.58 inches per year).

EXTREMES.--Current year: Maximum discharge, 9,250 cfs Sept. 12 (gage height, 16.85 ft), from rating curve extended as explained below; minimum, 12 cfs many days in October (gage height, 1.66 ft).
Period of record: Maximum discharge, 12,100 cfs July 21, 1956 (gage height, 19.40 ft), from rating curve extended above 1,900 cfs on basis of slope-area measurement at gage height 7.88 ft and contracted-opening measurements at gage heights 10.12 and 19.40 ft; minimum, 0.40 cfs Sept. 9-12, 1966.

REMARKS.--Records good. Records of chemical analyses for the water year 1970 are published in part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13	26	29	38	29	100	60	48	133	60	82	54
2	13	21	29	45	29	92	62	51	106	103	529	53
3	13	38	28	40	29	100	66	56	97	45	297	52
4	12	48	32	97	32	205	58	50	85	38	1,460	48
5	12	256	28	320	62	127	56	46	74	37	539	47
6	12	46	28	142	196	127	74	54	72	36	150	47
7	12	34	27	85	542	118	184	51	85	36	114	44
8	12	29	26	70	995	100	103	82	70	32	92	43
9	12	27	28	58	324	92	80	64	62	32	80	42
10	12	27	29	54	75	87	72	53	58	32	74	40
11	13	40	29	51	70	87	66	48	54	33	150	1,640
12	13	58	43	53	65	82	64	48	53	36	175	2,580
13	13	58	43	53	1,200	80	64	231	51	32	95	387
14	13	41	33	56	408	77	60	115	50	29	77	200
15	14	170	29	62	127	77	56	76	95	28	77	151
16	15	65	36	51	97	74	56	209	68	29	118	127
17	14	46	133	50	87	68	56	122	58	30	78	168
18	13	38	56	38	90	64	58	87	53	32	70	124
19	13	36	45	36	95	118	53	73	50	43	77	112
20	13	50	40	38	112	136	53	66	50	37	77	103
21	22	66	38	40	112	87	53	76	48	30	68	106
22	53	43	130	42	304	80	53	65	46	28	60	92
23	24	37	106	60	324	90	51	58	45	27	54	92
24	19	33	106	53	154	77	51	55	43	26	50	90
25	16	32	66	50	127	70	50	56	40	27	48	82
26	16	32	58	85	109	70	50	62	62	27	47	90
27	15	33	50	54	164	66	48	51	80	26	473	95
28	15	32	46	37	124	66	50	49	46	24	162	87
29	15	30	40	37	------	66	51	51	45	41	77	85
30	19	32	38	46	------	64	50	134	45	426	64	80
31	37	------	38	41	------	60	------	486	------	106	57	------
TOTAL	508	1,524	1,487	1,982	6,082	2,807	1,908	2,773	1,924	1,568	5,571	6,961
MEAN	16.4	50.8	48.0	63.9	217	90.5	63.6	89.5	64.1	50.6	180	232
MAX	53	256	133	320	1,200	205	184	486	133	426	1,460	2,580
MIN	12	21	26	36	29	60	48	46	40	24	47	40
CFSM	.25	.79	.75	.99	3.37	1.41	.99	1.39	1.00	.79	2.80	3.60
IN.	.29	.88	.86	1.14	3.51	1.62	1.10	1.60	1.11	.91	3.22	4.02

CAL YR 1970 TOTAL 21,055 MEAN 57.7 MAX 422 MIN 12 CFSM .90 IN 12.16
WTR YR 1971 TOTAL 35,095 MEAN 96.2 MAX 2,580 MIN 12 CFSM 1.49 IN 20.27

PEAK DISCHARGE (BASE, 950 CFS)

DATE	TIME	G. H.	DISCHARGE	DATE	TIME	G. H.	DISCHARGE
2- 7	2300	6.71	2,170	8- 4	0430	10.94	4,410
2-13	2100	8.52	3,040	8- 5	0530	5.16	1,510
5-31	0700	4.63	1,270	8-27	1730	5.55	1,680
7-30	1530	4.94	1,410	9-12	0200	16.85	9,250
8- 2	0500	6.69	2,160				

01589000 Patapsco River at Hollofield, Md.

LOCATION.--Lat 39°18'36", long 76°47'39", Howard County, on right bank at downstream side of highway bridge, at Hollofield, 0.3 mile downstream from Dogwood Run, 3.0 miles north of Ellicott City, and 28 miles upstream from mouth.

DRAINAGE AREA.--285 sq mi.

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

GAGE.--water-stage recorder. Altitude of gage is 190 ft (from topographic map).

EXTREMES.--Current year: Maximum discharge, 12,700 cfs Sept. 12 (gage height, 11.01 ft); minimum, 23 cfs Oct. 6 (gage height, 1.07 ft).
Period of record: Maximum discharge, 19,000 cfs July 21, 1956 (gage height, 15.88 ft); minimum, 6 cfs Sept. 6, 1944 (gage height, 0.83 ft); minimum daily, 9.6 cfs Aug. 12, 1963.
Flood in August 1933 reached a stage of 19.5 ft, from information by Maryland State Roads Commission.

REMARKS.--Records good. Flow regulated by Liberty Reservoir 11 miles upstream beginning July 22, 1954 (usable capacity, 42,070,000,000 gal; dead storage, 1,260,000,000 gal). 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 of part of Carroll County.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	27	58	52	60	50	166	106	89	729	125	131	158
2	26	45	50	65	45	156	109	91	418	223	1,020	138
3	27	54	50	70	50	190	122	107	338	92	572	128
4	26	104	53	139	58	434	105	92	282	79	3,740	118
5	24	422	48	523	106	222	101	89	226	74	2,480	108
6	24	92	47	284	253	222	145	99	189	72	1,140	106
7	24	60	45	150	666	208	434	99	186	73	574	101
8	25	52	44	130	1,790	175	233	143	178	66	350	101
9	25	47	47	120	925	155	190	125	153	65	257	97
10	25	47	47	100	120	149	194	104	125	65	200	95
11	26	71	47	95	100	148	166	94	108	68	219	2,240
12	28	120	64	94	110	141	158	89	102	74	473	5,220
13	27	119	81	96	1,720	136	154	577	101	65	197	1,720
14	27	85	58	96	1,100	132	169	414	104	63	158	850
15	32	302	53	116	208	131	138	257	182	58	132	506
16	37	131	77	88	163	128	130	667	156	59	163	362
17	32	85	266	81	145	118	120	501	138	65	128	435
18	30	73	118	70	147	114	124	326	113	67	110	326
19	30	64	85	60	151	166	121	239	96	78	122	274
20	31	68	75	60	172	270	108	191	90	86	118	245
21	51	123	70	65	181	151	103	204	85	66	103	266
22	115	75	234	70	455	140	115	183	86	59	99	222
23	53	66	220	95	730	151	107	148	81	58	97	197
24	40	58	184	90	261	134	96	125	81	58	90	200
25	36	54	126	85	200	127	96	121	77	59	86	170
26	37	54	106	120	178	127	94	158	84	58	84	171
27	36	54	90	70	283	110	94	137	134	66	1,080	214
28	35	54	80	55	200	115	93	118	104	56	1,130	200
29	35	52	70	55	------	115	98	110	87	62	459	182
30	42	53	65	75	------	112	92	241	84	543	283	174
31	70	------	65	65	------	108	------	1,370	------	193	204	------
TOTAL	1,103	2,742	2,717	3,342	10,567	4,951	4,115	7,308	4,917	2,895	15,999	15,324
MEAN	35.6	91.4	87.6	108	377	160	137	236	164	93.4	516	511
MAX	115	422	266	523	1,790	434	434	1,370	729	543	3,740	5,220
MIN	24	45	44	55	45	108	92	89	77	56	84	95
(†)	33,010	33,510	33,750	34,850	41,900	43,030	43,110	43,700	42,910	42,020	43,340	43,280
(‡)	188	139	138	134	159	196	159	153	165	185	161	158

CAL YR 1970 TOTAL 37,326 MEAN 102 MAX 749 MIN 22
WTR YR 1971 TOTAL 75,980 MEAN 208 MAX 5,220 MIN 24

† Month-end contents, in millions of gallons, in Liberty Reservoir (contents on Sept. 30, 1970, 35,650 million gallons); 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.

01589100 East Branch Herbert Run at Arbutus, Md.

LOCATION.--Lat 39°14'24", long 76°41'33", Baltimore County, on right bank at downstream side of highway bridge on Tom Day Boulevard at U. S. Route 1 in Arbutus, 0.5 mile upstream from mouth, and 2 miles south of Baltimore city limits.

DRAINAGE AREA.--2.47 sq mi.

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

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

AVERAGE DISCHARGE.--14 years, 2.92 cfs (16.05 inches per year).

EXTREMES.--Current year: Maximum discharge, 1,180 cfs Sept. 11 (gage height, 5.94 ft) from rating curve extended as explained below; minimum, 0.42 cfs Nov. 21 result of regulation; minimum daily, 0.59 cfs Oct. 11.
Period of record: Maximum discharge, 1,180 cfs Sept. 11, 1971 (gage height, 5.94 ft), from rating curve extended above 250 cfs on basis of slope-area measurement made prior to establishment of station at gage height 5.7 ft; minimum daily, 0.30 cfs July 24, Sept. 4, 11, 1966.
Flood of July 20, 1956, reached a stage of 5.7 ft from flood marks (discharge, 1,090 cfs from rating curve extended as explained above).

REMARKS.--Records good. Slight regulation at low flow from unknown source above station.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.96	1.0	1.0	1.4	.80	3.0	1.7	1.2	3.2	5.5	103	2.1
2	.99	1.0	1.0	1.5	.70	3.0	3.8	1.3	5.0	1.8	56	2.1
3	.97	5.0	1.1	1.8	.70	17	1.7	1.3	9.5	1.1	15	1.9
4	.62	18	1.1	16	.80	12	1.3	1.3	2.0	1.0	10	1.7
5	.85	5.0	.88	20	8.3	3.6	1.5	1.5	1.8	.92	17	1.4
6	.92	1.3	.65	3.6	3.0	3.0	17	3.0	1.7	1.1	2.5	1.3
7	.93	.99	.87	2.8	29	2.8	17	2.7	2.6	1.2	1.9	1.5
8	.95	.77	.97	2.6	24	2.5	3.2	6.5	1.8	1.1	1.4	1.5
9	.96	.96	1.1	2.2	4.6	2.5	2.3	1.0	1.7	1.0	1.5	1.5
10	.75	1.6	1.0	1.8	1.9	2.3	1.8	1.2	1.7	.92	1.7	1.4
11	.59	9.9	.97	2.0	2.1	2.3	1.5	1.4	1.6	1.9	3.4	152
12	.84	5.0	3.4	2.4	1.9	2.1	1.7	1.5	1.7	1.1	1.9	22
13	.94	13	.85	2.2	29	1.9	1.9	44	1.6	1.2	1.7	11
14	.95	3.2	.98	3.2	5.2	1.5	1.8	2.7	5.0	1.2	1.4	5.0
15	1.7	16	1.1	2.6	3.0	1.9	1.8	1.7	4.0	1.2	1.4	3.8
16	1.6	1.7	13	1.9	2.7	1.9	1.8	27	2.1	1.2	1.7	3.4
17	.68	1.5	4.4	1.7	3.2	1.8	2.1	3.2	1.9	1.5	1.4	24
18	.61	1.4	2.1	1.5	2.5	1.8	1.4	2.3	1.8	1.3	1.5	3.6
19	.98	1.3	1.5	1.3	2.5	13	1.7	1.9	1.7	1.7	24	3.2
20	.89	1.5	1.1	1.3	3.8	3.0	1.8	2.0	1.5	1.2	1.9	3.0
21	11	1.1	3.6	1.4	3.4	1.8	1.8	6.0	1.4	1.2	1.7	3.2
22	2.6	.82	18	1.5	34	2.7	1.7	1.9	1.4	1.2	1.3	2.7
23	1.0	1.1	3.8	3.0	15	3.2	1.7	1.8	1.4	1.2	1.4	2.7
24	.90	1.1	3.6	1.2	4.3	1.9	1.4	1.8	1.4	1.5	1.4	2.5
25	.90	1.2	1.5	4.6	3.4	1.8	1.2	2.4	1.4	1.0	1.4	2.1
26	1.6	.82	1.4	4.0	3.4	1.8	1.4	2.0	1.4	1.9	2.1	3.6
27	.90	.76	1.2	1.1	9.9	1.5	1.4	1.7	1.3	1.3	103	4.0
28	.90	.88	1.4	1.1	3.2	1.3	1.8	1.8	7.0	1.1	7.6	2.1
29	.90	.74	1.4	1.0	------	1.7	1.4	1.9	1.3	5.9	3.0	2.1
30	3.0	.99	1.3	1.3	------	1.7	1.4	22	1.2	14	2.5	2.1
31	2.6	------	1.3	.90	------	1.7	------	26	------	2.0	2.3	------
TOTAL	44.98	99.63	77.57	94.90	206.30	104.0	84.0	178.0	73.1	61.44	378.0	274.5
MEAN	1.45	3.32	2.50	3.06	7.37	3.35	2.80	5.74	2.44	1.98	12.2	9.15
MAX	11	18	18	20	34	17	17	44	9.5	14	103	152
MIN	.59	.74	.65	.90	.70	1.3	1.2	1.0	1.2	.92	1.3	1.3
CFSM	.59	1.34	1.01	1.24	2.98	1.36	1.13	2.32	.99	.80	4.94	3.70
IN.	.68	1.50	1.17	1.43	3.11	1.57	1.27	2.68	1.10	.93	5.69	4.13

CAL YR 1970 TOTAL 936.84 MEAN 2.57 MAX 33 MIN .59 CFSM 1.04 IN 14.11
WTR YR 1971 TOTAL 1,676.42 MEAN 4.59 MAX 152 MIN .59 CFSM 1.86 IN 25.25

PEAK DISCHARGE (BASE, 330 CFS REVISED)

DATE	TIME	G. H.	DISCHARGE	DATE	TIME	G. H.	DISCHARGE
5-13	0700	4.03	584	9-11	0800	5.94	1,180
8- 1	2030	4.87	836	9-11	1630	4.23	644
8- 2	0215	3.83	524	9-11	2030	3.74	497
8-27	1600	4.17	626	9-17	0830	3.73	494

01589200 Gwynns Falls near Owings Mills, Md.

LOCATION.--Lat 39°26'16", long 76°46'57", Baltimore County, on left bank at downstream side of bridge on railroad siding, 0.4 mile upstream from small right bank tributary, 1.2 miles north of Owings Mills, and 21 miles upstream from mouth.

DRAINAGE AREA.--4.90 sq mi.

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

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 520 ft (from topographic map).

AVERAGE DISCHARGE.--13 years, 4.23 cfs (11.72 inches per year).

EXTREMES.--Current year: Maximum discharge, 1,360 cfs Aug. 3 (gage height, 5.13 ft) from rating curve extended as explained below; minimum daily, 1.3 cfs many days in October.
Period of record: Maximum discharge, 1,360 cfs Aug. 3, 1971 (gage height, 5.13 ft), from rating curve extended above 100 cfs on basis of contracted-opening measurement at gage height 5.06 ft; minimum daily 0.5 cfs Sept. 5, 8, 1966.

REMARKS.--Records fair.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.6	1.8	2.5	2.5	2.2	5.4	3.6	3.1	6.0	3.5	19	4.0
2	1.6	1.8	2.5	2.9	2.0	5.1	4.3	4.5	6.0	4.7	55	4.3
3	1.4	4.7	2.3	2.7	2.0	15	4.3	3.6	5.4	2.5	118	4.0
4	1.3	15	2.5	2.9	2.2	17	3.6	3.1	4.0	2.3	56	3.8
5	1.3	15	2.5	26	2.5	7.8	3.8	3.1	3.8	2.3	91	3.8
6	1.3	4.0	2.5	6.8	9.0	7.0	11	5.9	3.8	2.2	5.9	3.1
7	1.3	3.8	2.5	4.0	60	5.7	19	3.6	5.6	2.2	4.6	3.1
8	1.3	4.0	2.5	3.3	91	4.8	4.3	7.2	4.6	2.2	3.8	3.3
9	1.3	4.6	2.5	3.3	10	4.3	3.3	3.6	3.8	3.2	3.3	3.1
10	1.3	4.8	2.5	3.1	4.8	4.3	3.3	2.9	3.6	2.5	3.1	3.1
11	1.3	8.4	2.2	2.7	4.0	4.3	3.1	2.7	3.3	6.9	6.1	33
12	1.3	8.3	6.0	2.7	3.6	4.0	3.1	2.9	5.0	3.1	4.3	21
13	1.3	5.1	3.6	2.7	99	4.0	2.9	35	3.8	2.5	3.3	15
14	1.3	3.8	3.1	4.9	13	4.0	2.9	6.0	7.9	2.3	3.1	5.4
15	2.7	22	3.1	3.1	5.1	3.8	2.9	4.0	9.0	2.2	3.1	4.3
16	2.2	4.6	10	2.7	3.8	3.3	2.9	25	4.8	2.8	3.3	4.0
17	1.6	3.3	13	2.5	5.7	3.3	2.9	6.0	3.3	2.3	3.1	5.4
18	1.6	3.3	3.8	2.5	6.2	3.3	2.9	4.3	2.9	2.2	3.1	4.6
19	1.6	3.1	3.3	2.7	5.0	16	2.7	3.8	2.9	4.5	3.3	4.3
20	1.6	6.1	3.1	2.2	6.6	7.9	2.7	3.6	2.9	2.5	3.3	4.0
21	8.6	3.6	2.9	2.2	5.2	5.1	2.9	6.0	2.9	2.5	3.1	7.0
22	4.9	3.1	17	2.2	31	5.1	2.9	4.0	2.8	2.3	3.1	4.0
23	1.8	3.1	6.8	4.8	21	6.6	2.9	3.6	2.5	2.3	2.9	3.8
24	1.8	2.9	8.9	4.8	6.3	4.8	2.9	3.6	2.5	2.3	2.7	3.8
25	1.8	2.9	3.6	5.0	4.8	4.8	2.9	5.3	2.5	2.2	2.9	3.8
26	2.2	2.9	3.1	5.6	4.8	4.6	3.1	4.9	4.6	2.6	2.9	6.4
27	2.0	2.9	2.7	2.5	14	4.0	3.1	3.6	3.1	2.3	96	6.3
28	1.8	2.9	2.5	2.5	5.7	3.8	3.3	3.6	2.5	2.0	26	4.6
29	2.2	3.1	2.3	2.5	------	4.3	3.6	3.8	2.5	8.4	5.4	4.3
30	2.5	2.7	2.2	2.9	------	4.0	3.1	16	2.5	22	4.6	4.3
31	3.6	------	2.2	2.2	------	3.8	------	44	------	8.6	4.3	------
TOTAL	63.4	157.6	130.2	123.4	430.5	181.2	120.2	232.3	120.8	116.4	549.6	184.9
MEAN	2.05	5.25	4.20	3.98	15.4	5.85	4.01	7.49	4.03	3.75	17.7	6.16
MAX	8.6	22	17	26	99	17	19	44	9.0	22	118	33
MIN	1.3	1.8	2.2	2.2	2.0	3.3	2.7	2.7	2.5	2.0	2.7	3.1
CFSM	.42	1.07	.86	.81	3.14	1.19	.82	1.53	.82	.77	3.61	1.26
IN.	.48	1.20	.99	.94	3.27	1.38	.91	1.76	.92	.88	4.17	1.40

CAL YR 1970 TOTAL 1,533.5 MEAN 4.20 MAX 50 MIN 1.3 CFSM .86 IN 11.64
WTR YR 1971 TOTAL 2,410.5 MEAN 6.60 MAX 118 MIN 1.3 CFSM 1.35 IN 18.30

PEAK DISCHARGE (BASE, 120 CFS REVISED)

DATE	TIME	G. H.	DISCHARGE	DATE	TIME	G. H.	DISCHARGE
2- 7	2130	2.96	366	8- 3	2200	5.13	1,360
2- 8	2000	3.00	380	8- 5	0400	3.44	536
2-13	1500	2.36	169	8-27	1030	2.32	158
2-13	2030	2.52	214	8-27	1800	2.88	338
5-13	0630	2.20	130	8-27	2400	2.35	166
5-31	0500	2.26	144	9-11	2200	2.68	268
8- 2	0300	2.53	218				

01589300 Gwynns Falls at Villa Nova, Md.

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

DRAINAGE AREA.--32.5 sq mi.

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

GAGE.--Water-stage recorder. Datum of gage is 361.32 ft above mean sea level (Baltimore County bench mark). Prior to Aug. 27, 1963, at site 300 ft upstream at same datum.

AVERAGE DISCHARGE.--14 years, 30.0 cfs (12.54 inches per year).

EXTREMES.--Current year: Maximum discharge, 2,370 cfs Aug. 27 (gage height, 9.71 ft); minimum, 2.6 cfs Oct. 9, 10.
Period of record: Maximum discharge, 2,850 cfs Sept. 10, 1968 (gage height, 10.70 ft); minimum, 1.7 cfs Sept. 7, 8, 1966 (gage height, 0.50 ft).
Flood of July 21, 1956, reached a stage of 12.6 ft (discharge, 5,270 cfs) on basis of contracted-opening measurement.

REMARKS.--Records good. Slight diurnal fluctuation at times from unknown source above station. Small diversion for irrigation above station.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.6	14	14	20	16	31	20	18	47	47	28	22
2	7.6	12	14	26	16	28	25	21	37	39	479	21
3	8.2	30	14	24	14	81	26	25	37	18	174	21
4	7.2	66	16	100	14	165	20	18	31	16	504	18
5	6.5	128	14	233	35	48	19	18	27	15	460	18
6	6.5	20	13	62	70	45	74	31	25	14	53	18
7	6.0	16	13	32	279	38	221	23	31	14	36	30
8	2.8	14	14	26	502	30	53	49	30	13	30	31
9	2.6	13	13	22	200	28	35	26	22	13	27	23
10	2.8	13	13	22	28	28	30	20	20	14	25	23
11	3.0	42	13	22	24	27	26	18	20	22	81	380
12	3.0	60	36	23	22	25	25	18	29	18	57	298
13	3.0	45	22	22	395	24	25	293	21	14	24	160
14	3.0	24	17	33	169	24	23	63	24	14	20	49
15	8.2	169	15	29	38	24	21	31	67	12	19	35
16	9.0	30	64	22	29	23	21	254	32	14	20	29
17	4.2	21	144	20	29	21	22	60	24	14	18	64
18	3.6	18	30	18	30	20	23	35	20	16	17	32
19	3.6	17	22	18	31	89	21	28	19	20	25	28
20	3.6	26	20	18	44	71	20	24	18	16	18	26
21	48	33	20	18	40	33	20	48	18	12	17	39
22	37	19	146	18	210	28	20	28	17	12	16	24
23	11	17	60	26	198	39	19	23	16	12	16	23
24	11	15	60	24	49	28	19	21	17	12	15	23
25	10	15	30	22	37	24	19	28	16	12	15	20
26	12	15	25	28	31	24	19	36	44	13	16	28
27	10	15	22	22	102	23	19	21	23	18	893	37
28	9.6	14	20	22	41	22	20	20	52	11	320	26
29	10	14	20	20	------	22	24	21	18	38	42	23
30	16	16	18	18	------	21	19	99	18	117	28	22
31	29	------	18	18	------	20	------	297	------	56	23	------
TOTAL	305.6	951	960	1,028	2,693	1,154	948	1,715	820	676	3,516	1,591
MEAN	9.86	31.7	31.0	33.2	96.2	37.2	31.6	55.3	27.3	21.8	113	53.0
MAX	48	169	146	233	502	165	221	297	67	117	893	380
MIN	2.6	12	13	18	14	20	19	18	16	11	15	18
CFSM	.30	.98	.95	1.02	2.96	1.14	.97	1.70	.84	.67	3.48	1.63
IN.	.35	1.09	1.10	1.18	3.08	1.32	1.09	1.96	.94	.77	4.02	1.82

CAL YR 1970 TOTAL 10,507.4 MEAN 28.8 MAX 397 MIN 2.6 CFSM .89 IN 12.03
WTR YR 1971 TOTAL 16,357.6 MEAN 44.8 MAX 893 MIN 2.6 CFSM 1.38 IN 18.72

PEAK DISCHARGE (BASE, 650 CFS REVISED)

DATE	TIME	G. H.	DISCHARGE	DATE	TIME	G. H.	DISCHARGE
2- 8	0230	6.00	990	8- 4	0600	7.23	1,360
2- 9	0030	6.03	999	8- 5	0830	6.56	1,160
2-13	2400	5.15	748	8-27	1730	9.71	2,370
5-13	1100	4.83	668	9-11	0800	7.09	1,320
8- 1	0330	7.04	1,300	9-12	0330	5.44	822

01589330 Dead Run at Franklintown, Md.

LOCATION.--Lat 39°18'40", long 76°43'02", Baltimore County, on right bank at downstream side of bridge on Colonial Road at Security Boulevard at Franklintown, 0.3 mile west of Baltimore city limits, 1.2 miles southwest of Woodlawn, and 2.5 miles upstream from mouth.

DRAINAGE AREA.--5.52 sq mi.

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

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

AVERAGE DISCHARGE.--12 years, 6.19 cfs (15.23 inches per year).

EXTREMES.--Current year: Maximum discharge, 2,130 cfs Sept. 11 (gage height, 8.68 ft); minimum, 0.30 cfs Oct. 18 (gage height, 0.64 ft).
Period of record: Maximum discharge, 2,750 cfs Sept. 10, 1968 (gage height, 10.22 ft, from high-water mark in well); minimum, 0.10 cfs Sept. 11-12, 1966 (gage height, 0.57 ft).

REMARKS.--Records good except those below 2 cfs, which are fair. Occasional regulation at low flow from unknown source above station.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.60	1.2	1.2	1.4	.90	3.4	1.9	1.7	4.4	55	14	2.2
2	.60	1.2	1.2	1.4	.80	3.0	6.9	2.4	11	8.5	157	2.0
3	.84	8.1	1.2	1.6	.80	39	3.8	1.7	11	1.9	163	1.9
4	.57	34	1.2	14	.80	35	2.1	1.4	3.5	1.5	52	1.8
5	.49	12	1.2	42	8.0	7.5	2.0	1.6	2.9	1.3	67	3.0
6	.49	1.6	1.2	7.1	13	5.2	51	2.8	2.8	1.3	3.8	1.7
7	.49	1.2	1.2	3.6	101	4.4	58	2.2	5.4	1.3	2.4	1.8
8	.61	1.2	1.2	3.0	88	3.2	5.0	18	2.8	1.2	2.0	1.7
9	.74	.98	1.2	2.6	11	2.8	3.4	2.5	2.1	1.6	1.8	1.5
10	.65	1.4	1.2	2.0	2.0	2.6	2.8	1.8	2.0	1.3	1.7	1.7
11	.65	20	1.2	2.6	2.0	2.6	2.6	1.7	1.9	2.6	11	375
12	.65	12	11	3.2	2.9	2.3	2.6	1.9	2.3	1.2	2.9	45
13	.65	13	2.0	2.6	104	2.3	2.6	115	1.8	1.5	1.5	40
14	.65	4.9	1.4	6.3	11	2.3	2.3	9.0	15	1.1	1.3	4.9
15	3.6	50	1.4	4.0	3.6	2.5	2.1	3.8	7.5	.98	1.3	3.2
16	3.2	3.2	48	2.2	3.2	2.4	2.1	92	2.5	1.5	1.2	2.6
17	.65	2.2	28	2.0	4.0	2.2	2.7	8.1	1.8	2.0	1.3	51
18	.57	2.0	3.2	1.8	3.2	2.0	2.1	3.6	1.6	3.3	1.3	4.3
19	.57	1.6	2.6	1.6	3.6	37	2.0	2.9	1.6	5.1	48	4.1
20	.65	3.2	2.2	1.4	8.1	8.0	2.0	2.6	1.5	1.2	1.8	2.9
21	29	2.2	4.4	1.4	4.9	3.4	1.9	18	1.5	.97	.94	3.3
22	9.0	1.6	70	2.0	107	3.9	1.8	3.1	1.4	.94	.84	2.2
23	1.2	1.4	12	5.5	31	5.7	1.7	2.4	1.4	1.4	.78	2.1
24	.84	1.2	10	2.9	5.9	2.7	1.8	2.3	1.4	1.8	.70	2.1
25	.84	1.2	3.6	7.1	4.2	2.5	1.6	10	1.6	1.6	.70	1.9
26	2.0	1.2	2.9	7.0	4.4	2.3	1.7	5.1	3.2	8.8	2.8	5.2
27	.84	1.2	2.2	2.2	22	2.3	1.7	2.2	1.4	2.3	344	4.7
28	.84	1.2	2.0	1.6	4.5	2.2	2.3	2.2	46	1.0	27	2.2
29	.84	1.2	1.6	1.4	------	2.3	2.0	2.7	2.6	13	5.7	2.0
30	8.1	1.2	1.6	2.0	------	2.0	1.7	40	2.0	27	5.0	2.0
31	4.9	------	1.6	1.4	------	1.9	------	87	------	8.4	3.0	------
TOTAL	76.32	188.58	224.9	140.9	555.80	200.9	178.2	451.7	147.9	162.59	927.76	580.0
MEAN	2.46	6.29	7.25	4.55	19.9	6.48	5.94	14.6	4.93	5.24	29.9	19.3
MAX	29	50	70	42	107	39	58	115	46	55	344	375
MIN	.49	.98	1.2	1.4	.80	1.9	1.6	1.4	1.4	.94	.70	1.5
CFSM	.45	1.14	1.31	.82	3.61	1.17	1.08	2.64	.89	.95	5.42	3.50
IN.	.51	1.27	1.52	.95	3.75	1.35	1.20	3.04	1.00	1.10	6.25	3.91

CAL YR 1970 TOTAL 2,007.35 MEAN 5.50 MAX 120 MIN .49 CFSM 1.00 IN 13.53
WTR YR 1971 TOTAL 3,835.55 MEAN 10.5 MAX 375 MIN .49 CFSM 1.90 IN 25.85

PEAK DISCHARGE (BASE, 650 CFS REVISED)

DATE	TIME	G. H.	DISCHARGE	DATE	TIME	G. H.	DISCHARGE
2- 7	1945	4.52	725	8-27	1645	8.13	1,910
6-28	1030	4.41	698	9-11	0730	8.68	2,130
7- 1	2145	5.12	875	9-11	1830	6.20	1,200
8- 2	0245	6.39	1,260	9-17	0915	4.48	715
8- 3	2245	8.15	1,920				

01589440 Jones Falls at Sorrento, Md.

LOCATION.--Lat 39°23'30", long 76°39'42", Baltimore County, on right bank 0.3 mile downstream from bridge on State Highway 25 (Falls Road), 0.4 mile downstream from Slaughterhouse Branch and Sorrento, and 18 miles upstream from mouth.

DRAINAGE AREA.--25.2 sq mi.

PERIOD OF RECORD.--Annual maximum, water years 1958-66. April 1966 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 240 ft (from topographic map). January 1958 to April 1966, nonrecording gage at site 450 ft upstream at same datum.

AVERAGE DISCHARGE.--5 years, 23.8 cfs (12.83 inches per year).

EXTREMES.--Current year: Maximum discharge, 1,290 cfs Aug. 27 (gage height, 8.43 ft); minimum, 8.2 cfs July 28 (gage height, 1.30 ft).
Period of record: Maximum discharge, 2,160 cfs Sept. 10, 1968 (gage height, 11.30 ft); minimum, 1.8 cfs Sept. 7, 8, 1966 (gage height, 1.16 ft).

REMARKS.--Records good. Slight diurnal fluctuation at low flow caused by mill above station.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.1	8.2	12	14	14	32	20	18	34	17	17	27
2	7.1	7.5	11	14	13	30	23	20	26	22	314	26
3	7.1	14	12	14	13	53	24	20	28	15	84	26
4	7.1	30	12	53	13	95	20	18	24	14	177	24
5	6.7	45	12	91	30	49	19	18	22	13	338	24
6	6.4	14	13	38	36	45	40	22	21	13	44	24
7	6.0	12	13	24	171	40	100	19	21	12	30	22
8	5.2	11	12	20	321	33	40	31	24	11	24	21
9	5.6	11	13	19	95	30	30	21	18	11	21	20
10	6.4	11	12	18	33	29	27	19	17	11	18	19
11	7.1	18	12	18	26	28	25	18	16	14	34	286
12	7.1	28	21	18	23	26	24	18	22	14	26	164
13	6.7	21	16	17	269	26	24	127	18	12	18	77
14	7.1	16	13	22	86	25	22	40	26	12	17	42
15	8.7	68	12	21	35	26	21	25	55	11	16	33
16	9.2	20	30	18	28	24	21	133	27	11	18	30
17	7.5	15	57	16	26	23	21	47	21	11	16	37
18	7.8	14	20	15	26	22	22	31	18	12	15	30
19	7.8	13	17	14	27	53	20	25	17	13	24	29
20	7.5	16	15	14	34	44	19	23	16	12	17	29
21	28	18	15	14	32	29	20	35	16	11	16	32
22	17	14	59	14	107	26	19	25	15	10	15	25
23	8.2	13	33	20	119	30	18	22	15	9.9	15	24
24	7.8	12	31	16	48	25	19	21	14	10	13	24
25	7.1	12	20	18	38	23	19	22	13	11	12	23
26	7.5	12	18	23	34	23	18	25	13	14	12	29
27	6.4	12	15	19	69	23	18	20	15	12	543	31
28	6.7	12	14	19	39	23	18	19	24	9.4	232	26
29	6.7	12	14	16	------	22	20	20	16	18	52	24
30	10	12	14	16	------	21	18	50	15	55	34	24
31	13	------	13	14	------	20	------	142	------	30	30	------
TOTAL	259.6	521.7	581	667	1,805	998	749	1,094	627	451.3	2,242	1,252
MEAN	8.37	17.4	18.7	21.5	64.5	32.2	25.0	35.3	20.9	14.6	72.3	41.7
MAX	28	68	59	91	321	95	100	142	55	55	543	286
MIN	5.2	7.5	11	14	13	20	18	18	13	9.4	12	19
CFSM	.33	.69	.74	.85	2.56	1.28	.99	1.40	.83	.58	2.87	1.65
IN.	.38	.77	.86	.98	2.66	1.47	1.11	1.61	.93	.67	3.31	1.85

CAL YR 1970 TOTAL 7,516.7 MEAN 20.6 MAX 230 MIN 5.2 CFSM .82 IN 11.10
WTR YR 1971 TOTAL 11,247.6 MEAN 30.8 MAX 543 MIN 5.2 CFSM 1.22 IN 16.60

PEAK DISCHARGE (BASE, 600 CFS REVISED)

DATE	TIME	G. H.	DISCHARGE	DATE	TIME	G. H.	DISCHARGE
2-7	2115	6.51	798	8- 5	0730	6.48	790
2-8	1930	6.19	718	8-27	2315	8.43	1,290
8-2	0330	7.61	1,070	9-11	0800	6.97	912

01590000 North River near Annapolis, Md.

LOCATION.--Lat 38°59'09", long 76°37'21", Anne Arundel County, on left bank 500 ft downstream from bridge on State Highway 450, 0.8 mile upstream from mouth, and 7 miles west of Annapolis.

DRAINAGE AREA.--8.5 sq mi, approximately.

PERIOD OF RECORD.--December 1931 to current year.

GAGE.--Water-stage recorder, crest-stage gage, and concrete control. Datum of gage is 6.73 ft above mean sea level. Prior to Nov. 2, 1933, staff gage at same site and datum.

AVERAGE DISCHARGE.--39 years (1932-71), 9.99 cfs (15.96 inches per year).

EXTREMES.--Current year: Maximum discharge, 112 cfs Aug. 27 (gage height, 2.31 ft); minimum daily, 2.6 cfs Oct. 5, 6, 9.
Period of record: Maximum discharge, 5,000 cfs Aug. 2, 1944 (gage height, 6.22 ft), from rating curve extended above 260 cfs on basis of velocity-area studies; minimum, 0.90 cfs Sept. 12, 1966 (gage height, 0.78 ft).

REMARKS.--Records good except those for periods of no gage-height record, which are fair.

REVISIONS (WATER YEARS).--WSP 1432: 1932-38, 1939(M), 1942(M).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.2	5.5	5.8	5.0	6.0	11	7.8	8.5	17	5.0	8.4	7.4
2	3.0	5.2	5.5	7.5	5.0	11	8.5	8.4	11	12	43	7.4
3	3.0	14	5.8	8.0	5.0	15	11	8.6	13	8.0	40	7.2
4	2.8	18	6.2	14	5.5	24	8.8	8.2	11	6.0	43	6.6
5	2.6	37	6.0	30	7.0	15	8.0	7.7	8.9	5.0	28	6.2
6	2.6	14	5.7	20	12	13	15	8.1	8.0	7.0	14	5.9
7	2.8	8.0	5.4	14	20	12	52	8.1	9.2	8.0	9.0	5.5
8	2.8	6.6	5.2	11	72	11	25	18	12	5.5	7.3	5.4
9	2.6	5.8	5.7	9.5	37	9.9	15	12	9.9	4.6	6.1	5.3
10	3.0	5.8	6.0	8.0	10	9.7	13	8.9	7.8	4.4	5.6	5.2
11	3.2	11	5.7	7.5	9.0	9.7	11	7.9	6.9	4.8	5.6	21
12	3.0	12	7.9	7.0	8.5	9.1	11	7.8	6.7	4.4	9.0	36
13	3.6	12	8.3	6.5	29	9.1	10	15	6.9	4.0	5.8	36
14	4.0	11	6.3	6.5	38	9.1	9.9	17	6.9	3.8	5.1	16
15	7.0	28	5.7	9.5	23	9.3	9.1	9.7	8.7	3.6	4.8	10
16	13	16	7.3	7.5	17	9.2	9.2	32	8.0	3.4	4.7	8.3
17	8.0	10	25	9.0	15	8.4	9.2	22	6.8	3.4	4.7	16
18	5.0	8.0	11	6.5	14	8.1	9.9	13	6.0	5.0	4.7	12
19	3.8	7.0	8.0	5.0	13	11	9.0	10	5.7	6.5	14	8.9
20	5.5	8.0	7.1	4.5	12	15	8.8	9.1	5.7	4.6	12	8.3
21	10	8.5	6.9	4.5	11	10	8.8	12	5.4	4.0	6.7	7.9
22	15	9.0	21	5.5	16	9.2	8.6	11	5.2	3.7	5.6	7.6
23	6.9	9.0	18	12	47	11	8.4	8.9	5.0	3.6	5.6	7.3
24	5.1	8.5	12	9.0	22	9.4	8.4	7.9	6.0	3.7	4.9	7.4
25	4.6	8.4	9.5	11	15	8.5	8.1	7.6	5.5	6.5	4.5	6.5
26	4.6	7.6	8.0	15	13	8.5	8.1	7.2	6.0	4.6	4.5	7.7
27	4.5	7.2	7.0	13	17	8.5	8.0	6.7	6.5	8.3	45	9.1
28	4.3	6.9	6.5	10	14	8.5	8.5	6.7	6.0	5.3	56	7.6
29	4.3	6.6	6.0	9.0	------	8.6	12	8.4	5.5	4.5	16	7.0
30	4.4	6.6	6.0	8.5	------	8.4	9.2	25	5.0	9.2	9.8	6.7
31	5.0	------	5.5	7.5	------	7.9	------	35	------	24	8.2	------
TOTAL	153.2	321.2	256.0	301.5	513.0	328.1	349.3	376.4	232.2	186.4	441.6	309.4
MEAN	4.94	10.7	8.26	9.73	18.3	10.6	11.6	12.1	7.74	6.01	14.2	10.3
MAX	15	37	25	30	72	24	52	35	17	24	56	36
MIN	2.6	5.2	5.2	4.5	5.0	7.9	7.8	6.7	5.0	3.4	4.5	5.2
CFSM	.58	1.26	.97	1.14	2.15	1.25	1.36	1.42	.91	.71	1.67	1.21
IN.	.67	1.41	1.12	1.32	2.25	1.44	1.53	1.65	1.02	.82	1.93	1.35

CAL YR 1970 TOTAL 3,164.0 MEAN 8.67 MAX 52 MIN 2.5 CFSM 1.02 IN 13.85
WTR YR 1971 TOTAL 3,768.3 MEAN 10.3 MAX 72 MIN 2.6 CFSM 1.21 IN 16.49

PEAK DISCHARGE (BASE, 75 CFS)

DATE	TIME	G. H.	DISCHARGE	DATE	TIME	G. H.	DISCHARGE
2-8	0230	2.26	104	8-27	2100	2.31	112

NOTE.--No gage-height record June 23 to July 26.

01591000 Patuxent River near Unity, Md.

LOCATION.--Lat 39°14'18", long 77°03'23", Montgomery County, on right bank at downstream side of bridge on State Highway 97, 0.6 mile upstream from Cattail Creek, 0.8 mile upstream from Triadelphia Reservoir, 1.1 miles northeast of Unity, and 97 miles upstream from mouth.

DRAINAGE AREA.--34.8 sq mi.

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

GAGE.--Water-stage recorder and concrete control. Datum of gage is 364.76 ft above mean sea level (Washington Suburban Sanitary Commission bench mark). Prior to Aug. 14, 1946, wire-weight gage and crest-stage gage at same site and datum.

AVERAGE DISCHARGE.--27 years, 35.6 cfs (13.89 inches per year).

EXTREMES.--Current year: Maximum discharge, 21,800 cfs Sept. 11 (gage height, 18.60 ft) from rating curve extended as explained below; minimum, 7.0 cfs part of each day Oct. 4-9 (gage height, 2.02 ft).
Period of record: Maximum discharge, 21,800 cfs Sept. 11, 1971 (gage height, 18.60 ft), from rating curve extended above 870 cfs on basis of slope-area measurement at gage height 13.58 ft; minimum, 0.20 cfs Sept. 10, 11, 12, 1966 (gage height, 1.66 ft).

REMARKS.--Records good.

REVISIONS (WATER YEARS).--WSP 1111: 1947. WSP 1432: 1948.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.0	16	19	25	22	60	36	29	74	193	47	32
2	8.8	14	19	32	20	56	39	32	64	238	271	31
3	8.7	30	18	27	22	77	42	35	65	41	499	29
4	7.6	48	19	55	24	119	36	30	66	32	1,430	28
5	7.4	170	17	141	50	78	35	28	50	28	203	27
6	7.4	32	17	78	80	78	53	33	50	27	94	26
7	7.3	23	16	53	220	74	111	30	65	26	69	25
8	7.1	19	16	45	527	64	62	52	47	23	55	25
9	7.4	18	16	39	186	56	51	40	40	24	47	24
10	7.8	17	17	36	60	55	45	33	37	23	42	23
11	10	26	16	34	48	54	43	29	35	23	48	2,580
12	9.2	46	25	33	42	51	42	29	36	24	60	2,070
13	8.6	34	25	32	450	50	40	183	36	22	39	230
14	8.5	27	20	35	200	48	38	76	36	21	36	143
15	11	102	19	37	70	48	37	51	53	20	33	107
16	15	41	24	31	55	45	37	147	42	21	32	89
17	9.5	30	75	32	50	43	37	79	36	21	31	127
18	9.4	26	35	28	48	40	38	58	32	19	30	85
19	9.1	24	29	26	50	68	35	49	30	29	65	76
20	9.0	41	25	24	55	74	34	45	28	25	36	70
21	22	41	24	24	80	51	34	60	27	21	31	64
22	36	28	89	26	150	48	33	45	26	20	29	59
23	15	25	66	38	170	52	32	39	25	19	28	58
24	13	21	61	32	100	44	32	37	25	21	25	56
25	12	20	44	29	70	42	30	40	24	21	24	52
26	11	20	38	50	65	42	30	50	23	20	24	59
27	11	20	28	34	95	40	29	36	23	19	197	60
28	11	20	26	30	68	39	30	34	27	17	86	54
29	11	19	24	28	------	39	31	36	25	52	43	51
30	14	21	22	30	------	38	30	97	25	122	36	50
31	23	------	22	26	------	36	------	308	------	55	32	------
TOTAL	356.8	1,019	911	1,190	3,077	1,709	1,202	1,870	1,172	1,267	3,722	6,410
MEAN	11.5	34.0	29.4	38.4	110	55.1	40.1	60.3	39.1	40.9	120	214
MAX	36	170	89	141	527	119	111	308	74	238	1,430	2,580
MIN	7.1	14	16	24	20	36	29	28	23	17	24	23
CFSM	.33	.98	.84	1.10	3.16	1.58	1.15	1.73	1.12	1.18	3.45	6.15
IN.	.38	1.09	.97	1.27	3.29	1.83	1.28	2.00	1.25	1.35	3.98	6.85

CAL YR 1970 TOTAL 13,533.1 MEAN 37.1 MAX 340 MIN 7.0 CFSM 1.07 IN 14.47
WTR YR 1971 TOTAL 23,905.8 MEAN 65.5 MAX 2,580 MIN 7.1 CFSM 1.88 IN 25.55

PEAK DISCHARGE (BASE, 770 CFS)

DATE	TIME	G. H.	DISCHARGE	DATE	TIME	G. H.	DISCHARGE
2- 8	0130	6.29	1,100	8- 4	0030	13.61	9,300
2-13	*	*	*	9-11	2330	18.60	21,800
7- 1	2400	7.48	1,780				

* Unknown.

01592500 Patuxent River near Laurel, Md.

LOCATION.--Lat 39°06'56", long 76°52'27", Prince Georges County, on right bank at Rocky Gorge Pumping station, 600 ft downstream from Rocky Gorge Dam, 0.7 mile upstream from Walker Branch, 1.3 miles northwest of Laurel, and 81 miles upstream from mouth.

DRAINAGE AREA.--132 sq mi.

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

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 160 ft (from topographic map). Prior to Oct. 1, 1955, water-stage recorder and concrete control at site 0.3 mile downstream at different datum. Oct. 1, 1955, to Sept. 30, 1956, nonrecording gage at present site at datum 1.2 ft lower. Oct. 1, 1956, to Jan. 27, 1957, nonrecording gage at present site and datum.

EXTREMES.--Current year: Maximum discharge, about 12,000 cfs Sept. 12 (gage height, about 18.5 ft from floodmarks), from rating curve extended above 6,600 cfs; minimum daily discharge, 11 cfs many days in December.
Period of record: Maximum discharge, about 12,000 cfs Sept. 12, 1971 (gage height, about 18.5 ft from floodmarks), from rating curve extended above 6,600 cfs; minimum, 0.1 cfs Sept. 25, 1964 (valve closed for repair); minimum daily, 1.1 cfs June 26, 1956.

REMARKS.--Records fair; affected by construction of highway bridge just downstream from gage. 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 Rocky Gorge Reservoir (combined usable capacity, 12,500,000,000 gal; dead storage, 80,000,000 gal).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18	12	12	12	12	188	77	16	169	27	18	51
2	15	12	12	12	12	179	79	16	135	865	192	29
3	15	12	12	12	12	157	79	16	203	240	172	20
4	15	13	12	12	12	191	79	16	231	118	3,820	20
5	15	14	11	12	12	270	79	16	169	19	585	20
6	15	14	11	12	12	307	79	16	151	18	158	20
7	15	12	11	12	57	242	96	16	77	18	150	20
8	15	12	11	12	1,520	143	143	16	117	18	91	44
9	15	12	11	12	1,310	140	150	16	103	18	37	25
10	14	16	11	12	162	169	171	16	40	18	16	45
11	13	14	12	12	174	169	155	16	20	18	16	1,640
12	49	13	12	12	385	150	116	16	20	18	19	6,010
13	79	12	12	12	1,110	147	67	568	20	18	19	1,190
14	55	12	12	12	1,430	150	66	199	20	18	19	191
15	17	12	12	12	526	98	64	113	20	18	19	300
16	17	12	12	12	245	49	44	479	20	18	19	605
17	17	12	12	12	174	37	18	310	20	18	19	901
18	17	12	12	12	176	76	17	113	20	18	19	163
19	16	12	12	12	181	91	17	113	20	18	19	163
20	14	13	12	12	181	133	17	64	20	18	19	95
21	19	13	12	12	174	138	16	64	20	18	19	27
22	25	13	11	12	266	164	18	104	20	18	20	40
23	15	12	11	12	608	152	16	104	20	18	20	102
24	14	12	11	12	186	138	16	67	20	18	20	111
25	14	12	11	12	314	140	16	19	20	18	20	73
26	13	12	11	12	338	108	17	18	20	18	43	35
27	12	13	11	12	417	79	16	51	20	18	926	75
28	12	12	11	13	223	79	16	55	20	18	349	90
29	13	12	11	12	------	77	16	20	20	18	72	58
30	16	12	11	12	------	76	17	142	20	18	51	29
31	14	------	12	12	------	76	------	1,010	------	18	51	------
TOTAL	613	376	357	373	10,229	4,313	1,777	3,805	1,795	1,737	7,017	12,192
MEAN	19.8	12.5	11.5	12.0	365	139	59.2	123	59.8	56.0	226	406
MAX	79	16	12	13	1,520	307	171	1,010	231	865	3,820	6,010
MIN	12	12	11	12	12	37	16	16	20	18	16	20
(†)	9,440	10,440	11,160	12,390	13,000	12,880	12,970	13,280	12,940	12,670	12,940	12,240
(‡)	83.9	75.3	73.8	70.8	76.9	72.7	83.8	91.4	102	96.8	93.7	86.0

CAL YR 1970 TOTAL 21,297 MEAN 58.3 MAX 1,440 MIN 11 ‡ 83.8
WTR YR 1971 TOTAL 44,584 MEAN 122 MAX 6,010 MIN 11 ‡ 83.9

† Combined month-end total contents, in millions of gallons, in Triadelphia and Rocky Gorge Reservoirs (contents on Sept. 30, 1970: 10,610 million gallons); furnished by Washington Suburban Sanitary Commission.
‡ Diversion, in cubic feet per second, above station at Patuxent (formerly Willis School) filtration plant for supply of Washington Suburban Sanitary District. Records furnished by Washington Suburban Sanitary Commission.

01593500 Little Patuxent River at Guilford, Md.

LOCATION.--Lat 39°10'04", long 76°51'07", Howard County, on left bank 75 ft upstream from bridge on State Highway 32, 1 mile west of Guilford, 3 miles upstream from Middle Patuxent River, 4 miles north of Laurel, and 20.1 miles upstream from mouth.

DRAINAGE AREA.--38.0 sq mi.

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

GAGE.--Water-stage recorder. Concrete control since June 20, 1946. Altitude of gage is 260 ft (from topographic map). Prior to June 25, 1946, nonrecording gage at same site and datum.

AVERAGE DISCHARGE.--39 years, 39.2 cfs (14.01 inches per year).

EXTREMES.--Current year: Maximum discharge, 3,070 cfs Aug. 4 (gage height, 11.45 ft); minimum, 5.5 cfs Sept. 27 (gage height, 2.53 ft).
Period of record: Maximum discharge, 5,300 cfs Sept. 1, 1952 (gage height, 13.26 ft), from rating curve extended above 1,800 cfs on basis of contracted-opening measurement of peak flow; minimum, no flow Sept. 8, and parts of Sept. 6, 7, 9-12, 1966.

REMARKS.--Records good. Low flow affected by regulation from unknown source.

REVISIONS (WATER YEARS).--WSP 1502: 1933, 1934(M), 1939(M), 1945(M), 1948(P)

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.0	16	19	21	16	44	29	26	65	72	38	28
2	7.0	13	19	28	14	41	35	26	45	206	573	27
3	7.0	21	18	23	14	86	45	29	117	34	59	26
4	7.0	78	21	61	16	230	33	26	136	25	1,090	24
5	7.0	256	20	235	46	65	31	24	49	22	247	23
6	6.5	30	18	81	103	58	95	28	42	21	52	23
7	6.5	19	16	42	183	52	298	27	49	20	36	22
8	6.5	16	17	36	773	43	65	56	44	18	29	22
9	6.5	15	16	31	401	39	48	43	34	19	25	21
10	7.0	15	16	29	46	37	42	29	30	19	23	20
11	7.0	61	16	29	38	37	38	25	29	20	29	1,080
12	7.5	52	28	33	32	34	36	25	29	20	44	743
13	7.0	270	28	31	389	34	36	336	30	16	24	364
14	7.0	62	21	38	365	34	35	75	28	15	21	71
15	11	283	18	38	53	35	32	42	47	14	20	50
16	19	55	47	28	38	33	32	278	34	14	20	42
17	11	34	182	30	36	30	31	78	29	14	19	302
18	9.0	29	40	25	36	29	33	47	26	14	19	75
19	9.0	26	29	20	38	95	30	39	25	20	85	50
20	8.5	28	26	18	52	95	29	33	25	18	41	44
21	33	32	24	18	50	47	30	66	24	14	24	43
22	58	24	192	23	247	41	29	41	23	13	21	39
23	17	22	77	45	424	50	28	32	22	13	20	37
24	12	20	56	34	72	39	27	30	23	13	18	36
25	12	19	36	36	55	35	26	30	21	19	17	33
26	11	19	32	65	48	35	26	47	21	14	16	37
27	10	20	28	40	85	34	25	30	24	16	597	41
28	9.7	20	26	30	54	36	27	28	23	12	498	37
29	9.7	19	24	18	------	33	28	31	22	22	52	34
30	13	21	22	26	------	31	27	122	22	76	37	33
31	29	------	20	20	------	30	------	402	------	43	31	------
TOTAL	378.4	1,595	1,152	1,232	3,724	1,562	1,326	2,151	1,138	876	3,825	3,427
MEAN	12.2	53.2	37.2	39.7	133	50.4	44.2	69.4	37.9	28.3	123	114
MAX	58	283	192	235	773	230	298	402	136	206	1,090	1,080
MIN	6.5	13	16	18	14	29	25	24	21	12	16	20
CFSM	.32	1.40	.98	1.04	3.50	1.33	1.16	1.83	1.00	.74	3.24	3.00
IN.	.37	1.56	1.13	1.21	3.65	1.53	1.30	2.11	1.11	.86	3.74	3.35

CAL YR 1970 TOTAL 13,627.8 MEAN 37.3 MAX 422 MIN 6.5 CFSM .98 IN 13.34
WTR YR 1971 TOTAL 22,386.4 MEAN 61.3 MAX 1,090 MIN 6.5 CFSM 1.61 IN 21.92

PEAK DISCHARGE (BASE, 600 CFS)

DATE	TIME	G. H.	DISCHARGE	DATE	TIME	G. H.	DISCHARGE
11- 5	0230	6.17	602	5-31	0900	6.59	677
11-13	1330	6.46	654	8- 2	0900	7.95	923
2- 8	0600	8.81	1,140	8- 4	0630	11.45	3,070
2-14	0100	6.97	746	8-27	2030	10.22	1,990
2-23	0300	7.37	818	9-11	1030	10.75	2,420
5-13	1130	6.41	645	9-17	1400	6.56	672

01594500 Western Branch near Largo, Md.

LOCATION.--Lat 38°52'34", long 76°47'54", Prince Georges County, on right bank 200 ft upstream from culvert on State Highway 202, 200 ft downstream from small tributary, 0.1 mile upstream from Southwest Branch, 2.3 miles southeast of Largo, 4.8 miles northwest of Upper Marlboro, and 11 miles upstream from mouth.

DRAINAGE AREA.--30.2 sq mi.

PERIOD OF RECORD.--October 1949 to current year. Monthly discharge only for some periods, published in WSP 1302.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 46.50 ft above mean sea level (levels by private consultant engineers).

AVERAGE DISCHARGE.--22 years, 29.6 cfs (13.31 inches per year).

EXTREMES.--Current year: Maximum discharge, 1,760 cfs Aug. 27 (gage height, 8.97 ft), from rating curve extended above 400 cfs; minimum daily 1.3 cfs Oct. 6.
Period of record: Maximum discharge, 1,760 cfs Aug. 27, 1971 (gage height, 8.97 ft) from rating curve extended above 400 cfs.

REMARKS.--Records fair.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.1	6.5	8.2	11	16	44	14	14	86	7.0	98	27
2	1.9	5.0	7.9	12	12	37	18	14	42	58	745	26
3	1.9	15	7.5	14	11	82	36	14	49	32	238	25
4	1.5	129	8.7	38	18	173	23	13	32	14	812	22
5	1.4	258	7.5	226	33	85	18	12	24	11	486	20
6	1.3	65	7.3	148	52	55	85	12	18	12	84	19
7	1.4	28	6.7	60	128	45	440	12	23	29	47	18
8	1.5	18	6.4	40	545	34	219	39	24	11	35	18
9	1.5	14	7.2	30	324	29	69	29	14	8.3	29	17
10	1.4	13	7.7	25	110	27	45	19	11	10	25	16
11	1.5	78	8.0	22	65	27	34	15	9.4	6.5	40	74
12	1.5	58	19	20	44	24	30	13	8.7	6.5	34	525
13	1.5	66	20	19	213	23	27	100	8.8	6.0	19	322
14	1.4	68	14	30	392	20	24	110	8.3	6.0	15	73
15	2.5	205	12	35	118	21	21	49	9.0	5.3	11	40
16	8.4	77	33	26	61	20	21	270	11	5.3	10	29
17	4.1	54	134	28	47	17	20	151	8.4	5.3	13	61
18	3.1	28	55	16	42	16	23	52	8.0	9.2	11	42
19	2.8	19	32	12	40	43	20	31	6.4	11	19	31
20	2.4	16	19	9.2	40	65	18	22	6.1	7.2	21	25
21	24	14	20	9.6	37	39	18	48	5.7	6.5	13	22
22	42	13	177	15	113	29	16	31	5.3	5.8	9.5	19
23	18	12	130	43	398	36	16	21	5.3	5.5	9.7	17
24	8.7	9.9	64	30	160	27	15	17	5.3	7.0	6.5	16
25	5.4	9.0	43	47	69	22	14	15	4.9	7.0	5.7	13
26	4.3	9.3	31	50	52	20	14	13	4.5	7.0	6.6	18
27	4.1	9.3	24	40	77	19	13	11	4.7	13	661	22
28	3.3	8.8	18	35	56	18	15	10	5.8	11	724	18
29	3.1	9.6	14	24	------	18	20	18	11	8.9	119	15
30	4.1	11	11	28	------	16	16	71	9.0	40	48	14
31	7.6	------	10	26	------	14	------	232	------	80	30	------
TOTAL	169.7	1,326.4	963.1	1,168.8	3,273	1,145	1,362	1,478	468.6	452.3	4,425.0	1,604
MEAN	5.47	44.2	31.1	37.7	117	36.9	45.4	47.7	15.6	14.6	143	53.5
MAX	42	258	177	226	545	173	440	270	86	80	812	525
MIN	1.3	5.0	6.4	9.2	11	14	13	10	4.5	5.3	5.7	13
CFSM	.18	1.46	1.03	1.25	3.87	1.22	1.50	1.58	.52	.48	4.74	1.77
IN.	.21	1.63	1.19	1.44	4.03	1.41	1.68	1.82	.58	.56	5.45	1.98

CAL YR 1970 TOTAL 11,267.4 MEAN 30.9 MAX 433 MIN 1.3 CFSM 1.02 IN 13.88
WTR YR 1971 TOTAL 17,935.9 MEAN 48.9 MAX 812 MIN 1.3 CFSM 1.62 IN 21.97

PEAK DISCHARGE (BASE, 340 CFS)

DATE	TIME	G. H.	DISCHARGE	DATE	TIME	G. H.	DISCHARGE
11- 5	0130	5.84	580	5-16	1200	5.58	515
11-15	0500	4.99	388	5-31	0530	5.10	410
12-22	1200	5.06	402	8- 2	0400	7.53	1,220
2- 8	0230	6.60	795	8- 4	0600	7.77	1,460
2-14	0030	6.16	663	8-27	2000	8.97	1,760
2-23	0300	5.45	482	9-12	1600	6.73	834
4- 7	0930	5.58	515				

01594600 Cocktown Creek near Huntingtown, Md.

LOCATION.--Lat 38°38'27", long 76°38'07", Calvert County, on right bank at downstream side of bridge 2 miles northwest of Huntingtown, 2.8 miles southeast of Lower Marlboro, and 3.5 miles upstream from mouth.

DRAINAGE AREA.--3.85 sq mi.

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

GAGE.--Water-stage recorder. Altitude of gage is 40 ft (from topographic map).

AVERAGE DISCHARGE.--14 years (1957-71), 3.94 cfs (13.90 inches per year).

EXTREMES.--Current year: Maximum discharge, 80 cfs May 16 (gage height, 4.47 ft); minimum daily, 0.08 cfs Oct. 5-7.
Period of record: Maximum discharge, 1,120 cfs June 14, 1960 (gage height, 7.96 ft) from rating curve extended above 150 cfs on basis of contracted-opening measurement of peak flow; no flow many days in July and August 1957, September 1963, July, August, and September 1964.

REMARKS.--Records fair.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.14	.52	1.0	5.8	3.0	7.5	4.5	4.6	11	3.2	1.2	2.1
2	.14	.47	1.0	3.1	2.6	7.0	5.5	4.6	9.2	3.4	1.1	1.9
3	.14	.47	1.0	2.6	2.4	12	6.2	4.5	14	3.0	.93	1.8
4	.11	1.0	1.1	5.1	5.0	9.6	4.9	4.3	8.7	2.8	14	1.7
5	.08	1.6	.95	26	7.6	8.2	4.6	4.3	7.0	2.6	5.6	1.7
6	.08	.81	.95	10	5.2	7.6	13	4.2	6.5	3.6	2.4	1.7
7	.08	.70	.85	8.0	13	7.2	15	4.3	6.0	2.5	1.9	1.5
8	.11	.66	.80	7.0	18	6.8	9.6	5.4	7.5	1.8	1.6	1.5
9	.11	.66	.90	6.0	10	6.6	8.0	4.5	6.0	1.7	1.5	1.4
10	.11	.81	.95	5.0	8.3	6.5	7.0	4.2	5.5	1.6	1.3	1.3
11	.11	4.4	.90	4.8	7.7	6.3	6.5	4.0	5.0	1.6	1.9	1.5
12	.11	2.6	2.1	4.6	6.8	6.1	6.5	3.8	5.0	1.5	2.1	2.3
13	.14	2.1	1.4	5.0	20	5.9	6.0	4.6	6.0	1.4	1.3	1.6
14	.14	1.5	1.1	6.1	12	5.8	6.0	4.1	7.0	1.3	1.1	1.2
15	.17	11	1.0	5.8	8.8	6.2	5.5	3.6	5.5	1.1	1.0	1.1
16	.33	2.2	5.3	5.2	7.9	5.8	5.5	26	5.0	1.1	.99	1.0
17	.28	1.6	10	4.0	7.5	5.5	5.5	8.7	6.5	1.1	1.0	1.4
18	.22	1.4	3.5	3.4	7.1	5.4	6.0	6.7	5.0	1.4	1.0	1.2
19	.20	1.3	2.9	3.2	6.9	7.8	6.0	5.9	4.6	1.4	1.3	1.1
20	.22	1.6	2.5	3.0	6.9	7.0	5.5	5.4	4.2	1.2	1.0	1.0
21	.61	1.6	4.0	3.0	6.6	5.7	5.0	6.3	4.0	1.1	.87	1.1
22	1.8	1.3	16	3.0	13	5.6	4.8	5.4	3.8	.94	.83	1.1
23	.61	1.2	6.8	5.2	20	6.3	4.8	4.9	3.8	.88	.82	1.1
24	.47	1.1	5.0	4.0	9.8	5.4	4.6	4.7	4.6	.85	.64	1.1
25	.42	1.0	3.4	5.0	8.5	5.2	4.6	4.5	4.0	.81	.61	.92
26	.37	1.1	3.2	5.5	8.0	5.5	4.4	4.2	5.5	.76	.62	1.1
27	.33	1.1	3.0	3.6	11	5.8	4.4	4.0	4.8	.72	25	1.1
28	.32	1.1	2.8	3.0	8.0	5.4	4.6	4.0	4.0	.70	7.1	1.1
29	.31	1.1	2.6	2.8	------	5.1	5.5	8.5	3.5	1.3	3.2	1.0
30	.42	1.0	2.4	3.4	------	4.8	4.8	32	3.4	2.9	2.7	.99
31	.61	------	3.2	4.4	------	4.6	------	19	------	1.4	2.2	------
TOTAL	9.29	49.00	92.60	166.6	251.6	200.2	184.8	215.2	176.6	51.66	88.81	40.61
MEAN	.30	1.63	2.99	5.37	8.99	6.46	6.16	6.94	5.89	1.67	2.86	1.35
MAX	1.8	11	16	26	20	12	15	32	14	3.6	25	2.3
MIN	.08	.47	.80	2.6	2.4	4.6	4.4	3.6	3.4	.70	.61	.92
CFSM	.08	.42	.78	1.39	2.34	1.68	1.60	1.80	1.53	.43	.74	.35
IN.	.09	.47	.89	1.61	2.43	1.93	1.79	2.08	1.71	.50	.86	.39

CAL YR 1970 TOTAL 1,273.95 MEAN 3.49 MAX 18 MIN .03 CFSM .91 IN 12.31
WTR YR 1971 TOTAL 1,526.97 MEAN 4.18 MAX 32 MIN .08 CFSM 1.09 IN 14.75

PEAK DISCHARGE (BASE, 80 CFS).--May 16 (0945) 80 cfs (4.47 ft).

01595000 North Branch Potomac River at Steyer, Md.

LOCATION.-- Lat 39°18'07", long 79°18'26", Garrett County, on left bank 0.3 mile southeast of Steyer, 0.4 mile downstream from Steyer Run, 2 miles northeast of Gorman, and at mile 81.8.

DRAINAGE AREA.--73.0 sq mi.

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

GAGE.--Water-stage recorder. Datum of gage is 2,276.01 ft above mean sea level.

AVERAGE DISCHARGE.--15 years, 162 cfs (30.14 inches per year).

EXTREMES.--Current year: Maximum discharge, 3,650 cfs Dec. 22 (gage height, 7.26 ft); minimum daily, 13 cfs July 23, 24, Sept. 2.
Period of record: Maximum discharge, 6,240 cfs Mar. 5, 1963 (gage height, 9.13 ft), from rating curve extended above 3,000 cfs; miniumum, 2.9 cfs Sept. 10, 1965 (gage height, 2.03 ft).
Flood of Oct. 15, 1954, reached a stage of 13.0 ft, from floodmarks.

REMARKS.--Records fair except those for winter periods and periods of no gage-height record, which are poor.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	28	155	84	150	180	357	197	47	90	31	128	15
2	26	124	78	160	140	293	173	47	80	60	165	13
3	23	290	70	140	110	264	155	97	70	33	152	119
4	23	253	130	550	150	218	128	83	70	22	173	36
5	20	287	130	1,600	200	201	124	60	160	19	204	34
6	20	301	110	650	290	182	109	604	140	19	86	110
7	18	241	94	450	220	342	110	510	110	23	55	175
8	15	188	90	350	190	285	125	935	80	22	38	142
9	15	157	90	260	150	219	250	610	70	19	30	89
10	15	134	98	210	130	194	300	368	60	19	25	50
11	24	140	94	190	120	176	220	268	50	22	32	486
12	60	170	260	220	140	191	160	241	50	33	48	523
13	32	160	280	190	200	395	150	569	60	21	27	824
14	24	160	210	1,100	300	507	138	391	290	19	23	1,270
15	26	190	170	1,000	190	528	129	284	160	19	21	690
16	42	170	150	450	160	426	112	268	110	15	19	338
17	32	140	222	360	150	315	107	256	66	14	19	259
18	23	140	248	300	250	258	125	220	55	18	16	193
19	21	120	260	250	391	314	104	200	50	19	25	185
20	25	120	284	180	869	406	92	150	56	24	20	179
21	53	120	393	160	930	286	83	130	48	19	16	193
22	104	110	2,170	170	884	275	83	100	47	14	50	144
23	60	100	1,330	160	1,030	320	80	90	37	13	32	125
24	47	88	1,130	170	595	262	74	85	34	13	24	108
25	38	84	600	150	423	211	66	80	32	17	19	84
26	33	86	400	270	389	209	58	70	27	22	21	186
27	33	88	300	200	587	186	56	65	24	34	29	207
28	33	84	250	120	478	216	62	60	19	23	75	149
29	33	80	210	130	------	344	66	60	20	16	34	117
30	112	90	180	180	------	282	58	170	34	21	21	100
31	217	------	160	280	------	232	------	130	------	29	18	------
TOTAL	1,275	4,570	10,275	10,750	9,846	8,894	3,694	7,248	2,199	692	1,645	7,143
MEAN	41.1	152	331	347	352	287	123	234	73.3	22.3	53.1	238
MAX	217	301	2,170	1,600	1,030	528	300	935	290	60	204	1,270
MIN	15	80	70	120	110	176	56	47	19	13	16	13
CFSM	.56	2.08	4.53	4.75	4.82	3.93	1.68	3.21	1.00	.31	.73	3.26
IN.	.65	2.33	5.24	5.48	5.02	4.53	1.88	3.69	1.12	.35	.84	3.64

CAL YR 1970 TOTAL 67,240.2 MEAN 184 MAX 2,170 MIN 8.8 CFSM 2.52 IN 34.26
WTR YR 1971 TOTAL 68,231.0 MEAN 187 MAX 2,170 MIN 13 CFSM 2.56 IN 34.77

PEAK DISCHARGE (BASE, 2,200 CFS)

DATE	TIME	G. H.	DISCHARGE	DATE	TIME	G. H.	DISCHARGE
12-22	1500	7.26	3,650	1-14	*	*	*
1- 4	*	*	*	9-14	1145	5.97	2,200

* Unknown but greater than base.

NOTE.--No gage-height record Nov. 11 to Dec. 16, Dec. 25 to Feb. 18, May 18 to June 17.

01595200 Stony River near Mt. Storm, W. Va.

LOCATION.--Lat 39°16'10", long 79°15'45", Grant County, on left bank 100 ft downstream from highway bridge on U. S. Highway 50, and 1.0 mile west of Mt. Storm.

DRAINAGE AREA.--48.8 sq mi.

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

GAGE.--Water-stage recorder. Datum of gage is 2,554.54 ft above mean sea level.

AVERAGE DISCHARGE.--10 years, 87.1 cfs (24.24 inches per year), unadjusted.

EXTREMES.--Current year: Maximum discharge, 1,240 cfs Dec. 22 (gage height, 6.00 ft); minimum daily, 4.2 cfs Oct. 7.
Period of record: Maximum discharge, 3,120 cfs Mar. 19, 1963, from rating curve extended above 1,000 cfs; maximum gage height, 8.41 ft Mar. 5, 1963 (ice jam); minimum discharge, 1.8 cfs July 13, 1968 (gage height, 1.98 ft).

REMARKS.--Records fair. Flow regulated by Stony River Reservoir, 14.0 miles upstream from station (capacity, 1,948,000,000 gal, of which 1,681,000,000 gal is controlled above minimum pool). Since 1963, minor regulation by Virginia Electric and Power Company dam 4.0 miles upstream from station. Records of water temperatures for the current year are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	212	14	50	100	333	143	32	113	21	29	18
2	11	182	11	50	85	304	134	37	105	28	28	21
3	10	340	10	45	75	291	125	47	96	20	31	28
4	7.3	360	50	388	65	270	118	40	100	18	52	20
5	5.5	348	34	695	90	249	110	31	128	17	48	20
6	4.7	292	28	450	149	233	110	131	118	18	27	21
7	4.2	230	23	372	115	260	120	120	110	17	19	27
8	4.9	185	20	308	100	229	134	203	98	17	15	28
9	34	158	19	227	90	209	176	167	87	17	13	33
10	35	131	20	55	80	191	212	146	78	17	12	24
11	60	155	20	60	164	176	170	134	70	20	14	35
12	56	179	128	76	85	176	155	123	64	20	16	66
13	31	161	128	80	158	227	146	215	58	17	12	125
14	28	152	100	308	130	188	152	332	91	17	11	224
15	29	182	87	277	100	188	146	368	76	17	11	300
16	30	152	87	239	90	185	134	312	68	16	12	245
17	29	125	108	221	115	218	128	224	60	17	14	209
18	29	113	108	200	140	209	137	118	53	19	15	105
19	30	89	146	179	173	236	123	72	48	20	23	93
20	30	80	146	161	332	221	113	70	42	20	21	100
21	105	45	194	176	312	188	103	70	40	18	21	96
22	93	27	798	161	354	179	91	55	40	18	33	89
23	45	23	1,060	170	403	176	85	62	32	21	28	82
24	37	19	888	155	380	155	76	62	28	24	23	74
25	34	16	553	152	329	143	48	62	23	30	19	68
26	33	14	91	161	312	137	38	58	20	32	18	70
27	32	13	80	140	414	131	35	53	17	42	22	50
28	31	12	75	120	374	155	39	50	17	37	41	48
29	32	11	65	110	------	176	35	56	20	20	28	52
30	143	17	60	152	------	161	33	123	20	21	22	60
31	221	------	55	120	------	149	------	120	------	31	19	------
TOTAL	1,286.6	4,023	5,206	6,058	5,314	6,343	3,369	3,704	1,930	667	697	2,431
MEAN	41.5	134	168	195	190	205	112	119	64.3	21.5	22.5	81.0
MAX	221	360	1,060	695	414	333	212	368	128	42	52	300
MIN	4.2	11	10	45	65	131	33	31	17	16	11	18
(†)	1,553	1,184	1,175	1,175	1,564	1,180	1,274	1,553	1,533	994	1,263	1,387

CAL YR 1970 TOTAL 39,629.6 MEAN 109 MAX 1,060 MIN 2.2 CFSM 2.23 IN 30.20
WTR YR 1971 TOTAL 41,028.6 MEAN 112 MAX 1,060 MIN 4.2 CFSM 2.30 IN 31.27

† Month-end contents, in millions of gallons, in Stony River Reservoir; furnished by Westvaco Corporation. The month-end contents given herein have been revised since publication of the 1971 West Virginia State Report.

01595500 North Branch Potomac River at Kitzmiller, Md.

LOCATION.--Lat 39°23'38", long 79°10'55", Garrett County, on left bank 0.6 mile downstream from bridge on State Highway 38 in Kitzmiller, 1.5 miles downstream from Wolfden Run, and at mile 68.9.

DRAINAGE AREA.--225 sq mi.

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

GAGE.--Water-stage recorder. Datum of gage is 1,572.26 ft above mean sea level. Prior to Oct. 15, 1954, at site 0.3 mile upstream at datum 7.58 ft higher. Oct. 15, 1954, to Nov. 20, 1955, nonrecording gage at bridge 0.5 mile upstream at datum 21.51 ft higher.

AVERAGE DISCHARGE.--22 years, 424 cfs (25.59 inches per year), adjusted for storage.

EXTREMES.--Current year: Maximum discharge, 8,810 cfs Dec. 22 (gage height, 8.12 ft); minimum, 29 cfs Oct. 9 (gage height, 2.40 ft).
Period of record: Maximum discharge, 33,400 cfs Oct. 15, 1954 (gage height, 13.73 ft, from floodmarks, present site and datum); minimum, 4.6 cfs Oct. 3-7, 1953.

REMARKS.--Records good except those for winter months, which are fair. Regulation at low flow by Stony River Reservoir, 30 miles above station (see station 01595200). Records of water temperatures for the water year 1971 are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	58	637	220	416	545	1,420	573	159	294	129	81	44
2	52	487	202	440	450	1,200	539	152	259	146	401	41
3	48	979	185	380	350	1,070	483	232	238	103	311	138
4	45	945	336	1,550	397	912	429	216	224	72	488	78
5	37	1,010	333	3,290	767	817	391	178	432	62	538	57
6	34	906	293	1,780	1,140	734	375	970	388	58	223	93
7	32	728	246	1,250	687	1,050	431	1,080	330	59	145	260
8	31	593	235	969	574	897	514	1,920	274	57	102	238
9	34	505	234	710	471	748	736	1,500	220	54	78	150
10	47	447	255	584	403	674	883	1,010	195	56	65	94
11	58	459	243	522	360	620	663	794	171	60	66	361
12	173	566	665	592	385	620	581	699	156	95	102	907
13	97	510	727	521	600	1,110	533	1,390	198	62	68	1,680
14	71	501	541	2,080	1,190	1,400	530	1,280	756	52	54	2,350
15	66	619	446	2,020	744	1,480	484	1,100	525	48	49	1,550
16	72	542	403	1,240	604	1,280	439	1,020	353	44	44	952
17	68	463	494	959	577	1,020	409	884	292	39	44	804
18	61	430	555	828	900	863	463	677	237	45	42	596
19	57	392	623	688	1,070	995	394	511	204	54	51	572
20	55	370	711	500	2,150	1,130	354	445	184	63	53	626
21	137	371	762	430	2,600	873	325	391	171	54	44	566
22	332	302	4,700	470	2,460	844	307	346	176	43	86	460
23	162	279	4,050	440	2,820	908	284	309	146	40	84	396
24	117	227	3,360	460	1,830	748	261	283	123	37	58	354
25	99	222	1,980	420	1,420	654	224	273	109	45	44	299
26	89	226	1,100	740	1,380	622	192	248	96	67	38	401
27	83	229	837	555	2,170	555	184	215	84	70	72	450
28	77	218	684	370	1,850	653	198	198	75	72	243	338
29	76	207	577	390	------	868	187	199	70	49	108	277
30	329	238	500	460	------	727	171	471	88	45	68	256
31	773	------	445	762	------	625	------	387	------	57	51	------
TOTAL	3,470	14,608	26,942	26,856	30,894	28,117	12,537	19,537	7,068	1,937	3,901	15,388
MEAN	112	487	869	866	1,103	907	418	630	236	62.5	126	513
MAX	773	1,010	4,700	3,290	2,820	1,480	883	1,920	756	146	538	2,350
MIN	31	207	185	370	350	555	171	152	70	37	38	41

CAL YR 1970 TOTAL 185,859 MEAN 509 MAX 5,620 MIN 26 CFSM 2.26 IN 30.72
WTR YR 1971 TOTAL 191,255 MEAN 524 MAX 4,700 MIN 31 CFSM 2.33 IN 31.61

PEAK DISCHARGE (BASE, 3,400 CFS)

DATE	TIME	G. H.	DISCHARGE	DATE	TIME	G. H.	DISCHARGE
12-22	1645	8.12	8,810	1-14	1730	6.97	4,420
1- 4	2200	6.97	4,420	2-20	2100	6.65	3,690

01595800 North Branch Potomac River at Barnum, W. Va.

LOCATION.--Lat 39°26'44", long 79°06'39", Garrett County, Md., on left bank at bridge at Barnum, W. Va., 0.4 mile upstream from Folly Run, and 4 miles southwest of Piedmont, W. Va.

DRAINAGE AREA.--266 sq mi.

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

GAGE.--Water-stage recorder. Datum of gage is 1,151.93 ft above mean sea level.

AVERAGE DISCHARGE.--5 years, 467 cfs (23.84 inches per year).

EXTREMES.--Current year: Maximum discharge, 8,710 cfs Dec. 22 (gage height, 8.74 ft); minimum, 29 cfs Oct. 9, 10 (gage height, 2.01 ft).
Period of record: Maximum discharge, 12,200 cfs Mar. 7, 1967 (gage height, 9.70 ft); minimum, 10 cfs Oct. 2, 3, 1968 (gage height, 1.69 ft).

REMARKS.--Records good. Regulation at low flow by Stony River Reservoir, 39 miles above station (see station 01595200).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	61	673	237	468	580	1,580	581	180	332	143	70	51
2	54	515	215	496	500	1,320	553	170	292	143	401	45
3	48	947	195	433	400	1,160	504	260	271	124	322	117
4	45	1,000	316	1,490	440	984	453	240	251	83	407	106
5	41	1,020	369	3,620	850	864	416	200	422	69	714	68
6	35	932	320	1,930	1,200	774	393	1,100	404	64	281	82
7	33	737	271	1,340	750	1,070	447	1,210	372	63	169	257
8	31	595	255	1,030	600	957	524	2,080	313	61	118	275
9	30	504	263	800	500	783	753	1,740	251	59	90	169
10	42	453	279	633	420	706	948	1,130	218	59	74	113
11	52	460	267	561	381	646	720	870	192	64	66	213
12	156	590	657	644	381	617	629	745	172	101	98	979
13	112	536	820	569	800	1,110	575	1,490	184	76	84	1,880
14	78	530	596	2,050	1,300	1,520	557	1,420	775	58	59	2,510
15	67	650	490	2,250	804	1,630	519	1,190	535	53	51	1,750
16	70	570	448	1,340	637	1,460	473	1,080	372	48	47	1,000
17	71	479	502	1,060	574	1,130	437	948	309	42	46	835
18	63	442	615	887	931	937	484	731	257	44	44	624
19	58	407	643	730	1,120	1,010	426	540	220	55	51	583
20	55	378	805	584	2,280	1,240	388	475	197	67	61	675
21	88	392	722	480	2,890	933	361	424	183	63	49	595
22	365	320	4,600	520	2,750	885	342	381	189	49	74	485
23	183	295	4,480	480	3,060	975	318	346	161	41	113	424
24	126	240	3,690	500	2,030	799	295	319	136	40	70	375
25	104	229	2,190	460	1,530	682	262	305	121	41	53	314
26	93	233	1,270	787	1,500	655	221	288	107	70	43	402
27	85	237	938	600	2,410	569	210	249	94	64	65	490
28	80	233	764	400	2,140	628	220	230	82	84	293	373
29	77	219	637	420	------	890	210	223	78	59	143	303
30	248	240	550	500	------	756	190	466	85	49	84	279
31	827	------	493	822	------	640	------	431	------	57	61	------
TOTAL	3,478	15,056	28,897	28,884	33,758	29,910	13,409	21,461	7,575	2,093	4,301	16,372
MEAN	112	502	932	932	1,206	965	447	692	253	67.5	139	546
MAX	827	1,020	4,600	3,620	3,060	1,630	948	2,080	775	143	714	2,510
MIN	30	219	195	400	381	569	190	170	78	40	43	45

CAL YR 1970 TOTAL 200,223 MEAN 549 MAX 6,170 MIN 27 CFSM 2.06 IN 27.99
WTR YR 1971 TOTAL 205,194 MEAN 562 MAX 4,600 MIN 30 CFSM 2.11 IN 28.69

PEAK DISCHARGE (BASE, 4,000 CFS)

DATE	TIME	G. H.	DISCHARGE	DATE	TIME	G. H.	DISCHARGE
12-22	1745	8.74	8,710	1-14	1800	7.10	4,690
1- 4	2245	7.21	4,900	9-14	1430	7.03	4,560

01596500 Savage River near Barton, Md.

LOCATION.--Lat 39°34'05", long 79°06'10", Garrett County, on right bank 0.9 mile upstream from Bear Pen Run, 1.5 miles downstream from Popular Lick Run, 5.4 miles northwest of Barton, and 10 miles upstream from mouth.

DRAINAGE AREA.--49.1 sq mi.

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

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 1,605 ft (from topographic map).

AVERAGE DISCHARGE.--23 years, 71.1 cfs (19.66 inches per year).

EXTREMES.--Current year: Maximum discharge, 1,210 cfs Dec. 23 (gage height, 3.81 ft); maximum gage height, 5.03 ft Feb. 13 (backwater from ice); minimum daily, 3.0 cfs Oct. 10, Aug. 17, 18.
Period of record: Maximum discharge, 7,510 cfs Oct. 15, 1954 (gage height, 8.45 ft), from rating curve extended above 1,600 cfs on basis of slope-area measurement of peak flow; minimum, 0.40 cfs Sept. 3, 4, 1966 (gage height, 0.96 ft).

REMARKS.--Records fair except those for winter months, which are poor.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.8	202	34	64	94	348	111	23	19	7.6	11	7.6
2	7.6	138	31	60	90	255	131	23	23	8.2	16	6.5
3	7.6	210	33	50	84	201	117	24	23	7.0	19	6.0
4	5.5	205	62	240	70	145	96	23	19	5.5	55	4.5
5	4.5	133	73	561	131	100	84	23	20	5.0	36	3.6
6	4.1	93	76	336	120	84	80	371	23	5.0	23	3.6
7	3.6	70	68	200	110	98	80	360	28	5.5	16	7.6
8	3.2	55	62	130	98	96	82	618	28	5.0	12	7.6
9	3.2	44	55	110	70	87	91	348	22	6.5	9.4	7.0
10	3.0	38	54	90	64	87	133	197	20	6.5	7.6	6.0
11	5.5	43	49	78	56	75	131	128	17	18	8.8	8.8
12	9.4	70	107	78	52	76	119	107	16	17	11	34
13	7.0	73	186	70	280	225	104	399	22	14	7.0	64
14	5.5	73	155	139	439	388	96	330	35	10	6.0	354
15	5.5	117	114	290	217	501	78	209	31	6.4	5.0	174
16	5.0	117	91	186	139	451	67	155	27	5.8	4.5	89
17	4.5	96	87	130	117	300	59	111	25	5.8	3.0	75
18	4.1	76	84	109	151	197	56	87	22	6.4	3.0	60
19	4.1	64	98	100	225	174	48	75	19	10	6.0	75
20	3.6	64	190	90	508	170	43	65	17	16	6.0	148
21	25	73	178	76	678	142	41	55	21	11	6.0	122
22	77	65	439	62	757	131	39	46	18	8.5	40	82
23	40	56	966	67	685	125	36	41	15	6.0	44	60
24	27	50	701	52	377	107	33	37	13	4.2	34	45
25	20	48	360	49	250	96	30	34	12	10	23	35
26	16	46	225	48	246	85	28	29	11	9.0	19	39
27	14	41	151	32	678	76	27	27	9.4	6.0	15	39
28	11	38	111	44	568	84	29	24	11	4.1	17	35
29	11	35	87	80	------	125	27	23	9.4	7.0	13	26
30	77	38	82	114	------	136	25	24	7.6	11	11	23
31	213	------	72	110	------	119	------	22	------	11	11	------
TOTAL	636.3	2,471	5,081	3,845	7,354	5,284	2,121	4,038	583.4	259.0	498.3	1,647.8
MEAN	20.5	82.4	164	124	263	170	70.7	130	19.4	8.35	16.1	54.9
MAX	213	210	966	561	757	501	133	618	35	18	55	354
MIN	3.0	35	31	32	52	75	25	22	7.6	4.1	3.0	3.6
CFSM	.42	1.68	3.34	2.53	5.36	3.46	1.44	2.65	.40	.17	.33	1.12
IN.	.48	1.87	3.85	2.91	5.57	4.00	1.61	3.06	.44	.20	.38	1.25

CAL YR 1970 TOTAL 33,514.0 MEAN 91.8 MAX 1,550 MIN 2.1 CFSM 1.87 IN 25.39
WTR YR 1971 TOTAL 33,818.8 MEAN 92.7 MAX 966 MIN 3.0 CFSM 1.89 IN 25.62

PEAK DISCHARGE (BASE, 800 CFS)

DATE	TIME	G. H.	DISCHARGE	DATE	TIME	G. H.	DISCHARGE
12-23	1430	3.81	1,210	2-22	1545	3.52	948
2-20	2030	3.48	913	2-27	1830	3.45	888

01597000 Crabtree Creek near Swanton, Md.

LOCATION.--Lat 39°30'00", long 79°09'35", Garrett County, on left bank, 0.5 mile upstream from mouth, 1.0 mile downstream from Springlick Run, and 5 miles northeast of Swanton.

DRAINAGE AREA.--16.7 sq mi.

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

GAGE.--Water-stage recorder and concrete control. Datum of gage is 1,529.06 ft above mean sea level (Corps of Engineers bench mark).

AVERAGE DISCHARGE.--23 years, 27.6 cfs (22.44 inches per year).

EXTREMES.--Current year: Maximum discharge, 280 cfs Dec. 22 (gage height, 2.30 ft); minimum, 1.5 cfs Oct. 8, 9, 10 (gage height, 0.72 ft).
Period of record: Maximum discharge, 3,260 cfs July 12, 1949 (gage height, 5.01 ft), from rating curve extended above 210 cfs on basis of slope-area and contracted-opening measurements of peak flow; minimum, 0.1 cfs Dec. 3, 1953 (gage height, 0.56 ft); minimum daily, 0.8 cfs Nov. 6, 1953.

REMARKS.--Records good except those for the winter months, which are fair. Small diversion above station by Baltimore and Ohio Railroad.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.8	33	8.1	23	41	102	36	9.8	9.9	7.2	3.2	2.5
2	1.7	24	7.9	22	33	76	36	10	11	6.0	6.6	2.4
3	1.8	36	8.0	18	32	61	33	10	9.9	5.0	4.7	3.6
4	1.6	37	13	79	26	49	30	9.8	9.2	4.5	7.2	2.5
5	1.6	36	13	172	50	40	28	9.8	8.8	4.0	5.6	2.4
6	1.6	29	14	111	45	35	28	64	14	4.3	3.8	2.3
7	1.6	22	13	76	39	44	30	85	14	4.0	3.2	3.0
8	1.5	16	13	58	35	44	31	192	14	3.6	2.8	8.4
9	1.6	13	13	47	29	40	35	171	13	5.2	2.7	6.6
10	1.6	11	12	39	29	36	46	89	13	4.3	2.5	4.0
11	3.6	12	13	34	25	33	46	59	11	5.6	3.2	14
12	3.1	12	32	35	23	35	45	45	10	5.6	3.2	30
13	2.0	12	44	33	109	70	39	102	11	3.8	2.5	49
14	1.9	13	39	83	101	124	35	106	16	3.4	2.3	174
15	2.0	23	32	138	70	152	29	73	15	3.2	2.3	85
16	1.9	24	29	90	50	130	29	55	13	3.0	2.3	48
17	1.7	22	29	65	46	89	27	43	12	3.0	2.1	36
18	1.6	19	28	50	54	64	25	35	11	3.2	2.1	32
19	1.6	16	37	39	70	68	21	31	10	4.5	2.7	37
20	1.6	15	50	34	151	72	19	28	9.5	5.0	2.3	46
21	6.2	14	52	29	227	66	18	25	9.5	3.4	2.3	42
22	6.0	12	185	24	200	61	18	20	10	3.0	6.4	34
23	3.4	12	241	26	199	59	16	18	8.1	2.8	3.6	28
24	3.0	11	170	22	133	52	14	16	7.2	2.7	2.7	21
25	2.7	9.8	110	22	92	46	13	15	6.4	3.2	2.3	16
26	2.5	9.7	70	23	88	42	12	14	5.8	3.2	2.3	20
27	2.4	9.4	50	15	201	39	11	12	5.6	2.7	3.2	16
28	2.2	9.0	40	30	166	39	12	11	5.0	2.8	9.5	14
29	2.2	8.8	34	26	------	42	11	12	9.9	2.8	3.8	13
30	16	9.0	29	59	------	42	11	12	8.4	3.0	3.0	13
31	31	------	26	48	------	39	------	10	------	3.4	2.7	------
TOTAL	115.0	529.7	1,455.0	1,570	2,364	1,891	784	1,392.4	311.2	121.4	109.1	805.7
MEAN	3.71	17.7	46.9	50.6	84.4	61.0	26.1	44.9	10.4	3.92	3.52	26.9
MAX	31	37	241	172	227	152	46	192	16	7.2	9.5	174
MIN	1.5	8.8	7.9	15	23	33	11	9.8	5.0	2.7	2.1	2.3
CFSM	.22	1.06	2.81	3.03	5.05	3.65	1.56	2.69	.62	.23	.21	1.61
IN.	.26	1.18	3.24	3.50	5.27	4.21	1.75	3.10	.69	.27	.24	1.79

CAL YR 1970 TOTAL 10,711.3 MEAN 29.3 MAX 405 MIN 1.5 CFSM 1.75 IN 23.86
WTR YR 1971 TOTAL 11,448.5 MEAN 31.4 MAX 241 MIN 1.5 CFSM 1.88 IN 25.50

PEAK DISCHARGE (BASE, 330 CFS).--No peak above base.

01597500 Savage River, below Savage River Dam, near Bloomington, Md.

LOCATION.--Lat 39°30'05", long 79°07'25", Garrett County, on left bank 0.7 mile downstream from Savage River Dam, 1.1 miles downstream from Crabtree Creek, 3.2 miles northwest of Bloomington, and 3.7 miles upstream from mouth.

DRAINAGE AREA.--106 sq mi.

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

GAGE.--Water-stage recorder and concrete control. Datum of gage is 1,276.40 ft above mean sea level (Corps of Engineers bench mark).

AVERAGE DISCHARGE.--23 years, 158 cfs (20.24 inches per year), adjusted for storage since December 1950.

EXTREMES.--Current year: Maximum discharge, 2,550 cfs Dec. 24 (gage height, 5.24 ft); minimum, 1.3 cfs Sept. 28 (gage height, 0.66 ft).
Period of record: Maximum discharge, 6,530 cfs Oct. 16, 1954 (gage height, 7.70 ft); minimum, 0.35 cfs Oct. 27, 1966 (gage height, 0.57 ft); minimum daily, 0.6 cfs July 27-31, Aug. 5, 6, 9, 10, 1951.

REMARKS.--Records good. Diversions above station by Baltimore & 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).

REVISIONS (WATER YEARS).--WSP 1432: 1955.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	77	565	104	97	92	1,360	15	361	47	14	60	51
2	77	575	105	97	92	1,000	15	293	50	13	30	51
3	77	109	104	97	92	485	15	15	58	13	15	148
4	77	110	105	100	360	286	15	15	49	16	275	521
5	76	411	105	257	292	95	14	15	46	37	54	419
6	76	581	105	984	91	96	15	19	59	30	14	39
7	76	570	105	1,270	92	97	15	347	62	30	77	32
8	76	299	105	795	92	335	15	1,280	70	42	115	29
9	80	11	105	98	358	510	15	1,150	53	49	77	30
10	83	11	105	99	232	239	16	610	45	49	56	29
11	83	11	105	279	91	94	16	401	40	49	56	30
12	83	72	106	514	91	95	16	300	37	34	56	31
13	83	105	106	501	96	99	16	610	43	26	56	60
14	61	105	392	300	517	106	17	823	70	40	56	114
15	46	105	552	100	940	413	16	570	73	48	56	430
16	46	105	542	102	899	1,030	16	427	60	48	69	647
17	46	105	367	104	359	1,240	16	324	54	56	76	639
18	46	106	102	1,110	92	488	16	249	49	61	75	631
19	46	105	102	605	361	18	16	207	44	61	58	624
20	53	105	104	2.7	507	18	16	175	39	46	49	305
21	66	106	106	2.3	545	442	16	150	41	41	49	111
22	65	106	394	8.8	1,290	287	16	126	42	44	170	111
23	65	105	871	44	1,830	16	16	106	35	57	88	111
24	65	105	1,830	70	1,750	16	15	96	29	61	113	111
25	65	105	2,290	94	1,010	15	15	93	25	61	76	111
26	63	105	1,040	237	496	15	15	80	23	61	68	111
27	64	105	522	352	519	15	15	68	20	60	75	111
28	64	234	508	292	1,080	14	15	59	40	60	74	79
29	64	104	240	11	------	15	15	60	59	60	74	111
30	66	104	97	58	------	15	80	64	30	60	74	111
31	92	------	97	92	------	15	------	59	------	60	60	------
TOTAL	2,107	5,345	11,521	8,772.8	14,266	8,969	529	9,152	1,392	1,387	2,301	5,938
MEAN	68.0	178	372	283	510	289	17.6	295	46.4	44.7	74.2	198
MAX	92	581	2,290	1,270	1,830	1,360	80	1,280	73	61	275	647
MIN	46	11	97	2.3	91	14	14	15	20	13	14	29
(†)	9,340	6,850	4,360	4,290	5,900	11,500	19,230	20,060	19,910	18,160	15,380	12,090

CAL YR 1970 TOTAL 72,270.0 MEAN 198 MAX 3,320 MIN 11 CFSM 1.87 IN 25.36
WTR YR 1971 TOTAL 71,679.8 MEAN 196 MAX 2,290 MIN 2.3 CFSM 1.85 IN 25.15

† Month-end contents, in acre-ft, in Savage River Reservoir (contents on Sept. 30, 1970, 11,560 acre-ft). Records furnished by Corps of Engineers.

01598500 North Branch Potomac River at Luke, Md.

LOCATION.--Lat 39°28'45", long 79°03'55", Mineral County, W. Va., on right bank 0.2 mile downstream from Savage River, 0.5 mile northwest of Luke, and at mile 53.3.

DRAINAGE AREA.--404 sq mi.

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

GAGE.--Water-stage recorder and concrete control. Datum of gage is 946.25 ft above mean sea level, adjustment of 1912. June 27, 1899, to July 15, 1906, nonrecording gage at bridge 1.1 miles downstream at datum about 35 feet lower.

AVERAGE DISCHARGE.--28 years (1899-1905, 1949-1971), 677 cfs (22.76 inches per year), adjusted for storage since 1949.

EXTREMES.--Current year: Maximum discharge, 8,680 cfs Dec. 22 (gage height, 8.99 ft); minimum, 74 cfs July 22 (gage height, 1.00 ft).
Period of record: Maximum discharge, 39,400 cfs Oct. 15, 1954 (gage height, 17.15 ft); minimum daily, 6 cfs Sept. 4, 1904.

REMARKS.--Records good. Flow regulated since 1913 by Stony River Reservoir, 45 miles above station (see station 01595200), and since December 1950, by Savage River Reservoir, 5 miles above station (see station 01597500). Some regulation at low flow by West Virginia Pulp and Paper Company at site used 1899-1906. Records of water temperatures for the water year 1971 are published in Part 2 of this report.

REVISIONS (WATER YEARS).--WSP 192: 1899-1904. WSP 1432: 1905-6, drainage area at former site.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	142	1,240	363	653	760	3,460	675	573	382	175	142	106
2	133	1,170	334	671	640	2,780	640	493	338	165	419	100
3	128	1,040	315	611	490	1,920	587	268	328	163	342	223
4	123	1,190	400	1,150	560	1,510	526	279	298	113	665	587
5	120	1,430	515	4,120	940	1,120	486	240	446	119	814	465
6	113	1,580	450	3,000	1,350	1,010	462	956	470	106	320	113
7	111	1,360	395	2,500	908	1,310	531	1,700	446	104	244	254
8	109	985	372	1,900	700	1,450	603	3,390	382	113	238	315
9	110	553	387	1,200	660	1,450	825	3,250	304	125	177	202
10	121	494	396	1,000	600	1,110	1,050	1,990	262	122	132	150
11	135	493	388	983	500	859	809	1,430	231	130	124	121
12	223	677	722	1,300	540	817	705	1,160	206	153	146	1,000
13	209	672	995	1,230	1,200	1,350	655	2,120	221	122	146	1,710
14	148	669	1,010	2,100	2,720	1,870	537	2,500	831	109	118	2,390
15	119	801	1,090	2,740	2,200	2,330	598	1,960	662	113	110	2,300
16	117	735	1,030	1,680	1,880	2,860	544	1,650	476	107	115	1,730
17	120	639	923	1,350	1,110	2,730	509	1,390	390	110	121	1,520
18	114	592	769	1,930	1,160	1,720	552	1,070	325	116	120	1,330
19	110	554	764	1,610	1,600	1,150	489	813	284	127	114	1,240
20	110	523	972	746	2,840	1,450	443	700	254	127	110	1,040
21	156	537	836	660	3,960	1,500	409	608	249	119	107	721
22	434	457	4,400	720	4,460	1,380	387	534	251	106	231	615
23	270	427	5,730	680	5,600	1,130	362	470	218	111	206	546
24	206	369	5,840	720	4,400	935	338	426	182	113	185	497
25	179	352	4,980	640	3,100	800	305	407	159	113	139	440
26	163	354	2,990	1,030	2,370	771	259	378	142	137	111	487
27	157	361	1,720	1,080	3,400	673	246	325	127	135	130	634
28	151	485	1,470	560	3,750	726	259	298	130	155	352	472
29	151	343	1,090	580	------	996	259	289	147	135	235	422
30	295	356	789	720	------	854	293	514	151	125	163	394
31	948	------	697	950	------	733	------	510	------	130	127	------
TOTAL	5,725	21,438	43,132	40,814	54,398	44,754	15,443	32,691	9,292	3,898	6,703	22,124
MEAN	185	715	1,391	1,317	1,943	1,444	515	1,055	310	126	216	737
MAX	948	1,580	5,840	4,120	5,600	3,460	1,050	3,390	831	175	814	2,390
MIN	109	343	315	560	490	673	246	240	127	104	107	100

CAL YR 1970 TOTAL 296,733 MEAN 813 MAX 6,530 MIN 95 CFSM 2.01 IN 27.32
WTR YR 1971 TOTAL 300,412 MEAN 823 MAX 5,840 MIN 100 CFSM 2.04 IN 27.65

01599000 Georges Creek at Franklin, Md.

LOCATION.--Lat 39°29'38", long 79°02'42", Allegany County, on right bank at Franklin, and 1.2 miles upstream from Westernport and mouth.

DRAINAGE AREA.--72.4 sq mi.

PERIOD OF RECORD.--May 1905 to July 1906 (published as "at Westernport"), October 1929 to current year.

GAGE.--Water-stage recorder. Datum of gage is 958.96 ft above mean sea level (Westvaco Corporation bench mark). May 4, 1905, to July 15, 1906, nonrecording gage at bridge 0.8 mile downstream at different datum. Oct. 16, 1929, to Oct. 1, 1937, water-stage recorder at site 95 ft downstream at present datum.

AVERAGE DISCHARGE.--42 years (1929-71), 76.8 cfs (14.41 inches per year).

EXTREMES.--Current year: Maximum discharge, 989 cfs Feb. 22 (gage height, 5.98 ft); minimum, 4.7 cfs Oct. 8 (gage height, 3.05 ft).
Period of record: Maximum discharge, 8,500 cfs Mar. 17, 1936 (gage height, 9.6 ft, site then in use), from rating curve extended above 2,000 cfs on basis of slope-area measurement of peak flow; minimum, 1.6 cfs Sept. 29 to Oct. 13, 1930.
Flood of Mar. 29, 1924, reached a stage of about 10 ft, from floodmarks, at site 95 ft downstream.

REMARKS.--Records good. Records include about 0.5 cfs of sewage from city of Frostburg, which obtains its water supply from Big Piney Run (Monongahela River basin) and Savage River. A negligible discharge 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. Miscellaneous measurements of discharge from the Hoffman drainage tunnel have been made in the water years 1944, 1965-71 by the U. S. Geological Survey and in the water years 1958 and 1959 by the Maryland Geological Survey.

REVISIONS (WATER YEARS).--WSP 726: Drainage area. WSP 1502: 1940.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.7	212	35	90	71	530	125	39	42	18	17	7.5
2	6.3	103	32	88	66	430	117	40	42	15	20	7.5
3	6.3	256	32	85	62	380	109	47	42	14	37	7.5
4	5.5	180	58	300	60	324	99	38	37	13	81	7.0
5	5.5	117	49	445	81	260	90	37	39	13	46	7.0
6	5.5	80	42	316	99	228	94	238	42	14	22	8.5
7	5.1	66	37	246	81	231	117	196	37	14	17	12
8	5.1	54	34	190	74	224	119	475	38	13	14	13
9	5.1	45	35	175	68	188	109	372	30	16	13	11
10	5.5	41	35	150	59	167	109	280	27	15	11	9.1
11	8.1	66	34	141	59	155	97	212	25	25	13	11
12	9.1	109	92	170	50	150	97	177	24	26	12	32
13	6.7	101	92	143	328	228	92	407	36	15	11	50
14	6.7	97	75	221	336	430	90	308	47	23	9.6	101
15	6.3	188	68	276	212	540	88	235	33	14	9.6	52
16	5.9	136	65	205	170	450	78	235	32	13	9.6	27
17	5.9	105	80	177	148	360	71	188	31	12	10	25
18	5.9	88	83	140	202	320	68	153	26	12	10	22
19	5.5	77	115	120	264	284	71	136	22	15	12	34
20	5.5	77	141	100	475	272	62	121	30	15	11	71
21	33	80	121	100	645	246	61	111	31	13	13	47
22	50	62	470	101	797	224	56	96	26	12	42	33
23	17	56	705	107	747	212	54	83	22	11	24	25
24	14	42	610	90	540	196	50	74	19	11	17	22
25	12	36	398	88	425	180	47	68	17	13	11	17
26	11	39	300	103	425	165	46	64	16	13	9.6	26
27	11	38	235	70	710	155	44	54	15	11	9.6	30
28	9.8	38	188	60	660	148	51	50	17	10	11	22
29	10	36	140	64	------	145	46	54	16	14	8.5	18
30	128	42	120	110	------	143	41	54	19	15	7.5	17
31	199	------	110	90	------	139	------	45	------	18	7.5	------
TOTAL	617.0	2,667	4,631	4,761	7,914	8,104	2,398	4,687	880	456	546.5	772.1
MEAN	19.9	88.9	149	154	283	261	79.9	151	29.3	14.7	17.6	25.7
MAX	199	256	705	445	797	540	125	475	47	26	81	101
MIN	5.1	36	32	60	50	139	41	37	15	10	7.5	7.0
CFSM	.27	1.23	2.06	2.13	3.91	3.61	1.10	2.09	.40	.20	.24	.36
IN.	.32	1.37	2.38	2.45	4.07	4.16	1.23	2.41	.45	.23	.28	.40

CAL YR 1970 TOTAL 36,613.4 MEAN 100 MAX 1,770 MIN 5.1 CFSM 1.38 IN 18.81
WTR YR 1971 TOTAL 38,433.6 MEAN 105 MAX 797 MIN 5.1 CFSM 1.45 IN 19.75

PEAK DISCHARGE (BASE, 1,200 CFS).--No peak above base.

01600000 North Branch Potomac River at Pinto, Md.

LOCATION.--Lat 39°33'59", long 78°50'25", Mineral County, W. Va., on right bank at downstream side of Western Maryland Railway bridge at Pinto, 2.8 miles downstream from Mill Run, and at mile 32.6.

DRAINAGE AREA.--596 sq mi.

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

GAGE.--Water-stage recorder. Datum of gage is 648.23 ft above mean sea level (Corps of Engineers bench mark). Prior to Dec. 10, 1938, nonrecording gage at highway bridge 250 ft downstream at same datum.

AVERAGE DISCHARGE.--33 years, 849 cfs (19.34 inches per year), unadjusted.

EXTREMES.--Current year: Maximum discharge, 11,000 cfs Dec. 22 (gage height, 12.11 ft); minimum 105 cfs Sept. 3 (gage height, 1.80 ft).
Period of record: Maximum discharge, 37,000 cfs Oct. 16, 1954 (gage height, 23.23 ft); minimum, 31 cfs Dec. 18, 19, 1943 (gage height, 1.37 ft), result of freezeup.
Flood of Mar. 29, 1924, reached a stage of about 24 ft (discharge, about 55,000 cfs). Flood of Mar. 17, 1936, reached a stage of about 23.5 ft, from floodmarks (discharge, about 50,000 cfs).

REMARKS.--Records good. Some regulation at low flow by Stony River Reservoir, 66 miles above station (see station 01595200), and since December 1950, by Savage River Reservoir (see station 01597500).

REVISIONS (WATER YEARS).--WSP 1332: 1943.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	158	1,480	449	863	820	3,890	886	571	485	214	158	128
2	150	1,630	408	834	660	3,270	844	600	406	204	338	115
3	144	1,380	385	762	560	2,340	790	379	398	201	416	141
4	136	1,730	420	1,110	680	2,040	717	374	359	158	764	530
5	130	1,580	638	5,060	1,120	1,530	653	335	398	128	1,020	576
6	125	1,790	537	3,620	1,480	1,430	614	605	550	130	506	221
7	120	1,540	489	3,080	1,110	1,620	717	1,950	540	118	286	182
8	118	1,300	442	2,400	860	1,800	820	3,370	455	115	289	339
9	115	708	448	1,600	820	1,770	958	3,880	371	130	246	268
10	120	615	449	1,220	720	1,550	1,170	2,400	311	150	167	204
11	147	607	459	1,090	620	1,230	1,050	1,770	276	152	147	144
12	173	859	606	1,660	660	1,150	922	1,460	246	291	150	838
13	280	956	1,300	1,580	1,560	1,560	862	2,490	253	176	173	1,850
14	201	938	1,090	1,500	3,060	2,210	820	3,160	705	176	150	2,180
15	147	1,270	1,250	3,710	2,390	2,510	796	2,430	740	130	125	2,570
16	125	1,140	1,170	2,160	2,030	3,020	723	2,020	576	125	118	1,820
17	128	947	1,190	1,710	1,620	2,910	670	1,750	456	118	128	1,550
18	128	832	1,040	2,040	1,550	2,270	587	1,400	388	122	130	1,400
19	120	758	949	2,030	2,060	1,470	663	1,100	323	136	136	1,250
20	118	698	1,260	953	3,220	1,830	589	934	284	158	122	1,300
21	198	711	1,100	830	5,530	1,620	545	820	276	138	120	864
22	535	618	4,400	880	5,620	1,810	512	717	265	125	268	744
23	402	553	8,050	840	7,320	1,430	482	626	261	115	265	631
24	272	488	7,030	900	5,310	1,260	455	560	218	118	214	566
25	225	430	5,640	820	3,770	1,100	422	525	185	122	195	497
26	201	431	3,650	1,000	2,820	1,060	377	490	158	130	130	484
27	185	437	2,020	1,200	3,800	956	346	424	152	158	125	716
28	176	523	1,730	700	4,470	956	347	380	136	147	250	587
29	170	470	1,390	790	------	1,150	364	359	170	164	347	464
30	384	422	995	900	------	1,100	382	520	170	155	208	437
31	1,320	------	887	1,000	------	975	------	636	------	164	164	------
TOTAL	6,951	27,841	51,871	48,842	66,240	54,817	20,183	39,035	10,512	4,578	7,855	23,596
MEAN	224	928	1,673	1,576	2,366	1,768	673	1,259	350	148	253	787
MAX	1,320	1,790	8,050	5,060	7,320	3,890	1,170	3,880	740	214	1,020	2,570
MIN	115	422	385	700	560	956	346	335	136	115	118	115

CAL YR 1970 TOTAL 356,557 MEAN 977 MAX 9,180 MIN 108 CFSM 1.64 IN 22.25
WTR YR 1971 TOTAL 362,321 MEAN 993 MAX 8,050 MIN 115 CFSM 1.67 IN 22.61

01601500 Wills Creek near Cumberland, Md.

LOCATION.--Lat 39°40'07", long 78°47'18", Allegany County, on right bank at downstream side of Western Maryland Railway bridge, 2 miles upstream from Cumberland, and mouth.

DRAINAGE AREA.--247 sq mi.

PERIOD OF RECORD.--May 1905 to July 1906 (published as "at Cumberland"), October 1929 to current year.

GAGE.--Water-stage recorder. Datum of gage is 640.89 ft above mean sea level (Corps of Engineers bench mark). May 6, 1905, to July 14, 1906, nonrecording gage at highway bridge 700 ft 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 upstream at present datum.

AVERAGE DISCHARGE.--42 years (1929-71), 309 cfs (16.99 inches per year).

EXTREMES.--Current year: Maximum discharge, 4,900 cfs Dec. 23 (gage height, 7.08 ft); minimum, 20 cfs Sept. 7. Period of record: Maximum discharge, 38,100 cfs Mar. 17, 1936 (gage height, 20.2 ft, from floodmarks at present site), from rating curve extended above 6,500 cfs on basis of slope-area measurements at gage heights 13.45 and 20.2 ft; minimum, 9 cfs Oct. 14, 1930.

REMARKS.--Records good. Records include drainage from numerous active and abandoned coal mines. An undetermined amount of water is diverted into basin from Georges Creek basin by Hoffman drainage tunnel (see station 01599000). Slight diurnal fluctuation at low flow caused by quarry upstream.

REVISIONS (WATER YEARS).--WSP 726: Drainage area. WSP 1432: 1906, 1930(M), 1933-34(M), 1936-37, 1945(M).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	30	796	250	300	230	1,820	465	140	142	59	83	24
2	28	545	249	290	210	1,360	478	138	140	57	79	23
3	26	1,300	237	250	200	1,100	483	140	159	53	118	23
4	26	1,200	328	976	210	904	424	133	138	48	172	22
5	26	715	313	1,860	230	726	379	129	122	46	152	22
6	24	484	318	1,360	280	649	357	1,640	131	44	94	24
7	23	349	298	957	240	655	375	1,840	193	43	68	21
8	22	263	261	700	220	644	370	2,380	388	41	55	23
9	22	211	243	600	200	550	309	1,640	264	39	47	24
10	22	182	230	520	210	515	339	1,030	201	41	43	28
11	26	212	208	490	200	505	325	759	162	49	42	26
12	29	490	449	480	190	492	313	627	140	96	47	34
13	30	690	698	450	900	794	313	1,240	182	65	49	125
14	29	735	645	490	2,350	1,380	317	1,470	447	48	39	145
15	27	1,040	530	770	1,300	1,600	286	1,110	348	42	35	177
16	26	843	449	700	820	1,640	267	904	298	39	38	114
17	25	676	503	580	646	1,230	261	721	247	35	53	99
18	24	528	517	460	752	897	261	585	204	35	42	80
19	23	423	506	330	1,060	800	228	496	174	38	38	76
20	23	400	849	290	1,790	782	210	433	152	45	35	196
21	109	510	817	300	2,950	671	207	384	140	44	33	215
22	272	433	1,360	300	3,710	649	204	325	136	38	47	162
23	127	420	3,340	290	3,580	699	193	286	116	33	57	125
24	86	346	3,460	260	2,050	649	185	261	107	33	47	101
25	70	275	1,800	270	1,440	575	174	244	91	35	39	79
26	60	249	1,160	322	1,370	535	164	215	82	32	32	77
27	53	226	812	240	2,460	478	159	198	75	35	30	127
28	46	209	632	200	2,780	456	162	182	69	33	30	97
29	47	193	490	240	------	483	167	172	65	40	29	86
30	338	275	400	295	------	505	152	172	61	59	28	80
31	777	------	330	270	------	496	------	162	------	77	26	------
TOTAL	2,496	15,218	22,682	15,840	32,578	25,239	8,527	20,156	5,174	1,422	1,727	2,455
MEAN	80.5	507	732	511	1,164	814	284	650	172	45.9	55.7	81.8
MAX	777	1,300	3,460	1,860	3,710	1,820	483	2,380	447	96	172	215
MIN	22	182	208	200	190	456	152	129	61	32	26	21
CFSM	.33	2.05	2.96	2.07	4.71	3.30	1.15	2.63	.70	.19	.23	.33
IN.	.38	2.29	3.42	2.39	4.91	3.80	1.28	3.04	.78	.21	.26	.37

CAL YR 1970 TOTAL 160,928 MEAN 441 MAX 6,940 MIN 18 CFSM 1.79 IN 24.24
WTR YR 1971 TOTAL 153,514 MEAN 421 MAX 3,710 MIN 21 CFSM 1.70 IN 23.12

PEAK DISCHARGE (BASE, 3,500 CFS)

DATE	TIME	G. H.	DISCHARGE	DATE	TIME	G. H.	DISCHARGE
12-23	1600	7.08	4,900	2-22	1630	7.00	4,750
2-13	*2200	*6.6	4,030				

* About (affected by ice).

01603000 North Branch Potomac River near Cumberland, Md.

LOCATION.--Lat 39°37'16", long 78°46'24", Allegany County, on left bank at downstream side of Wiley Ford Bridge, 2.1 miles downstream from Wills Creek, 2 miles south of Cumberland, and at mile 19.6.

DRAINAGE AREA.--875 sq mi.

PERIOD OF RECORD.--May 1929 to current year. Gage-height records collected at various sites about 2 miles upstream from September 1901 to December 1932 and thereafter at present site, are contained in reports of U. S. Weather Bureau.

GAGE.--Water-stage recorder. Datum of gage is 585.22 ft above mean sea level (Corps of Engineers bench mark). Prior to June 18, 1929, nonrecording gage at same site and datum.

AVERAGE DISCHARGE.--42 years, 1,198 cfs (18.59 inches per year), unadjusted.

EXTREMES.--Current year: Maximum discharge, 13,600 cfs Feb. 23 (gage height, 12.31 ft); minimum, 129 cfs Oct. 9; minimum daily, 135 cfs Sept. 3.
Period of record: Maximum discharge, 88,200 cfs Mar. 17, 1936 (gage height, 29.1 ft), from rating curve extended above 21,000 cfs on basis of slope-area measurement of peak flow; minimum (river only), 12 cfs Sept. 22, 1932 (gage height, 2.38 ft); minimum daily (including flow in canal), 38 cfs Sept. 24, 1932.
Maximum stage known, 29.2 ft June 1, 1889 (discharge, about 89,000 cfs). Flood of Mar. 29, 1924, reached a stage of 28.4 ft (discharge, about 82,000 cfs).

REMARKS.--Records good. Regulation by Stony River Reservoir, about 79 miles above station (see station 01595200), and since December 1950, by Savage River Reservoir (see station 01597500). Prior to July 1957, small amount of inflow from industrial wastes and sewage from city of Cumberland from water diverted from Evitts Creek, mouth of which is below station. Diversion to Chesapeake and Ohio Canal prior to 1935. Records of chemical analyses, water temperatures, and suspended sediment loads for the water year 1971 are published in Part 2 of this report.

REVISIONS (WATER YEARS).--WSP 726: Drainage area. WSP 781: 1932(M).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	191	2,380	732	1,210	1,400	6,550	1,280	579	698	249	273	171
2	191	2,440	700	1,150	920	5,380	1,240	715	602	263	311	143
3	178	2,880	664	1,100	800	3,960	1,210	635	597	236	580	135
4	164	3,430	740	1,480	965	3,440	1,080	493	547	223	781	320
5	160	2,400	940	7,500	1,440	2,430	987	464	501	179	1,160	589
6	155	2,490	896	5,840	1,870	2,210	936	1,980	713	175	690	452
7	147	1,990	836	4,720	1,560	2,270	1,020	4,110	756	163	403	162
8	142	1,670	746	3,910	1,240	2,650	1,120	6,000	858	153	345	332
9	138	1,010	721	2,320	1,170	2,510	1,160	6,510	691	155	315	340
10	142	852	709	1,830	1,000	2,250	1,390	4,020	555	183	254	254
11	169	862	704	1,520	840	1,750	1,330	2,790	477	210	215	201
12	205	1,320	1,030	2,210	918	1,640	1,170	2,150	432	283	216	643
13	300	1,730	2,030	2,170	2,970	2,310	1,110	3,630	497	250	232	1,890
14	257	1,750	1,730	2,120	6,260	3,830	1,080	5,410	1,020	195	220	2,040
15	205	2,560	1,830	5,320	4,210	4,410	1,030	4,100	1,070	166	181	3,320
16	164	2,190	1,650	3,320	3,240	5,100	955	3,320	904	163	171	2,120
17	151	1,700	1,750	2,520	2,590	4,680	902	2,770	722	152	188	1,690
18	155	1,380	1,640	2,520	2,290	3,750	901	2,140	614	148	186	1,520
19	147	1,200	1,460	2,860	3,410	2,340	870	1,670	516	170	181	1,330
20	142	1,130	2,190	1,330	5,240	2,770	787	1,410	452	198	175	1,590
21	328	1,220	2,030	1,160	9,500	2,290	735	1,240	427	191	159	1,080
22	779	1,090	4,770	1,230	9,900	2,720	700	1,080	409	169	239	934
23	608	1,000	11,700	1,210	12,400	2,130	664	962	386	151	364	783
24	402	887	11,700	1,270	8,630	1,920	629	878	342	150	280	696
25	328	752	8,640	1,180	6,260	1,660	588	827	294	162	245	610
26	289	725	5,920	1,380	4,780	1,530	539	761	253	162	197	583
27	262	700	3,590	1,700	6,670	1,380	496	679	238	188	157	822
28	243	686	2,810	950	8,110	1,320	500	613	217	181	192	730
29	243	777	2,180	1,100	------	1,520	520	577	229	214	398	580
30	716	736	1,500	1,280	------	1,560	485	651	234	235	262	546
31	2,200	------	1,270	1,810	------	1,410	------	862	------	255	208	------
TOTAL	9,901	45,937	79,808	71,220	110,583	85,670	27,414	64,026	16,251	5,972	9,778	26,606
MEAN	319	1,531	2,574	2,297	3,949	2,764	914	2,065	542	193	315	887
MAX	2,200	3,430	11,700	7,500	12,400	6,550	1,390	6,510	1,070	283	1,160	3,320
MIN	138	686	664	950	800	1,320	485	464	217	148	157	135

CAL YR 1970 TOTAL 547,969 MEAN 1,501 MAX 15,800 MIN 138 CFSM 1.72 IN 23.29
WTR YR 1971 TOTAL 553,166 MEAN 1,516 MAX 12,400 MIN 135 CFSM 1.73 IN 23.51

PEAK DISCHARGE (BASE, 10,000 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
12-24	0400	11.91	13,000	2-23	0400	12.31	13,600

01603500 Evitts Creek near Centerville, Pa.

LOCATION.--Lat 39°47'23", long 78°38'48", Bedford County, on left bank 2 miles upstream from Thomas W. Koon Dam, 3.0 miles south of Centerville, 7.0 miles upstream from Rock Gully Creek, and at mile 16.3.

DRAINAGE AREA.--30.2 sq mi.

PERIOD OF RECORD.--September 1932 to current year. Prior to October 1952, published as "near Bedford Valley".

GAGE.--Water-stage recorder and concrete control. Datum of gage is 1,027.59 ft above mean sea level (city of Cumberland bench mark).

AVERAGE DISCHARGE.--39 years, 30.2 cfs (13.58 inches per year).

EXTREMES.--Current year: Maximum discharge, 772 cfs Feb. 22 (gage height, 3.28 ft); minimum, 3.5 cfs Sept. 10, 11 (gage height, 1.09 ft).
Period of record: Maximum discharge, 5,240 cfs Mar. 17, 1936 (gage height, 7.13 ft), from rating curve extended above 400 cfs on basis of slope-area measurements at gage heights 4.64 and 7.13 ft; minimum, 0.70 cfs Dec. 17, 1958 (gage height, 0.79 ft), result of freezeup.
Maximum stage known, about 8 ft, from floodmark, date unknown.

REMARKS.--Records good except those for winter months, which are fair.

REVISIONS (WATER YEARS).--WSP 781: 1933(M).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.4	55	29	42	27	195	31	16	20	8.4	14	4.2
2	5.2	32	25	40	26	150	31	17	21	8.1	9.4	4.4
3	5.4	140	25	36	24	130	29	18	20	7.2	10	4.4
4	5.2	75	42	163	24	112	27	17	18	6.8	20	4.1
5	4.6	51	30	235	26	96	26	18	16	6.5	15	3.9
6	4.4	39	27	110	34	89	26	293	20	6.8	7.6	3.9
7	4.2	32	24	90	28	115	34	159	34	6.5	6.0	4.1
8	4.2	26	23	80	26	94	32	240	28	6.0	5.2	3.9
9	4.2	23	22	70	24	74	27	138	18	6.0	5.0	4.4
10	4.4	21	23	60	24	69	27	103	15	6.0	4.6	3.9
11	6.2	31	22	55	24	75	24	82	14	11	6.8	3.7
12	5.8	70	84	65	22	73	24	73	15	10	6.5	12
13	5.0	108	58	56	110	108	24	162	28	6.5	4.8	35
14	4.6	70	42	59	211	95	24	122	55	5.8	4.4	14
15	5.6	121	37	64	124	99	23	96	21	5.4	6.8	9.0
16	5.2	79	35	49	70	99	23	98	19	5.0	53	8.1
17	4.6	64	64	44	70	86	23	81	18	4.8	10	9.7
18	4.6	53	66	42	85	74	25	66	16	4.6	7.2	7.2
19	4.4	45	55	38	120	82	22	58	15	5.6	6.5	8.1
20	4.4	58	60	34	200	87	21	54	14	5.8	6.0	46
21	20	59	48	34	394	70	20	55	13	4.8	5.6	17
22	38	42	134	34	573	62	20	44	13	4.4	9.4	11
23	13	38	347	32	500	56	20	40	12	4.1	7.2	9.4
24	9.0	33	301	30	265	50	19	38	12	4.1	5.6	8.4
25	7.8	30	164	31	216	46	18	35	10	4.4	5.0	7.2
26	7.0	28	121	41	212	45	18	31	10	4.6	4.8	11
27	6.5	27	93	28	326	42	17	29	9.4	4.4	4.8	12
28	6.0	26	74	24	278	40	18	27	9.0	3.9	5.0	9.0
29	6.0	26	60	28	------	39	19	26	9.0	5.8	4.6	8.1
30	35	47	52	34	------	36	17	25	9.4	6.8	4.2	7.6
31	63	------	46	32	------	33	------	23	------	8.1	4.2	------
TOTAL	308.9	1,549	2,233	1,780	4,063	2,521	709	2,284	531.8	188.2	269.2	294.7
MEAN	9.96	51.6	72.0	57.4	145	81.3	23.6	73.7	17.7	6.07	8.68	9.82
MAX	63	140	347	235	573	195	34	293	55	11	53	46
MIN	4.2	21	22	24	22	33	17	16	9.0	3.9	4.2	3.7
CFSM	.33	1.71	2.38	1.90	4.80	2.69	.78	2.44	.59	.20	.29	.33
IN.	.38	1.91	2.75	2.19	5.00	3.11	.87	2.81	.66	.23	.33	.36

CAL YR 1970 TOTAL 19,011.7 MEAN 52.1 MAX 1,180 MIN 3.7 CFSM 1.73 IN 23.42
WTR YR 1971 TOTAL 16,731.8 MEAN 45.8 MAX 573 MIN 3.7 CFSM 1.52 IN 20.61

PEAK DISCHARGE (BASE, 400 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
12-23	1300	3.02	556	2-22	1815	3.28	772
2-13	1845	2.83	421	5- 6	1215	2.99	533

01608500 South Branch Potomac River near Springfield, W. Va.

LOCATION.--Lat 39°26'49", long 78°39'16", Hampshire County, on left bank at highway bridge, 2.0 miles east of Springfield, and at mile 13.4.

DRAINAGE AREA.--1,471 sq mi.

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

GAGE.--Water-stage recorder. Datum of gage is 562.02 ft above mean sea level. June 1894 to February 1896, nonrecording gage at Baltimore & Ohio Railroad bridge 11.2 miles upstream at different datum. June 26, 1899, to Feb. 2, 1902, nonrecording gage at bridge 10.0 miles 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.

AVERAGE DISCHARGE.--47 years (1899-1901, 1903-5, 1928-71), 1,230 cfs (11.36 inches per year).

EXTREMES.--Current year: Maximum discharge, 16,600 cfs May 31 (gage height, 12.74 ft); minimum, 126 cfs Oct. 9, 10, 11 (gage height, 1.26 ft).
Period of record: Maximum discharge, 143,000 cfs Mar. 18, 1936 (gage height, 34.2 ft), from rating curve extended above 18,000 cfs on basis of measurement made about 10 miles upstream from station, adjusted for storage and inflow and slope-area measurement at gage height 29.84 ft; minimum, 29 cfs Jan. 28, 1956 (result of freezeup), July 30, 1966; minimum gage height, 0.39 ft July 30, 1966.
Flood in November 1877 reached a stage of about 34 ft, from floodmarks (discharge, 140,000 cfs).

REMARKS.--Records good.

REVISIONS (WATER YEARS).--WSP 1552: 1903-6, 1929-30(M), 1932-33(M), 1935(M), 1937-40(M), 1942-43(M), 1945(M).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	177	1,330	480	550	2,220	4,110	1,490	527	7,800	867	269	179
2	166	1,420	529	560	1,100	3,360	1,350	497	4,270	627	725	168
3	158	1,310	529	620	940	3,000	1,330	481	3,060	508	921	161
4	150	2,320	508	1,000	920	2,910	1,250	486	2,290	432	1,230	170
5	142	2,520	480	6,870	1,090	2,490	1,130	484	1,830	385	1,640	157
6	136	2,300	494	11,100	3,510	2,520	1,050	511	1,730	348	1,310	156
7	132	2,220	456	6,070	2,790	3,820	1,180	517	1,690	317	769	168
8	130	1,780	434	3,850	2,060	5,930	1,740	721	1,680	293	540	277
9	128	1,520	403	2,930	1,730	4,320	2,070	1,110	1,630	281	410	254
10	127	1,260	394	2,350	1,390	3,340	2,950	1,210	1,230	273	340	269
11	129	1,110	398	1,950	1,000	2,830	3,350	1,000	1,020	273	297	234
12	131	1,250	412	1,810	1,000	2,490	2,820	856	894	289	270	246
13	171	2,730	495	2,340	1,950	2,280	2,370	935	832	277	265	694
14	146	2,670	704	2,170	11,100	2,500	2,070	1,650	1,050	273	249	2,850
15	136	2,460	689	4,740	6,170	2,890	1,830	1,740	1,300	242	240	2,720
16	135	2,030	632	4,500	3,730	3,270	1,560	1,570	993	219	455	2,080
17	133	1,580	630	3,260	2,960	3,060	1,380	1,860	1,010	204	448	1,270
18	131	1,280	692	2,580	3,540	2,500	1,260	1,930	966	195	292	1,290
19	129	1,070	777	2,010	5,270	2,130	1,150	1,710	816	195	265	1,130
20	132	930	757	1,300	6,890	2,120	1,010	1,490	704	192	244	1,080
21	151	840	815	1,200	13,200	1,980	922	2,670	655	192	226	1,790
22	172	903	4,010	1,200	10,900	1,710	860	1,950	808	192	234	1,830
23	277	912	13,800	1,350	15,300	1,590	822	1,390	697	225	228	1,310
24	375	832	8,360	1,950	11,200	1,600	775	1,120	662	195	219	1,020
25	277	753	5,450	1,610	6,490	1,470	724	962	725	182	213	834
26	229	655	3,720	1,660	4,820	1,340	677	842	697	184	201	711
27	198	613	2,730	1,980	4,470	1,310	631	740	592	192	188	658
28	184	592	2,070	1,200	4,840	1,210	599	651	522	187	177	696
29	174	557	1,610	900	------	1,280	574	597	462	177	171	740
30	192	515	1,200	1,300	------	1,600	563	757	462	179	177	836
31	269	------	750	3,680	------	1,650	------	12,800	------	209	198	------
TOTAL	5,317	42,262	55,408	80,590	132,580	78,610	41,487	45,764	43,077	8,804	13,411	25,978
MEAN	172	1,409	1,787	2,600	4,735	2,536	1,383	1,476	1,436	284	433	866
MAX	375	2,730	13,800	11,100	15,300	5,930	3,350	12,800	7,800	867	1,640	2,850
MIN	127	515	394	550	920	1,210	563	481	462	177	171	156
CFSM	.12	.96	1.21	1.77	3.22	1.72	.94	1.00	.98	.19	.29	.59
IN.	.13	1.07	1.40	2.04	3.35	1.99	1.05	1.16	1.09	.22	.34	.66

CAL YR 1970 TOTAL 454,314 MEAN 1,245 MAX 13,800 MIN 127 CFSM .85 IN 11.49
WTR YR 1971 TOTAL 573,288 MEAN 1,571 MAX 15,300 MIN 127 CFSM 1.07 IN 14.50

PEAK DISCHARGE (BASE, 10,000 CFS)

DATE	TIME	G. H.	DISCHARGE	DATE	TIME	G. H.	DISCHARGE
12-23	0845	12.62	16,400	2-23	1530	12.69	16,500
1- 6	0145	11.21	13,400	5-31	1330	12.74	16,600
2-14	1230	11.29	13,600				

01609000 Town Creek near Oldtown, Md.

LOCATION.--Lat 39°33'12", long 78°33'19", Allegany County, at highway bridge 2.0 miles upstream from Sawpit Run, 3.0 miles northeast of Oldtown, and 4.0 miles upstream from mouth.

DRAINAGE AREA.--148 sq mi.

PERIOD OF RECORD.--July 1928 to September 1935, June 1967 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 550 ft (from topographic map). July 1928, to September 1935, nonrecording gage at present site at datum 0.08 ft lower.

AVERAGE DISCHARGE.--11 years (1928-35, 1967-71), 133 cfs (12.20 inches per year).

EXTREMES.--Current year: Maximum discharge, 3,350 cfs Feb. 23 (gage height, 10.05 ft); minimum, 5.7 cfs Sept. 4 (gage height, 1.86 ft).
Period of record: Maximum discharge 9,700 cfs Oct. 23, 1929 (gage height, 14.08 ft, from graph based on gage readings), from rating curve extended above 1,100 cfs on basis of contracted-opening determination at gage height, 19.08 ft; minimum, 0.9 cfs Aug. 2, 3, 7-14, 1930 (gage height, 1.49 ft).
Flood of Mar. 17 or 18, 1936, reached a stage of 19.08 ft, from floodmarks (discharge, 27,000 cfs, from rating curve extended as explained above.

REMARKS.--Records good.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13	493	103	122	88	748	110	46	102	26	25	8.9
2	12	277	90	140	84	557	105	45	87	25	28	8.2
3	12	610	84	173	90	472	101	48	101	22	32	7.9
4	11	650	97	500	96	409	93	48	86	19	32	7.6
5	11	326	105	1,410	106	324	87	46	73	17	66	7.9
6	11	208	90	775	131	363	86	554	68	16	47	7.3
7	10	151	82	513	120	456	112	792	83	16	27	7.3
8	9.8	121	74	390	110	506	127	1,020	159	16	20	7.9
9	9.4	102	80	339	94	361	107	725	94	15	18	7.3
10	9.6	89	75	272	100	312	98	444	67	14	14	7.0
11	9.6	102	71	236	90	299	89	312	55	15	14	7.0
12	11	405	107	230	119	287	86	245	50	23	12	13
13	13	1,270	286	210	271	373	86	526	63	32	13	181
14	13	1,050	217	230	1,000	480	84	816	170	23	14	121
15	12	1,130	181	296	559	435	78	518	112	19	12	61
16	11	719	153	257	391	378	75	432	90	16	176	37
17	11	448	224	242	273	306	74	361	83	16	76	28
18	10	314	368	211	312	252	80	276	74	15	36	24
19	10	241	320	184	584	242	75	228	61	14	24	22
20	10	201	289	160	1,040	288	66	521	51	15	20	32
21	44	241	250	160	1,930	256	63	1,910	50	16	17	67
22	110	182	723	160	1,990	235	62	786	60	15	17	40
23	54	164	1,480	150	2,520	215	60	455	46	13	17	30
24	36	138	1,830	140	1,220	196	57	318	41	12	16	28
25	30	122	847	150	780	177	54	265	37	13	14	24
26	25	120	549	153	791	170	51	208	34	13	12	23
27	22	110	372	140	1,200	161	49	169	30	13	10	26
28	20	105	289	120	1,170	143	48	144	27	12	10	32
29	20	96	225	139	------	143	51	130	26	12	9.5	26
30	96	101	190	156	------	130	49	126	29	13	9.2	23
31	625	------	150	129	------	118	------	119	------	25	9.2	------
TOTAL	1,301.4	10,286	10,001	8,487	17,259	9,792	2,363	12,633	2,109	531	846.9	922.3
MEAN	42.0	343	323	274	616	316	78.8	408	70.3	17.1	27.3	30.7
MAX	625	1,270	1,830	1,410	2,520	748	127	1,910	170	32	176	181
MIN	9.4	89	71	120	84	118	48	45	26	12	9.2	7.0
CFSM	.28	2.32	2.18	1.85	4.16	2.14	.53	2.76	.48	.12	.18	.21
IN.	.33	2.59	2.51	2.13	4.34	2.46	.59	3.18	.53	.13	.21	.23

CAL YR 1970 TOTAL 81,416.9 MEAN 223 MAX 3,880 MIN 9.4 CFSM 1.51 IN 20.46
WTR YR 1971 TOTAL 76,531.6 MEAN 210 MAX 2,520 MIN 7.0 CFSM 1.42 IN 19.24

PEAK DISCHARGE (BASE, 1,500 CFS)

DATE	TIME	G. H.	DISCHARGE	DATE	TIME	G. H.	DISCHARGE
11-13	2245	9.09	2,550	2-23	0145	10.05	3,350
12-24	0200	9.22	2,660	5-21	1000	9.09	2,550
1- 5	0245	7.67	1,730				

01610000 Potomac River at Paw Paw, W. Va.

LOCATION.--Lat 39°32'13", long 78°27'28", Allegany County, Md., on left bank 250 ft upstream from bridge on Maryland State Highway 51 at Paw Paw, 3.3 miles downstream from Little Cacapon River, and at mile 277.

DRAINAGE AREA.--3,109 sq mi.

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

GAGE.--Water-stage recorder. Datum of gage is 487.88 ft above mean sea level (Corps of Engineers bench mark). Prior to Mar. 25, 1939, nonrecording gage at bridge 250 ft downstream at same datum.

AVERAGE DISCHARGE.--33 years, 3,042 cfs (13.29 inches per year).

EXTREMES.--Current year: Maximum discharge, 40,400 cfs Feb. 23 (gage height, 22.25 ft); minimum, 295 cfs Sept. 4.
Period of record: Maximum discharge, 111,000 cfs Oct. 16, 1942 (gage height, 38.36 ft); minimum, 164 cfs Sept. 10, 11, 1966.
Maximum stage known, 54.0 ft Mar. 18, 1936 (discharge, 240,000 cfs, from rating curve extended above 85,000 cfs on basis of slope-area measurement of peak flow at site 5 miles upstream at Okonoko, W. Va.).

REMARKS.--Records good. Low flow affected by Stony River Reservoir (see station 01595200), and since December 1950, by Savage River Reservoir (see station 01597500).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	548	4,550	1,660	3,100	4,590	13,700	3,650	1,430	9,770	1,100	571	415
2	489	4,810	1,600	2,700	3,400	11,000	3,410	1,630	5,790	1,220	1,360	355
3	445	4,980	1,600	2,600	2,200	9,140	3,310	1,570	4,440	969	1,790	315
4	415	7,400	1,600	3,830	2,600	8,300	3,120	1,330	3,600	834	3,000	300
5	390	6,270	1,740	15,900	3,120	6,850	2,850	1,330	2,950	732	3,850	755
6	370	5,550	1,850	21,300	5,570	6,640	2,660	2,390	2,910	639	3,490	706
7	355	5,130	1,740	13,900	6,090	7,690	2,850	6,390	3,020	597	2,010	435
8	335	4,360	1,600	7,200	4,510	11,300	3,630	7,990	3,120	551	1,370	440
9	325	3,490	1,520	5,800	3,800	9,190	3,970	9,910	3,100	521	1,100	678
10	310	2,770	1,470	5,890	3,200	7,520	4,810	7,340	2,440	521	890	596
11	320	2,540	1,440	5,020	2,600	6,430	5,580	5,470	2,030	546	713	530
12	435	3,220	1,570	5,200	2,750	5,860	4,940	4,460	1,800	619	620	518
13	415	5,930	3,100	6,380	4,380	5,950	4,370	5,560	1,690	675	590	1,640
14	554	7,050	3,430	6,020	21,200	7,420	3,970	10,000	2,240	614	572	4,740
15	467	7,510	3,310	10,100	14,500	8,300	3,670	8,200	3,140	531	542	5,660
16	395	6,710	3,110	10,300	9,320	9,180	3,300	6,840	2,780	475	652	4,940
17	340	5,150	3,240	7,670	7,460	8,980	3,000	6,340	2,280	445	1,000	3,540
18	320	4,160	3,770	6,330	7,000	7,600	2,850	5,720	2,180	421	646	3,080
19	315	3,520	3,560	6,000	11,100	5,910	2,720	4,930	1,830	419	554	2,900
20	315	3,060	3,740	4,600	14,700	6,060	2,450	4,460	1,560	438	518	2,850
21	355	3,030	3,900	3,760	29,300	5,720	2,250	7,640	1,410	449	478	3,010
22	1,120	2,790	8,270	3,730	27,900	5,520	2,120	5,540	1,440	438	484	3,190
23	1,360	2,680	30,400	3,720	38,400	4,970	2,030	4,060	1,450	424	626	2,530
24	1,190	2,440	27,900	4,370	28,500	4,710	1,930	3,320	1,290	429	633	2,080
25	980	2,150	18,500	4,190	17,400	4,300	1,810	2,920	1,240	411	536	1,740
26	762	1,940	12,800	4,180	13,100	3,970	1,690	2,560	1,280	401	489	1,520
27	649	1,810	8,170	5,000	13,900	3,770	1,570	2,250	1,070	415	415	1,500
28	577	1,740	6,380	4,000	16,500	3,520	1,510	1,980	950	428	380	1,690
29	535	1,780	5,200	3,200	------	3,550	1,490	1,790	860	419	456	1,480
30	683	1,650	4,200	3,360	------	3,970	1,460	1,880	846	460	548	1,590
31	3,550	------	3,500	6,200	------	3,940	------	12,600	------	562	445	------
TOTAL	19,619	120,170	175,870	195,550	319,090	210,960	88,970	149,830	74,506	17,703	31,328	55,723
MEAN	633	4,006	5,673	6,308	11,400	6,805	2,966	4,833	2,484	571	1,011	1,857
MAX	3,550	7,510	30,400	21,300	38,400	13,700	5,580	12,600	9,770	1,220	3,850	5,660
MIN	310	1,650	1,440	2,600	2,200	3,520	1,460	1,330	846	401	380	300

CAL YR 1970 TOTAL 1,306,322 MEAN 3,579 MAX 39,400 MIN 310 CFSM 1.15 IN 15.63
WTR YR 1971 TOTAL 1,459,319 MEAN 3,998 MAX 38,400 MIN 300 CFSM 1.29 IN 17.46

PEAK DISCHARGE (BASE, 20,000 CFS)

DATE	TIME	G. H.	DISCHARGE	DATE	TIME	G. H.	DISCHARGE
12-23	1600	20.18	33,700	2-14	1515	17.21	24,700
1- 6	0500	16.85	23,700	2-23	1345	22.25	40,400

01610155 Sideling Hill Creek near Bellegrove, Md.

LOCATION.--Lat 39°38'58", long 78°20'40", Washington County, on left bank at Highway bridge on Pearre Road, 4 miles south of Bellegrove, and 1.2 miles upstream from mouth.

DRAINAGE AREA.--102 square miles.

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

GAGE.--Water-stage recorder. Altitude of gage is 450 ft (from topographic map).

EXTREMES.--Current year: Maximum discharge, 4,380 cfs Nov. 13 (gage height, 7.12 ft); minimum daily, 0.04 cfs July 29.
Period of record: Maximum discharge, 5,750 cfs Apr. 2, 1970 (gage height, 8.18 ft); minimum, no flow for many days in August and September 1968.

REMARKS.--Records fair.

REVISIONS (WATER YEARS).--WRD Md. and Del. 1970: 1967-69 (P).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10	329	61	72	58	433	57	22	48	5.8	5.2	1.6
2	7.2	188	54	94	54	298	54	19	38	5.6	18	1.3
3	5.2	366	51	104	62	242	52	23	36	4.0	23	1.2
4	4.0	454	55	264	62	210	45	24	36	3.0	22	1.2
5	3.2	218	59	1,170	68	166	41	22	29	2.3	63	1.0
6	2.7	129	50	579	86	184	39	406	24	1.8	37	.92
7	1.9	88	45	384	110	278	50	535	28	1.8	18	.81
8	1.6	65	37	300	84	382	60	602	83	1.8	11	.62
9	1.2	50	40	256	80	278	52	476	118	1.6	7.3	.62
10	.92	43	39	204	66	222	44	289	52	1.3	5.5	.46
11	.92	64	38	161	71	198	40	193	29	1.3	4.9	.62
12	1.2	463	50	146	86	180	39	147	21	2.0	4.6	2.1
13	1.2	2,390	173	150	357	218	38	234	29	4.5	3.5	36
14	1.7	903	160	153	1,260	293	39	412	59	3.7	2.7	94
15	2.1	831	134	172	568	260	36	300	131	4.2	3.5	52
16	1.7	571	112	155	329	226	35	256	113	3.5	312	27
17	1.7	327	233	144	237	170	35	219	85	2.1	64	17
18	2.1	214	432	135	228	134	39	170	68	1.6	30	16
19	1.5	155	408	105	477	131	39	140	52	1.4	17	13
20	1.4	126	320	100	1,030	157	32	437	40	1.3	11	13
21	2.9	147	247	126	1,840	150	31	2,210	34	1.0	8.4	44
22	35	112	413	120	1,920	141	30	652	28	.92	7.2	34
23	50	102	1,460	102	2,100	141	30	330	31	.81	5.9	24
24	31	84	1,560	96	861	128	29	207	24	.62	5.1	18
25	21	71	651	98	510	112	28	157	18	.62	4.9	13
26	16	65	394	95	489	104	26	115	13	.32	4.2	11
27	13	61	254	100	830	97	24	87	9.0	.54	4.0	11
28	10	58	184	130	725	90	23	70	7.0	.24	3.5	16
29	8.5	53	167	90	------	85	24	59	6.8	.04	2.9	13
30	13	57	120	100	------	76	24	58	8.0	.39	2.5	9.6
31	233	------	108	86	------	64	------	58	------	2.1	1.9	------
TOTAL	486.84	8,784	8,109	5,991	14,648	5,848	1,135	8,929	1,297.8	62.20	713.7	474.05
MEAN	15.7	293	262	193	523	189	37.8	288	43.3	2.01	23.0	15.8
MAX	233	2,390	1,560	1,170	2,100	433	60	2,210	131	5.8	312	94
MIN	.92	43	37	72	54	64	23	19	6.8	.04	1.9	.46
CFSM	.15	2.87	2.57	1.89	5.13	1.85	.37	2.82	.42	.02	.23	.15
IN.	.18	3.20	2.96	2.18	5.34	2.13	.41	3.26	.47	.02	.26	.17

CAL YR 1970 TOTAL 59,686.11 MEAN 164 MAX 3,990 MIN .24 CFSM 1.61 IN 21.77
WTR YR 1971 TOTAL 56,478.59 MEAN 155 MAX 2,390 MIN .04 CFSM 1.52 IN 20.60

PEAK DISCHARGE (BASE, 1,100 CFS)

DATE	TIME	G. H.	DISCHARGE	DATE	TIME	G. H.	DISCHARGE
11-13	1330	7.12	4,380	2-23	0230	5.86	2,950
12-23	2030	5.83	2,910	5- 6	1830	3.82	1,120
1- 5	0545	4.37	1,560	5-21	0445	6.07	3,170
2-13	2330	5.42	2,500	8-16	0500	3.92	1,200
2-21	0545	5.09	2,190				

01613000 Potomac River at Hancock, Md.

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

DRAINAGE AREA.--4,073 sq mi.

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

GAGE.--Water-stage recorder. Datum of gage is 383.46 ft above mean sea level, adjustment of 1912. 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.

AVERAGE DISCHARGE.--39 years, 3,906 cfs (13.02 inches per year).

EXTREMES.--Current year: Maximum discharge, 63,600 cfs Feb. 14 (gage height, 22.91 ft); minimum, 356 cfs Oct. 19 (gage height, 2.43 ft).
Period of record: Maximum discharge, 340,000 cfs Mar. 18, 1936 (gage height, 47.6 ft), from rating curve extended above 120,000 cfs on basis of slope-area measurement of peak flow; minimum observed, 180 cfs Oct. 4, 1932 (gage height, 2.01 ft).
Maximum stage known prior to 1932, about 40 ft in May 1889 (discharge, about 220,000 cfs).

REMARKS.--Records good. Slight regulation at low flow from power plants upstream. Low flow affected slightly by Stony River Reservoir (see station 01595200) and since December 1950 by Savage River Reservoir (see station 01597500). Records of water temperatures for the water year 1971 are published in Part 2 of this report.

REVISIONS (WATER YEARS).--WSP 781: 1933(M). WSP 801: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	706	5,290	2,030	4,080	6,400	17,400	4,340	1,790	17,800	1,040	1,350	557
2	586	5,630	1,980	3,480	4,600	14,100	4,010	1,760	9,790	1,360	2,080	533
3	532	5,780	1,930	3,420	3,200	11,900	3,790	1,970	7,030	1,330	3,400	476
4	479	8,140	1,890	4,180	3,500	10,500	3,680	1,900	5,900	1,070	5,930	431
5	449	7,860	1,920	12,800	4,100	9,210	3,410	1,660	4,580	944	7,460	401
6	424	6,580	2,050	25,700	7,400	8,250	3,150	2,390	3,890	849	7,510	742
7	403	6,120	2,080	20,500	8,200	9,130	3,160	6,550	3,830	754	4,680	780
8	391	5,400	1,950	14,000	6,000	14,600	3,730	8,920	4,080	703	3,060	605
9	380	4,490	1,810	10,800	5,400	13,600	4,850	12,100	3,980	648	2,220	462
10	374	3,490	1,720	8,370	4,800	10,500	5,910	10,200	3,540	613	1,760	714
11	371	3,210	1,680	6,980	3,900	8,890	7,080	7,500	2,870	625	1,450	695
12	381	3,740	1,720	6,190	3,800	7,800	6,750	5,880	2,470	664	1,210	752
13	440	9,770	2,170	6,920	5,800	7,380	5,830	5,440	2,250	707	1,060	1,520
14	451	12,400	3,640	7,740	40,000	8,330	5,170	10,800	2,520	761	1,080	4,840
15	558	10,300	3,850	7,530	49,700	9,690	4,680	11,300	3,580	693	980	6,370
16	519	10,100	3,760	12,900	26,900	10,300	4,260	9,180	4,150	615	1,370	6,770
17	441	7,650	3,810	11,400	13,700	10,700	3,850	8,500	3,700	552	1,090	5,090
18	386	5,950	4,730	9,000	8,870	9,410	3,600	7,980	3,140	510	1,310	3,900
19	365	4,880	5,450	7,590	12,600	7,850	3,440	6,920	2,810	496	1,030	3,590
20	365	4,180	4,910	7,300	17,300	7,020	3,210	6,170	2,370	486	840	3,370
21	414	3,800	4,910	5,600	32,100	7,400	2,900	11,700	2,040	489	762	3,450
22	515	3,680	5,210	4,720	36,600	6,610	2,700	10,600	1,910	509	724	4,050
23	1,430	3,380	28,600	4,660	46,000	6,440	2,570	6,970	1,990	508	668	3,870
24	1,520	3,160	37,700	4,550	40,100	5,780	2,450	5,240	1,850	482	771	3,090
25	1,370	2,840	25,200	5,310	24,000	5,390	2,320	4,370	1,850	492	790	2,550
26	1,120	2,520	16,900	5,260	17,400	4,900	2,200	3,790	1,730	470	686	2,220
27	890	2,310	11,800	5,070	16,500	4,580	2,070	3,290	1,600	465	632	1,990
28	761	2,180	8,520	6,000	19,400	4,330	1,950	2,870	1,330	466	565	2,020
29	676	2,110	6,870	4,940	------	4,120	1,870	2,540	1,190	534	504	2,170
30	714	2,140	5,560	4,090	------	4,340	1,850	2,420	1,070	571	518	1,970
31	2,190	------	4,610	4,210	------	4,560	------	9,120	------	723	677	------
TOTAL	20,601	159,080	210,960	245,290	468,270	265,010	110,780	191,820	110,840	21,129	58,167	69,978
MEAN	665	5,303	6,805	7,913	16,720	8,549	3,693	6,188	3,695	682	1,876	2,333
MAX	2,190	12,400	37,700	25,700	49,700	17,400	7,080	12,100	17,800	1,360	7,510	6,770
MIN	365	2,110	1,680	3,420	3,200	4,120	1,850	1,660	1,070	465	504	401
CFSM	.16	1.30	1.67	1.94	4.11	2.10	.91	1.52	.91	.17	.46	.57
IN.	.19	1.45	1.93	2.24	4.28	2.42	1.01	1.75	1.01	.19	.53	.64

CAL YR 1970 TOTAL 1,633,923 MEAN 4,477 MAX 52,700 MIN 365 CFSM 1.10 IN 14.92
WTR YR 1971 TOTAL 1,931,925 MEAN 5,293 MAX 49,700 MIN 365 CFSM 1.30 IN 17.64

PEAK DISCHARGE (BASE, 23,000 CFS)

DATE	TIME	G. H.	DISCHARGE	DATE	TIME	G. H.	DISCHARGE
12-23	2345	18.50	43,200	2-14	2130	22.91	63,600
1- 6	1715	14.64	28,000	2-23	1830	19.90	49,300

01614500 Conococheague Creek at Fairview, Md.

LOCATION.--Lat 39°42'57", long 77°49'28", Washington County, on right bank 0.7 mile upstream from highway bridge in Fairview, 2 miles upstream from Rockdale Run, 6.5 miles northwest of Hagerstown, and 18.7 miles upstream from mouth.

DRAINAGE AREA.--494 sq mi.

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

GAGE.--Water-stage recorder. Datum of gage is 391.77 ft above mean sea level, adjustment of 1912. Prior to Dec. 6, 1932, nonrecording gage at highway bridge 0.7 mile downstream at datum 2.85 ft lower. Dec. 6, 1932, to Oct. 7, 1933, nonrecording gage 150 ft downstream from former site at datum 4.84 ft lower than present datum.

AVERAGE DISCHARGE.--43 years, 550 cfs (15.12 inches per year).

EXTREMES.--Current year: Maximum discharge, 7,470 cfs Feb. 23 (gage height, 9.97 ft); minimum, 90 cfs Sept. 9, 10.
Period of record: Maximum discharge, 17,100 cfs Nov. 22, 1952 (gage height, 15.16 ft, from high-water mark in well); minimum, 21 cfs Aug. 8, Sept. 12, 1966; minimum daily, 25 cfs Nov. 28, 1930.
Maximum stage known, about 16.5 ft (present datum) sometime in 1889, from information by local residents (discharge, about 22,000 cfs).

REMARKS.--Records fair. Low flow partly regulated by small powerplants near Mercersburg, Pa. Records of chemical analyses, water temperatures, and suspended sediment loads for the water year 1971 are published in Part 2 of this report.

REVISIONS (WATER YEARS).--WSP 756: Drainage area. WSP 1432: 1929(M), 1930, 1931-32(M), 1935(M).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	202	1,170	761	840	420	2,550	630	310	488	237	393	113
2	191	786	650	800	370	2,160	609	306	432	231	370	113
3	180	1,650	598	770	350	1,930	596	346	488	213	449	113
4	160	2,700	617	1,060	340	1,800	555	326	614	194	661	105
5	155	1,450	575	3,150	430	1,560	522	296	488	188	643	99
6	146	985	522	2,520	552	1,680	505	752	574	183	428	100
7	137	748	476	1,870	635	1,940	638	1,390	568	178	307	99
8	131	604	450	1,460	544	1,970	630	1,200	846	172	242	100
9	127	507	433	1,200	689	1,600	546	1,140	601	165	204	97
10	123	466	433	1,100	550	1,420	499	919	470	155	186	94
11	125	1,030	414	1,060	490	1,330	469	780	414	165	179	126
12	127	2,430	566	1,000	490	1,240	450	694	385	222	205	337
13	131	3,960	1,190	930	1,770	1,240	440	995	377	219	185	261
14	123	3,020	924	911	3,730	1,270	426	1,580	391	191	161	245
15	125	2,970	772	905	1,910	1,180	412	1,220	1,630	164	144	186
16	121	2,630	684	790	1,430	1,170	400	1,180	1,040	156	144	150
17	121	1,880	1,750	700	1,270	1,050	394	1,170	715	147	139	224
18	123	1,520	2,210	640	1,720	955	397	948	559	144	138	239
19	117	1,270	1,700	590	2,970	948	382	827	469	146	130	182
20	119	1,190	1,400	580	3,510	1,280	368	947	416	155	129	234
21	133	1,920	1,180	580	4,260	1,240	363	1,360	386	151	133	340
22	602	1,470	1,680	580	4,790	1,190	354	988	366	143	130	301
23	758	1,240	2,990	599	6,970	1,160	347	794	333	136	130	220
24	383	1,030	3,720	617	4,690	1,060	337	696	310	131	127	191
25	279	889	2,480	575	3,240	951	327	653	292	128	118	170
26	234	796	1,990	630	2,820	892	324	668	270	129	112	158
27	209	743	1,600	590	3,210	842	317	562	260	133	116	245
28	185	695	1,360	470	3,090	797	318	506	247	122	154	238
29	172	643	1,160	470	------	763	338	475	247	123	167	210
30	191	799	1,010	540	------	719	337	506	250	211	142	181
31	856	------	910	530	------	671	------	577	------	435	124	------
TOTAL	6,786	43,191	37,205	29,057	57,240	40,558	13,230	25,111	14,926	5,467	6,890	5,471
MEAN	219	1,440	1,200	937	2,044	1,308	441	810	498	176	222	182
MAX	856	3,960	3,720	3,150	6,970	2,550	638	1,580	1,630	435	661	340
MIN	117	466	414	470	340	671	317	296	247	122	112	94
CFSM	.44	2.92	2.43	1.90	4.14	2.65	.89	1.64	1.01	.36	.45	.37
IN.	.51	3.25	2.80	2.19	4.31	3.05	1.00	1.89	1.12	.41	.52	.41

CAL YR 1970 TOTAL 324,398 MEAN 889 MAX 9,420 MIN 117 CFSM 1.80 IN 24.43
WTR YR 1971 TOTAL 285,132 MEAN 781 MAX 6,970 MIN 94 CFSM 1.58 IN 21.47

PEAK DISCHARGE (BASE, 4,300 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
12-23	2400	7.76	4,550	2-23	1030	9.97	7,470
2-14	0045	8.48	5,410				

01617800 Marsh Run at Grimes, Md.

LOCATION.--Lat 39°30'53", long 77°46'38", Washington County, on right bank 220 ft upstream from bridge on Sprecher Road, 0.1 mile downstream from unnamed tributary, 0.5 mile southwest of Grimes, 1.5 miles upstream from mouth, and 2.2 miles southwest of Fairplay.

DRAINAGE AREA.--18.9 sq mi.

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

GAGE.--Water-stage recorder. Altitude of gage is 360 ft (from topographic map).

AVERAGE DISCHARGE.--8 years, 9.46 cfs (6.80 inches per year).

EXTREMES.--Current year: Maximum discharge, 146 cfs Feb. 13 (gage height, 2.74 ft); minimum discharge, 2.7 cfs Sept. 11.
Period of record: Maximum discharge, 146 cfs Feb. 13, 1971 (gage height, 2.74 ft); minimum daily, 0.40 cfs Jan. 31, 1966, result of freezeup.

REMARKS.--Records good.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.8	8.9	9.0	12	12	33	16	12	14	9.5	11	4.8
2	6.7	7.6	8.6	12	11	33	16	13	13	9.2	12	4.7
3	6.5	16	8.7	12	11	36	16	13	15	8.9	8.2	4.5
4	6.5	13	8.2	19	10	37	17	12	14	8.8	10	4.3
5	6.4	10	8.2	29	11	35	17	12	14	8.5	15	4.1
6	6.4	8.6	7.9	25	13	38	17	17	16	8.4	9.6	4.1
7	6.2	7.9	7.8	22	15	38	23	15	30	8.2	8.3	4.1
8	6.2	7.4	7.7	19	18	32	19	21	25	8.0	7.7	3.8
9	5.9	7.2	7.9	17	23	30	16	14	18	8.1	7.2	3.8
10	5.9	8.1	7.9	16	17	29	15	13	15	7.9	7.1	3.7
11	5.8	13	7.8	16	16	29	15	13	14	8.3	8.1	3.3
12	5.6	13	9.2	16	22	27	15	12	15	8.3	7.7	5.4
13	5.6	12	9.0	16	68	28	15	19	14	7.8	6.8	12
14	5.6	13	8.1	17	45	25	14	17	14	7.4	6.5	15
15	8.7	14	7.9	18	29	24	14	15	14	7.2	6.4	8.5
16	6.3	12	8.5	16	25	22	14	17	14	7.2	6.3	6.7
17	5.9	11	14	15	26	21	14	16	13	7.1	6.3	12
18	5.9	10	11	15	30	21	14	14	12	7.0	6.2	8.1
19	5.5	9.9	9.8	14	34	23	13	13	12	7.4	6.2	6.4
20	4.5	12	9.0	14	35	25	13	13	12	7.1	5.8	12
21	7.8	14	9.2	13	35	21	13	13	11	6.9	5.2	38
22	11	12	16	13	43	21	13	14	10	6.6	3.9	15
23	7.2	11	20	15	54	20	13	14	10	6.5	3.3	13
24	6.9	9.9	21	15	41	19	12	14	11	6.8	3.1	12
25	6.5	9.5	17	15	37	19	12	14	10	6.9	3.8	9.7
26	6.3	9.5	16	15	36	19	12	14	10	6.1	3.7	9.7
27	6.1	9.8	15	14	42	18	12	14	10	5.4	6.6	9.7
28	5.9	9.4	13	14	36	18	13	14	9.8	5.1	6.4	8.6
29	5.9	9.3	12	13	------	18	14	14	9.9	5.3	5.1	8.0
30	7.5	9.2	12	14	------	18	13	21	9.7	5.7	5.2	8.0
31	11	------	12	13	------	17	------	20	------	6.2	4.7	------
TOTAL	205.0	318.2	339.4	494	795	794	440	457	409.4	227.8	213.4	263.0
MEAN	6.61	10.6	10.9	15.9	28.4	25.6	14.7	14.7	13.6	7.35	6.88	8.77
MAX	11	16	21	29	68	38	23	21	30	9.5	15	38
MIN	4.5	7.2	7.7	12	10	17	12	12	9.7	5.1	3.1	3.3
CFSM	.35	.56	.58	.84	1.50	1.35	.78	.78	.72	.39	.36	.46
IN.	.40	.63	.67	.97	1.56	1.56	.87	.90	.81	.45	.42	.52

CAL YR 1970 TOTAL 4,816.2 MEAN 13.2 MAX 65 MIN 3.7 CFSM .70 IN 9.48
WTR YR 1971 TOTAL 4,956.2 MEAN 13.6 MAX 68 MIN 3.1 CFSM .72 IN 9.76

PEAK DISCHARGE (BASE, 40 CFS)

DATE	TIME	G. H.	DISCHARGE	DATE	TIME	G. H.	DISCHARGE
2-13	1600	2.74	146	6- 7	1730	2.20	93
2-23	0200	1.85	59	8- 1	2130	1.69	43
2-27	0500	1.70	44	9-13	1900	1.66	41
3- 5	2045	1.67	42	9-21	0115	2.17	90

01618000 Potomac River at Shepherdstown, W. Va.

LOCATION.--Lat 39°26'04", long 77°48'07", Jefferson County, on right bank 0.1 mile downstream from Rumsey Bridge at Shepherdstown, 3.3 miles upstream from Antietam Creek, and at mile 184.

DRAINAGE AREA.--5,936 sq mi.

PERIOD OF RECORD.--August 1928 to current year (annual maximum only, October 1954 to June 1964). Gage-height record and estimated discharge October 1953 to June 1964 available in files of Maryland district office.

GAGE.--Water-stage recorder. Datum of gage is 281.00 ft above mean sea level, adjustment of 1912.

AVERAGE DISCHARGE.--32 years (1928-53, 1964-71), 5,662 cfs (12.95 inches per year).

EXTREMES.--Current year: Maximum discharge, 69,800 cfs Feb. 24 (gage height, 17.86 ft from high-water mark on gage house); minimum, 563 cfs Oct. 23 (gage height 1.53 ft).
Period of record: Maximum discharge, 335,000 cfs Mar. 19, 1936 (gage height, 42.1 ft, from floodmarks), from rating curve extended above 200,000 cfs on basis of slope-area measurements of peak flow at gage heights 32.68 and 42.1 ft; minimum, 170 cfs Aug. 1, 1966; minimum daily, 185 cfs July 31, 1966.
Floods in June 1889 and May 1924 reached stages of 39.2 and 29.8 ft respectively, from floodmarks (discharges, about 290,000 and 168,000 cfs, respectively, from rating curve extended as explained above).

REMARKS.--Records good except those for periods of no gage-height record, which are fair. Some regulation at low flow by powerplants above station, Stony River Reservoir (see station 01595200), and since December 1950 by Savage River Reservoir (see station 01597500).

REVISIONS (WATER YEARS).--WSP 756: Drainage area. WSP 781: 1929(M).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1,400	3,750	3,890	6,740	6,500	26,800	6,020	3,000	21,000	1,700	2,200	1,500
2	1,310	7,330	3,630	5,740	6,000	22,000	5,690	3,000	19,000	1,800	3,500	1,700
3	1,110	7,640	3,360	5,350	5,500	18,400	5,360	2,800	12,000	1,900	5,000	1,180
4	988	12,800	3,240	5,460	5,000	16,200	5,110	3,100	9,500	1,900	8,000	1,050
5	948	12,800	3,190	15,700	6,000	14,500	4,890	3,100	7,500	1,700	10,000	910
6	894	9,960	3,150	34,000	9,000	13,000	4,590	3,000	7,000	1,500	10,200	830
7	826	8,250	3,210	32,400	10,000	15,000	4,680	6,000	6,000	1,300	7,770	901
8	760	7,400	3,100	22,000	11,000	19,000	5,850	12,000	6,500	1,200	5,020	1,230
9	775	6,340	2,940	16,400	9,000	21,000	6,910	15,000	6,000	1,100	3,530	1,060
10	752	5,340	2,800	13,000	7,500	17,000	7,490	16,000	5,500	1,300	2,780	932
11	764	5,420	2,730	10,700	7,000	14,000	8,330	11,000	5,000	1,200	2,410	984
12	979	9,150	2,730	9,330	6,500	12,000	8,810	9,000	4,200	1,100	2,540	1,870
13	1,260	21,800	3,360	9,080	12,000	10,000	7,900	8,000	3,800	1,100	2,100	2,920
14	1,240	34,600	5,120	10,400	54,000	11,000	6,980	11,000	3,700	1,200	1,760	5,710
15	1,020	19,700	5,780	10,300	58,000	12,000	6,310	15,000	5,000	1,300	1,680	7,780
16	961	19,000	5,370	16,000	37,000	13,000	6,000	14,000	6,200	1,200	1,560	7,480
17	1,010	14,700	6,890	15,000	20,000	14,000	5,500	13,000	6,500	1,100	1,700	7,050
18	935	10,900	12,200	13,000	16,000	13,000	5,000	12,000	5,500	1,000	1,600	5,650
19	846	8,670	11,600	11,000	21,000	12,000	4,800	10,000	4,500	950	1,600	4,530
20	794	7,290	9,550	10,000	26,000	10,000	4,600	9,500	4,200	950	1,700	4,260
21	766	7,300	8,180	9,000	37,000	10,000	4,400	12,000	3,800	900	1,400	4,990
22	752	7,400	8,560	8,000	50,000	9,500	4,000	14,000	3,400	900	1,200	5,640
23	817	6,400	24,300	7,000	60,000	9,000	3,800	12,000	3,000	900	1,200	5,390
24	1,630	5,850	53,700	7,000	63,000	8,500	3,600	8,500	2,800	850	1,100	4,490
25	2,250	5,240	40,900	7,500	41,000	8,000	3,400	6,500	2,700	850	1,100	3,690
26	1,780	4,670	27,700	8,000	28,000	7,500	3,400	5,500	2,800	850	1,200	3,220
27	1,700	4,220	19,900	7,500	24,700	7,000	3,400	5,000	2,500	800	1,200	2,920
28	1,640	3,960	14,000	7,500	27,300	6,500	3,200	4,600	2,200	800	1,100	2,770
29	1,950	3,790	11,000	7,000	------	6,000	3,100	4,200	2,000	900	1,000	2,850
30	1,510	3,670	8,960	7,000	------	5,800	3,000	4,000	1,800	1,100	950	2,840
31	1,530	------	7,560	6,500	------	6,040	------	14,000	------	1,400	1,000	------
TOTAL	35,897	285,340	322,600	353,600	665,600	387,740	156,120	269,800	175,600	36,750	89,100	98,327
MEAN	1,158	9,511	10,410	11,410	23,770	12,510	5,204	8,703	5,853	1,185	2,874	3,278
MAX	2,250	34,600	53,700	34,000	63,000	26,800	8,810	16,000	21,000	1,900	10,200	7,780
MIN	752	3,670	2,730	5,350	5,000	5,800	3,000	2,800	1,800	800	950	830
CFSM	.20	1.60	1.75	1.92	4.00	2.11	.88	1.47	.99	.20	.48	.55
IN.	.22	1.79	2.02	2.22	4.17	2.43	.98	1.69	1.10	.23	.56	.62

CAL YR 1970 TOTAL 2,634,762 MEAN 7,219 MAX 74,700 MIN 752 CFSM 1.22 IN 16.51
WTR YR 1971 TOTAL 2,876,474 MEAN 7,881 MAX 63,000 MIN 752 CFSM 1.33 IN 18.03

PEAK DISCHARGE (BASE, 23,000 CFS)

DATE	TIME	G. H.	DISCHARGE	DATE	TIME	G. H.	DISCHARGE
11-14	0345	12.31	39,100	2-24	Unknown	*17.86	69,800
12-24	1015	15.68	57,000	3- 9	†	†	†
1- 6	2030	12.06	37,900	6- 1	†	†	†
2-15	†	†	†				

* Gage-height from high-water mark on gage house.
† Unknown (discharge greater than base).
NOTE.--No gage-height record Jan. 16 to Feb. 24, Mar. 6-30, and Apr. 16 to Aug. 5.

01619000 Antietam Creek near Waynesboro, Pa.

LOCATION.--Lat 39°42'59", long 77°36'28", Washington County, Md., on right bank 100 ft upstream from highway bridge at Rocky Forge, 0.4 mile downstream from Pennsylvania-Maryland State line, 0.7 mile downstream from confluence of west and east branches, 1.9 miles northeast of Leitersburg, Md., 2.5 miles southwest of Waynesboro, Pa., and 36.6 miles upstream from mouth.

DRAINAGE AREA.--93.5 sq mi.

PERIOD OF RECORD.--May 1948 to September 1951, October 1965 to current year.

GAGE.--Water-stage recorder. Datum of gage is 550.64 ft above mean sea level (Corps of Engineers bench mark). May 1948 to September 1951, nonrecording gage and crest-stage gage 100 ft downstream at present datum.

AVERAGE DISCHARGE.--9 years (1948-51, 1965-71), 102 cfs (14.81 inches per year).

EXTREMES.--Current year: Maximum discharge, 1,140 cfs Feb. 13 (gage height, 6.02 ft); minimum, 36 cfs Sept. 10, 11 (gage height, 3.22 ft).
Period of record: Maximum discharge, 2,040 cfs July 29, 1970; maximum gage height, 8.55 ft Nov. 25, 1950; minimum daily, 11 cfs Jan. 30, 1966.

REMARKS.--Records good. Occasional regulation from mills above station.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	47	64	78	115	80	343	133	82	114	78	114	44
2	46	53	74	110	72	305	136	98	108	78	125	44
3	45	199	74	111	70	300	130	98	160	72	127	44
4	44	111	80	206	68	287	122	85	188	68	148	42
5	44	76	72	347	90	253	119	82	133	68	125	41
6	44	66	70	249	119	257	133	240	127	68	76	40
7	44	59	66	206	103	339	154	164	185	66	64	40
8	42	56	64	181	136	292	133	225	171	62	59	39
9	45	54	64	170	151	249	122	185	136	60	57	39
10	44	62	64	160	96	236	114	160	122	60	56	38
11	42	78	62	151	88	228	111	145	114	70	68	41
12	42	154	87	148	103	217	108	148	111	78	64	66
13	42	154	82	139	616	240	106	270	111	64	54	50
14	41	151	74	145	296	214	103	245	157	62	53	44
15	49	160	68	142	188	210	101	188	356	60	52	41
16	46	157	78	120	170	199	101	214	167	59	50	40
17	41	136	232	110	170	185	98	185	142	57	50	44
18	40	101	151	105	199	174	98	160	127	54	50	41
19	41	94	133	98	221	217	94	151	116	59	54	41
20	41	122	122	96	287	240	94	148	108	57	52	54
21	70	145	114	103	356	195	94	167	103	54	47	89
22	119	106	171	106	522	192	92	142	101	53	47	47
23	54	103	249	111	670	185	92	130	96	52	47	42
24	47	94	249	106	490	174	89	125	92	54	44	41
25	46	87	202	103	398	164	87	125	87	59	44	40
26	45	85	178	116	356	160	87	117	85	54	42	44
27	44	82	160	96	468	157	85	108	82	52	70	50
28	42	80	140	90	385	154	87	106	85	50	68	44
29	41	78	130	86	------	151	94	106	82	52	47	41
30	53	94	130	92	------	145	85	139	80	57	46	40
31	89	------	125	92	------	136	------	160	------	66	44	------
TOTAL	1,520	3,061	3,643	4,210	6,968	6,798	3,202	4,698	3,846	1,903	2,044	1,351
MEAN	49.0	102	118	136	249	219	107	152	128	61.4	65.9	45.0
MAX	119	199	249	347	670	343	154	270	356	78	148	89
MIN	40	53	62	86	68	136	85	82	80	50	42	38
CFSM	.52	1.09	1.26	1.45	2.66	2.34	1.14	1.63	1.37	.66	.70	.48
IN.	.60	1.22	1.45	1.67	2.77	2.70	1.27	1.87	1.53	.76	.81	.54

CAL YR 1970 TOTAL 45,327 MEAN 124 MAX 960 MIN 40 CFSM 1.33 IN 18.03
WTR YR 1971 TOTAL 43,244 MEAN 118 MAX 670 MIN 38 CFSM 1.26 IN 17.21

PEAK DISCHARGE (BASE, 850 CFS).--Feb. 13 (1715) 1,140 cfs (6.02 ft).

01619500 Antietam Creek near Sharpsburg, Md.

LOCATION.--Lat 39°27'01", long 77°43'52", Washington County, on left bank 400 ft downstream from Burnside Bridge, 1 mile southeast of Sharpsburg, and 4 miles upstream from mouth.

DRAINAGE AREA.--281 sq mi.

PERIOD OF RECORD.--June 1897 to September 1905. August 1928 to current year. Monthly discharge only for some periods, published in WSP 1302.

GAGE.--Water-stage recorder. Concrete control since Mar. 29, 1934. Datum of gage is 311.00 ft above mean sea level, adjustment of 1912. June 24, 1897, to Aug. 25, 1905, nonrecording gage a few hundred feet downstream from Middle Bridge, 1.2 miles upstream at datum about 12 feet higher. Aug. 21, 1928, to July 13, 1933, nonrecording gage at Burnside Bridge at present datum.

AVERAGE DISCHARGE.--48 years (1897-1903, 1904-5, 1930-1971), 257 cfs (12.42 inches per year), adjusted for inflow since 1930.

EXTREMES.--Current year: Maximum discharge, 2,670 cfs Feb. 13 (gage height, 7.15 ft); minimum, 122 cfs part of each day Sept. 8-11 (gage height, 2.45 ft).
Period of record: Maximum discharge, 12,600 cfs July 20, 1956 (gage height, 16.73 ft), from rating curve extended above 4,300 cfs on basis of contracted-opening measurement of peak flow; minimum discharge, 9.4 cfs Nov. 22, 1957, result of regulation caused by construction work above station; minimum daily, 37 cfs Jan. 30, 1966.

REMARKS.--Records good. Some diurnal fluctuation caused by powerplant above station. Since 1928, records include pumpage from Potomac River for municipal supply of Hagerstown. This water later enters Antietam Creek above station as sewage. Records of chemical analyses and water temperatures for the water year 1971 are published in Part 2 of this report.

REVISIONS (WATER YEARS).--WSP 192: 1897-1905. WSP 726: Drainage area. WSP 1432: 1929-31(M), 1933, 1935(M), 1937(M), 1949(M), 1952(M).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	146	206	228	320	260	876	392	262	391	216	219	136
2	144	166	211	300	240	809	388	269	327	208	372	136
3	141	289	205	300	230	790	389	297	344	200	241	134
4	135	426	208	391	230	810	370	271	400	188	348	132
5	134	256	202	864	290	722	360	256	379	183	341	128
6	137	208	192	760	392	724	359	351	374	182	243	126
7	135	187	185	600	365	784	453	489	387	183	192	127
8	134	174	186	520	350	812	428	473	467	177	176	125
9	132	166	183	500	480	714	382	479	377	173	168	125
10	132	170	183	480	398	676	365	408	339	170	165	133
11	131	232	181	456	340	657	354	373	319	171	189	127
12	130	264	201	439	382	628	346	354	310	195	192	198
13	130	313	226	426	1,160	629	343	479	302	181	169	178
14	128	283	201	421	1,590	623	338	588	302	177	156	178
15	164	294	191	432	691	585	326	471	506	173	151	150
16	144	336	191	380	582	576	322	483	434	176	153	135
17	132	280	352	340	567	542	320	495	352	174	150	157
18	127	260	388	320	593	514	319	438	321	167	149	151
19	125	248	301	310	640	528	306	421	298	172	151	144
20	126	269	278	300	694	645	301	398	285	173	154	152
21	150	377	267	310	816	564	301	420	275	165	146	341
22	292	306	376	321	992	526	297	386	270	160	146	216
23	212	272	504	340	1,630	514	290	349	259	157	143	163
24	154	266	661	340	1,360	494	284	331	251	157	139	151
25	142	247	545	327	1,060	474	276	328	242	203	136	145
26	137	237	495	320	939	462	274	326	235	171	134	146
27	135	230	453	300	1,040	450	272	301	227	165	167	155
28	130	225	416	280	1,000	437	273	291	219	158	207	156
29	128	219	386	260	------	433	284	292	222	158	162	145
30	142	222	360	300	------	422	274	376	219	173	143	141
31	202	------	340	290	------	404	------	496	------	192	139	------
TOTAL	4,531	7,628	9,296	12,247	19,311	18,824	9,986	11,951	9,633	5,498	5,741	4,631
MEAN	146	254	300	395	690	607	333	386	321	177	185	154
MAX	292	426	661	864	1,630	876	453	588	506	216	372	341
MIN	125	166	181	260	230	404	272	256	219	157	134	125
(†)	-13.1	-11.0	-6.9	-5.7	-6.0	-5.5	-6.5	-5.5	-6.8	-10.8	-11.3	-13.0
MEAN ‡	133	243	293	389	684	602	326	380	314	166	174	141
CFSM ‡	.47	.86	1.04	1.38	2.43	2.14	1.16	1.35	1.12	.59	.62	.50
IN ‡	.54	.96	1.20	1.59	2.53	2.47	1.29	1.56	1.25	.68	.72	.56

CAL YR 1970 TOTAL 124,639 MEAN 341 MAX 1,810 MIN 110 MEAN‡ 333 CFSM‡ 1.19 IN‡ 16.15
WTR YR 1971 TOTAL 119,277 MEAN 327 MAX 1,630 MIN 125 MEAN‡ 318 CFSM‡ 1.13 IN‡ 15.34

PEAK DISCHARGE (BASE, 1,500 CFS)

DATE	TIME	G. H.	DISCHARGE	DATE	TIME	G. H.	DISCHARGE
2-13	2115	7.15	2,670	2-23	1800	5.67	1,680

† Pumpage, in cubic feet per second, from Potomac River for municipal supply of Hagerstown.
‡ Adjusted for pumpage.

01636500 Shenandoah River at Millville, W. Va.

LOCATION.--Lat 39°16'55", long 77°47'22", Jefferson County, on left bank 0.4 mile downstream from Cattail Run, 1.0 mile upstream from Millville, 5.0 miles upstream from Harpers Ferry, and at mile 5.0.

DRAINAGE AREA.--3,040 sq mi.

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

GAGE.--Water-stage recorder. Datum of gage is 293.00 ft above mean sea level, adjustment of 1912. Apr. 15, 1895, to Mar. 31, 1909, nonrecording gage at site 0.8 mile downstream at datum 0.32 ft higher.

AVERAGE DISCHARGE.--56 years (1895-1908, 1928-71), 2,592 cfs (11.58 inches per year).

EXTREMES.--Current year: Maximum discharge, 61,300 cfs June 1 (gage height, 17.04 ft); minimum, 358 cfs Oct. 10 (gage height, 1.16 ft); minimum daily, 400 cfs Oct. 11.
Period of record: Maximum discharge, 230,000 cfs Oct. 16, 1942 (gage height, 32.4 ft, from floodmarks); minimum, about 59 cfs Oct. 4, 1930 (gage height, 0.39 ft); minimum daily, 194 cfs July 24, 1930.
Flood of 1870 reached practically same stage as flood of Mar. 18, 1936, 26.36 ft (discharge, 151,000 cfs).

REMARKS.--Records good. Regulation by hydroelectric plants, particularly that of Potomac Light and Power Co., 0.5 mile upstream from station.

REVISIONS (WATER YEARS).--WSP 951: 1936(M). WSP 1432: Drainage area at former site, 1895-99, 1901-2, 1905, 1907-8, 1932(M), 1935(M).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	505	1,160	1,650	2,200	2,320	5,470	2,120	1,580	50,700	1,530	1,340	1,230
2	520	4,160	1,580	1,950	1,940	4,880	2,050	1,580	19,600	1,710	1,570	867
3	468	4,490	1,440	2,070	1,810	4,610	2,050	1,540	11,900	1,800	1,560	744
4	458	4,360	1,400	2,130	1,790	4,700	2,020	1,530	8,750	1,750	1,690	796
5	454	5,070	1,420	3,150	1,950	5,460	1,950	1,480	7,010	1,690	2,100	780
6	457	5,550	1,370	6,820	2,390	5,980	1,880	1,470	6,380	1,390	3,740	722
7	438	5,060	1,210	11,400	2,750	5,740	2,160	1,420	5,170	1,250	3,030	719
8	476	4,020	1,230	8,720	3,860	6,140	3,840	1,480	4,680	1,220	1,950	742
9	467	3,180	1,200	6,400	3,120	6,240	4,570	1,660	4,610	1,470	1,600	722
10	422	2,640	1,190	5,090	2,840	5,690	5,300	1,670	4,170	1,400	1,310	792
11	400	2,620	1,120	4,270	2,680	5,040	6,050	1,570	3,390	1,250	1,280	898
12	466	4,550	1,180	3,710	2,400	4,500	6,110	1,480	2,930	1,370	1,320	1,760
13	464	14,100	1,160	3,390	3,300	4,100	5,350	1,510	3,050	1,570	1,500	2,310
14	408	10,300	1,180	3,280	19,700	3,720	4,570	2,080	3,250	1,760	1,290	3,030
15	474	6,970	1,200	3,970	27,100	3,420	3,990	2,660	3,390	1,390	1,220	2,950
16	479	5,590	1,290	4,920	11,900	3,210	3,510	3,130	3,530	1,200	1,200	2,010
17	516	4,790	1,600	5,060	8,010	3,020	3,150	4,260	3,540	1,130	944	1,950
18	463	4,030	2,300	4,140	6,330	2,920	2,970	4,400	3,720	1,090	932	1,610
19	417	3,380	2,280	3,600	5,580	2,810	2,740	4,300	3,370	1,060	1,010	1,420
20	445	3,010	2,240	3,080	5,440	2,850	2,520	3,710	2,920	1,110	961	1,400
21	540	3,210	2,080	2,990	5,990	2,860	2,350	4,900	2,630	1,120	866	2,050
22	574	3,140	2,270	2,680	7,040	2,910	2,190	5,610	2,590	1,050	967	2,280
23	644	3,140	5,560	2,580	8,790	2,770	2,080	7,780	2,450	1,070	957	2,140
24	675	2,850	8,140	2,880	11,800	2,590	2,020	5,600	2,380	964	888	1,900
25	905	2,600	7,050	2,980	10,300	2,430	1,970	4,400	2,510	979	852	1,710
26	775	2,370	5,620	2,950	8,020	2,350	1,930	3,880	2,400	1,030	823	1,490
27	683	2,190	4,500	2,970	6,790	2,260	1,890	3,120	2,080	995	903	1,410
28	604	1,900	3,770	2,780	6,050	2,240	1,720	2,650	1,850	978	942	1,400
29	520	1,890	3,170	2,460	------	2,250	1,680	2,360	1,730	1,080	945	1,360
30	529	1,900	2,760	2,080	------	2,190	1,630	4,060	1,690	1,320	975	1,260
31	747	------	2,430	2,810	------	2,170	------	35,600	------	1,600	1,130	------
TOTAL	16,393	124,220	76,590	119,510	181,990	117,520	88,360	124,470	178,370	40,326	41,795	44,452
MEAN	529	4,141	2,471	3,855	6,500	3,791	2,945	4,015	5,946	1,301	1,348	1,482
MAX	905	14,100	8,140	11,400	27,100	6,240	6,110	35,600	50,700	1,800	3,740	3,030
MIN	400	1,160	1,120	1,950	1,790	2,170	1,630	1,420	1,690	964	823	719
CFSM	.17	1.36	.81	1.27	2.14	1.25	.97	1.32	1.96	.43	.44	.49
IN.	.20	1.52	.94	1.46	2.23	1.44	1.08	1.52	2.18	.49	.51	.54

CAL YR 1970 TOTAL 887,541 MEAN 2,432 MAX 15,200 MIN 400 CFSM .80 IN 10.86
WTR YR 1971 TOTAL 1,153,996 MEAN 3,162 MAX 50,700 MIN 400 CFSM 1.04 IN 14.12

PEAK DISCHARGE (BASE, 15,000 CFS)

DATE	TIME	G. H.	DISCHARGE	DATE	TIME	G. H.	DISCHARGE
11-13	1315	8.94	16,900	6-1	0445	17.04	61,300
2-15	0315	12.86	35,200				

01637500 Catoctin Creek near Middletown, Md.

LOCATION.--Lat 39°25'35", long 77°33'25", Frederick County, on right bank 300 ft downstream from bridge on State Highway 17, 1.3 miles south of Middletown, 2.2 miles downstream from Little Catoctin Creek, and 14.8 miles upstream from mouth.

DRAINAGE AREA.--66.9 sq mi.

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

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 385 ft (from topographic map).

AVERAGE DISCHARGE.--24 years, 67.6 cfs (13.72 inches per year).

EXTREMES.--Current year: Maximum discharge, 1,590 cfs Feb. 13 (gage height, 4.80 ft); minimum, 4.4 cfs Sept. 11 (gage height, 0.96 ft).
Period of record: Maximum discharge, 7,760 cfs July 18, 1949 (gage height, 11.18 ft), from rating curve extended above 1,500 cfs on basis of slope-area measurement of peak flow; no flow Aug. 27 to Sept. 12, 1966.

REMARKS.--Records good.

REVISIONS (WATER YEARS).--WSP 1432: 1947-48.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.9	45	37	100	70	247	57	36	127	28	20	7.9
2	6.4	27	34	170	65	212	58	37	102	21	40	7.4
3	6.0	160	31	150	60	205	60	44	95	18	20	7.1
4	5.5	108	34	300	55	205	52	36	107	16	45	6.4
5	5.2	90	31	462	55	178	49	33	118	15	101	5.7
6	5.1	61	28	328	100	187	133	81	93	15	31	13
7	4.9	48	25	220	104	248	357	71	104	14	20	7.9
8	4.9	39	25	170	305	207	268	149	122	13	15	5.6
9	5.0	33	26	140	175	172	185	111	80	12	13	5.1
10	5.1	29	25	130	90	159	145	86	69	12	11	4.8
11	5.2	35	24	120	80	149	120	76	61	13	26	11
12	5.7	105	31	110	95	134	104	72	58	16	17	38
13	5.7	86	45	107	738	129	94	170	58	14	13	82
14	5.6	66	31	107	359	118	84	149	56	12	11	32
15	23	98	26	117	190	113	76	113	67	12	9.4	22
16	22	94	30	90	149	110	72	196	58	10	11	15
17	9.5	75	200	85	144	93	68	163	50	9.6	9.3	46
18	7.1	64	132	80	180	84	67	137	42	8.7	8.6	28
19	6.2	56	113	75	223	102	59	120	38	9.9	8.7	21
20	5.7	97	96	60	291	134	55	107	35	12	9.1	22
21	21	165	82	65	346	103	54	110	33	9.9	7.9	156
22	95	102	176	73	594	98	52	91	32	8.4	7.0	42
23	28	87	268	88	792	93	49	79	28	7.3	6.8	28
24	18	71	336	80	504	85	46	73	27	7.0	5.5	24
25	14	64	254	71	370	79	43	76	25	8.5	5.1	20
26	13	56	190	85	303	78	41	72	24	8.8	4.8	22
27	11	51	150	65	397	73	39	59	24	8.2	17	28
28	10	47	120	60	300	72	40	55	22	6.8	32	23
29	10	43	110	65	------	70	41	55	22	9.4	15	20
30	14	41	100	80	------	65	39	166	23	14	9.7	17
31	59	------	95	75	------	60	------	232	------	16	7.8	------
TOTAL	443.7	2,143	2,905	3,928	7,134	4,062	2,607	3,055	1,800	385.5	557.7	767.9
MEAN	14.3	71.4	93.7	127	255	131	86.9	98.5	60.0	12.4	18.0	25.6
MAX	95	165	336	462	792	248	357	232	127	28	101	156
MIN	4.9	27	24	60	55	60	39	33	22	6.8	4.8	4.8
CFSM	.21	1.07	1.40	1.90	3.81	1.96	1.30	1.47	.90	.19	.27	.38
IN.	.25	1.19	1.62	2.18	3.97	2.26	1.45	1.70	1.00	.21	.31	.43

CAL YR 1970 TOTAL 32,519.9 MEAN 89.1 MAX 818 MIN 4.8 CFSM 1.33 IN 18.08
WTR YR 1971 TOTAL 29,788.8 MEAN 81.6 MAX 792 MIN 4.8 CFSM 1.22 IN 16.56

PEAK DISCHARGE (BASE, 1,200 CFS).--Feb. 13 (1600) 1,590 cfs (4.80 ft).

01638500 Potomac River at Point of Rocks, Md.

LOCATION.--Lat 39°16'25", long 77°32'35", Frederick County, on left bank at downstream side of bridge on U.S. Highway 15 at Point of Rocks, 0.3 mile downstream from Catoctin Creek (Virginia), 6 miles upstream from Monocacy River, and at mile 159.5.

DRAINAGE AREA.--9,651 sq mi.

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

GAGE.--Water-stage recorder. Datum of gage is 200.54 ft above mean sea level, adjustment of 1912. Prior to October 28, 1929, nonrecording gage at same site. Prior to Sept. 2, 1902, at datum about 0.45 ft higher.

AVERAGE DISCHARGE.--76 years, 9,079 cfs (12.77 inches per year).

EXTREMES.--Current year: Maximum discharge, 86,400 cfs Feb. 24 (gage height, 15.92 ft); minimum, 1,200 cfs Oct. 11 (gage height, 0.70 ft).
Period of record: Maximum discharge, 480,000 cfs Mar. 19, 1936 (gage height, 41.03 ft), from rating curve extended above 300,000 cfs on basis of adjustment of figure of peak flow at station near Washington for inflow and storage, and slope-area measurement of peak flow; minimum, 530 cfs Sept. 11, 12, 1966 (gage height, 0.27 ft).
Flood of June 2, 1889, reached a stage of 40.2 ft, from floodmarks (discharge, about 460,000 cfs, from rating curve extended as explained above).

REMARKS.--Records good. Low flow affected slightly since 1913 by Stony River Reservoir (see station 01595200) and since December 1950 by Savage River Reservoir (see station 01597500). Low flow affected extensively at times by run-of-the-river hydroelectric plants. Records of chemical analyses, water temperatures, and suspended sediment loads for the water year 1971 are published in Part 2 of this report.

REVISIONS (WATER YEARS).--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).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2,030	2,950	6,190	10,000	9,000	35,500	9,590	5,240	73,800	3,980	2,850	3,760
2	1,970	11,000	5,960	8,600	8,800	30,700	9,280	5,250	44,700	3,990	4,720	3,080
3	1,880	13,400	5,640	8,200	7,500	26,400	8,850	5,140	27,400	4,030	5,670	2,220
4	1,660	17,000	5,310	8,600	6,800	24,300	8,470	5,270	21,400	4,130	7,890	2,160
5	1,590	19,400	5,160	15,000	7,200	22,500	8,150	5,170	16,900	4,080	11,600	2,080
6	1,520	17,400	5,130	36,800	8,570	21,700	7,860	5,110	14,700	3,520	14,600	1,910
7	1,430	15,100	4,920	46,800	10,100	21,500	8,720	7,320	13,100	3,270	13,700	1,820
8	1,390	13,100	4,840	36,400	15,700	24,800	10,400	14,400	12,900	2,960	9,060	1,810
9	1,350	11,200	4,670	26,900	14,200	29,600	12,900	18,200	12,600	2,930	6,500	2,010
10	1,300	9,480	4,500	21,300	11,200	25,900	14,100	19,900	11,400	3,130	5,190	1,990
11	1,220	8,800	4,230	17,300	10,000	21,700	15,400	16,100	9,830	2,800	4,410	2,370
12	1,270	12,700	4,350	15,100	9,650	19,100	16,500	12,800	8,460	2,740	4,640	6,540
13	1,410	29,700	4,570	14,000	13,000	17,200	15,300	11,500	7,960	2,930	4,260	5,630
14	1,660	46,000	6,250	15,100	35,200	16,400	13,500	13,700	8,040	3,400	3,630	8,560
15	1,750	32,100	7,790	15,700	73,000	17,100	12,100	21,500	8,570	3,050	3,240	11,900
16	1,700	26,500	7,630	18,700	44,300	18,000	11,000	20,400	11,100	2,840	3,130	11,100
17	1,620	22,500	9,160	22,900	29,900	18,300	10,100	19,500	11,100	2,610	2,990	11,400
18	1,600	17,400	14,800	18,400	23,900	18,000	9,480	18,600	10,300	2,560	2,920	9,190
19	1,510	14,100	16,000	15,500	22,800	16,400	8,920	17,000	9,140	2,510	2,930	7,370
20	1,390	12,200	14,000	13,500	30,100	15,200	8,420	14,800	8,150	2,420	3,050	6,720
21	1,480	12,000	12,000	12,700	40,200	14,900	8,010	16,800	7,210	2,360	2,750	7,740
22	1,810	12,400	12,600	11,000	59,700	14,900	7,420	23,300	6,740	2,260	2,510	8,810
23	1,650	11,200	22,500	10,800	72,400	13,900	6,990	22,500	6,290	2,210	2,480	8,950
24	1,700	10,100	58,900	10,900	83,200	13,300	6,750	16,300	6,070	2,160	2,330	8,150
25	2,670	9,170	54,600	11,400	60,700	12,200	6,490	13,100	6,240	2,240	2,240	6,810
26	3,060	8,230	38,700	12,200	42,400	11,600	6,250	11,700	5,840	2,230	2,170	5,920
27	2,570	7,540	28,700	11,800	35,500	10,800	6,100	10,100	5,550	2,250	2,490	5,300
28	2,380	6,830	21,200	10,800	35,300	10,300	5,740	8,680	4,930	2,140	2,650	4,880
29	2,460	6,510	16,300	10,000	------	9,930	5,600	7,810	4,530	2,280	2,440	4,700
30	2,500	6,370	13,900	9,000	------	9,540	5,380	9,200	4,210	2,800	2,370	4,790
31	2,540	------	11,800	9,200	------	9,520	------	33,400	------	3,090	2,420	------
TOTAL	56,070	442,380	432,300	504,600	820,320	571,190	283,770	429,790	399,160	89,900	143,830	169,670
MEAN	1,809	14,750	13,950	16,280	29,300	18,430	9,459	13,860	13,310	2,900	4,640	5,656
MAX	3,060	46,000	58,900	46,800	83,200	35,500	16,500	33,400	73,800	4,130	14,600	11,900
MIN	1,220	2,950	4,230	8,200	6,800	9,520	5,380	5,110	4,210	2,140	2,170	1,810
CFSM	.19	1.53	1.45	1.69	3.04	1.91	.98	1.44	1.38	.30	.48	.59
IN.	.22	1.71	1.67	1.94	3.16	2.20	1.09	1.66	1.54	.35	.55	.65

CAL YR 1970 TOTAL 3,885,630 MEAN 10,650 MAX 80,700 MIN 1,220 CFSM 1.10 IN 14.98
WTR YR 1971 TOTAL 4,342,980 MEAN 11,900 MAX 83,200 MIN 1,220 CFSM 1.23 IN 16.74

PEAK DISCHARGE (BASE, 35,000 CFS)

DATE	TIME	G. H.	DISCHARGE	DATE	TIME	G. H.	DISCHARGE
11-14	0830	10.80	49,300	2-24	0600	15.92	86,400
12-24	1800	13.44	67,100	3- 1	0430	8.63	36,300
1- 7	1100	10.60	48,100	6- 1	1400	15.40	82,200
2-15	0700	15.28	81,200				

01639000 Monocacy River at Bridgeport, Md.

LOCATION.--Lat 39°40'43", long 77°14'06", Frederick County, on right bank 60 ft downstream from bridge on State Highway 97 at Bridgeport, 0.9 mile upstream from Cattail Branch, 3.4 miles northwest of Taneytown, 4.8 miles downstream from confluence of Rock and Marsh Creeks at Pennsylvania-Maryland State line, and 49 miles upstream from mouth.

DRAINAGE AREA.--173 sq mi.

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

GAGE.--Water-stage recorder. Concrete control since Sept. 15, 1947. Datum of gage is 340.83 ft above mean sea level (Corps of Engineers bench mark). Prior to May 3, 1946, nonrecording gage and crest-stage gages at site 0.3 mile downstream at datum 0.98 ft lower.

AVERAGE DISCHARGE.--29 years, 188 cfs (14.76 inches per year).

EXTREMES.--Current year: Maximum discharge, 6,880 cfs Feb. 13 (gage height, 12.30 ft); minimum, 4.6 cfs Oct. 6, 7, 8 (gage height, 1.88 ft).
Period of record: Maximum discharge, 15,000 cfs May 21, 1943 (gage height, 20.53 ft, former site and datum), from rating curve extended above 6,700 cfs on basis of velocity-area studies; no flow July 24-29, 1966.
Flood of Aug. 24, 1933, reached a stage of about 25 ft, present site and datum, from floodmarks; stage exceeded that of June 1889, from information by local residents.

REMARKS.--Records good. Occasional regulation at low flow from unknown source above station.

REVISIONS (WATER YEARS).--WSP 1382: 1944(M).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.7	157	222	70	45	498	92	44	142	28	33	19
2	7.3	72	157	65	21	401	90	42	76	40	156	16
3	7.2	243	128	70	18	351	101	68	83	31	112	15
4	6.2	426	162	120	18	582	86	54	160	21	206	14
5	5.3	346	137	1,810	20	513	77	43	90	18	297	12
6	4.8	139	102	1,170	110	955	77	280	67	16	114	11
7	4.7	83	80	583	176	1,540	236	317	153	16	51	9.9
8	4.7	63	64	280	303	662	185	598	180	17	34	9.0
9	5.0	52	71	220	970	313	116	444	101	15	25	8.8
10	5.3	46	68	200	344	268	96	210	68	13	20	7.9
11	5.6	54	68	190	191	263	82	151	55	17	19	10
12	6.2	427	151	197	188	239	73	120	48	29	18	46
13	6.9	731	417	202	2,770	298	69	669	44	29	22	77
14	6.4	299	188	185	2,810	281	67	744	46	18	16	65
15	10	1,220	137	221	648	233	60	253	260	15	13	29
16	24	610	116	160	415	233	56	613	134	14	12	20
17	18	249	2,650	130	412	180	55	476	94	12	11	18
18	12	189	662	110	1,010	150	54	230	64	11	10	23
19	8.6	160	341	90	1,980	360	51	169	51	10	13	21
20	7.4	430	256	70	1,790	1,180	46	136	44	9.7	26	26
21	10	1,430	202	65	1,630	512	45	150	44	10	18	351
22	206	306	1,170	75	2,540	307	45	135	39	10	14	104
23	92	217	1,990	89	3,180	243	43	98	34	8.6	11	53
24	37	155	1,720	99	1,120	195	41	79	31	7.6	9.0	40
25	24	179	550	95	793	167	40	75	28	6.9	7.6	31
26	20	178	390	136	704	159	39	70	26	7.9	7.3	26
27	17	177	250	160	1,790	145	38	60	29	10	11	51
28	15	175	220	90	834	134	38	54	33	8.4	366	62
29	14	164	160	70	------	127	68	52	36	7.4	97	45
30	15	469	110	79	------	116	56	77	30	19	37	35
31	139	------	100	87	------	101	------	309	------	34	24	------
TOTAL	753.3	9,446	13,039	7,188	26,830	11,706	2,222	6,820	2,290	509.5	1,809.9	1,255.6
MEAN	24.3	315	421	232	958	378	74.1	220	76.3	16.4	58.4	41.9
MAX	206	1,430	2,650	1,810	3,180	1,540	236	744	260	40	366	351
MIN	4.7	46	64	65	18	101	38	42	26	6.9	7.3	7.9
CFSM	.14	1.82	2.43	1.34	5.54	2.19	.43	1.27	.44	.09	.34	.24
IN.	.16	2.03	2.80	1.55	5.77	2.52	.48	1.47	.49	.11	.39	.27

CAL YR 1970 TOTAL 109,304.8 MEAN 299 MAX 6,790 MIN 4.7 CFSM 1.73 IN 23.50
WTR YR 1971 TOTAL 83,869.3 MEAN 230 MAX 3,180 MIN 4.7 CFSM 1.33 IN 18.03

PEAK DISCHARGE (BASE, 4,800 CFS)

DATE	TIME	G. H.	DISCHARGE	DATE	TIME	G. H.	DISCHARGE
12-17	1000	10.23	4,810	2-13	2400	12.30	6,880

01639500 Big Pipe Creek at Bruceville, Md.

LOCATION.--Lat 39°36'45", long 77°14'10", Carroll County, on left bank 300 ft downstream from bridge on State Highway 194, 800 ft downstream from Bruceville, 3.5 miles upstream from Detour, and confluence with Little Pipe Creek.

DRAINAGE AREA.--102 sq mi.

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 (from topographic map).

AVERAGE DISCHARGE.--24 years, 97.8 cfs (13.02 inches per year).

EXTREMES.--Current year: Maximum discharge, 3,120 cfs Feb. 13 (gage height, 7.55 ft); minimum, 8.5 cfs Oct. 2, 3 (gage height, 0.77 ft); minimum daily 18 cfs Oct. 2, 4, 5.
Period of record: Maximum discharge, 9,500 cfs July 12, 1949 (gage height, 11.92 ft), from rating curve extended above 2,300 cfs on basis of slope-area measurement at gage height 8.38 ft and slope-conveyance study; minimum daily, 1.0 cfs Sept. 12, 1966.

REMARKS.--Records good. Occasional diversion for irrigation above station.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	21	62	49	55	70	187	84	59	137	49	76	45
2	18	45	45	80	60	168	86	61	101	56	475	44
3	21	68	44	95	50	194	92	72	131	42	256	43
4	18	107	52	180	49	343	80	59	166	37	556	39
5	18	437	49	616	82	269	77	55	103	34	817	38
6	19	93	45	308	269	283	80	107	93	32	155	37
7	20	61	42	190	316	296	239	92	93	33	103	35
8	19	49	44	150	1,080	207	191	151	105	29	82	35
9	21	45	42	140	700	173	122	105	80	29	70	34
10	20	41	44	120	150	162	105	79	70	34	62	33
11	21	49	42	112	130	157	95	70	65	32	58	70
12	23	112	74	112	229	144	92	67	64	40	74	240
13	21	97	99	107	1,610	146	90	168	64	34	54	184
14	19	70	59	107	910	135	84	151	77	31	49	85
15	32	198	50	122	201	131	77	99	153	28	55	65
16	52	126	49	95	159	129	77	187	82	26	138	55
17	28	80	305	90	164	107	75	153	70	27	54	58
18	23	68	129	80	207	99	77	112	64	24	47	58
19	23	61	97	75	231	241	70	97	56	27	59	52
20	23	88	82	75	264	296	68	88	56	36	91	55
21	25	155	74	75	246	168	68	88	55	29	54	550
22	126	80	269	70	700	148	68	82	53	26	48	117
23	53	68	319	85	572	144	65	74	50	24	46	90
24	38	58	405	100	285	124	64	68	50	24	40	80
25	34	56	180	75	231	112	62	68	47	25	38	67
26	32	50	150	160	205	112	61	74	44	24	37	67
27	29	52	120	90	398	103	61	62	45	25	89	85
28	30	50	100	70	231	101	61	59	56	22	186	72
29	31	47	90	80	------	99	67	61	46	23	68	64
30	31	53	80	80	------	93	61	124	50	106	54	59
31	72	------	75	80	------	88	------	343	------	84	48	------
TOTAL	961	2,626	3,304	3,874	9,799	5,159	2,599	3,135	2,326	1,092	4,039	2,556
MEAN	31.0	87.5	107	125	350	166	86.6	101	77.5	35.2	130	85.2
MAX	126	437	405	616	1,610	343	239	343	166	106	817	550
MIN	18	41	42	55	49	88	61	55	44	22	37	33
CFSM	.30	.86	1.05	1.23	3.43	1.63	.85	.99	.76	.35	1.27	.84
IN.	.35	.96	1.20	1.41	3.57	1.88	.95	1.14	.85	.40	1.47	.93

CAL YR 1970 TOTAL 42,001 MEAN 115 MAX 1,900 MIN 17 CFSM 1.13 IN 15.32
WTR YR 1971 TOTAL 41,470 MEAN 114 MAX 1,610 MIN 18 CFSM 1.12 IN 15.12

PEAK DISCHARGE (BASE, 1,600 CFS)

DATE	TIME	G. H.	DISCHARGE	DATE	TIME	G. H.	DISCHARGE
2- 8	2200	5.62	1,870	8- 5	0230	5.33	1,700
2-13	2100	7.55	3,120				

01640500 Owens Creek at Lantz, Md.

LOCATION.--Lat 39°40'36", long 77°27'50", Frederick County, on right bank 0.5 mile west of Lantz Post Office (Deerfield station on Western Maryland Railway), 1.5 miles south of Sabillasville, 4.5 miles northwest of Thurmont, and 14.2 miles upstream from mouth.

DRAINAGE AREA.--5.93 sq mi.

PERIOD OF RECORD.--October 1931 to current year.

GAGE.--Water-stage recorder and concrete contol. Altitude of gage is 965 ft (from topographic map).

AVERAGE DISCHARGE.--40 years, 8.59 cfs (19.67 inches per year), adjusted for diversions.

EXTREMES.--Current year: Maximum discharge, 164 cfs Sept. 20 (gage height 3.06 ft); minimum daily, 0.37 cfs Oct. 7, 8.
Period of record: Maximum discharge, 3,270 cfs Dec. 1, 1934 (gage height, 8.4 ft); from rating curve extended above 750 cfs on basis of slope-area measurements at gage heights 5.11 and 6.30 ft; no flow Sept. 2-11, 1966.

REMARKS.--Records fair. A small diversion is occasionally made to Victor Cullen State School at Cullen, 0.5 mile above station.

REVISIONS (WATER YEARS).--WSP 921: 1932(M). WSP 1202: 1935(M). WSP 1382: Drainage area. WSP 1432: 1937(M), 1943(M), 1949(P).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.54	4.8	4.1	8.8	5.0	38	9.4	5.2	12	2.8	13	1.1
2	.51	2.4	3.9	9.8	4.5	31	9.7	7.9	11	2.7	4.0	1.0
3	.46	25	4.1	8.8	4.5	29	9.0	6.8	17	2.3	16	.92
4	.40	8.0	4.8	33	4.5	26	8.2	5.4	14	2.2	14	.79
5	.40	4.8	4.0	56	5.0	22	7.9	5.8	12	2.2	11	.74
6	.39	3.2	3.6	34	6.0	24	8.7	24	11	2.1	3.1	.70
7	.37	2.5	3.1	26	5.3	41	15	15	12	2.1	2.2	.65
8	.37	2.0	3.0	22	6.6	29	14	36	10	1.9	1.8	.63
9	.41	1.8	3.3	19	6.4	23	11	23	8.2	1.9	1.6	.62
10	.44	1.9	3.3	17	5.2	22	9.7	19	7.3	1.8	1.5	.59
11	.49	7.7	3.2	15	4.8	21	9.2	16	6.8	3.3	1.5	1.1
12	.52	30	6.4	14	5.5	19	9.0	15	6.4	2.5	1.4	3.8
13	.45	14	5.6	13	28	22	8.9	33	6.5	2.1	1.4	2.3
14	.43	7.1	4.3	15	17	19	8.4	24	11	2.0	1.3	1.3
15	2.8	21	3.7	12	9.7	19	8.0	20	14	1.7	1.3	.88
16	.90	9.5	8.9	11	8.2	18	7.9	31	10	1.6	1.2	.76
17	.53	6.5	53	10	8.2	16	7.9	22	7.6	1.4	1.2	1.5
18	.50	5.5	25	9.5	14	15	7.7	19	6.2	1.1	1.1	1.2
19	.48	4.9	18	9.0	21	20	6.9	17	5.6	1.8	2.0	2.2
20	.50	21	14	8.5	40	21	6.9	16	5.2	1.3	1.3	6.8
21	13	17	11	8.0	47	18	6.7	17	4.7	1.3	1.1	22
22	15	9.3	24	7.9	65	17	6.5	14	4.5	1.2	1.0	3.0
23	2.2	7.4	40	8.8	68	16	6.3	12	4.1	1.2	.95	2.2
24	1.2	6.0	35	7.5	46	14	6.3	11	3.8	1.7	.90	1.9
25	.99	5.2	25	7.4	39	13	6.0	10	3.5	1.8	.85	1.5
26	.91	4.9	21	8.9	37	13	5.9	9.4	3.4	1.4	.85	2.2
27	.82	4.9	17	6.0	67	12	5.8	8.4	3.3	1.4	5.6	2.6
28	.76	4.8	14	5.5	48	12	6.7	8.2	3.2	1.1	2.7	2.1
29	.70	4.5	12	5.5	------	11	8.7	8.2	3.4	1.5	1.3	1.8
30	4.5	4.7	10	6.6	------	10	5.6	21	3.3	2.0	1.0	1.5
31	14	------	9.4	5.5	------	9.7	------	23	------	2.3	.96	------
TOTAL	65.97	252.3	397.7	429.0	626.4	620.7	247.9	503.3	231.0	57.7	99.11	70.38
MEAN	2.13	8.41	12.8	13.8	22.4	20.0	8.26	16.2	7.70	1.86	3.20	2.35
MAX	15	30	53	56	68	41	15	36	17	3.3	16	22
MIN	.37	1.8	3.0	5.5	4.5	9.7	5.6	5.2	3.2	1.1	.85	.59
CFSM	.36	1.42	2.16	2.33	3.78	3.37	1.39	2.73	1.30	.31	.54	.40
IN.	.41	1.58	2.49	2.69	3.93	3.89	1.56	3.16	1.45	.36	.62	.44

CAL YR 1970 TOTAL 4,110.26 MEAN 11.3 MAX 100 MIN .37 CFSM 1.91 IN 25.78
WTR YR 1971 TOTAL 3,601.46 MEAN 9.87 MAX 68 MIN .37 CFSM 1.66 IN 22.59

PEAK DISCHARGE (BASE, 120 CFS).--Sept. 20 (2400) 164 cfs (3.06 ft).

01641000 Hunting Creek at Jimtown, Md.

LOCATION.--Lat 39°35'40", long 77°23'50", Frederick County, on right bank just downstream from highway bridge, 0.4 mile southwest of Jimtown, about 2.2 miles southeast of Thurmont, 2.2 miles upstream from Little Hunting Creek, and 5.2 miles upstream from mouth.

DRAINAGE AREA.--18.4 sq mi.

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

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 355 ft (from topographic map).

AVERAGE DISCHARGE.--22 years, 22.8 cfs (16.83 inches per year).

EXTREMES.--Current year: Maximum discharge, 299 cfs Feb. 13 (gage height, 2.84 ft); minimum, 1.8 cfs Oct. 7-9 (gage height, 1.53 ft).
Period of record: Maximum discharge, 1,170 cfs Sept. 1, 1952 (gage height, 4.94 ft), from rating curve extended above 500 cfs; minimum, 0.4 cfs Sept. 9, 1966 (gage height, 1.48 ft).

REMARKS.--Records good. Slight regulation at irregular intervals caused by pumpage at recreation camp near Foxville, and from occasional draining and refilling of pond near Thurmont by Maryland Game and Inland Fish Commission.

REVISIONS (WATER YEARS).--WSP 1332: 1952.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.2	20	15	28	11	94	25	14	38	13	7.5	4.3
2	2.8	16	14	27	7.0	79	27	16	29	10	11	4.0
3	2.4	60	14	27	5.5	77	25	17	27	8.1	13	3.8
4	2.1	42	15	74	6.5	79	22	15	25	6.8	22	3.6
5	2.1	24	13	128	10	72	21	14	25	6.2	56	3.5
6	2.1	15	12	101	8.1	72	28	37	22	6.2	16	3.4
7	2.1	11	11	72	18	89	47	32	25	6.8	8.8	3.2
8	2.0	10	11	52	50	79	37	74	28	5.6	6.8	2.8
9	2.0	8.8	11	47	37	64	31	58	21	5.5	5.6	2.6
10	2.2	8.1	12	44	16	56	27	42	18	5.4	5.6	2.5
11	2.4	13	11	38	18	54	24	35	16	7.5	5.8	6.8
12	2.8	54	21	37	24	50	23	32	15	6.8	5.6	14
13	3.2	37	20	35	119	50	23	72	15	5.6	5.0	8.1
14	4.0	24	15	37	82	47	22	62	17	5.6	5.0	6.2
15	9.5	64	13	37	49	45	21	47	24	5.0	4.8	5.6
16	4.0	35	22	32	38	44	20	77	22	5.1	4.5	4.5
17	3.4	25	109	29	40	38	20	64	19	4.5	4.5	7.5
18	3.2	20	62	27	56	34	20	52	15	5.0	4.5	5.0
19	3.2	18	45	25	70	56	19	44	13	5.6	6.2	5.6
20	3.0	62	35	24	96	60	18	40	12	5.0	4.8	8.1
21	24	60	32	24	112	45	18	40	11	4.5	4.5	62
22	32	37	74	24	182	44	17	35	10	4.4	4.8	10
23	8.8	29	82	28	220	38	17	31	9.5	4.3	4.5	6.8
24	6.8	24	86	24	150	35	17	28	9.5	4.5	4.0	6.2
25	6.2	20	68	22	122	34	16	27	8.8	5.0	4.0	5.0
26	6.0	19	56	34	104	32	15	25	8.1	4.5	3.9	6.2
27	6.0	18	45	24	122	31	14	22	7.5	4.3	11	6.4
28	5.8	17	38	20	106	31	15	21	7.5	4.0	6.8	5.6
29	5.0	17	32	20	------	30	17	21	12	4.5	4.5	5.0
30	17	17	29	25	------	28	15	54	9.5	6.2	4.5	4.8
31	32	------	28	18	------	27	------	68	------	6.8	4.3	------
TOTAL	211.3	824.9	1,051	1,184	1,879.1	1,614	661	1,216	519.4	182.3	259.8	223.1
MEAN	6.82	27.5	33.9	38.2	67.1	52.1	22.0	39.2	17.3	5.88	8.38	7.44
MAX	32	64	109	128	220	94	47	77	38	13	56	62
MIN	2.0	8.1	11	18	5.5	27	14	14	7.5	4.0	3.9	2.5
CFSM	.37	1.49	1.84	2.08	3.65	2.83	1.20	2.13	.94	.32	.46	.40
IN.	.43	1.67	2.12	2.39	3.80	3.26	1.34	2.46	1.05	.37	.53	.45

CAL YR 1970 TOTAL 11,622.6 MEAN 31.8 MAX 299 MIN 2.0 CFSM 1.73 IN 23.50
WTR YR 1971 TOTAL 9,825.9 MEAN 26.9 MAX 220 MIN 2.0 CFSM 1.46 IN 19.87

PEAK DISCHARGE (BASE, 350 CFS).--No peaks above base.

01641500 Fishing Creek near Lewistown, Md.

LOCATION.--Lat 39°31'35", long 77°28'00", Frederick County, on left bank immediately upstream from Fishing Creek Reservoir, 50 ft downstream from Little Fishing Creek, 2.8 miles west of Lewistown, and 9.9 miles upstream from mouth.

DRAINAGE AREA.--7.29 sq mi.

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

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 735 ft (from topographic map).

AVERAGE DISCHARGE.--24 years, 10.3 cfs (19.19 inches per year).

EXTREMES.--Current year: Maximum discharge, 92 cfs Feb. 23 (gage height, 2.27 ft); minimum daily, 1.6 cfs Oct. 7-9.
Period of record: Maximum discharge, 500 cfs July 12, 1949 (gage height, 3.73 ft); from rating curve extended above 100 cfs on basis of slope-area measurement of peak flow; minimum, 0.6 cfs Sept. 10, 11, 12, 1966.

REMARKS.--Records good.

REVISIONS (WATER YEARS).--WSP 1432: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.0	4.8	11	18	10	43	13	8.0	23	5.8	5.0	2.2
2	1.9	3.1	11	18	9.5	38	13	8.8	22	5.4	5.8	2.2
3	1.8	17	10	17	9.8	36	12	8.4	22	4.8	3.8	2.0
4	1.7	9.1	11	28	9.5	33	11	8.0	21	4.6	5.0	1.9
5	1.7	7.5	9.6	38	10	28	11	7.6	20	4.3	8.8	2.0
6	1.7	4.9	9.2	35	9.9	28	12	14	19	4.2	3.6	2.2
7	1.6	4.0	8.5	33	9.8	31	15	9.7	20	4.1	3.0	1.9
8	1.6	3.5	8.0	31	11	28	13	20	17	3.8	2.8	2.0
9	1.6	3.3	8.0	29	11	27	11	16	15	3.7	2.6	1.8
10	1.7	3.2	8.0	27	9.0	26	11	15	14	3.6	2.7	1.7
11	1.7	5.5	7.8	25	8.6	25	10	15	13	4.3	2.7	4.6
12	1.7	12	11	24	8.7	23	10	15	13	4.0	2.7	5.8
13	1.7	11	9.5	22	19	22	10	26	12	3.8	2.5	3.1
14	1.7	10	8.2	23	19	21	10	24	12	3.8	2.3	2.7
15	4.5	18	7.7	21	15	21	9.8	24	13	3.6	2.3	2.4
16	2.0	15	9.3	19	14	20	9.8	36	12	3.3	2.3	2.2
17	1.7	14	27	18	14	18	9.8	33	11	3.2	2.3	3.2
18	1.7	12	19	18	16	17	9.7	32	9.7	3.1	2.2	2.6
19	1.7	12	18	17	19	19	9.2	28	9.2	3.8	2.9	3.4
20	1.8	17	17	15	27	19	9.2	26	8.4	3.3	2.3	7.0
21	8.9	19	17	15	40	17	9.7	24	8.0	3.1	2.2	12
22	12	17	24	14	60	17	9.7	21	7.6	3.0	2.2	6.5
23	2.8	17	27	15	85	16	9.2	19	7.2	2.9	2.0	4.4
24	2.5	15	31	14	69	15	9.2	18	6.8	2.9	1.8	3.6
25	2.2	14	30	14	57	15	9.0	16	6.4	3.0	1.8	3.0
26	2.2	13	28	14	50	15	8.8	15	6.4	2.8	1.8	3.4
27	2.0	12	26	13	55	15	8.8	13	6.1	2.7	4.8	3.6
28	1.9	12	24	12	49	14	8.8	13	6.4	2.5	3.6	3.4
29	1.9	12	22	11	------	14	8.6	12	6.1	2.9	2.3	3.0
30	4.8	12	20	12	------	14	8.4	25	5.8	3.3	2.2	2.8
31	11	------	19	11	------	13	------	29	------	3.6	2.0	------
TOTAL	89.7	329.9	496.8	621	724.8	688	309.7	579.5	373.1	113.2	94.3	102.6
MEAN	2.89	11.0	16.0	20.0	25.9	22.2	10.3	18.7	12.4	3.65	3.04	3.42
MAX	12	19	31	38	85	43	15	36	23	5.8	8.8	12
MIN	1.6	3.1	7.7	11	8.6	13	8.4	7.6	5.8	2.5	1.8	1.7
CFSM	.40	1.51	2.19	2.74	3.55	3.05	1.41	2.57	1.70	.50	.42	.47
IN.	.46	1.68	2.54	3.17	3.70	3.51	1.58	2.96	1.90	.58	.48	.52

CAL YR 1970 TOTAL 5,132.8 MEAN 14.1 MAX 65 MIN 1.6 CFSM 1.93 IN 26.19
WTR YR 1971 TOTAL 4,522.6 MEAN 12.4 MAX 85 MIN 1.6 CFSM 1.70 IN 23.08

PEAK DISCHARGE (BASE, 100 CFS).--No peak above base.

01642500 Linganore Creek near Frederick, Md.

LOCATION.--Lat 39°24'55", long 77°20'00", Frederick County, on left bank 2.4 miles upstream from mouth and 4 miles east of Frederick.

DRAINAGE AREA.--82.3 sq mi.

PERIOD OF RECORD.--November 1931 to March 1932, September 1934 to current year.

GAGE.--Water-stage recorder. Concrete control since Sept. 23, 1946. Altitude of gage is 270 ft (from topographic map). Prior to Mar. 27, 1932, nonrecording gage at Frederick pumping station, 1.5 miles downstream at datum about 20 ft lower. Sept. 12, 1934, to Sept. 25, 1946, nonrecording gage at present site and datum.

AVERAGE DISCHARGE.--37 years (1934-71), 78.3 cfs (12.92 inches per year).

EXTREMES.--Current year: Maximum discharge, 3,200 cfs Aug. 4 (gage height, 9.69 ft); minimum, 13 cfs Oct. 4, 7, 8 (gage height, 1.67 ft).
Period of record: Maximum discharge, 4,130 cfs Aug. 13, 1955 (gage height, 11.39 ft), from rating curve extended above 1,500 cfs on basis of slope-area measurement at gage height 10.01 ft; maximum gage height 12.22 ft June 2, 1946; minimum discharge, 2.0 cfs Sept. 8, 1966 (gage height, 1.14 ft).
Flood of Aug. 23 or 24, 1933, reached a stage of 10.5 ft from floodmarks (discharge, 2,920 cfs).

REMARKS.--Records good.

REVISIONS (WATER YEARS).--WSP 891: 1938-39. WSP 1432: 1934, 1936, 1937(M).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16	33	34	36	50	146	69	51	139	40	83	54
2	15	26	34	50	44	133	72	53	107	44	189	53
3	14	56	33	60	36	160	76	59	106	35	523	51
4	13	58	35	183	34	288	67	51	93	32	1,370	48
5	13	380	32	449	60	201	64	49	85	30	855	47
6	13	58	31	225	278	206	76	64	82	29	193	46
7	13	43	29	138	324	194	206	57	94	29	138	43
8	13	37	27	100	1,200	158	117	92	82	26	113	43
9	13	34	30	90	505	136	93	66	67	25	98	42
10	14	32	30	85	110	129	83	55	62	26	88	41
11	20	38	30	80	100	123	77	52	58	29	101	305
12	17	55	45	80	129	113	74	51	56	35	131	715
13	16	48	50	79	1,210	100	72	113	57	27	79	195
14	15	41	38	86	566	104	69	96	57	25	72	119
15	18	154	34	98	162	104	66	70	130	22	233	96
16	20	74	40	65	127	98	65	143	70	28	122	82
17	16	53	183	65	118	89	64	110	59	28	78	102
18	16	46	76	60	123	84	66	84	54	23	70	83
19	16	42	61	55	133	136	60	71	50	32	70	75
20	16	63	54	55	166	158	59	65	48	31	66	71
21	28	99	49	55	172	104	60	76	46	24	62	84
22	73	54	270	50	458	96	58	64	46	21	59	67
23	30	48	194	65	455	99	57	58	43	20	57	64
24	23	41	172	75	242	89	56	54	43	19	53	64
25	20	39	106	55	185	83	54	58	40	20	51	58
26	19	38	92	133	158	83	53	86	38	19	50	63
27	18	39	70	74	275	80	53	54	40	18	126	67
28	18	38	60	50	174	79	52	52	41	17	122	62
29	18	36	55	55	------	79	54	53	42	65	65	59
30	24	38	50	55	------	75	52	184	41	718	58	56
31	45	------	46	55	------	70	------	409	------	98	55	------
TOTAL	623	1,841	2,090	2,861	7,594	3,797	2,144	2,600	1,976	1,635	5,430	2,955
MEAN	20.1	61.4	67.4	92.3	271	122	71.5	83.9	65.9	52.7	175	98.5
MAX	73	380	270	449	1,210	288	206	409	139	718	1,370	715
MIN	13	26	27	36	34	70	52	49	38	17	50	41
CFSM	.24	.75	.82	1.12	3.29	1.48	.87	1.02	.80	.64	2.13	1.20
IN.	.28	.83	.94	1.29	3.43	1.72	.97	1.18	.89	.74	2.45	1.34

CAL YR 1970 TOTAL 28,362 MEAN 77.7 MAX 859 MIN 13 CFSM .94 IN 12.82
WTR YR 1971 TOTAL 35,546 MEAN 97.4 MAX 1,370 MIN 13 CFSM 1.18 IN 16.07

PEAK DISCHARGE (BASE, 1,400 CFS)

DATE	TIME	G. H.	DISCHARGE	DATE	TIME	G. H.	DISCHARGE
2- 7	2400	7.36	2,030	7-30	1230	6.61	1,660
2- 8	2130	7.96	2,330	8- 4	0130	9.69	3,200
2-13	2100	8.54	2,620	9-12	0130	6.47	1,580

01643000 Monocacy River at Jug Bridge near Frederick, Md.

LOCATION.--Lat 39°24'13", long 77°21'58", Frederick County, on right bank 0.2 mile upstream from Jug Bridge on U.S. Highway 40, 0.4 mile downstream from Linganore Creek, 2 miles east of Frederick, and 16.6 miles upstream from mouth.

DRAINAGE AREA.--817 sq mi.

PERIOD OF RECORD.--October 1929 to current year. Monthly discharge only for October, November 1929, published in WSP 1302.

GAGE.--Water-stage recorder. Datum of gage is 231.92 ft above mean sea level (Corps of Engineers bench mark).

AVERAGE DISCHARGE.--42 years, 855 cfs (14.21 inches per year).

EXTREMES.--Current year: Maximum discharge, 13,300 cfs Feb. 14 (gage height, 13.88 ft); minimum, 100 cfs Oct. 6, 7.
Period of record: Maximum discharge, 51,000 cfs Aug. 24, 1933 (gage height, 28.1 ft); minimum daily, 19 cfs Sept. 7-13, 1966.
Flood in June 1889 reached a stage of 30 ft, from floodmarks (discharge, 56,000 cfs).

REMARKS.--Records good. Records of chemical analyses, water temperatures, and suspended-sediment loads for the water year 1971 are published in Part 2 of this report.

REVISIONS (WATER YEARS).--WSP 711: 1930.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	142	791	890	500	460	2,320	648	395	1,530	344	381	252
2	127	506	564	480	420	1,950	638	377	861	337	1,010	230
3	123	849	491	500	400	1,850	664	416	785	307	1,340	221
4	112	1,890	479	700	400	2,800	625	425	1,070	263	3,380	215
5	109	2,140	516	4,830	440	2,290	571	377	915	237	3,600	203
6	106	1,130	446	4,520	800	2,960	579	438	714	222	1,490	197
7	104	598	391	2,500	1,730	3,560	1,100	1,150	814	218	746	193
8	105	458	347	1,700	4,500	2,870	1,360	1,140	939	210	586	186
9	105	388	335	1,400	5,030	1,820	848	1,780	779	199	446	179
10	106	347	344	1,220	1,690	1,540	710	1,000	586	196	368	175
11	116	358	342	1,080	1,100	1,450	636	761	507	201	363	684
12	118	737	403	1,030	1,000	1,340	597	658	465	218	406	1,660
13	117	1,580	966	1,020	5,300	1,270	576	962	456	230	337	1,010
14	116	1,350	771	998	11,000	1,380	554	2,380	444	222	294	709
15	127	1,900	552	1,170	2,550	1,200	514	1,250	1,340	195	404	485
16	169	2,700	496	955	1,700	1,190	500	1,410	989	188	469	370
17	203	1,150	4,250	750	1,490	1,030	485	2,230	734	182	338	439
18	162	834	3,220	750	1,860	898	488	1,280	591	174	265	388
19	137	707	1,510	650	3,690	988	465	975	501	174	256	343
20	127	802	1,150	650	3,780	3,000	443	839	447	183	283	322
21	170	3,570	940	600	4,350	1,950	434	810	417	180	298	1,340
22	630	1,480	2,040	650	4,990	1,400	430	785	398	164	255	1,020
23	708	982	4,620	738	9,720	1,220	419	668	367	153	238	515
24	336	777	5,630	774	5,000	1,060	410	587	345	148	220	416
25	236	632	2,600	706	3,150	933	397	587	323	148	205	362
26	201	624	1,840	840	2,700	879	385	629	301	147	198	338
27	179	607	1,420	950	4,210	846	371	517	289	147	306	359
28	161	593	1,100	650	3,570	808	368	463	290	139	683	406
29	153	564	950	600	------	780	387	451	343	183	680	381
30	180	554	850	550	------	746	435	855	320	750	368	331
31	457	------	750	550	------	691	------	2,390	------	500	272	------
TOTAL	5,942	31,598	41,203	35,011	87,030	49,019	17,037	28,985	18,860	7,159	20,485	13,929
MEAN	192	1,053	1,329	1,129	3,108	1,581	568	935	629	231	661	464
MAX	708	3,570	5,630	4,830	11,000	3,560	1,360	2,390	1,530	750	3,600	1,660
MIN	104	347	335	480	400	691	368	377	289	139	198	175
CFSM	.24	1.29	1.63	1.38	3.80	1.94	.70	1.14	.77	.28	.81	.57
IN.	.27	1.44	1.88	1.59	3.96	2.23	.78	1.32	.86	.33	.93	.63

CAL YR 1970 TOTAL 400,390 MEAN 1,097 MAX 14,000 MIN 104 CFSM 1.34 IN 18.23
WTR YR 1971 TOTAL 356,258 MEAN 976 MAX 11,000 MIN 104 CFSM 1.19 IN 16.22

PEAK DISCHARGE (BASE, 8,800 CFS)

DATE	TIME	G. H.	DISCHARGE	DATE	TIME	G. H.	DISCHARGE
2-14	0700	13.88	13,300	2-23	0700	12.02	10,400

01643500 Bennett Creek at Park Mills, Md.

LOCATION.--Lat 39°17'40", long 77°24'30", Frederick County, on left bank 75 ft downstream from highway bridge, 0.2 mile south of Park Mills, 1.8 miles upstream from mouth, and 3.7 miles southwest of Urbana.

DRAINAGE AREA.--62.8 sq mi.

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 (from topographic map). Oct. 1, 1959 to July 31, 1966, crest-stage gage at same site and datum.

AVERAGE DISCHARGE.--15 years (1948-58, 1966-71), 63.6 cfs (13.75 inches per year).

EXTREMES.--Current year: Maximum discharge, 13,000 cfs Sept. 12 (gage height, 14.33 ft, from rating curve extended as explained below; minimum, 9.6 cfs part of each day Oct. 4-8 (gage height, 0.99 ft).
Period of record: Maximum discharge, 13,000 cfs Sept. 12, 1971 (gage height, 14.33 ft), from rating curve extended above 2,700 cfs on basis of contracted-opening measurements at gage heights 11.15 and 14.33 ft; minimum, 0.30 cfs Sept. 8, 1966 (gage height, 0.80 ft)

REMARKS.--Records good.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	22	26	50	36	105	51	41	151	29	75	33
2	12	19	25	55	30	96	55	46	108	48	166	32
3	11	60	24	48	30	122	59	50	116	29	610	30
4	9.6	54	26	260	32	212	50	42	140	26	1,930	28
5	9.6	320	23	540	65	149	48	39	102	25	266	28
6	10	48	23	157	200	152	65	46	91	24	126	29
7	9.6	32	22	104	260	142	260	42	172	23	95	26
8	9.6	27	22	85	737	118	148	75	125	23	78	25
9	10	25	22	75	283	102	104	56	87	24	70	24
10	11	24	23	66	100	95	88	44	73	23	61	23
11	16	32	23	62	85	92	77	40	64	23	139	840
12	13	47	35	63	80	84	72	40	63	23	100	3,040
13	12	44	36	61	734	81	68	169	62	22	58	424
14	11	34	27	68	345	77	63	113	58	20	50	230
15	13	124	25	74	131	76	58	71	68	19	51	165
16	14	60	35	60	104	72	58	190	62	25	58	129
17	11	43	163	55	92	65	57	118	54	22	42	169
18	11	36	68	50	90	61	57	84	47	20	39	117
19	11	33	52	45	93	91	52	69	43	27	45	103
20	11	50	43	40	108	117	51	62	42	24	39	93
21	24	61	40	41	107	78	51	86	40	20	35	102
22	47	39	217	47	269	72	50	63	39	19	34	79
23	19	35	137	72	304	77	47	53	36	18	33	76
24	16	30	128	61	165	67	47	49	36	18	30	73
25	15	28	85	56	132	62	45	50	33	19	29	65
26	14	28	73	85	115	62	44	63	32	19	29	77
27	14	28	60	52	165	60	42	46	31	17	124	79
28	14	27	50	46	120	59	44	42	30	16	95	68
29	14	26	42	42	------	59	45	47	30	73	44	63
30	19	30	38	46	------	56	42	182	32	350	36	60
31	31	------	38	42	------	52	------	476	------	65	33	------
TOTAL	454.4	1,466	1,651	2,608	5,012	2,813	1,998	2,594	2,067	1,133	4,220	6,330
MEAN	14.7	48.9	53.3	84.1	179	90.7	66.6	83.7	68.9	36.5	136	211
MAX	47	320	217	540	737	212	260	476	172	350	1,530	3,040
MIN	9.6	19	22	40	30	52	42	39	30	16	29	23
CFSM	.23	.78	.85	1.34	2.85	1.44	1.06	1.33	1.10	.58	2.17	3.36
IN.	.27	.87	.98	1.54	2.97	1.67	1.18	1.54	1.22	.67	2.50	3.75

CAL YR 1970 TOTAL 21,781.6 MEAN 59.7 MAX 604 MIN 9.6 CFSM .95 IN 12.90
WTR YR 1971 TOTAL 32,346.4 MEAN 88.6 MAX 3,040 MIN 9.6 CFSM 1.41 IN 19.16

PEAK DISCHARGE (BASE, 1,200 CFS)

DATE	TIME	G. H.	DISCHARGE	DATE	TIME	G. H.	DISCHARGE
1- 5	0100	5.27	1,450	8- 4	0130	11.15	7,180
2- 7	0100	5.72	1,630	9-12	0200	14.33	13,000
2-13	1730	5.38	1,490				

01645000 Seneca Creek at Dawsonville, Md.

LOCATION.--Lat 39°07'41", long 77°20'13", Montgomery County, on right bank 60 ft downstream from bridge on State Highway 28, 150 ft downstream from mouth of Great Seneca Creek, half a mile east of Dawsonville, and 5.8 miles upstream from mouth.

DRAINAGE AREA.--101 sq mi.

PERIOD OF RECORD.--September 1930 to current year.

GAGE.--Water-stage recorder. Concrete control since Mar. 3, 1934. Datum of gage is 214.15 ft above mean sea level, adjustment of 1912. Sept. 26 to Nov. 9, 1930, chain gage and Nov. 10, 1930, to Apr. 6, 1934, water-stage recorder, at highway bridge 60 ft upstream at same datum.

AVERAGE DISCHARGE.--41 years, 91.5 cfs (12.31 inches per year).

EXTREMES.--Current year: Maximum discharge, 25,900 cfs Sept. 12 (gage height, 16.32 ft, from flood mark), from rating curve extended above 3,000 cfs as explained below; minimum, 15 cfs Oct. 5 (gage height, 1.82 ft).
Period of record: Maximum discharge, 25,900 cfs Sept. 12, 1971 (gage height, 16.32 ft, from flood mark), from rating curve extended above 3,000 cfs on basis of contracted opening and flow-over-road measurement of peak flow at site 5.0 miles downstream, discharge adjusted to gage site on basis of ratio of the drainage areas raised to the 0.8 power; minimum observed, 1.7 cfs Sept. 28, 29, 1930 (gage height, 0.56 ft).

REMARKS.--Records good. Small diversion at times for irrigation above station. Records of chemical analyses for the water year 1971 are published in Part 2 of this report.

REVISIONS (WATER YEARS).--WSP 726: Drainage area. WSP 1232: 1930. WSP 1272: 1933. WSP 1432: 1934-35(M) 1941 (M).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	19	40	53	65	55	140	80	68	262	87	126	82
2	18	32	52	70	55	130	87	74	196	556	793	78
3	18	119	50	66	55	177	97	81	254	87	480	74
4	16	156	53	108	64	404	82	70	239	69	2,820	69
5	15	596	47	352	121	207	79	66	183	63	430	65
6	16	98	47	220	202	206	116	75	150	61	191	63
7	16	69	43	131	476	186	453	71	295	59	134	61
8	16	58	43	110	1,440	159	194	125	190	56	109	59
9	16	52	45	100	616	135	141	105	136	57	96	58
10	16	50	46	92	130	127	118	77	114	56	92	57
11	23	79	45	86	110	126	105	70	106	54	101	3,880
12	19	104	65	86	105	119	101	69	104	56	123	9,000
13	18	94	69	85	1,070	115	98	536	105	50	82	731
14	18	71	53	94	1,000	112	96	218	101	48	76	318
15	29	252	49	102	200	112	89	126	114	47	104	233
16	55	123	70	85	140	110	88	399	109	47	104	188
17	23	89	260	80	120	105	86	216	96	45	76	323
18	21	76	103	75	120	100	89	144	89	42	72	180
19	19	70	83	70	120	130	81	119	84	59	150	160
20	21	83	73	65	130	184	80	133	82	54	82	144
21	49	142	70	67	160	116	80	304	76	45	72	131
22	102	82	344	69	380	105	79	139	74	43	67	120
23	37	72	197	124	550	116	76	112	72	42	67	120
24	29	62	142	109	220	101	75	99	69	40	61	114
25	26	59	108	88	180	93	72	98	65	57	59	101
26	25	58	96	150	158	93	71	182	63	54	57	126
27	23	57	75	100	231	90	69	110	62	47	484	131
28	25	55	70	85	164	89	72	97	63	42	298	109
29	25	54	65	70	------	89	72	97	63	150	104	104
30	32	58	60	85	------	85	69	340	63	349	87	99
31	59	------	60	75	------	81	------	975	------	104	78	------
TOTAL	844	3,010	2,636	3,164	8,372	4,142	3,095	5,395	3,679	2,626	7,675	16,978
MEAN	27.2	100	85.0	102	299	134	103	174	123	84.7	248	566
MAX	102	596	344	352	1,440	404	453	975	295	556	2,820	9,000
MIN	15	32	43	65	55	81	69	66	62	40	57	57
CFSM	.27	.99	.84	1.01	2.96	1.33	1.02	1.72	1.22	.84	2.46	5.60
IN.	.31	1.11	.97	1.17	3.08	1.53	1.14	1.99	1.36	.97	2.83	6.25

CAL YR 1970 TOTAL 36,148 MEAN 99.0 MAX 980 MIN 15 CFSM .98 IN 13.31
WTR YR 1971 TOTAL 61,616 MEAN 169 MAX 9,000 MIN 15 CFSM 1.67 IN 22.69

PEAK DISCHARGE (BASE, 1,300 CFS)

DATE	TIME	G. H.	DISCHARGE	DATE	TIME	G. H.	DISCHARGE
2- 8	0200	7.28	2,290	7- 2	0415	6.39	1,640
2-13	2100	7.67	2,700	8- 4	0730	9.62	6,810
5-31	0815	6.80	1,900	9-12	*0100	16.32	25,900

* About.
Note.--Fragmentary gage-height record Sept. 11, 12.

01645200 Watts Branch at Rockville, Md.

NOTE.--Records for the 1971 water year have been withheld pending better definition of the stage-discharge relation. They will be published in a subsequent annual report.

01646500 Potomac River near Washington, D. C.

LOCATION.--Lat 38°56'58", long 77°07'40", Montgomery County, Maryland, on left bank just above Little Falls Dam, 1 mile upstream from District of Columbia boundary line, 1.2 miles upstream from Chain Bridge, 1.8 miles east of Langley, Fairfax County, Virginia, and at mile 117.4.
DRAINAGE AREA.--11,560 sq mi.
PERIOD OF RECORD.--March 1930 to current year.
GAGE.--Water-stage recorder and concrete control. Datum of gage is 37.95 ft above mean sea level. Prior to June 7, 1930, nonrecording gage, and June 7, 1930, to Jan. 22, 1965, water-stage recorder at site 1 mile upstream on right bank at same datum.
AVERAGE DISCHARGE.--41 years, 10,730 cfs (12.61 inches per year), adjusted for diversions.
EXTREMES.--Current year: Maximum discharge, 91,200 cfs Feb. 24 (gage height, 9.15 ft); minimum daily, 1,170 cfs Oct. 13 (does not include diversion of 452 cfs for municipal use).
Period of record: Maximum discharge, 484,000 cfs Mar. 19, 1936 (gage height, 28.1 ft, site then in use); minimum daily observed at gaging station, 121 cfs Sept. 9, 1966 (does not include diversion of 489 cfs for municipal use); minimum daily (adjusted), 601 cfs Sept. 10, 1966 (includes diversion of 449 cfs for municipal use).
Flood of June 2, 1889, was of approximately the same magnitude as that of March 19, 1936.
REMARKS.--Records good. Diversions at Great Falls through aqueducts, and since June 1959, from gage pool at Little Falls Dam, for municipal supply of Washington, D. C.; since October 1958, at Rockville Filtration Plant, for municipal supply of city of Rockville; since April 1961, at Potomac Filtration Plant, for water supply of Washington Suburban Sanitary District; since October 1961, at Fairfax Water Treatment Plant for water supply of city of Fairfax (from Goose Creek); and since April 1964, at Violets Lock, to Chesapeake and Ohio Canal. Low flow affected slightly by Stony River Reservoir (see station 01595200) and since December 1950, by Savage River Reservoir (see station 01597500). Low flow affected extensively at times by run-of-the-river hydroelectric plants.
REVISIONS.--WSP 726: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEb	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2,330	2,990	6,680	12,300	10,000	40,800	10,200	6,020	70,200	4,400	3,930	2,730
2	2,040	4,380	6,680	10,800	7,580	38,000	10,200	5,860	61,800	4,790	5,150	4,460
3	1,870	12,700	6,300	9,610	9,280	32,600	10,100	5,840	35,600	4,330	6,790	3,450
4	1,810	15,500	5,500	9,500	8,590	32,200	9,680	5,810	26,100	4,030	15,900	2,540
5	1,690	24,700	5,300	14,100	7,910	27,800	9,180	5,820	21,600	4,000	13,800	2,320
6	1,520	21,300	5,010	36,500	9,500	27,100	8,950	5,780	17,500	3,940	16,100	2,230
7	1,440	17,000	5,020	51,200	12,900	26,400	14,200	5,890	15,800	3,570	15,600	2,060
8	1,390	14,300	5,090	44,100	22,600	28,800	14,000	11,100	17,400	3,220	11,800	1,920
9	1,290	12,300	4,970	32,400	31,700	32,900	14,400	17,800	14,300	2,880	8,100	1,850
10	1,260	10,400	4,780	25,700	19,100	30,000	15,000	21,400	13,100	2,950	5,990	1,960
11	1,240	9,270	4,700	20,800	13,500	25,100	16,000	19,400	11,500	3,040	4,970	2,580
12	1,210	10,300	4,590	17,700	12,100	22,000	17,400	15,100	9,830	2,830	4,940	32,900
13	1,170	26,900	4,720	15,900	16,000	19,700	17,500	16,300	8,770	2,690	4,940	13,900
14	1,210	48,200	5,430	15,500	46,700	18,500	15,100	15,300	8,520	2,810	4,280	8,910
15	1,620	44,300	6,950	17,000	74,000	18,400	13,700	20,300	9,330	3,120	3,730	10,700
16	1,980	31,700	8,020	17,600	58,300	19,300	12,500	26,700	10,900	2,910	3,510	12,200
17	1,660	27,800	11,100	23,600	37,200	19,400	11,500	24,600	12,300	2,790	3,550	12,000
18	1,730	21,400	16,900	21,700	28,900	19,400	10,800	22,200	11,400	2,620	3,190	12,100
19	1,790	16,900	19,000	17,600	26,400	18,600	10,200	19,600	10,200	2,630	3,110	8,980
20	1,680	13,900	16,900	14,400	31,900	18,600	9,570	17,200	9,140	2,680	3,110	7,460
21	1,630	13,900	14,300	13,300	41,300	17,900	9,000	18,600	8,180	2,440	3,120	6,760
22	2,010	15,500	16,000	12,600	60,400	17,000	8,330	22,800	7,260	2,370	2,920	9,050
23	2,350	12,800	22,200	11,600	80,200	16,000	7,970	25,300	6,790	2,160	2,690	9,520
24	2,590	11,300	51,700	12,200	89,500	14,900	7,520	20,300	6,260	2,130	2,510	8,760
25	2,240	10,400	64,800	12,200	74,400	13,800	7,110	15,300	6,060	2,270	2,770	7,550
26	2,730	9,350	47,000	12,900	52,200	13,000	6,800	13,600	5,930	2,260	2,490	6,540
27	3,210	8,570	34,900	13,400	42,300	12,200	6,790	11,700	5,660	2,350	3,960	5,930
28	2,800	7,880	26,500	12,200	41,100	11,500	6,650	10,000	5,330	2,200	4,720	5,360
29	2,600	7,150	20,000	11,400	------	11,100	6,340	8,920	4,890	2,450	3,970	5,000
30	2,570	6,870	16,300	11,100	------	10,500	6,110	11,100	4,560	3,600	3,590	4,880
31	2,930	------	13,900	11,200	------	10,200	------	30,000	------	4,780	3,080	------
TOTAL	59,590	489,960	481,240	562,110	965,560	663,700	322,800	475,640	456,210	95,240	178,310	216,600
MEAN	1,922	16,330	15,520	18,130	34,480	21,410	10,760	15,340	15,210	3,072	5,752	7,220
MAX	3,210	48,200	64,800	51,200	89,500	40,800	17,500	30,000	70,200	4,790	16,100	32,900
MIN	1,170	2,990	4,590	9,500	7,580	10,200	6,110	5,780	4,560	2,130	2,490	1,850
(†)	432	405	412	410	413	415	416	424	457	519	463	450
MEAN‡	2,354	16,740	15,930	18,540	34,890	21,820	11,180	15,760	15,670	3,591	6,215	7,670
CFSM‡	.20	1.45	1.38	1.60	3.02	1.89	.97	1.36	1.36	.31	.54	.66
IN‡	.23	1.62	1.59	1.84	3.14	2.18	1.08	1.57	1.52	.36	.62	.74

CAL YR 1970 TOTAL 4,430,630 MEAN 12,140 MAX 85,700 MIN 1,170 MEAN‡ 12,570 CFSM‡ 1.09 IN‡ 14.80
WTR YR 1971 TOTAL 4,966,960 MEAN 13,610 MAX 89,500 MIN 1,170 MEAN‡ 14,040 CFSM‡ 1.21 IN‡ 16.42

PEAK DISCHARGE (BASE, 45,000 CFS)

DATE	TIME	G. H.	DISCHARGE	DATE	TIME	G. H.	DISCHARGE
11-14	1700	7.16	52,400	2-24	0745	9.15	91,200
12-25	0015	8.20	71,200	6- 1	2100	8.77	82,700
1- 7	1315	7.18	52,800	9-12	0800	6.94	48,700
2-15	1500	8.73	81,900				

† Diversion, in cfs, to Chesapeake and Ohio Canal and for municipal supply of Washington, D.C., Washington Suburban Sanitary District, City of Rockville, and City of Fairfax (from Goose Creek); records furnished by Corps of Engineers, Washington Suburban Sanitary Commission, City of Rockville, and City of Fairfax.
‡ Adjusted for diversion.

01646550 Little Falls Branch near Bethesda, Md.

LOCATION.--Lat 38°57'27", long 77°06'31", Montgomery County, on left bank at downstream side of bridge on Massachusetts Avenue, 0.3 mile downstream from Willett Branch, 1.7 miles upstream from mouth, and 2.0 miles southwest of Bethesda.

DRAINAGE AREA.--4.1 sq mi, approximately.

PERIOD OF RECORD.--June 1944 to September 1959. Annual maximum, water years 1960-61. Occasional low-flow measurements water years 1960-62, December 1961 to current year.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 169.32 ft above mean sea level (Maryland State Roads Commission bench mark). Prior to Oct. 1, 1959, water-stage recorder and concrete control at site 50 ft upstream at same datum. Oct. 1, 1959 to Nov. 30, 1961, crest-stage gage at present site and datum.

AVERAGE DISCHARGE.--24 years (1945-59, 1963-71), 3.16 cfs (10.47 inches per year).

EXTREMES.--Current year: Maximum discharge, 750 cfs July 29 (gage height, 3.70 ft); minimum daily, 0.59 cfs Oct. 17, 18, 25.
Period of record: Maximum discharge, 2,680 cfs Sept. 14, 1966 (gage height, 6.82 ft), from rating curve extended above 630 cfs on basis of slope-area measurement at gage height 5.92 ft; no flow at times in 1944 1954, 1959, minima not available Oct. 1959 to Nov. 1961.

REMARKS.--Records fair. Occasional slight regulation at low flow from unknown source above station.

REVISIONS (WATER YEARS).--WSP 1171: 1945.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.0	.67	.81	1.3	1.3	1.4	1.2	1.2	2.2	1.3	13	1.8
2	1.0	.75	.80	1.9	1.2	1.4	11	1.5	3.2	1.3	6.0	1.5
3	2.0	8.5	.84	2.1	1.1	22	1.9	1.4	2.9	1.2	2.3	1.5
4	.94	50	1.3	18	1.1	8.3	1.4	1.2	5.4	1.2	7.5	1.5
5	.94	12	.86	27	1.1	2.2	1.4	1.5	1.9	1.1	5.3	1.4
6	.94	.94	.79	3.7	5.0	1.9	21	1.4	2.0	3.0	1.7	1.5
7	1.0	.84	.84	2.7	3.5	1.7	22	3.6	12	1.2	1.6	1.5
8	1.0	.75	.79	2.1	23	1.5	2.5	9.0	2.0	1.1	1.6	1.6
9	1.0	.84	.81	1.7	3.0	1.4	2.0	1.5	1.7	4.6	1.6	1.6
10	3.7	3.3	.84	1.7	1.8	1.4	1.7	1.2	1.7	1.9	1.6	1.5
11	1.2	20	1.5	1.5	1.8	1.4	1.5	1.2	1.5	1.5	12	36
12	1.3	3.4	7.0	2.1	1.7	1.5	1.9	1.4	1.7	1.2	2.0	14
13	1.3	2.8	.95	1.7	47	1.4	1.7	32	1.5	1.1	1.6	2.3
14	1.2	7.6	.85	7.0	4.0	1.2	1.7	2.8	2.7	1.2	1.5	1.3
15	13	18	.84	2.7	1.9	1.4	1.5	2.2	2.7	1.1	1.5	1.1
16	3.0	1.1	28	1.4	1.5	1.4	1.5	33	1.7	1.1	1.6	1.0
17	.59	1.0	3.5	1.4	1.7	1.2	3.1	3.2	1.5	11	1.7	14
18	.59	.95	1.2	1.3	1.4	1.2	2.0	3.6	1.4	1.2	1.6	1.3
19	.67	.92	1.1	1.3	1.4	19	2.9	3.1	1.4	4.1	14	1.2
20	.67	2.6	.94	1.4	2.2	2.0	2.6	8.1	1.3	1.5	1.7	1.1
21	21	.88	6.4	1.4	1.4	1.5	1.5	9.8	1.4	1.2	2.0	2.5
22	4.7	.85	26	2.7	40	4.8	1.5	1.7	1.4	1.1	1.6	1.1
23	.84	.86	2.4	7.4	7.1	2.8	1.4	1.5	1.4	1.2	1.7	1.0
24	.67	.87	3.6	4.7	2.2	1.4	1.4	1.5	1.4	8.1	1.5	.96
25	.59	.95	1.3	5.7	1.9	1.4	1.2	1.4	1.5	1.5	1.6	.90
26	1.4	.90	1.3	4.0	2.0	1.9	1.4	1.4	1.3	8.2	1.7	7.2
27	.67	.95	1.1	1.5	5.6	1.4	1.5	1.5	1.3	1.5	46	1.1
28	.67	.85	1.1	1.4	1.5	1.2	2.6	1.5	2.5	1.1	2.9	.96
29	.67	.84	1.0	1.8	------	1.4	2.8	5.9	1.3	33	1.6	.97
30	4.6	.86	1.0	1.6	------	1.4	1.2	21	1.4	14	1.6	.95
31	2.9	------	.93	1.4	------	1.2	------	24	------	4.0	1.5	------
TOTAL	75.75	145.77	100.69	117.6	168.4	95.3	103.0	185.3	67.3	117.8	145.1	106.34
MEAN	2.44	4.86	3.25	3.79	6.01	3.07	3.43	5.98	2.24	3.80	4.68	3.54
MAX	21	50	28	27	47	22	22	33	12	33	46	36
MIN	.59	.67	.79	1.3	1.1	1.2	1.2	1.2	1.3	1.1	1.5	.90
CFSM	.60	1.19	.79	.92	1.47	.75	.84	1.46	.55	.93	1.14	.86
IN.	.69	1.32	.91	1.07	1.53	.86	.93	1.68	.61	1.07	1.32	.96

CAL YR 1970 TOTAL 1,046.22 MEAN 2.87 MAX 85 MIN .52 CFSM .70 IN 9.49
WTR YR 1971 TOTAL 1,428.35 MEAN 3.91 MAX 50 MIN .59 CFSM .95 IN 12.96

PEAK DISCHARGE (BASE, 450 CFS).--July 29 (1900) 750 cfs (3.70 ft).

01647685 Williamsburg Run near Olney, Md.

LOCATION.--Lat 39°08'32", long 77°05'48", Montgomery County, on right bank 200 ft downstream from vehicle bridge on golf course of Norbeck Country Club, 0.2 mile downstream from Cashell Road, 0.5 mile upstream from mouth, and 1.8 miles southwest of Olney.
DRAINAGE AREA.--2.25 sq mi.
PERIOD OF RECORD.--October 1966 to current year.
GAGE.--Water-stage recorder and concrete control. Altitude of gage is 390 ft (from topographic map).
AVERAGE DISCHARGE.--5 years, 2.16 cfs (13.04 inches per year).
EXTREMES.--Current year: Maximum discharge, 1,140 cfs Aug. 3 (gage height, 5.90 ft), from rating curve extended above 300 cfs on basis of slope-area measurement of peak flow; minimum, 0.11 cfs Oct. 17-18 (gage height, 0.99 ft).
Period of record: Maximum discharge, 1,140 cfs Aug. 3, 1971 (gage height, 5.90 ft), from rating curve extended above 300 cfs on basis of slope-area measurement of peak flow; minimum, 0.10 cfs Sept. 26, 1968 (gage height, 0.98 ft).
REVISIONS.--The figures of maximum discharge for some water years have been revised as shown in the following table. They supersede figures published in the Water Resources Data reports indicated.

Report	Water year	Date	Discharge (cfs)	Gage height (feet)
WRD Md. and Del.	1967	Aug. 25, 1967	424	4.48
WRD Md. and Del.	1969	Aug. 2, 1969	606	4.99
WRD Md. and Del.	1970	July 20, 1970	427	4.49

REMARKS.--Records good. Records of suspended-sediment loads for the 1971 water year are published in Part 2 of this report.
REVISIONS.--The figures of peak discharge for the 1967 water year have been revised as shown in the following table. They supersede figures published in WRD Md. and Del., 1967.
REVISED PEAK DISCHARGE.--1967: Mar. 7 (0600) 242 cfs (3.64 ft); Aug. 25 (0100) 424 cfs (4.48 ft).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.42	.72	1.1	1.3	.90	2.1	1.4	1.3	2.3	6.1	7.0	1.3
2	.41	.67	1.1	1.2	.85	1.9	1.8	1.5	23	2.1	17	1.2
3	.40	4.2	1.1	1.2	.85	13	1.9	1.3	11	1.1	57	1.2
4	.37	23	1.1	4.3	.90	11	1.5	1.3	4.0	.95	23	1.2
5	.47	17	1.0	17	5.1	3.8	1.4	1.2	2.1	.94	8.9	1.2
6	.57	1.3	1.0	3.9	3.8	3.1	6.9	1.2	4.8	.89	1.7	1.2
7	.35	1.1	.98	2.0	40	2.6	12	1.2	4.5	.87	1.4	1.1
8	.35	1.1	1.0	1.5	36	2.1	2.4	2.6	2.3	.83	1.3	1.1
9	.36	.95	1.1	1.5	4.2	1.9	2.0	1.5	1.6	.81	1.3	1.1
10	.37	1.0	1.1	1.4	1.5	1.9	1.8	1.2	1.5	.80	1.2	1.0
11	.36	4.5	1.1	1.5	1.3	2.0	1.6	1.1	1.3	.82	1.5	50
12	.34	3.4	1.9	2.0	1.6	1.9	1.6	1.1	1.4	.80	1.3	13
13	.34	1.8	1.2	1.6	73	1.8	1.6	32	1.4	.76	1.2	3.3
14	.40	1.5	1.1	2.6	5.6	1.7	1.5	2.4	1.4	.73	1.1	1.8
15	1.5	20	1.0	2.1	2.2	2.0	1.4	1.6	1.9	.71	1.1	1.5
16	1.1	1.8	8.4	1.4	1.9	1.8	1.6	25	1.6	.71	1.1	1.4
17	.36	1.4	5.6	1.1	1.8	1.6	2.0	2.7	1.3	.68	1.0	4.1
18	.49	1.2	1.6	1.1	1.9	1.5	2.2	1.8	1.2	.66	1.0	1.5
19	.41	1.2	1.3	1.0	2.1	6.3	2.0	1.6	1.2	.76	4.9	1.4
20	.44	4.3	1.2	1.0	3.1	2.8	1.7	2.8	1.1	.69	1.2	1.3
21	5.7	1.9	1.2	1.0	2.4	1.9	1.6	4.9	1.1	.64	1.1	1.4
22	1.5	1.3	18	1.1	30	1.9	1.6	1.9	1.1	.62	1.1	1.2
23	.70	1.2	2.9	3.9	13	2.4	1.5	1.5	1.1	.59	1.0	1.3
24	.63	1.1	2.3	1.5	3.0	1.8	1.5	1.4	1.1	.61	.92	1.2
25	.60	1.1	1.6	2.4	2.5	1.6	1.4	1.5	1.0	.74	.92	1.2
26	.63	1.1	1.4	5.6	2.3	1.5	1.3	2.2	1.0	.66	.89	1.6
27	.55	1.1	1.3	1.4	6.0	1.5	1.3	1.3	1.0	.58	57	1.6
28	.57	1.1	1.2	1.1	2.4	1.5	1.3	1.3	1.0	.55	3.5	1.3
29	.64	1.1	1.1	1.0	------	1.5	1.4	1.4	1.0	6.7	1.6	1.3
30	.80	1.1	1.1	1.1	------	1.4	1.3	11	1.0	2.1	1.4	1.2
31	1.8	------	1.1	1.0	------	1.4	------	28	------	1.9	1.3	------
TOTAL	23.93	104.24	68.18	71.8	250.20	85.2	64.5	142.8	81.3	38.40	205.93	104.2
MEAN	.77	3.47	2.20	2.32	8.94	2.75	2.15	4.61	2.71	1.24	6.64	3.47
MAX	5.7	23	18	17	73	13	12	32	23	6.7	57	50
MIN	.34	.67	.98	1.0	.85	1.4	1.3	1.1	1.0	.55	.89	1.0
CFSM	.34	1.54	.98	1.03	3.97	1.22	.96	2.05	1.20	.55	2.95	1.54
IN.	.40	1.72	1.13	1.19	4.14	1.41	1.07	2.36	1.34	.63	3.40	1.72

CAL YR 1970 TOTAL 852.51 MEAN 2.34 MAX 50 MIN .34 CFSM 1.04 IN 14.09
WTR YR 1971 TOTAL 1,240.68 MEAN 3.40 MAX 73 MIN .34 CFSM 1.51 IN 20.51

PEAK DISCHARGE (BASE, 150 CFS REVISED)

DATE	TIME	G. H.	DISCHARGE	DATE	TIME	G. H.	DISCHARGE
11- 4	2245	3.06	155	6- 2	2215	4.18	345
2- 7	2000	3.81	271	8- 3	2215	5.90	1,140
2- 8	1900	3.44	211	8-27	1645	4.00	305
2-13	1745	4.55	445	9-11	0830	3.84	274
5-13	0700	3.49	218				

01647720 North Branch Rock Creek near Norbeck, Md.

LOCATION.--Lat 39°06'59", long 77°06'09", Montgomery County, on left bank 550 ft downstream from bridge on Muncaster Mill Road (State Highway 115), 0.7 mile upstream from Manor Run, 1.5 miles northwest of Norbeck, and 2 miles upstream from mouth.

DRAINAGE AREA.--9.73 sq mi.

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

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

AVERAGE DISCHARGE.--5 years, 9.30 cfs (12.98 inches per year).

EXTREMES.--Current year: Maximum discharge, 1,030 cfs Feb. 13 (gage height, 5.86 ft); minimum daily, 1.2 cfs Oct. 8.
Period of record: Maximum discharge, 1,030 cfs Feb. 13, 1971 (gage height, 5.86 ft); minimum daily 0.40 cfs July 17-18, 1969.

REMARKS.--Records good. Diversion at low flow for irrigation of golf courses above station. Records of suspended-sediment loads for the water year 1971 are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.6	3.6	5.4	7.5	5.2	12	7.5	5.8	15	13	11	4.5
2	1.8	3.2	5.4	7.0	5.1	11	9.3	6.0	34	27	70	4.5
3	1.9	11	5.1	6.7	4.8	39	10	6.5	53	4.9	58	4.3
4	1.7	35	5.8	15	4.8	55	7.8	5.6	22	4.3	184	4.1
5	1.7	76	5.1	58	18	20	7.5	4.9	12	4.1	35	4.1
6	1.8	7.5	5.1	24	19	17	19	6.3	11	4.1	8.0	4.1
7	1.3	5.6	4.7	12	126	15	50	5.8	26	4.1	5.8	4.1
8	1.2	4.7	4.7	9.4	158	12	14	12	13	3.6	4.5	4.1
9	1.4	4.3	4.9	8.0	33	10	11	9.2	8.9	3.4	4.3	4.1
10	1.7	4.3	5.4	7.0	12	10	9.4	6.3	7.8	3.6	4.1	3.7
11	2.0	10	5.1	7.0	8.6	9.7	8.6	5.4	7.2	3.4	4.9	107
12	2.0	15	8.9	7.5	8.9	9.4	8.6	5.4	6.7	3.4	6.5	91
13	1.9	9.2	8.0	8.0	276	9.2	8.3	131	7.2	3.2	4.1	14
14	2.5	8.0	6.3	11	65	9.4	7.8	17	7.0	2.7	3.9	8.3
15	4.3	35	4.7	12	14	10	7.2	9.7	9.7	2.4	3.9	6.5
16	5.6	11	16	9.7	12	9.2	7.5	100	9.4	2.4	3.6	5.6
17	2.3	7.0	34	7.0	11	8.6	7.5	18	7.2	2.4	3.4	17
18	2.1	6.0	10	6.0	11	8.0	8.3	11	6.3	2.3	3.4	7.8
19	2.0	6.0	8.0	5.4	11	22	7.2	9.2	5.8	3.0	22	6.5
20	2.1	11	6.7	5.0	14	17	7.0	10	5.8	3.0	5.1	6.0
21	13	11	6.5	5.4	14	11	6.7	25	5.1	2.4	4.1	6.5
22	8.6	7.0	58	5.4	100	10	6.5	11	4.9	2.1	3.9	5.4
23	3.4	6.3	20	15	75	12	6.0	8.6	4.7	2.0	3.9	5.4
24	3.0	5.6	14	9.7	18	9.4	6.3	7.8	4.7	2.0	3.3	5.1
25	2.7	5.1	9.4	10	15	8.9	6.0	7.8	4.5	2.9	3.1	4.7
26	2.7	4.9	8.6	22	13	8.8	5.8	12	4.3	3.0	3.0	6.5
27	2.7	5.1	7.2	11	26	8.8	5.6	7.8	4.3	2.3	163	7.8
28	2.7	5.1	6.7	7.0	14	8.5	5.8	7.0	4.3	2.0	21	6.3
29	2.9	5.1	6.5	6.3	------	8.0	6.3	8.0	4.3	18	7.0	5.6
30	3.4	5.8	6.3	6.3	------	8.0	5.8	38	4.3	9.2	5.6	5.6
31	6.0	------	5.8	5.3	------	7.5	------	123	------	7.0	4.9	------
TOTAL	94.0	334.4	308.3	336.6	1,092.4	414.4	284.3	641.1	320.4	153.2	668.3	370.2
MEAN	3.03	11.1	9.95	10.9	39.0	13.4	9.48	20.7	10.7	4.94	21.6	12.3
MAX	13	76	58	58	276	55	50	131	53	27	184	107
MIN	1.2	3.2	4.7	5.0	4.8	7.5	5.6	4.9	4.3	2.0	3.0	3.7
CFSM	.31	1.14	1.02	1.12	4.01	1.38	.97	2.13	1.10	.51	2.22	1.26
IN.	.36	1.28	1.18	1.29	4.18	1.58	1.09	2.45	1.22	.59	2.56	1.42

CAL YR 1970 TOTAL 3,755.4 MEAN 10.3 MAX 173 MIN 1.2 CFSM 1.06 IN 14.36
WTR YR 1971 TOTAL 5,017.6 MEAN 13.7 MAX 276 MIN 1.2 CFSM 1.41 IN 19.18

PEAK DISCHARGE (BASE, 300 CFS)

DATE	TIME	G. H.	DISCHARGE	DATE	TIME	G. H.	DISCHARGE
11- 5	0100	3.53	327	5-16	0900	3.56	333
2- 7	2215	4.62	606	5-31	0500	3.90	415
2- 8	1915	4.10	465	6- 3	0015	3.77	382
2-13	2045	5.86	1,030	8- 4	0100	5.77	998
2-22	2400	3.57	335	8-27	1900	4.74	642
5-13	0915	4.23	498	9-12	0015	3.92	420

01647725 Manor Run near Norbeck, Md.

LOCATION.--Lat 36°06'36", long 77°06'00", Montgomery County, on left bank 100 ft downstream from ford on farm lane, 0.5 mile upstream from mouth, and 1.2 miles west of Norbeck.

DRAINAGE AREA.--1.01 sq mi.

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

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 330 ft (from topographic map).

AVERAGE DISCHARGE.--5 years, 1.11 cfs (14.92 inches per year).

EXTREMES.--Current year: Maximum discharge, 536 cfs Aug. 3 (gage height, 4.67 ft) from rating curve extended above 220 cfs; minimum daily, 0.23 cfs Oct. 3-13, 18-20.
Period of record: Maximum discharge, 536 cfs Aug. 3, 1971 (gage height, 4.67 ft) from rating curve extended above 220 cfs; minimum daily, 0.17 cfs Aug. 17, 1967, Sept. 30, Oct. 1-5, 1968.

REMARKS.--Records fair. Records of suspended-sediment loads for the water year 1971 are published in Part 2 of this report.

REVISIONS (WATER YEARS).--WRD Md. and Del. 1969: 1967-68(P).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.24	.32	.57	.80	.42	.96	.68	.57	.88	.73	5.7	.45
2	.25	.29	.52	.60	.40	1.2	1.2	.57	2.1	.43	3.9	.46
3	.23	2.4	.52	.60	.38	7.9	.88	.57	1.4	.39	25	.43
4	.23	19	.57	2.8	.43	5.2	.68	.57	.88	.35	8.2	.43
5	.23	5.4	.47	9.0	2.2	2.0	.68	.57	.74	.35	3.6	.39
6	.23	.62	.47	2.0	2.0	1.5	4.3	.57	2.5	.43	.68	.39
7	.23	.52	.47	1.0	21	1.2	6.1	.57	1.6	.35	.52	.51
8	.23	.47	.47	.81	15	.96	1.2	1.4	.88	.35	.47	.39
9	.23	.47	.47	.74	1.5	.96	.88	.68	.81	.39	.43	.43
10	.23	.47	.47	.74	.74	.88	.81	.52	.74	.35	.47	.43
11	.23	2.2	.47	.74	.60	.88	.74	.47	.74	.35	.81	3.6
12	.23	1.2	1.4	1.0	.70	.81	.74	.52	.68	.35	.47	9.2
13	.23	1.0	.62	.81	25	.81	.74	18	.62	.35	.39	2.4
14	.24	1.2	.52	1.7	3.5	.81	.68	1.0	.60	.35	.39	.66
15	1.0	11	.52	1.0	1.2	.81	.81	.74	.68	.39	.39	.54
16	.58	.81	7.3	.74	.94	.74	.74	12	.64	.39	.39	.46
17	.24	.68	2.5	.60	.90	.74	.74	1.2	.60	.39	.39	2.1
18	.23	.62	.74	.52	1.0	.68	.74	.88	.54	.39	.39	.90
19	.23	.68	.68	.48	1.2	3.4	.68	.74	.54	.43	1.7	.62
20	.23	.88	.62	.45	1.7	1.2	.62	3.5	.50	.35	.43	.57
21	3.3	.68	.74	.45	1.2	.88	.62	3.2	.50	.39	.43	.57
22	.75	.57	11	.57	16	.88	.57	.96	.50	.39	.39	.58
23	.32	.52	1.7	2.5	4.3	1.2	.57	.81	.50	.35	.39	.57
24	.29	.52	1.6	.81	1.5	.74	.57	.81	.45	.39	.39	.57
25	.29	.52	.88	1.7	1.2	.74	.57	.81	.45	.68	.39	.53
26	.27	.52	.81	2.3	1.2	.74	.57	.81	.45	.43	.39	.52
27	.27	.52	.70	.74	2.8	.74	.52	.68	.45	.35	30	.76
28	.27	.52	.62	.52	1.2	.74	.57	.62	.43	.35	1.2	.57
29	.27	.52	.56	.45	------	.74	.57	.74	.43	8.4	.57	.57
30	.47	.57	.54	.50	------	.68	.57	5.2	.43	1.7	.57	.57
31	.47	------	.54	.45	------	.68	------	15	------	.81	.48	------
TOTAL	12.74	55.69	40.06	38.12	110.21	42.40	30.34	75.28	23.26	22.10	89.92	31.17
MEAN	.41	1.86	1.29	1.23	3.94	1.37	1.01	2.43	.78	.71	2.90	1.04
MAX	3.3	19	11	9.0	25	7.9	6.1	18	2.5	8.4	30	9.2
MIN	.23	.29	.47	.45	.38	.68	.52	.47	.43	.35	.39	.39
CFSM	.41	1.84	1.28	1.22	3.90	1.36	1.00	2.41	.77	.70	2.87	1.03
IN.	.47	2.05	1.48	1.40	4.06	1.56	1.12	2.77	.86	.81	3.31	1.15

CAL YR 1970 TOTAL 432.73 MEAN 1.19 MAX 28 MIN .23 CFSM 1.18 IN 15.94
WTR YR 1971 TOTAL 571.29 MEAN 1.57 MAX 30 MIN .23 CFSM 1.55 IN 21.04

PEAK DISCHARGE (BASE, 150 CFS)

DATE	TIME	G. H.	DISCHARGE	DATE	TIME	G. H.	DISCHARGE
2- 7	1845	2.79	154	8- 1	2230	3.11	185
2- 8	1715	2.87	161	8- 3	2215	4.67	536
2-13	Unknown	*3.56	235	8-27	1415	3.99	313
5-13	0515	3.35	210	9-12	0600	2.93	167
7-29	1845	3.08	182				

* From floodmark.

01647740 North Branch Rock Creek near Rockville, Md.

LOCATION.--Lat 39°06'09", long 77°07'12", Montgomery County, on left bank 170 ft downstream from outlet of Bernard Frank Lake, 370 ft upstream from mouth, and 2.4 miles northeast of Rockville.

DRAINAGE AREA.--12.5 sq mi.

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

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 270 ft (from topographic map).

EXTREMES.--Current year: Maximum discharge, 100 cfs Feb. 9 (gage height, 2.92 ft); maximum gage height, 4.01 ft Feb. 13 (backwater from Rock Creek); minimum discharge, .01 cfs July 28-29 (gage height, 0.64 ft), when drain valve at Bernard Frank Lake was closed.
Period of record: Maximum discharge, 100 cfs Feb. 9, 1971 (gage height, 2.92 ft); maximum gage height, 4.01 ft Feb. 13, 1971 (backwater from Rock Creek); minimum discharge, .01 cfs July 28-29, 1971 (gage height, 0.64 ft), when drain valve at Bernard Frank Lake was closed.

REMARKS.--Records good. Flow regulated by dam above station. Records of suspended-sediment loads for the 1971 water year are published in Part 2 of this report.

REVISIONS (WATER YEARS).--WRD Md. and Del. 1970: 1967-68(M).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.8	6.2	8.6	11	10	33	11	8.6	43	8.6	3.3	24
2	5.8	6.2	8.6	11	9.6	26	11	8.2	29	13	42	16
3	5.8	6.2	8.6	11	9.2	25	12	8.6	47	12	41	12
4	5.8	6.3	8.6	12	9.0	47	12	8.6	38	10	89	10
5	5.8	24	8.6	28	11	45	12	8.6	29	9.0	84	9.4
6	5.8	22	8.6	35	17	41	13	8.6	21	8.2	72	9.4
7	5.8	16	8.6	32	25	37	39	8.6	25	8.2	58	8.2
8	5.8	11	8.6	29	71	32	37	10	24	8.2	45	7.9
9	5.8	10	8.6	24	96	26	30	13	18	8.2	29	7.6
10	5.8	9.0	8.6	20	92	22	24	12	15	8.2	18	7.6
11	5.8	9.4	8.6	17	75	19	19	11	12	8.2	11	34
12	5.8	15	8.6	15	54	17	16	9.9	11	7.9	11	75
13	5.8	15	8.6	15	62	16	15	54	11	7.9	8.6	70
14	5.8	12	8.6	15	96	15	13	73	11	7.9	7.2	58
15	5.8	37	8.6	15	90	15	13	60	11	7.9	6.5	45
16	6.2	35	9.4	15	80	15	12	71	11	7.9	6.2	29
17	6.2	26	29	13	67	13	11	69	11	7.9	6.2	24
18	6.2	19	25	12	50	13	11	41	11	7.6	5.8	21
19	6.2	15	19	11	37	15	11	32	10	7.6	13	15
20	6.2	12	16	10	30	27	11	32	9.4	7.6	16	12
21	6.2	15	13	9.8	27	23	11	32	9.4	7.2	11	9.8
22	6.2	12	28	9.4	33	19	10	32	9.0	7.2	9.0	9.4
23	6.2	11	40	11	59	18	10	30	8.6	7.2	7.9	9.0
24	6.5	10	33	13	55	16	9.8	31	8.6	6.8	7.2	8.6
25	6.5	9.4	27	13	51	15	9.8	31	8.6	7.2	6.5	8.2
26	6.5	9.0	21	16	45	13	9.8	21	8.6	7.2	6.2	7.9
27	6.5	9.0	18	18	42	13	8.6	7.2	8.6	7.6	33	9.8
28	6.5	9.0	15	16	38	12	8.6	7.2	8.6	5.2	75	9.8
29	6.5	9.0	13	13	------	12	8.6	7.2	8.6	.02	63	9.0
30	6.5	8.6	11	12	------	12	8.6	7.5	8.6	1.3	52	8.2
31	6.2	------	11	11	------	12	------	45	------	2.6	38	------
TOTAL	188.3	414.3	457.4	493.2	1,340.8	664	427.8	798.8	484.6	231.52	881.6	584.8
MEAN	6.07	13.8	14.8	15.9	47.9	21.4	14.3	25.8	16.2	7.47	28.4	19.5
MAX	6.5	37	40	35	96	47	39	73	47	13	89	75
MIN	5.8	6.2	8.6	9.4	9.0	12	8.6	7.2	8.6	.02	3.3	7.6
CFSM	.49	1.10	1.18	1.27	3.83	1.71	1.14	2.06	1.30	.60	2.27	1.56
IN.	.56	1.23	1.36	1.47	3.99	1.98	1.27	2.38	1.44	.69	2.62	1.74

CAL YR 1970 TOTAL 5,279.50 MEAN 14.5 MAX 89 MIN 5.8 CFSM 1.16 IN 15.71
WTR YR 1971 TOTAL 6,967.12 MEAN 19.1 MAX 96 MIN .02 CFSM 1.53 IN 20.73

01648000 Rock Creek at Sherrill Drive, Washington, D. C.

LOCATION.--Lat 38°58'21", long 77°02'25", District of Columbia, on left bank 125 ft downstream from new Sherrill Drive Bridge in Rock Creek Park in Washington, and 7½ miles upstream from mouth.

DRAINAGE AREA.62.2 sq mi.

PERIOD OF RECORD.--October 1929 to current year.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 148.87 ft above mean sea level, datum of 1929.

AVERAGE DISCHARGE.--42 years, 56.3 cfs (12.29 inches per year).

EXTREMES.--Current year: Maximum discharge, 1,950 cfs Aug. 27 (gage height, 7.71 ft); minimum, 13 cfs Oct. 8, 9 (gage height, 1.27 ft).
Period of record: Maximum discharge, 7,220 cfs July 21, 1956 (gage height, 13.19 ft, from high-water mark in gage house), from rating curve extended above 4,400 cfs on basis of contracted-opening measurement of peak flow; minimum, 0.5 cfs Oct. 1-7, 1930 (gage height, 1.04 ft).

REMARKS.--Records good. Flow affected by two reservoirs upstream; Needwood Lake on Rock Creek since Sept. 1966 and Bernard Frank Lake on North Branch Rock Creek since 1968.

REVISIONS (WATER YEARS).--WSP 1432: 1933(M).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15	26	37	78	30	80	42	32	138	65	53	65
2	15	24	37	78	22	75	46	33	117	46	409	51
3	16	100	36	40	24	215	65	35	199	43	146	44
4	15	170	42	75	30	329	50	32	124	39	572	40
5	14	493	36	291	110	129	46	33	93	37	280	37
6	14	89	35	121	156	114	100	37	178	39	177	35
7	13	62	35	55	300	103	350	35	207	36	150	34
8	13	49	36	50	700	89	150	89	85	33	124	34
9	13	43	43	40	350	77	70	55	64	37	97	32
10	19	40	43	36	160	69	55	41	55	33	67	30
11	20	127	26	37	130	65	50	39	51	33	107	434
12	14	79	68	37	100	59	48	39	49	32	91	385
13	14	83	30	37	700	57	46	660	48	28	45	190
14	14	48	21	56	550	54	46	175	52	29	39	150
15	63	354	42	45	170	54	44	152	52	26	36	125
16	103	85	156	36	110	53	44	509	48	25	34	100
17	19	67	250	32	100	49	46	184	54	37	33	220
18	16	54	73	28	95	48	46	129	76	29	31	81
19	16	48	62	25	90	178	44	99	33	51	129	62
20	15	51	39	28	85	98	43	109	33	43	52	52
21	168	54	40	30	85	65	44	232	33	25	44	52
22	91	43	354	32	350	60	42	88	33	24	38	44
23	26	39	95	84	410	80	41	76	33	24	35	42
24	22	35	99	53	120	60	40	70	33	59	33	40
25	21	88	53	73	85	50	40	68	33	46	31	38
26	29	45	45	75	80	46	40	69	32	78	29	74
27	19	40	39	60	120	46	39	47	31	55	799	46
28	18	39	35	46	90	44	46	44	102	24	416	39
29	18	39	88	52	------	44	41	62	34	213	146	38
30	36	42	86	48	------	42	31	209	32	140	110	37
31	51	------	80	42	------	42	------	426	------	102	84	------
TOTAL	940	2,556	2,151	1,820	5,352	2,574	1,835	3,908	2,152	1,531	4,437	2,651
MEAN	30.3	85.2	69.4	58.7	191	83.0	61.2	126	71.7	49.4	143	88.4
MAX	168	493	354	291	700	329	350	660	207	213	799	434
MIN	13	24	21	25	22	42	31	32	31	24	29	30
CFSM	.49	1.37	1.12	.94	3.07	1.33	.98	2.03	1.15	.79	2.30	1.42
IN.	.56	1.53	1.29	1.09	3.20	1.54	1.10	2.34	1.29	.92	2.65	1.59

CAL YR 1970 TOTAL 25,854 MEAN 70.8 MAX 976 MIN 13 CFSM 1.14 IN 15.46
WTR YR 1971 TOTAL 31,907 MEAN 87.4 MAX 799 MIN 13 CFSM 1.41 IN 19.08

PEAK DISCHARGE (BASE, 1,000 CFS REVISED)

DATE	TIME	G. H.	DISCHARGE	DATE	TIME	G. H.	DISCHARGE
11- 5	0500	5.59	1,180	5-13	1245	6.10	1,340
2- 7	2400	5.64	1,190	8- 2	0430	5.01	1,010
2- 9	0030	5.71	1,210	8- 4	0815	5.64	1,190
2-14	0200	7.21	1,750	8-27	2345	7.71	1,950
2-23	0200	5.01	1,010				

01649500 Northeast Branch Anacostia River at Riverdale, Md.

LOCATION.--Lat 38°57'37", long 76°55'34", Prince Georges County, on right bank 200 ft downstream from bridge on Riverdale Road, in Riverdale, 1.8 miles downstream from Indian Creek, and 1.8 miles upstream from confluence with Northwest Branch.

DRAINAGE AREA.--72.8 sq mi.

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

GAGE.--Water-stage recorder 200 ft downstream from bridge. Datum of gage is 12.68 ft above mean sea level (Washington Suburban Sanitary Commission bench mark). 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 above mean sea level. Mar. 23, 1966 to Apr. 11, 1967, nonrecording gage 600 ft downstream at datum 9.25 ft above mean sea level.

AVERAGE DISCHARGE.--33 years, 77.2 cfs (14.40 inches per year).

EXTREMES.--Current year: Maximum discharge, 4,340 cfs Sept. 11 (gage height, 6.60 ft); minimum daily, 11 cfs Oct. 10, 11, 12.
Period of record: Maximum discharge, 5,660 cfs Aug. 10, 1969 (gage height, 7.28 ft) from rating curve extended above 3,000 cfs; maximum gage height, 12.93 ft Oct. 16, 1942; minimum daily discharge, 1.4 cfs Sept. 12, 1966.
Maximum stage known, about 15.5 ft Aug. 23 or 24, 1933, from floodmarks (discharge, 10,500 cfs from rating curve extended above 3,000 cfs on basis of velocity-area study).

REMARKS.--Records good. Some regulation at low flow by sand and gravel plants above station.

REVISIONS (WATER YEARS).--WRD Md. and Del. 1968: 1967(M).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15	32	34	46	38	89	47	38	183	223	156	28
2	15	24	33	60	36	76	83	38	102	248	444	25
3	14	62	33	55	36	279	99	38	136	59	213	23
4	18	329	40	186	40	493	64	37	83	39	694	22
5	16	431	36	550	102	175	51	33	64	33	282	20
6	14	96	34	267	107	120	267	37	59	39	86	19
7	13	47	32	117	488	99	839	38	181	47	49	15
8	12	38	28	85	928	83	240	112	286	30	37	15
9	12	32	28	65	483	76	112	69	96	28	30	14
10	11	42	28	64	179	69	83	44	56	29	26	14
11	11	252	30	63	125	69	69	38	47	32	44	922
12	11	182	71	65	81	64	62	38	46	27	65	1,420
13	12	378	49	62	908	62	58	890	44	23	34	338
14	12	186	38	86	594	62	53	368	42	22	31	136
15	37	572	33	83	179	61	51	129	51	21	27	80
16	107	155	162	55	112	60	53	689	49	21	23	61
17	28	76	275	50	91	55	104	279	42	40	22	450
18	21	58	99	46	83	53	152	111	38	27	22	150
19	16	49	62	42	76	203	115	74	35	27	162	70
20	14	49	49	40	91	175	89	68	33	32	65	55
21	158	47	64	38	83	96	44	243	32	21	37	50
22	137	40	514	38	677	81	42	112	30	20	30	46
23	40	37	264	91	937	102	40	72	30	18	27	46
24	26	33	155	71	244	76	40	56	28	35	22	44
25	21	32	91	102	128	64	40	52	26	44	20	42
26	26	33	71	110	102	62	38	49	24	69	20	80
27	18	33	55	60	207	62	37	43	26	62	1,490	60
28	16	33	48	48	122	55	37	41	79	22	898	46
29	16	33	44	46	------	55	47	63	48	198	137	44
30	30	37	40	47	------	53	40	213	35	337	57	44
31	60	------	38	46	------	47	------	687	------	156	35	------
TOTAL	957	3,448	2,578	2,784	7,277	3,176	3,096	4,799	2,031	2,029	5,285	4,379
MEAN	30.9	115	83.2	89.8	260	102	103	155	67.7	65.5	170	146
MAX	158	572	514	550	937	493	839	890	286	337	1,490	1,420
MIN	11	24	28	38	36	47	37	33	24	18	20	14
CFSM	.42	1.58	1.14	1.23	3.57	1.40	1.41	2.13	.93	.90	2.34	2.01
IN.	.49	1.76	1.32	1.42	3.72	1.62	1.58	2.45	1.04	1.04	2.70	2.24

CAL YR 1970 TOTAL 29,115 MEAN 79.8 MAX 1,230 MIN 11 CFSM 1.10 IN 14.88
WTR YR 1971 TOTAL 41,839 MEAN 115 MAX 1,490 MIN 11 CFSM 1.58 IN 21.38

PEAK DISCHARGE (BASE, 1,650 REVISED)

DATE	TIME	G. H.	DISCHARGE	DATE	TIME	G. H.	DISCHARGE
2- 7	2045	4.78	2,140	8- 1	2345	4.35	1,710
2-13	2030	4.82	2,180	8- 4	0015	5.45	2,860
2-22	2345	4.83	2,190	8-27	1615	6.47	4,160
5-13	0800	4.91	2,270	9-11	2015	6.60	4,340

01650050 Northwest Branch Anacostia River at Norwood, Md.

LOCATION.--Lat 39°07'36", long 77°01'15", Montgomery County, on left bank 20 ft downstream from bridge on Ednor Road, 0.2 mile downstream from tributary, 0.4 mile east of Norwood, 1.6 miles south of Sandy Spring, and 19 miles upstream from confluence with Northeast Branch.

DRAINAGE AREA.--2.45 sq mi.

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

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 360 ft (from topographic map).

AVERAGE DISCHARGE.--5 years, 2.13 cfs (11.81 inches per year).

EXTREMES.--Current year: Maximum discharge, 1,500 cfs Aug. 3 (gage height, 5.43 ft), from rating curve extended above 280 cfs on basis of culvert and flow-over-road measurement of peak flow; minimum daily, 0.33 cfs Oct. 5.
Period of record: Maximum discharge, 1,500 cfs Aug. 3, 1971 (gage height, 5.43 ft), from rating curve extended above 280 cfs on basis of culvert and flow-over road measurement of peak flow; minimum daily, 0.05 cfs July 19, 1969.

REMARKS.--Records good. Records of suspended-sediment loads for the water year 1971 are published in Part 2 of this report.

REVISIONS WATER YEARS).--WRD Md. and Del. 1968: 1967(P).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.49	.95	1.2	1.6	1.2	2.6	1.8	1.5	2.9	8.6	14	1.2
2	.49	.77	1.2	1.5	1.0	2.4	2.4	1.6	4.6	3.2	17	1.2
3	.43	1.0	1.2	1.5	1.0	11	2.6	1.6	7.5	1.5	75	1.2
4	.38	16	1.2	5.0	1.1	12	2.1	1.6	4.6	1.2	35	1.0
5	.33	9.2	1.2	15	4.2	4.2	1.8	1.5	2.4	1.0	12	1.0
6	.49	1.5	1.0	4.2	5.4	3.5	8.0	1.6	3.5	1.0	2.4	1.0
7	.38	1.2	1.0	2.6	47	3.2	13	1.5	3.8	1.0	1.5	.95
8	.38	1.0	1.0	1.8	47	2.6	3.5	3.2	2.6	.95	1.3	.95
9	.38	.95	1.0	1.8	5.0	2.4	2.6	2.4	2.4	.95	1.2	.95
10	.43	.95	1.0	1.8	3.0	2.4	2.4	1.8	1.6	.95	1.0	.95
11	.49	3.5	1.2	1.6	2.2	2.4	2.4	1.5	1.5	.95	1.3	40
12	.55	3.8	1.8	1.8	2.6	2.1	2.4	1.5	1.5	.95	1.3	8.6
13	.49	9.8	1.5	1.8	75	2.1	2.1	38	1.5	.86	1.0	2.9
14	.49	2.4	1.3	2.4	30	2.1	2.1	3.8	1.6	.86	1.0	1.8
15	.86	23	1.2	2.4	3.2	2.1	2.1	2.4	2.6	.77	1.0	1.5
16	.95	2.4	9.2	1.8	2.4	2.1	1.8	22	1.8	.86	1.0	1.3
17	.62	1.8	7.5	1.4	2.4	1.8	2.1	3.8	1.6	.77	.95	6.0
18	.55	1.5	2.4	1.2	2.4	1.8	2.1	2.4	1.5	.86	.95	1.8
19	.49	1.5	1.8	1.1	2.5	6.4	1.8	2.1	1.3	1.0	1.6	1.6
20	.49	1.5	1.6	1.1	3.2	3.8	1.8	2.1	1.3	.95	1.0	1.5
21	1.6	1.5	1.5	1.2	3.0	2.6	1.8	5.0	1.3	.86	.95	1.3
22	1.2	1.3	16	1.2	25	2.4	1.8	2.6	1.2	.77	.86	1.3
23	.77	1.3	4.2	3.2	9.0	2.9	1.6	2.1	1.2	.77	.86	1.3
24	.77	1.2	2.9	2.4	4.5	2.4	1.6	1.8	1.2	.77	.86	1.3
25	.70	1.2	2.1	2.6	3.5	2.1	1.6	1.8	1.2	.95	.77	1.2
26	.60	1.2	1.8	6.0	2.9	2.1	1.5	2.1	1.3	.95	.77	1.6
27	.60	1.2	1.5	3.5	5.4	2.1	1.5	1.6	1.0	.86	62	1.8
28	.55	1.2	1.3	2.0	2.9	2.1	1.6	1.5	1.0	.77	5.0	1.5
29	.60	1.2	1.2	1.6	------	2.1	1.6	1.6	1.0	3.8	1.8	1.3
30	.86	1.3	1.2	1.7	------	1.8	1.5	7.5	1.0	2.6	1.5	1.3
31	1.2	------	1.2	1.5	------	1.8	------	28	------	2.6	1.2	------
TOTAL	19.61	97.32	75.4	80.3	298.0	97.4	77.0	153.5	63.5	44.88	248.07	91.30
MEAN	.63	3.24	2.43	2.59	10.6	3.14	2.57	4.95	2.12	1.45	8.00	3.04
MAX	1.6	23	16	15	75	12	13	38	7.5	8.6	75	40
MIN	.33	.77	1.0	1.1	1.0	1.8	1.5	1.5	1.0	.77	.77	.95
CFSM	.26	1.32	.99	1.06	4.33	1.28	1.05	2.02	.87	.59	3.27	1.24
IN.	.30	1.48	1.14	1.22	4.52	1.48	1.17	2.33	.96	.68	3.77	1.39

CAL YR 1970 TOTAL 938.47 MEAN 2.57 MAX 68 MIN .33 CFSM 1.05 IN 14.25
WTR YR 1971 TOTAL 1,346.28 MEAN 3.69 MAX 75 MIN .33 CFSM 1.51 IN 20.44

PEAK DISCHARGE (BASE, 150 CFS)

DATE	TIME	G. H.	DISCHARGE	DATE	TIME	G. H.	DISCHARGE
2- 7	1930	3.00	263	8- 1	2300	2.61	214
2- 8	1800	3.12	280	8- 3	2300	5.43	1,500
2-13	1745	3.37	320	8-27	1645	3.66	374
5-13	0715	2.82	240	9-11	2100	3.06	271

01650085 Nursery Run at Cloverly, Md.

LOCATION.--Lat 39°07'05", long 77°00'24", Montgomery County, on left bank 300 ft upstream from culvert on Bryants Nursery Road, 350 ft upstream from mouth, 0.8 mile northwest of Cloverly, and 2.4 miles southeast of Sandy Spring.
DRAINAGE AREA.--0.35 sq mi.
PERIOD OF RECORD.--November 1966 to current year.
AVERAGE DISCHARGE.--5 years, 0.39 cfs (15.13 inches per year).
GAGE.--Water-stage recorder and concrete control. Altitude of gage is 400 ft (from topographic map).
EXTREMES.--Current year: Maximum discharge, 260 cfs Aug. 3 (gage height, 3.56 ft), from rating curve extended above 30 cfs on basis of culvert and flow-over-road measurement of peak flow; minimum, 0.12 cfs Oct. 3-14 (gage height, 1.62 ft).
Period of record: Maximum discharge, 260 cfs Aug. 3, 1971 (gage height, 3.56 ft); from rating curve extended above 30 cfs on basis of culvert and flow-over-road measurement of peak flow; minimum, 0.07 cfs Aug. 30, 31, Oct. 2-5, 1968, Jan. 16, and July 16-18, 1969.
REVISIONS.--The figures of maximum discharge for some water years have been revised as shown in the following table. They supersede figures published in the Water Resources Data reports indicated.

Report	Water Year	Date	Discharge (cfs)	Gage height (feet)
WRD Md. and Del.	1967	Aug. 25, 1967	216	3.46
WRD Md. and Del.	1968	June 19, 1968	61	2.76
WRD Md. and Del.	1969	Aug. 2, 1969	72	2.84

REMARKS.--Records good. Records of suspended-sediment loads for the water year 1971 are published in Part 2 of this report.
REVISIONS.--The figures of peak discharge for water years 1967 and 1969 have been revised as shown in the following table. They supersede figures published in WRD Md. and Del., 1967 and 1969.
REVISED PEAK DISCHARGE.--1967: Mar. 7 (0530) 35 cfs (2.53 ft); July 29 (2230) 34 cfs (2.52 ft); Aug. 4 (2030) 51 cfs (2.68 ft); Aug. 25 (0030) 216 cfs (3.46 ft).
1969: June 18 (2145) 40 cfs (2.58 ft); Aug 2 (2000) 72 cfs (2.84 ft); Sept 4 (1600) 36 cfs (2.54 ft).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.15	.19	.28	.35	.23	.48	.39	.35	.48	2.2	.85	.28
2	.13	.17	.28	.31	.22	.43	.53	.40	.48	.53	1.9	.28
3	.13	.35	.28	.31	.22	1.0	.48	.35	.70	.28	5.2	.28
4	.12	2.4	.31	.70	.25	1.2	.39	.35	.48	.22	2.1	.25
5	.12	1.2	.31	1.5	.48	.70	.39	.35	.39	.22	1.0	.25
6	.12	.35	.25	.64	.58	.64	.85	.35	.43	.22	.35	.25
7	.12	.28	.25	.48	4.6	.58	1.4	.35	.53	.22	.28	.22
8	.12	.25	.25	.39	4.0	.53	.64	.58	.43	.17	.25	.22
9	.12	.25	.28	.35	.70	.48	.53	.39	.31	.17	.22	.22
10	.12	.25	.28	.35	.39	.48	.48	.35	.28	.17	.22	.22
11	.13	.85	.31	.35	.31	.43	.43	.31	.28	.19	1.0	2.0
12	.13	.77	.53	.35	.31	.43	.43	.31	.28	.17	.43	.85
13	.13	2.4	.43	.35	5.6	.43	.43	2.0	.28	.17	.28	.53
14	.13	.58	.39	.40	.85	.43	.39	.53	.28	.15	.22	.35
15	.48	2.6	.39	.35	.53	.43	.39	.43	.39	.15	.22	.31
16	.35	.58	1.1	.31	.48	.43	.39	1.6	.31	.15	.22	.28
17	.15	.43	.85	.29	.43	.39	.43	.58	.28	.15	.22	.92
18	.15	.39	.43	.28	.43	.39	.43	.43	.25	.15	.19	.39
19	.15	.35	.35	.26	.43	.94	.39	.35	.25	.22	1.0	.35
20	.15	.43	.35	.26	.53	.64	.39	.39	.22	.19	.28	.31
21	.64	.35	.35	.28	.48	.48	.39	.77	.22	.15	.22	.28
22	.43	.35	1.6	.30	3.2	.48	.35	.43	.22	.15	.22	.26
23	.19	.31	.70	.53	1.5	.53	.35	.35	.22	.15	.22	.28
24	.19	.28	.64	.39	.70	.43	.35	.35	.22	.17	.19	.28
25	.17	.28	.43	.48	.58	.43	.35	.31	.19	.25	.19	.22
26	.19	.28	.39	.64	.53	.43	.35	.31	.22	.19	.19	.43
27	.17	.28	.35	.39	.77	.39	.35	.28	.22	.17	6.0	.39
28	.17	.28	.31	.31	.53	.39	.39	.28	.28	.15	.86	.31
29	.17	.28	.28	.25	------	.43	.36	.35	.22	.70	.41	.28
30	.28	.28	.27	.27	------	.39	.35	.85	.22	.48	.35	.28
31	.31	------	.30	.26	------	.39	------	1.6	------	.35	.31	------
TOTAL	6.11	18.04	13.52	12.68	29.86	16.23	13.77	16.63	9.56	9.00	25.59	11.77
MEAN	.20	.60	.44	.41	1.07	.52	.46	.54	.32	.29	.83	.39
MAX	.64	2.6	1.6	1.5	5.6	1.2	1.4	2.0	.70	2.2	6.0	2.0
MIN	.12	.17	.25	.25	.22	.39	.35	.28	.19	.15	.19	.22
CFSM	.57	1.71	1.26	1.17	3.06	1.49	1.31	1.54	.91	.83	2.37	1.11
IN.	.65	1.92	1.44	1.35	3.17	1.73	1.46	1.77	1.02	.96	2.72	1.25

CAL YR 1970 TOTAL 179.87 MEAN .49 MAX 6.0 MIN .12 CFSM 1.40 IN 19.12
WTR YR 1971 TOTAL 182.76 MEAN .50 MAX 6.0 MIN .12 CFSM 1.43 IN 19.42

PEAK DISCHARGE (BASE, 30 CFS)

DATE	TIME	G. H.	DISCHARGE	DATE	TIME	G. H.	DISCHARGE
2-13	1730	2.47	30	8- 3	2230	3.56	260
7- 1	2045	2.84	72	8-27	1615	2.56	44

01650450 Bel Pre Creek at Layhill, Md.

LOCATION.--Lat 39°05'27", long 77°03'11", Montgomery County, on right bank 130 ft upstream from bridge on Bel Pre Road, 0.5 mile west of Layhill, 1.2 miles upstream from Lutes Run, 1.8 miles southeast of Norbeck, and 2.9 miles upstream from mouth.

DRAINAGE AREA.--1.69 sq mi.

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

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 350 ft (from topographic map).

AVERAGE DISCHARGE.--5 years, 1.73 cfs (13.90 inches per year).

EXTREMES.--Current year: Maximum discharge, 1,030 cfs Aug. 3 (gage height, 8.49 ft), from rating curve extended above 210 cfs on basis of a culvert measurement of peak flow; minimum daily, 0.09 cfs Oct. 2-4, July 22.
Period of record: Maximum discharge, 1,030 cfs Aug. 3, 1971 (gage height, 8.49 ft), from rating curve extended above 210 cfs on basis of a culvert measurement of peak flow; minimum daily, 0.04 cfs Aug. 25-26, Sept. 1, 1968.

REMARKS.--Records good. Diversions at low flow for irrigation of golf courses above station. Some regulation at low flow from unknown cause. Records of suspended-sediment loads for the water year 1971 are published in Part 2 of this report.

REVISIONS (WATER YEARS).--WRD Md. and Del. 1968: 1967. WRD Md. and Del. 1970: 1967(P), 1968(P), 1969(P).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.12	.34	.38	.45	.37	1.1	.75	.51	.95	3.0	19	.44
2	.09	.29	.38	.40	.35	.98	1.5	.66	13	.86	15	.44
3	.09	2.9	.37	.45	.35	13	1.2	.51	4.5	.38	50	.38
4	.09	24	.44	5.4	.51	11	.75	.38	1.2	.33	41	.38
5	.14	13	.33	17	3.6	2.7	.66	.38	.75	.33	7.7	.38
6	.23	.72	.33	3.8	3.9	2.2	9.3	.38	4.7	.86	.86	.38
7	.17	.49	.33	1.3	33	1.5	15	.38	4.0	.33	.51	.33
8	.14	.40	.33	.80	30	1.1	2.0	2.8	1.5	.28	.44	.33
9	.12	.33	.33	.69	3.5	.75	1.1	1.0	.66	.28	.44	.33
10	.13	.45	.33	.61	1.0	.75	.86	.41	.51	.33	.44	.33
11	.12	4.5	.36	.63	.85	.75	.75	.38	.44	.23	3.3	20
12	.12	2.6	2.8	1.1	.84	.75	.75	.45	.51	.23	.75	7.1
13	.12	3.4	1.4	.87	61	.75	.75	44	.51	.15	.38	1.5
14	.14	1.7	.70	1.9	3.0	.75	.66	.80	.51	.15	.38	.66
15	3.3	22	.43	1.6	1.4	.66	.58	.56	.66	.44	.33	.58
16	1.1	1.2	13	.77	1.1	.66	.66	22	.51	.15	.33	.44
17	.23	.62	7.1	.58	1.1	.66	.86	.83	.51	.28	.38	3.5
18	.17	.51	1.1	.50	1.0	.58	.86	.70	.44	.28	.38	.51
19	.15	.50	.70	.41	1.1	6.5	.66	.62	.38	.75	3.7	.44
20	.15	.95	.54	.36	2.2	2.9	.58	4.9	.38	.23	.44	.44
21	7.2	.63	.88	.33	1.5	1.1	.75	2.5	.38	.12	.38	.44
22	1.4	.46	22	.36	28	1.2	.58	.65	.38	.09	.38	.44
23	.30	.40	3.5	4.0	11	1.8	.51	.60	.33	.12	.33	.44
24	.23	.35	2.6	1.9	2.2	.86	.51	.60	.51	.38	.33	.44
25	.21	.33	.95	2.3	1.4	.75	.51	.60	.33	1.1	.33	.44
26	.26	.33	.79	4.5	1.4	.75	.51	.60	.33	.33	.33	.98
27	.22	.33	.60	5.0	4.7	.66	.51	.55	.33	.23	59	.51
28	.20	.35	.46	1.0	1.5	.66	.51	.52	.38	.12	3.7	.38
29	.20	.39	.40	.40	------	.66	.58	.60	.23	13	.75	.38
30	.82	.44	.38	.50	------	.66	.58	3.7	.23	4.4	1.1	.38
31	1.1	------	.38	.45	------	.66	------	29	------	3.1	.44	------
TOTAL	19.06	84.91	64.62	60.36	201.87	59.80	45.78	122.57	40.05	32.86	212.83	43.72
MEAN	.61	2.83	2.08	1.95	7.21	1.93	1.53	3.95	1.34	1.06	6.87	1.46
MAX	7.2	24	22	17	61	13	15	44	13	13	59	20
MIN	.09	.29	.33	.33	.35	.58	.51	.38	.23	.09	.33	.33
CFSM	.36	1.67	1.23	1.15	4.27	1.14	.91	2.34	.79	.63	4.07	.86
IN.	.42	1.87	1.42	1.33	4.44	1.32	1.01	2.70	.88	.72	4.68	.96

CAL YR 1970 TOTAL 711.52 MEAN 1.95 MAX 66 MIN .08 CFSM 1.15 IN 15.66
WTR YR 1971 TOTAL 988.43 MEAN 2.71 MAX 61 MIN .09 CFSM 1.60 IN 21.76

PEAK DISCHARGE (BASE, 140 CFS) * About.

DATE	TIME	G. H.	DISCHARGE	DATE	TIME	G. H.	DISCHARGE
2- 7	1915	4.29	176	8- 1	2245	5.39	255
2- 8	1730	4.13	165	8- 3	2215	8.49	1,030
2-13	1730	5.50	265	8-27	1600	5.47	262
5-13	Unknown	*4.80	*210	9-11	2030	4.24	173
7-29	1915	4.35	180				

01650500 Northwest Branch Anacostia River near Colesville, Md.

LOCATION.--Lat 39°03'55", long 77°01'48", Montgomery County, on right bank 400 ft upstream from bridge on State Highway 183, 1.5 miles southwest of Colesville, 3 miles upstream from Burnt Mills, 10 miles upstream from Sligo Creek, and 12.5 miles upstream from confluence with Northeast Branch.

DRAINAGE AREA.--21.1 sq mi.

PERIOD OF RECORD.--October 1923 to current year. Monthly discharge only for some periods, published in WSP 1302.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 264.85 ft above mean sea level, adjustment of 1912. 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.

AVERAGE DISCHARGE (UNADJUSTED).--48 years, 21.4 cfs (13.77 inches per year).

EXTREMES.--Current year: Maximum discharge, 2,420 cfs Aug. 4 (gage height, 9.87 ft); minimum, 2.0 cfs Oct. 5 (gage height, 1.53 ft).
Period of record: Maximum discharge, 4,910 cfs Aug. 8, 1953 (gage height, 10.99 ft), from rating curve extended above 1,200 cfs on basis of contracted-opening and flow-over-road measurement of peak flow; minimum, no flow on several days during August and September, 1966.

REMARKS.--Records good. Inflow pumped from Patuxent River to augment water supply for Washington Suburban Sanitary District August 1939 to August 1960. Diversions at low flow since 1962 for irrigation of golf courses above station. Records of suspended-sediment loads for the water year 1971 are published in Part 2 of this report.

REVISIONS (WATER YEARS).--WSP 1432: 1924(M), 1925-26, 1929-30(M), 1933(M), 1939(P), 1940(M), 1943-46, 1948-49(P). WSP 1903: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.0	8.0	10	18	10	23	17	14	29	50	50	12
2	3.6	7.2	10	16	8.8	21	22	14	27	45	190	12
3	3.6	18	10	14	8.0	74	24	15	64	13	81	12
4	2.9	105	11	36	8.0	113	18	14	35	10	472	11
5	2.5	146	9.8	131	38	38	17	13	21	9.4	78	10
6	2.9	17	9.6	43	41	34	50	15	30	12	20	10
7	2.9	12	9.3	24	214	28	150	15	44	11	15	9.7
8	2.8	10	9.0	21	373	24	34	25	26	8.2	13	9.4
9	2.9	9.5	9.7	18	74	21	26	21	18	7.9	11	9.2
10	3.7	9.6	9.6	17	24	21	22	15	16	7.8	10	8.8
11	3.8	36	9.5	16	19	21	21	13	15	7.8	30	155
12	3.4	39	19	18	18	20	20	13	14	7.7	17	93
13	3.9	61	15	18	494	20	20	238	15	7.1	11	28
14	3.8	25	11	23	130	20	18	37	14	6.6	9.7	18
15	17	171	11	22	27	20	17	22	17	6.7	8.8	15
16	16	25	56	17	22	19	17	159	16	6.3	8.8	13
17	5.8	18	89	15	22	17	18	39	14	6.2	8.8	37
18	5.1	15	22	11	21	17	20	24	12	6.4	8.4	16
19	4.8	14	17	10	22	53	17	20	12	8.9	42	14
20	4.4	15	15	10	30	39	17	20	12	8.4	12	13
21	40	15	15	11	27	24	17	60	11	6.6	9.8	12
22	22	13	155	11	202	22	16	25	11	5.8	9.2	12
23	8.0	12	42	32	157	28	16	19	10	5.6	9.1	12
24	6.8	11	34	22	36	21	15	17	10	6.7	8.2	12
25	6.2	11	21	26	27	19	15	17	9.4	9.2	9.9	10
26	5.9	11	19	40	25	20	14	17	9.2	11	9.2	14
27	5.4	11	16	21	45	19	14	14	9.1	7.6	461	15
28	5.2	10	14	15	27	19	15	14	9.6	5.9	63	12
29	5.3	11	15	13	------	19	15	17	9.0	39	20	11
30	9.0	11	13	15	------	17	14	59	9.0	31	16	11
31	12	------	12	13	------	16	------	179	------	27	13	------
TOTAL	225.6	877.3	718.5	717	2,149.8	867	716	1,184	548.3	401.8	1,724.9	627.1
MEAN	7.28	29.2	23.2	23.1	76.8	28.0	23.9	38.2	18.3	13.0	55.6	20.9
MAX	40	171	155	131	494	113	150	238	64	50	472	155
MIN	2.5	7.2	9.0	10	8.0	16	14	13	9.0	5.6	8.2	8.8
CFSM	.35	1.38	1.10	1.09	3.64	1.33	1.13	1.81	.87	.62	2.64	.99
IN.	.40	1.55	1.27	1.26	3.79	1.53	1.26	2.09	.97	.71	3.04	1.11

CAL YR 1970 TOTAL 8,327.4 MEAN 22.8 MAX 544 MIN 2.5 CFSM 1.08 IN 14.68
WTR YR 1971 TOTAL 10,757.3 MEAN 29.5 MAX 494 MIN 2.5 CFSM 1.40 IN 18.97

PEAK DISCHARGE (BASE, 600 CFS)

DATE	TIME	G. H.	DISCHARGE	DATE	TIME	G. H.	DISCHARGE
11- 5	0030	6.03	667	5-13	0800	6.69	798
2- 8	0100	7.38	965	8- 2	0100	6.40	740
2- 8	2300	6.52	764	8- 4	0230	9.87	2,420
2-13	2230	8.41	1,310	8-27	1730	8.47	1,340
2-22	2400	5.65	600				

01651000 Northwest Branch Anacostia River near Hyattsville, Md.

LOCATION.--Lat 38°57'09", long 76°58'00", Prince Georges County, on right bank at downstream side of bridge on Queens Chapel Road (State Highway 500), 0.8 mile downstream from Sligo Branch, 1 mile west of Hyattsville, and 1.6 miles upstream from mouth.

DRAINAGE AREA.--49.4 sq mi.

PERIOD OF RECORD.--July 1938 to current year. Monthly discharge only for July 1938 published in WSP 1302.

GAGE.--Water-stage recorder. Datum of gage is 17.30 ft above mean sea level, adjustment of 1912. Prior to Oct. 22, 1938, nonrecording gage; Oct. 22, 1938 to Sept. 17, 1951, water-stage recorder; Sept. 17, 1951, to Aug. 29, 1952, nonrecording gage and crest-stage gage.

AVERAGE DISCHARGE.--33 years, 40.6 cfs (11.16 inches per year) unadjusted.

EXTREMES.--Current year: Maximum discharge, 2,510 cfs Aug. 27 (gage height, 9.12 ft); minimum, 4.2 cfs Oct. 8.
Period of record: Maximum discharge, 7,000 cfs Sept. 14, 1966 (gage height, 13.50 ft), from rating curve extended above 4,000 cfs; minimum, 0.2 cfs Sept. 11, 1966.
Maximum stage known, about 13.5 ft Aug. 24, 1933, and Sept. 14, 1966.

REMARKS.--Records fair. Prior to June 1961, low flow regulated by storage at Burnt Mills Dam, 7 miles 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.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.4	30	15	18	19	45	30	27	90	80	92	18
2	6.2	12	14	30	18	42	70	28	50	65	349	18
3	8.6	70	14	29	16	190	55	29	100	20	102	18
4	9.8	150	20	138	18	274	34	27	60	17	705	16
5	5.0	320	15	301	83	69	32	26	45	16	144	15
6	4.6	50	13	88	80	64	153	31	40	20	38	14
7	5.0	25	12	41	319	54	428	32	90	18	28	13
8	4.2	18	13	34	721	46	69	89	50	15	23	12
9	5.0	15	13	29	250	42	49	48	30	14	20	12
10	5.0	17	12	27	50	41	42	30	24	15	19	11
11	7.4	180	13	26	40	40	39	26	22	14	51	535
12	7.4	80	55	27	35	37	38	26	22	12	58	272
13	6.2	150	27	28	779	37	37	645	22	11	20	58
14	6.2	50	16	45	445	38	34	71	23	10	18	31
15	46	400	12	37	63	37	33	46	25	10	19	24
16	90	70	101	29	50	36	33	402	24	9.5	17	20
17	13	40	211	23	47	33	39	54	22	9.5	15	272
18	7.4	30	47	20	44	32	40	38	21	10	14	32
19	6.2	25	31	18	43	161	32	34	21	20	154	24
20	6.2	25	24	16	52	87	31	41	20	18	25	22
21	160	23	27	16	49	43	31	110	19	12	17	25
22	90	20	271	18	503	46	31	37	19	9.5	14	19
23	20	18	81	50	393	61	29	32	18	9.0	13	18
24	13	17	62	40	77	38	29	30	19	18	12	18
25	10	16	34	44	58	35	28	30	18	22	12	16
26	22	15	29	57	52	36	28	30	17	55	13	47
27	9.0	15	25	45	112	34	27	28	17	40	977	28
28	7.5	14	24	35	54	33	31	27	44	12	318	20
29	7.5	14	22	24	------	34	38	37	16	180	35	18
30	20	19	20	26	------	32	27	97	16	125	25	18
31	50	------	18	25	------	30	------	359	------	52	20	------
TOTAL	675.8	1,928	1,291	1,384	4,470	1,827	1,617	2,567	1,004	938.5	3,367	1,664
MEAN	21.8	64.3	41.6	44.6	160	58.9	53.9	82.8	33.5	30.3	109	55.5
MAX	160	400	271	301	779	274	428	645	100	180	977	535
MIN	4.2	12	12	16	16	30	27	26	16	9.0	12	11
CFSM	.44	1.30	.84	.90	3.24	1.19	1.09	1.68	.68	.61	2.21	1.12
IN.	.51	1.45	.97	1.04	3.37	1.38	1.22	1.93	.76	.71	2.54	1.25

CAL YR 1970 TOTAL 18,531.6 MEAN 50.8 MAX 1,500 MIN 4.2 CFSM 1.03 IN 13.95
WTR YR 1971 TOTAL 22,733.3 MEAN 62.3 MAX 977 MIN 4.2 CFSM 1.26 IN 17.12

PEAK DISCHARGE (BASE, 1,700 CFS REVISED)

DATE	TIME	G. H.	DISCHARGE	DATE	TIME	G. H.	DISCHARGE
2-13	1900	8.12	2,090	8- 4	0915	7.46	1,820
5-13	0630	7.80	1,960	8-27	1615	9.12	2,510
7-29	2000	7.20	1,700				

01653500 Henson Creek at Oxon Hill, Md.

LOCATION.--Lat 38°47'16", long 76°58'42", Prince Georges County, on left bank 100 ft downstream from bridge on Tucker Road, 1.0 mile south of Oxon Hill, and 1.4 miles upstream from Carey Branch and mouth.

DRAINAGE AREA.--16.7 sq mi.

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

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 62 ft (from topographic map).

AVERAGE DISCHARGE.--23 years, 18.5 cfs (15.04 inches per year).

EXTREMES.--Water year 1970: Maximum discharge, 2,050 cfs Apr. 2 (gage height, 6.46 ft), from rating curve extended as explained below; minimum, 0.35 cfs Sept. 26 (gage height, 0.38 ft).
Water year 1971: Maximum discharge, 3,440 cfs Aug. 4 (gage height, 7.63 ft) from rating curve extended as explained below; minimum, 0.35 cfs Oct. 6-9 (gage height, 0.38 ft).
Period of record: Maximum discharge, 3,440 cfs Aug. 4 (gage height, 7.63 ft), from rating curve extended above 520 cfs on basis of slope-area measurements at gage heights 6.63 and 7.27 ft; no flow at times during some summer months in 1954, 1955, 1957, 1962-64, and 1966.

REMARKS.--Records fair. Some diversion above station for irrigation of truck farm. Some regulation at low flow by sand and gravel plant above station.

REVISIONS (WATER YEARS).--WSP 1232: 1949(M), 1950.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.6	3.9	4.0	35	11	10	24	8.1	6.6	3.0	10	1.7
2	22	10	3.4	24	16	10	596	7.8	5.5	22	7.0	1.6
3	9.6	4.5	4.0	21	83	15	78	7.4	8.5	7.4	6.3	1.5
4	4.6	3.7	4.8	18	20	23	37	8.5	8.5	23	7.8	1.5
5	3.7	3.7	4.8	16	16	18	30	8.3	6.3	7.4	3.0	1.5
6	3.4	4.1	4.0	15	15	13	27	6.6	10	3.7	2.7	1.4
7	3.3	4.0	27	14	14	12	28	6.3	7.8	3.0	3.0	1.4
8	13	8.9	57	14	14	11	24	6.0	4.8	2.7	3.4	1.4
9	5.1	8.3	10	13	25	10	23	6.3	4.8	120	2.4	6.0
10	3.4	4.6	156	11	90	9.3	21	5.9	4.4	87	2.4	18
11	3.7	3.9	104	10	27	8.7	20	5.5	4.4	12	2.2	6.6
12	3.3	6.1	19	10	18	18	19	5.5	5.5	6.6	2.0	2.2
13	3.0	4.9	14	9.5	16	16	18	5.5	7.0	4.4	1.8	1.8
14	3.7	5.3	16	9.0	15	11	420	36	4.0	4.4	16	1.5
15	2.4	5.4	11	8.7	21	10	90	8.5	3.7	5.2	6.3	1.1
16	2.7	3.9	9.3	8.7	28	8.7	36	5.9	12	9.2	12	1.2
17	2.6	3.3	8.7	22	31	8.7	27	13	6.3	3.4	7.8	1.0
18	2.6	3.1	7.8	87	33	32	24	18	16	3.4	3.0	2.4
19	2.8	42	7.8	18	26	17	21	12	4.8	2.7	25	3.5
20	2.6	38	7.8	15	18	24	48	11	4.0	38	33	1.5
21	2.2	11	6.9	13	14	18	20	8.5	32	32	6.5	1.3
22	2.0	7.8	190	13	14	33	15	8.1	7.8	4.8	4.0	.85
23	1.9	6.9	20	12	13	23	16	7.8	4.4	25	10	.95
24	2.2	5.4	15	12	11	15	21	16	4.4	37	4.5	.98
25	3.1	4.0	10	13	12	14	18	51	4.0	16	3.5	.84
26	3.4	4.4	80	14	10	18	13	44	5.5	12	3.0	.95
27	3.2	4.4	33	13	9.5	30	12	18	7.0	8.1	2.5	9.4
28	4.2	4.4	21	12	10	15	10	8.5	3.7	6.3	2.0	3.0
29	3.2	4.0	22	18	------	51	9.2	7.8	3.0	6.6	1.9	1.2
30	3.3	4.1	131	15	------	21	8.5	7.4	3.0	23	1.9	1.2
31	3.5	------	169	10	------	52	------	7.0	------	12	1.8	------
TOTAL	132.3	228.0	1,178.3	523.9	630.5	575.4	1,753.7	376.2	209.7	551.3	198.7	79.47
MEAN	4.27	7.60	38.0	16.9	22.5	18.6	58.5	12.1	6.99	17.8	6.41	2.65
MAX	22	42	190	87	90	52	596	51	32	120	33	18
MIN	1.9	3.1	3.4	8.7	9.5	8.7	8.5	5.5	3.0	2.7	1.8	.84
CFSM	.26	.46	2.28	1.01	1.35	1.11	3.50	.72	.42	1.07	.38	.16
IN.	.29	.51	2.62	1.17	1.40	1.28	3.91	.84	.47	1.23	.44	.18

CAL YR 1969 TOTAL 6,174.40 MEAN 16.9 MAX 341 MIN .65 CFSM 1.01 IN 13.75
WTR YR 1970 TOTAL 6,437.47 MEAN 17.6 MAX 596 MIN .84 CFSM 1.05 IN 14.34

PEAK DISCHARGE (BASE, 450 CFS)

DATE	TIME	G. H.	DISCHARGE	DATE	TIME	G. H.	DISCHARGE
12-10	2300	3.74	654	4- 2	1630	6.46	2,050
12-22	1230	3.06	471	4-14	1500	4.89	1,060
12-31	0200	3.24	516	7- 9	2030	3.62	516

01653500 Henson Creek at Oxon Hill, Md.--Continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.3	3.6	5.9	14	7.5	19	9.2	9.7	26	20	34	12
2	1.3	3.5	5.8	13	6.0	18	17	9.4	18	9.9	188	11
3	1.4	26	5.8	12	6.0	72	26	8.9	30	5.2	25	9.7
4	.84	184	7.4	44	6.6	85	14	8.4	53	4.0	1,150	9.2
5	.77	167	6.3	150	7.2	26	12	8.2	17	3.7	260	8.2
6	.44	15	5.5	38	9.6	21	105	8.5	14	12	35	7.7
7	.61	10	4.8	22	54	20	252	9.9	17	7.8	23	6.2
8	.70	8.1	4.9	18	223	17	36	23	16	3.7	16	6.2
9	.95	7.0	5.5	16	72	15	25	11	10	3.4	12	5.7
10	1.0	12	5.4	15	21	16	21	8.2	8.8	18	10	5.2
11	1.1	84	5.9	14	36	16	19	7.7	7.6	4.0	45	38
12	.97	38	21	15	17	15	18	7.8	8.2	3.4	23	147
13	.58	34	8.5	14	212	16	17	67	8.7	3.0	6.7	31
14	.88	18	6.0	26	122	15	15	19	7.6	2.7	6.2	14
15	5.9	143	5.5	19	30	16	14	12	13	2.4	5.2	9.7
16	12	22	48	15	22	14	14	228	8.9	2.2	4.0	8.2
17	2.1	12	52	13	20	13	15	29	7.9	12	4.4	60
18	1.6	10	12	12	19	13	15	16	6.6	14	4.8	14
19	1.3	9.8	9.8	11	19	55	12	12	5.7	21	7.7	9.7
20	1.0	12	8.1	10	20	42	12	11	5.7	5.2	5.7	8.2
21	48	9.8	18	9.0	18	20	12	49	5.2	3.7	4.8	7.7
22	18	8.1	123	11	93	16	11	17	4.4	3.4	4.0	7.7
23	4.0	7.2	32	25	143	19	11	12	4.2	2.7	3.7	8.7
24	3.0	7.4	23	15	31	14	11	9.2	4.2	4.0	3.7	7.7
25	2.2	7.0	17	23	23	12	10	8.9	4.0	6.7	3.8	6.7
26	2.0	7.1	15	16	20	12	9.5	8.2	13	4.4	3.7	12
27	2.0	6.3	13	12	36	13	9.4	7.2	8.9	4.4	721	9.7
28	2.2	7.0	11	11	22	12	11	7.8	16	2.4	138	7.2
29	2.9	6.6	11	10	------	11	13	27	6.6	4.8	31	6.7
30	7.0	5.9	10	12	------	10	9.7	124	6.1	32	19	6.2
31	8.5	------	10	9.6	------	9.7	------	195	------	12	14	------
TOTAL	136.54	891.4	517.1	644.6	1,315.9	672.7	775.8	980.0	362.3	238.1	2,812.4	501.2
MEAN	4.40	29.7	16.7	20.8	47.0	21.7	25.9	31.6	12.1	7.68	90.7	16.7
MAX	48	184	123	150	223	85	252	228	53	32	1,150	147
MIN	.44	3.5	4.8	9.0	6.0	9.7	9.2	7.2	4.0	2.2	3.7	5.2
CFSM	.26	1.78	1.00	1.25	2.81	1.30	1.55	1.89	.72	.46	5.43	1.00
IN.	.30	1.99	1.15	1.44	2.93	1.50	1.73	2.18	.81	.53	6.26	1.12

CAL YR 1970 TOTAL 6,443.91 MEAN 17.7 MAX 596 MIN .44 CFSM 1.06 IN 14.35
WTR YR 1971 TOTAL 9,848.04 MEAN 27.0 MAX 1,150 MIN .44 CFSM 1.62 IN 21.94

PEAK DISCHARGE (BASE, 450 CFS)

DATE	TIME	G. H.	DISCHARGE	DATE	TIME	G. H.	DISCHARGE
11- 4	2230	4.73	975	5-31	0300	3.53	556
2- 8	0030	3.79	576	8- 2	0400	4.05	722
2-13	2200	4.19	736	8- 4	0230	7.63	3,440
2-23	0100	3.38	514	8-27	1700	6.20	1,840
4- 7	0700	3.27	482	9-12	1300	3.46	499
5-16	0900	3.88	655				

01653600 Piscataway Creek at Piscataway, Md.

LOCATION.--Lat 38°42'20", long 76°58'00", Prince Georges County, on left bank 70 ft upstream from bridge on State Highway 223, at Piscataway, 0.4 mile upstream from Tinker Creek, and 4.8 miles upstream from mouth.

DRAINAGE AREA.--39.5 sq mi.

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

GAGE.--Water-stage recorder. Altitude of gage is 10 ft (from topographic map).

AVERAGE DISCHARGE.--6 years (1966-71), 37.6 cfs (12.93 inches per year).

EXTREMES.--Current year: Maximum discharge, 1,180 cfs Aug. 28 (gage height, 7.19), from rating curve extended above 520 cfs; no flow Oct. 3-15.
Period of record: Maximum discharge, 1,180 cfs Aug. 28, 1971 (gage height, 7.19), from rating curve extended above 520 cfs, no flow during parts of July, Aug., Sept. 1966, and Sept., Oct. 1970.

REMARKS.--Records good below 100 cfs and fair above.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.20	3.9	14	24	20	65	33	31	94	7.5	25	22
2	.10	2.1	14	26	19	61	40	30	61	9.4	181	22
3	0	27	14	27	22	161	75	28	71	6.3	23	20
4	0	55	16	48	25	253	43	27	83	4.8	387	17
5	0	258	14	354	40	110	38	26	46	4.1	488	15
6	0	40	13	283	50	75	113	25	38	4.1	49	14
7	0	24	12	76	100	65	613	24	36	11	27	12
8	0	17	12	55	787	60	185	48	36	4.9	19	11
9	0	13	12	49	423	55	89	37	28	3.2	14	11
10	0	8.9	13	44	90	53	73	26	24	4.1	12	9.6
11	0	137	12	43	65	52	64	22	22	3.0	11	12
12	0	114	29	42	55	49	59	21	21	2.7	17	152
13	0	71	32	41	256	48	55	73	23	2.2	9.9	80
14	0	40	19	52	523	46	51	55	27	1.7	9.8	27
15	0	241	16	55	117	48	46	28	27	1.2	9.0	19
16	.30	63	25	42	86	47	46	376	26	.98	8.4	14
17	2.2	34	192	36	74	41	43	125	22	1.0	8.3	132
18	.58	28	46	30	68	39	45	53	17	13	7.6	46
19	.34	24	33	28	63	66	40	43	16	8.1	6.7	26
20	.35	23	27	27	62	91	39	38	15	5.8	7.2	21
21	5.2	24	30	27	56	51	37	76	14	3.1	4.8	17
22	35	20	279	32	112	46	35	44	13	2.2	4.0	16
23	6.8	19	176	54	482	52	34	31	12	1.6	4.0	16
24	3.8	16	68	41	123	42	34	27	12	1.2	2.8	16
25	2.5	15	46	51	88	39	32	26	10	1.2	2.3	12
26	2.0	15	38	44	77	41	34	22	9.0	1.4	2.2	14
27	1.6	15	32	26	103	42	32	19	8.9	11	407	17
28	1.4	15	28	22	75	43	34	19	8.0	2.9	872	14
29	1.3	14	24	20	------	39	41	45	10	2.2	68	12
30	1.4	15	22	32	------	36	33	297	8.7	23	38	11
31	4.9	------	22	28	------	33	------	408	------	46	27	------
TOTAL	69.97	1,391.9	1,330	1,759	4,061	1,949	2,136	2,150	838.6	194.88	2,752.0	827.6
MEAN	2.26	46.4	42.9	56.7	145	62.9	71.2	69.4	28.0	6.29	88.8	27.6
MAX	35	258	279	354	787	253	613	408	94	46	872	152
MIN	0	2.1	12	20	19	33	32	19	8.0	.98	2.2	9.6
CFSM	.06	1.17	1.09	1.44	3.67	1.59	1.80	1.76	.71	.16	2.25	.70
IN.	.07	1.31	1.25	1.66	3.82	1.84	2.01	2.02	.79	.18	2.59	.78

CAL YR 1970 TOTAL 15,253.14 MEAN 41.8 MAX 739 MIN 0 CFSM 1.06 IN 14.36
WTR YR 1971 TOTAL 19,459.95 MEAN 53.3 MAX 872 MIN 0 CFSM 1.35 IN 18.33

PEAK DISCHARGE (BASE, 450 CFS)

DATE	TIME	G. H.	DISCHARGE	DATE	TIME	G. H.	DISCHARGE
12-22	1800	5.24	505	4- 7	1130	5.91	683
1- 5	2200	5.50	570	5-16	1500	5.56	585
2- 8	2200	6.57	888	5-31	0930	5.43	552
2-14	0300	5.93	689	8- 4	2400	6.30	800
2-23	0800	5.61	598	8-28	0800	7.19	1,180

01658000 Mattawoman Creek near Pomonkey, Md.

LOCATION.--Lat 38°35'45", long 77°03'25", Charles County, on left bank 50 ft downstream from bridge on State Highway 227, 80 ft downstream from Old Womans Run, 1.2 miles southeast of Pomonkey, and 12.6 miles upstream from mouth.

DRAINAGE AREA.--57.7 sq mi.

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

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 40 ft (from topographic map).

AVERAGE DISCHARGE.--21 years (1950-71), 51.4 cfs (12.10 inches per year).

EXTREMES.--Current year: Maximum discharge, 1,110 cfs Feb. 9 (gage height, 4.99 ft); no flow many days in October, November, July, and August.
Period of record: Maximum discharge, 9,300 cfs Aug. 13, 1955 (gage height, 7.52), from rating curve extended above 6,000 cfs; no flow at times each year.

REMARKS.--Records fair except those below 10 cfs, which are poor.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1		0	15	32	38	99	44	26	488	7.0	7.4	21
2		0	15	32	30	82	47	24	266	8.5	23	18
3		0	15	40	28	134	86	24	139	6.5	13	15
4		1.0	15	50	28	264	75	22	96	5.0	25	12
5		125	16	258	34	272	60	20	64	4.0	60	10
6		84	15	549	44	175	72	19	50	3.0	40	9.5
7		29	14	594	81	114	283	19	44	5.5	15	9.0
8		14	13	242	324	89	455	42	44	2.6	7.9	8.5
9		11	13	122	907	74	342	72	33	1.6	2.1	8.0
10		8.8	14	84	380	65	145	44	26	3.0	.42	8.0
11		56	13	68	200	62	90	27	21	1.2	.36	14
12		143	19	66	120	59	73	22	21	.50	7.0	120
13		121	46	66	200	56	66	55	24	.20	3.9	50
14		79	31	68	389	54	60	65	23	0	1.1	24
15		168	21	83	518	54	53	39	25	0	.11	15
16		185	22	75	272	57	50	201	25	0	0	12
17		138	132	58	136	52	48	261	22	0	0	80
18		55	139	50	103	47	51	201	19	0	0	26
19		53	90	42	88	60	46	85	17	0	0	18
20		46	64	36	81	116	43	53	15	0	0	16
21		50	57	34	77	94	41	99	14	0	0	14
22		46	188	38	100	71	36	93	13	0	0	12
23		35	273	46	306	72	31	58	12	0	0	10
24		24	322	58	440	65	29	42	12	0	0	9.5
25		19	185	61	289	57	27	33	10	0	0	9.0
26		17	101	70	139	54	25	26	9.0	0	0	10
27		17	75	50	126	57	24	21	9.0	0	235	13
28		17	58	40	124	59	25	19	8.0	0	456	10
29		16	45	36	------	56	34	54	10	0	381	9.0
30		16	36	42	------	52	32	286	8.0	.07	91	8.0
31		------	32	55	------	47	------	543	------	.07	34	------
TOTAL	0	1,583.8	2,094	3,145	5,602	2,669	2,493	2,595	1,567.0	48.74	1,403.29	598.5
MEAN	0	52.8	67.5	101	200	86.1	83.1	83.7	52.2	1.57	45.3	20.0
MAX	0	185	322	594	907	272	455	543	488	8.5	456	120
MIN	0	0	13	32	28	47	24	19	8.0	0	0	8.0
CFSM	0	.92	1.17	1.75	3.47	1.49	1.44	1.45	.90	.03	.79	.35
IN.	0	1.02	1.35	2.03	3.61	1.72	1.61	1.67	1.01	.03	.90	.39

CAL YR 1970 TOTAL 20,030.19 MEAN 54.9 MAX 1,030 MIN 0 CFSM .95 IN 12.91
WTR YR 1971 TOTAL 23,799.33 MEAN 65.2 MAX 907 MIN 0 CFSM 1.13 IN 15.34

PEAK DISCHARGE (BASE, 400 CFS)

DATE	TIME	G. H.	DISCHARGE	DATE	TIME	G. H.	DISCHARGE
1- 6	2000	4.91	986	4- 8	1430	4.48	526
2- 9	0730	4.99	1,110	5-31	1630	4.60	630
2-15	0330	4.55	585	8-27	2000	4.73	763
2-24	0930	4.43	491				

NOTE.--No gage-height record June 16 to July 16 and Sept. 3-30.

01661000 Chaptico Creek at Chaptico, Md.

LOCATION.--Lat 38°22'45", long 76°46'56", St. Marys County, on right bank at downstream side of highway culvert, 0.8 mile north of Chaptico, and 0.8 mile upstream from Chaptico Bay.

DRAINAGE AREA.--10.7 sq mi.

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

GAGE.--Water-stage recorder. Concrete control prior to Oct. 25, 1961. Altitude of gage is 15 ft (from topographic map).

AVERAGE DISCHARGE.--24 years, 9.59 cfs (12.17 inches per year).

EXTREMES.--Current year: Maximum discharge, 424 cfs May 16 (gage height, 5.11 ft); minimum, 0.12 cfs Oct. 5, 6 (gage height, 1.00 ft).
Period of record: Maximum discharge, 7,800 cfs Sept. 10, 1950 (gage height, 8.56 ft), from rating curve extended above 410 cfs on basis of slope-area measurement of peak flow; no flow at times in 1954, 55, 57, 62-64, 66, 68-70.

REMARKS.--Records good. Occasional small diversion above station for irrigation.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.52	1.9	3.7	8.0	7.5	14	9.7	8.1	27	6.3	5.6	3.4
2	.52	1.7	3.7	9.0	7.0	13	11	8.1	19	9.4	2.8	3.5
3	.52	1.7	3.6	8.0	7.0	33	18	9.1	56	7.2	2.2	3.0
4	.28	2.3	4.0	9.9	8.0	29	11	7.9	22	5.1	30	2.4
5	.16	6.5	3.4	151	14	18	10	7.2	16	4.4	12	2.1
6	.16	2.8	3.4	42	17	16	40	7.4	14	4.9	5.2	1.9
7	.18	2.0	3.0	18	27	15	53	7.5	23	11	3.5	1.6
8	.18	1.8	3.0	13	84	13	23	23	69	5.2	2.4	1.6
9	.28	1.8	3.5	11	42	12	17	19	19	3.4	1.9	1.6
10	.36	2.0	3.4	11	15	12	15	9.9	15	3.7	1.6	1.4
11	.44	47	3.4	10	14	12	14	8.2	14	8.8	1.3	1.7
12	.44	23	9.5	10	13	12	13	7.4	13	6.4	1.2	7.0
13	.44	11	8.7	10	42	12	13	38	18	4.4	.94	4.9
14	.52	7.2	5.2	13	43	11	12	29	14	3.7	.91	2.6
15	.60	54	4.2	15	20	12	11	11	14	2.7	.81	1.8
16	2.7	12	8.2	10	15	13	11	201	17	2.7	.80	1.4
17	1.3	7.3	45	9.0	14	10	11	37	14	2.7	1.0	1.5
18	.76	6.0	11	8.5	13	9.7	12	18	11	2.9	1.3	1.4
19	.68	5.4	8.0	8.0	12	17	10	14	10	9.6	2.1	1.5
20	.52	6.6	6.6	8.0	13	20	10	11	9.6	9.5	1.8	1.5
21	1.8	9.2	13	7.5	11	12	10	19	8.8	4.2	.92	1.3
22	10	5.8	55	8.5	21	11	9.2	14	8.3	3.3	.65	1.5
23	2.4	5.3	24	13	99	16	8.9	10	8.6	3.0	.92	1.6
24	1.3	4.1	13	8.8	24	11	9.0	9.5	8.6	2.7	.46	1.6
25	.74	3.9	9.7	13	18	10	8.3	9.0	7.4	2.4	.38	.99
26	.68	4.1	8.6	11	15	12	8.4	8.1	7.0	2.3	.40	1.5
27	.75	4.1	7.5	7.0	24	18	8.1	7.1	6.7	2.1	113	2.3
28	.96	4.0	6.0	6.5	16	17	8.7	7.4	6.3	1.8	28	1.7
29	1.0	3.8	5.5	6.0	------	13	9.7	24	6.5	2.0	7.7	1.6
30	2.5	3.9	5.0	9.0	------	11	8.3	180	6.7	5.0	5.2	1.5
31	2.7	------	6.0	8.0	------	10	------	82	------	6.4	4.0	------
TOTAL	36.39	252.2	297.8	480.7	655.5	444.7	413.3	851.9	489.5	149.2	240.99	63.39
MEAN	1.17	8.41	9.61	15.5	23.4	14.3	13.8	27.5	16.3	4.81	7.77	2.11
MAX	10	54	55	151	99	33	53	201	69	11	113	7.0
MIN	.16	1.7	3.0	6.0	7.0	9.7	8.1	7.1	6.3	1.8	.38	.99
CFSM	.11	.79	.90	1.45	2.19	1.34	1.29	2.57	1.52	.45	.73	.20
IN.	.13	.88	1.04	1.67	2.28	1.55	1.44	2.96	1.70	.52	.84	.22

CAL YR 1970 TOTAL 2,774.99 MEAN 7.60 MAX 102 MIN 0 CFSM .71 IN 9.65
WTR YR 1971 TOTAL 4,375.57 MEAN 12.0 MAX 201 MIN .16 CFSM 1.12 IN 15.21

PEAK DISCHARGE (BASE, 160 CFS)

DATE	TIME	G. H.	DISCHARGE	DATE	TIME	G. H.	DISCHARGE
1- 5	1700	4.74	302	5-30	1230	4.81	323
2-23	0500	4.53	243	6- 8	0330	4.37	203
5-16	1400	5.11	424	8-27	1700	4.72	296

01661050 St. Clement Creek near Clements, Md.

LOCATION.--Lat 38°28'00", long 76°43'31", St. Marys County, on left bank 60 ft downstream from bridge on State Highway 242, 0.5 mile north of Clements, 2.3 miles upstream from mouth, and 5.7 miles northwest of Leonardtown.

DRAINAGE AREA.--18.5 sq mi.

PERIOD OF RECORD.--October 1968 to current year.

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 8 ft (from topographic map). Prior to Jan. 3, 1969, water-stage recorder 140 ft downstream at different datum.

EXTREMES.--Current year: Maximum discharge, 432 cfs May 16 (gage height, 4.33 ft); minimum, 0.32 cfs Oct. 5, 6 (gage height, 0.78 ft).
Period of record: Maximum discharge, 1,500 cfs (revised) July 23, 1969 (gage height, 5.55 ft); from rating curve extended above 420 cfs on basis of contracted-opening and flow-over-road measurement at gage height 6.55 ft (June 22, 1972); minimum, 0.07 cfs Sept. 7, 8, 1970 (gage height, 0.69 ft).
REVISIONS.--The maximum discharge for the water year 1969 has been revised to 1,500 cfs July 23, 1969 (gage height, 5.55 ft), superseding figure published in WRD Md. and Del., 1969.

REMARKS.--Records good.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.64	3.2	5.9	11	8.5	22	16	12	62	10	9.8	3.8
2	.64	2.8	5.9	12	8.0	20	16	12	35	20	4.5	4.1
3	.64	2.8	5.9	11	11	53	27	15	38	11	3.4	3.7
4	.44	3.9	6.2	14	12	57	18	13	28	7.5	62	3.2
5	.33	8.8	5.0	197	20	31	16	11	21	6.5	41	3.0
6	.35	5.0	5.0	125	27	25	60	11	18	12	8.6	2.8
7	.36	3.7	4.6	38	34	24	112	11	19	18	5.7	2.5
8	.36	3.2	4.3	23	126	21	44	39	50	7.7	4.3	2.5
9	.42	3.2	4.8	20	80	18	29	44	25	5.7	3.7	2.6
10	.46	3.2	5.0	17	25	18	24	18	17	5.3	3.2	2.5
11	.54	52	4.8	17	20	18	21	13	16	6.7	2.7	2.8
12	.62	52	13	17	23	17	20	12	14	6.9	2.6	8.8
13	.58	17	16	17	76	17	19	32	19	5.2	2.2	8.0
14	.58	8.8	8.0	20	80	17	17	58	16	4.6	2.2	4.6
15	.60	92	6.5	24	38	21	15	21	15	3.7	2.0	3.2
16	6.7	37	12	17	27	26	16	237	22	3.6	1.8	2.6
17	2.8	12	58	11	23	18	16	121	19	4.0	2.2	2.8
18	1.4	9.2	21	10	21	16	17	36	14	5.2	2.7	2.8
19	1.2	8.0	11	9.5	20	23	15	24	12	20	3.7	2.6
20	1.1	8.4	9.6	9.0	21	36	14	18	12	18	3.0	2.5
21	2.6	11	16	9.5	19	20	14	62	11	6.5	2.1	2.3
22	14	8.0	77	13	31	17	15	43	10	4.8	1.6	2.6
23	6.5	7.4	54	21	113	24	13	21	11	4.3	2.2	2.6
24	3.9	6.2	24	15	45	18	13	17	11	4.2	1.5	2.8
25	3.0	5.9	16	20	30	16	12	16	9.7	3.7	1.3	2.1
26	2.6	5.9	13	16	25	17	12	14	8.7	3.4	1.3	2.5
27	2.5	6.2	11	9.0	38	26	12	11	8.7	3.1	52	3.7
28	2.3	6.2	9.5	8.0	25	31	13	11	8.1	2.7	53	3.0
29	2.3	6.2	8.0	7.0	------	23	13	40	8.3	2.7	8.4	2.8
30	2.3	6.2	7.5	12	------	18	12	267	8.5	7.1	5.5	2.6
31	3.2	------	8.0	11	------	16	------	180	------	8.5	4.5	------
TOTAL	65.96	405.4	456.5	761.0	1,034.5	724	661	1,440	567.0	232.6	304.7	98.4
MEAN	2.13	13.5	14.7	24.5	36.9	23.4	22.0	46.5	18.9	7.50	9.83	3.28
MAX	14	92	77	197	126	57	112	267	62	20	62	8.8
MIN	.33	2.8	4.3	7.0	8.0	16	12	11	8.1	2.7	1.3	2.1
CFSM	.12	.73	.79	1.32	1.99	1.26	1.19	2.51	1.02	.41	.53	.18
IN.	.13	.82	.92	1.53	2.08	1.46	1.33	2.90	1.14	.47	.61	.20

CAL YR 1970 TOTAL 4,751.14 MEAN 13.0 MAX 124 MIN .10 CFSM .70 IN 9.55
WTR YR 1971 TOTAL 6,751.06 MEAN 18.5 MAX 267 MIN .33 CFSM 1.00 IN 13.58

PEAK DISCHARGE (BASE, 150 CFS)

DATE	TIME	G. H.	DISCHARGE	DATE	TIME	G. H.	DISCHARGE
11-15	0900	2.75	154	4- 7	0030	2.92	165
1- 5	1800	4.05	345	5-16	1230	4.33	432
2- 8	0400	3.04	174	5-30	1400	4.29	417
2-23	0430	2.75	154				

01661500 St. Marys River at Great Mills, Md.

LOCATION.--Lat 38°14'36", long 76°30'13", St. Marys County, on left bank at downstream side of bridge on State Highway 471 in Great Mills, 0.3 mile downstream from Western Branch, and 12.0 miles upstream from mouth.

DRAINAGE AREA.--24.0 sq mi.

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

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 10 ft (from topographic map).

AVERAGE DISCHARGE.--24 years, 22.7 cfs (12.84 inches per year).

EXTREMES.--Current year: Maximum discharge, 1,280 cfs May 30 (gage height, 8.79 ft); minimum, 1.8 cfs Oct. 4, 5, 6, 7, 8 (gage height, 1.28 ft).
Period of record: Maximum discharge, 7,950 cfs Aug. 20, 1969 (gage height, 13.34 ft), from rating curve extended above 1,500 cfs on basis of contracted-opening measurement at gage height 12.08 ft; minimum, 0.2 cfs Sept. 7, 1966 (gage height, 1.13 ft).

REMARKS.--Records good.

REVISIONS (WATER YEARS).--WSP 1702: 1946, 1948-49, 1955, 1957-58.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.5	3.5	5.5	23	9.0	21	14	9.5	120	6.0	12	3.2
2	2.4	3.4	5.4	17	6.5	19	14	11	57	10	6.6	3.1
3	2.3	3.5	5.4	13	6.0	43	25	15	40	11	4.8	2.9
4	2.0	3.8	5.6	15	7.5	85	18	12	26	6.9	9.3	2.6
5	1.9	5.7	5.4	217	16	43	15	10	20	5.6	8.9	2.5
6	1.9	4.6	5.3	117	21	28	100	9.5	17	5.3	6.3	2.3
7	1.9	4.0	4.9	42	41	24	191	9.9	16	8.2	4.6	2.2
8	1.9	3.7	4.6	23	196	20	65	48	18	6.3	3.9	2.1
9	2.2	3.5	5.0	18	140	17	35	59	14	4.9	3.4	2.1
10	2.3	3.8	5.2	16	52	16	25	23	13	4.5	3.2	2.0
11	2.3	29	5.0	15	28	15	20	16	12	8.8	3.0	2.4
12	2.4	31	9.6	15	24	14	18	13	12	9.2	3.8	10
13	2.4	12	14	14	110	14	17	32	20	6.3	3.2	13
14	2.4	8.1	8.8	17	134	14	16	54	15	5.0	3.0	6.0
15	2.8	66	7.0	21	59	14	14	23	13	4.0	2.7	3.8
16	7.3	22	10	20	36	15	14	301	20	3.7	2.6	3.2
17	6.1	11	53	15	25	13	13	132	16	3.8	2.7	2.9
18	4.0	8.1	18	11	21	13	14	51	12	3.6	3.4	2.9
19	3.2	7.1	11	9.0	19	15	13	27	10	3.7	5.4	2.9
20	3.1	6.9	9.0	8.5	18	19	13	19	8.7	4.6	4.5	2.8
21	5.0	8.1	13	8.5	17	15	13	44	7.8	4.0	3.5	2.6
22	18	7.4	76	11	24	13	12	37	7.6	3.5	2.9	2.6
23	8.0	6.7	52	15	73	20	11	22	7.9	3.2	3.0	2.7
24	4.6	5.9	25	13	43	16	11	18	8.3	3.2	2.5	2.8
25	3.8	5.4	16	16	27	13	10	14	7.5	4.3	2.2	2.4
26	3.3	5.5	13	15	22	14	11	13	6.9	3.8	2.2	2.6
27	3.0	5.7	11	10	35	19	10	11	6.9	3.9	7.0	3.2
28	3.0	5.7	9.3	8.5	27	25	10	11	6.5	3.7	15	3.2
29	3.0	6.2	8.0	7.0	------	21	11	55	6.5	4.4	6.9	2.9
30	2.9	6.0	7.0	11	------	17	9.5	810	6.6	12	4.4	2.8
31	3.3	------	7.6	12	------	15	------	494	------	21	3.6	------
TOTAL	115.2	303.3	435.6	773.5	1,237.0	650	762.5	2,403.9	552.2	188.4	150.5	102.7
MEAN	3.72	10.1	14.1	25.0	44.2	21.0	25.4	77.5	18.4	6.08	4.85	3.42
MAX	18	66	76	217	196	85	191	810	120	21	15	13
MIN	1.9	3.4	4.6	7.0	6.0	13	9.5	9.5	6.5	3.2	2.2	2.0
CFSM	.16	.42	.59	1.04	1.84	.88	1.06	3.23	.77	.25	.20	.14
IN.	.18	.47	.68	1.20	1.92	1.01	1.18	3.73	.86	.29	.23	.16

CAL YR 1970 TOTAL 5,848.2 MEAN 16.0 MAX 169 MIN 1.4 CFSM .67 IN 9.06
WTR YR 1971 TOTAL 7,674.8 MEAN 21.0 MAX 810 MIN 1.9 CFSM .88 IN 11.90

PEAK DISCHARGE (BASE, 400 CFS)

DATE	TIME	G. H.	DISCHARGE	DATE	TIME	G. H.	DISCHARGE
5-16	1630	5.75	523	5-30	1300	8.79	1,280

03075500 Youghiogheny River near Oakland, Md.

LOCATION.--Lat 39°25'19", long 79°25'32", Garrett County, on left bank 200 ft downstream from Baltimore & Ohio Railroad bridge, 250 ft downstream from Little Youghiogheny River, 1.2 miles northwest of Oakland, and 1.5 miles upstream from Dunkard Lick Run.

DRAINAGE AREA.--134 sq mi.

PERIOD OF RECORD.--August 1941 to current year.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 2,353.11 ft above mean sea level, unadjusted. Prior to Aug. 1, 1946, nonrecording gage at bridge 200 ft upstream at same datum.

AVERAGE DISCHARGE.--30 years, 283 cfs (28.68 inches per year).

EXTREMES.--Current year: Maximum discharge, 3,340 cfs Dec. 22 (gage height, 6.73 ft); minimum, 14 cfs July 17 (gage height, 1.92 ft).
Period of record: Maximum discharge, 11,800 cfs Oct. 16, 1954 (gage height, 12.16 ft); minimum daily, 2.5 cfs Oct. 4, 1953.
Flood in March 1936 reached a stage of 15.3 ft, from floodmarks.

REMARKS.--Records good. Town of Oakland diverted an average of 0.4 cfs for water supply. The diversion is returned above station as sewage.

REVISIONS (WATER YEARS).--WSP 1113: 1947(M).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	86	281	118	174	365	630	299	74	67	70	97	70
2	72	220	105	212	281	496	272	79	60	143	167	35
3	68	405	97	150	245	410	233	133	60	66	99	110
4	57	440	254	746	212	326	193	118	63	41	299	54
5	48	538	245	2,690	600	395	171	94	112	32	304	40
6	44	468	210	1,360	940	272	160	838	103	28	153	64
7	39	355	180	786	560	574	193	1,060	88	28	98	200
8	36	272	180	562	420	484	241	1,610	102	26	69	180
9	32	216	170	435	308	380	258	1,450	64	23	54	100
10	30	182	204	330	276	360	290	857	53	27	44	64
11	41	160	197	286	240	299	250	584	46	28	59	210
12	84	150	568	312	216	317	233	458	42	42	109	640
13	53	136	688	263	420	753	212	826	96	30	52	1,100
14	41	140	502	1,490	1,000	961	233	760	501	22	37	1,500
15	37	174	380	1,690	520	994	197	563	385	18	31	1,000
16	46	189	312	864	420	798	171	475	237	16	29	897
17	41	157	400	610	420	568	164	406	157	15	26	773
18	34	153	450	446	740	420	208	315	118	17	24	517
19	31	147	500	340	798	508	160	255	94	32	32	502
20	28	153	540	272	1,280	682	140	216	84	66	33	552
21	55	208	580	190	1,540	508	136	182	70	36	26	460
22	164	160	2,170	210	1,330	496	143	156	81	23	78	400
23	86	140	2,640	250	1,600	532	127	134	61	18	74	370
24	66	120	1,950	290	1,080	415	114	119	48	16	40	270
25	55	115	1,110	250	772	350	102	115	41	22	30	200
26	50	110	772	532	694	326	92	99	36	37	26	300
27	46	120	550	330	954	290	86	85	34	31	50	340
28	41	110	410	280	844	380	102	78	30	31	320	260
29	41	100	335	190	------	520	97	75	63	26	290	210
30	150	127	272	270	------	430	81	108	111	63	190	200
31	312	------	220	538	------	350	------	86	------	186	130	------
TOTAL	2,014	6,246	17,309	17,348	19,075	15,224	5,358	12,408	3,107	1,259	3,070	11,618
MEAN	65.0	208	558	560	681	491	179	400	104	40.6	99.0	387
MAX	312	538	2,640	2,690	1,600	994	299	1,610	501	186	320	1,500
MIN	28	100	97	150	212	272	81	74	30	15	24	35
CFSM	.49	1.55	4.16	4.18	5.08	3.66	1.34	2.99	.78	.30	.74	2.89
IN.	.56	1.73	4.81	4.82	5.30	4.23	1.49	3.44	.86	.35	.85	3.23

CAL YR 1970 TOTAL 117,485 MEAN 322 MAX 3,100 MIN 28 CFSM 2.40 IN 32.62
WTR YR 1971 TOTAL 114,036 MEAN 312 MAX 2,690 MIN 15 CFSM 2.33 IN 31.66

PEAK DISCHARGE (BASE, 2,000 CFS)

DATE	TIME	G. H.	DISCHARGE	DATE	TIME	G. H.	DISCHARGE
12-22	1945	6.73	3,340	5- 8	2030	5.56	2,090
1- 5	0915	6.42	2,970	9-14	Unknown	6.15	2,680
1-14	2030	6.31	2,850				

Reservoirs in Monongahela River Basin

03076000 DEEP CREEK RESERVOIR.--Lat 39°30'34", long 79°23'28" Garrett County, on Deep Creek at dam, 1.8 miles upstream from mouth and 7 miles north of Oakland, Md. Drainage area, 64.7 sq mi. 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). Maximum contents during year, 88,100 acre-ft Mar. 3 (elevation, 2,460.70 ft); minimum, 64,300 acre-ft Dec. 5 (elevation, 2,454.00 ft). Maximum contents since storage began, 93,258 acre-ft July 24, 25, 1949 (elevation, 2,462.075 ft); minimum observed, 11,763 acre-ft Sept. 30, 1925 (elevation, 2,433.45 ft).

Reservoir is formed by an earthfill dam completed January 1925. Usable capacity, 92,975 acre-ft between elevations 2,425 ft (top of intake to outlet tunnel) and 2,462 ft (crest of spillway). Dead storage, 13,085 acre-ft. Figures given herein represent usable contents. Reservoir is used for hydroelectric power. Records furnished by Pennsylvania Electric Co.

MONTHEND ELEVATION AND CONTENTS AT 2400, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

Date	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)
Sept. 30	2,455.10	68,100	-
Oct. 31	2,454.10	64,700	- 3,400
Nov. 30	2,454.20	65,000	+ 300
Dec. 31	2,456.10	71,500	+ 6,500
CAL YR 1970	-	-	+ 7,500
Jan. 31	2,457.40	76,100	+ 4,600
Feb. 28	2,460.40	87,000	+10,900
Mar. 31	2,458.70	80,800	- 6,200
Apr. 30	2,458.00	78,200	- 2,600
May 31	2,459.90	85,200	+ 7,000
June 30	2,459.40	83,300	- 1,900
July 31	2,458.10	78,600	- 4,700
Aug. 31	2,456.70	73,600	- 5,000
Sept. 30	2,457.30	75,700	+ 2,100
WTR YR 1971	-	-	+ 7,600

03076500 Youghiogheny River at Friendsville, Md.

LOCATION.--Lat 39°39'13", long 79°24'31", Garrett County, on left bank 0.7 mile upstream from bridge on State Highway 42 at Friendsville, and 1.5 miles upstream from Bear Creek.

DRAINAGE AREA.--295 sq mi.

PERIOD OF RECORD.--August 1898 to December 1904 and October 1940 to current year. October, November 1940 monthly discharge only, published in WSP 1305. September 1922 to September 1926 (gage heights only) in reports of Pennsylvania Department of Forests and Waters.

GAGE.--Water-stage recorder. Datum of gage is 1,487.33 ft above mean sea level. Aug. 17, 1898, to Dec. 31, 1904, and Sept. 1, 1922, to Sept. 30, 1926, nonrecording gages at bridge 0.7 mile downstream at datum 16.24 and 16.29 ft lower, respectively.

AVERAGE DISCHARGE.--37 years (1898-1904, 1940-1971), 627 cfs (28.86 inches per year), adjusted for storage since 1940.

EXTREMES.--Current year: Maximum discharge, 5,720 cfs Dec. 22 (gage height, 6.04 ft); minimum, 29 cfs July 17, 18, 19 (gage height, 1.86 ft); minimum daily, 37 cfs July 18.
Period of record: Maximum discharge, 13,000 cfs Oct. 16, 1954 (gage height, 8.99 ft), from rating curve extended above 5,800 cfs on basis of slope-area measurement of peak flow; minimum daily, 8.2 cfs Sept. 11, 1966.
Maximum stage since 1898, 14.2 ft Mar. 29, 1924, from floodmarks, site and datum then in use, or 10.2 ft, present site and datum (discharge, about 15,600 cfs, from rating curve extended as explained above).

REMARKS.--Records good. Low and medium flow regulated since 1925 by Deep Creek Reservoir (see station 03076000). Records of water temperatures for the 1971 water year are published in part 2 of this report.

REVISIONS (WATER YEARS).--WSP 1385: Drainage area at former site, 1898-1905, 1941(M), 1942, 1944-45, 1948-49, 1951(M).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	228	427	374	377	761	1,530	740	176	246	229	211	369
2	227	428	334	481	740	1,370	696	174	229	242	354	334
3	124	522	331	426	720	1,190	581	314	228	164	344	314
4	111	777	537	1,470	701	1,140	499	337	238	92	569	150
5	151	749	505	4,720	881	1,180	532	313	153	66	689	119
6	114	739	432	3,000	2,020	1,150	531	1,650	218	150	471	139
7	139	518	485	1,800	1,100	1,480	543	2,330	376	143	196	330
8	135	414	454	1,300	800	1,530	564	2,970	351	131	140	336
9	127	382	448	800	620	1,220	532	2,770	263	139	274	304
10	96	374	481	635	580	1,210	566	1,710	227	72	261	310
11	73	312	460	761	560	1,170	522	1,190	210	74	280	129
12	188	310	770	796	520	1,150	533	934	114	149	387	577
13	165	313	1,230	738	1,230	1,580	504	1,600	123	166	306	1,330
14	155	247	1,020	2,120	2,030	2,090	572	1,630	977	147	99	3,400
15	141	270	801	3,460	1,330	2,270	525	1,080	754	131	73	3,510
16	174	355	690	1,640	954	2,000	478	875	537	123	218	1,900
17	85	344	798	1,140	893	1,520	353	833	405	47	208	1,920
18	73	315	1,120	1,020	1,330	1,220	363	708	341	37	133	1,090
19	99	304	849	740	1,540	1,220	406	612	205	125	181	882
20	128	331	1,020	620	2,260	1,680	422	517	203	171	237	1,260
21	136	360	1,030	600	3,110	1,330	398	458	263	218	127	1,360
22	269	312	3,330	560	2,910	1,270	411	326	291	185	323	1,140
23	253	353	4,940	540	3,410	1,360	384	289	248	168	423	938
24	166	335	3,960	560	2,430	1,160	277	344	129	56	300	796
25	111	301	2,270	628	1,680	1,010	221	332	113	48	288	553
26	123	243	1,520	906	1,690	974	283	317	97	155	466	487
27	163	300	1,080	760	2,120	880	322	296	87	170	1,630	799
28	152	248	941	700	2,070	875	382	274	159	149	1,050	573
29	164	243	792	660	------	1,220	347	182	162	198	642	559
30	210	371	682	905	------	1,010	319	190	229	220	531	553
31	435	------	660	947	------	885	------	194	------	358	430	------
TOTAL	4,915	11,497	34,344	35,810	40,990	40,874	13,806	25,925	8,176	4,523	11,841	26,461
MEAN	159	383	1,108	1,155	1,464	1,319	460	836	273	146	382	882
MAX	435	777	4,940	4,720	3,410	2,270	740	2,970	977	358	1,630	3,510
MIN	73	243	331	377	520	875	221	174	87	37	73	119
†	-55.5	+5.0	+106	+74.6	+196	-101	-43.7	+114	-31.9	-76.6	-81.2	+35.3
MEAN‡	104	388	1,214	1,230	1,660	1,218	416	950	241	69.4	301	917
CFSM‡	.35	1.32	4.12	4.17	5.63	4.13	1.41	3.22	.82	.24	1.02	3.11
IN ‡	.41	1.47	4.74	4.81	5.86	4.76	1.57	3.71	.91	.27	1.18	3.47

CAL YR 1970	TOTAL	263,260	MEAN	721	MAX	5,900	MIN	72	MEAN‡	731	CFSM‡	2.48	IN‡	33.64
WTR YR 1971	TOTAL	259,162	MEAN	710	MAX	4,940	MIN	37	MEAN‡	720	CFSM‡	2.44	IN‡	33.12

† Change in contents, equivalent in cubic feet per second, in Deep Creek Reservoir, furnished by Pennsylvania Electric Co.
‡ Adjusted for change in contents.

03076600 Bear Creek at Friendsville, Md.

LOCATION.--Lat 39°39'22", long 79°23'41", Garrett County, on right bank 0.2 mile downstream from bridge on Accident-Friendsville Road, 0.6 mile downstream from South Branch Bear Creek, 0.8 mile southeast of Friendsville, and 1.2 miles upstream from mouth.

DRAINAGE AREA.--48.9 sq mi.

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

GAGE.--Water-stage recorder. Atltitude of gage is 1,555 ft (from topographic map).

AVERAGE DISCHARGE.--7 years, 73.9 cfs (20.52 inches per year).

EXTREMES.--Current year: Maximum discharge, 4,650 cfs Sept. 14 (gage height, 9.6 ft, from floodmarks), from rating curve extended as explained below; minimum daily, 11 cfs July 8.
Period of record: Maximum discharge, 4,650 cfs Sept. 14, 1971 (gage height, 9.6 ft, from floodmarks), from rating curve extended above 2,000 cfs on basis of slope-area measurement of peak flow; minimum, 1.5 cfs Sept. 12, 1966 (gage height, 0.42 ft).

REMARKS.--Records poor.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	25	60	59	72	74	213	118	31	29	18	183	44
2	21	62	57	73	60	176	116	34	28	18	198	40
3	24	104	59	66	54	153	104	34	28	13	174	34
4	18	122	156	319	48	128	92	34	25	12	180	32
5	17	122	120	507	56	116	83	31	27	12	160	30
6	15	107	99	280	110	99	94	322	33	13	90	36
7	15	94	80	202	90	136	86	280	52	18	70	30
8	15	79	72	158	72	130	94	377	41	11	56	54
9	14	68	70	126	64	118	76	262	29	27	44	60
10	14	60	78	106	60	107	88	198	24	18	36	40
11	23	56	76	94	80	99	80	158	21	53	46	120
12	26	52	206	86	66	109	78	136	20	58	52	320
13	18	50	236	76	306	239	76	223	40	25	34	370
14	16	49	208	250	253	309	92	228	44	101	28	3,100
15	16	55	169	284	174	326	82	198	85	49	24	630
16	15	55	144	205	134	256	79	171	57	35	22	330
17	14	51	149	162	151	195	78	140	48	27	22	290
18	14	49	153	134	210	158	75	116	40	22	20	230
19	13	49	151	100	253	180	65	99	36	28	22	240
20	13	64	155	80	416	202	60	85	31	26	18	310
21	22	83	153	80	416	180	57	73	38	19	20	250
22	38	82	435	72	428	164	55	65	49	16	350	260
23	24	70	678	79	435	151	51	58	31	15	340	130
24	22	60	539	68	303	132	47	53	26	15	120	110
25	20	54	316	68	226	116	44	51	22	43	66	90
26	19	54	223	89	210	109	41	45	20	23	52	130
27	18	52	167	58	312	100	37	40	18	20	76	140
28	18	50	132	64	277	122	40	38	16	16	190	90
29	17	50	106	70	------	164	36	35	15	62	84	74
30	32	66	92	100	------	151	34	36	13	94	60	68
31	53	------	83	86	------	130	------	33	------	290	50	------
TOTAL	629	2,029	5,419	4,214	5,338	4,968	2,158	3,684	986	1,197	2,887	7,682
MEAN	20.3	67.6	175	136	191	160	71.9	119	32.9	38.6	93.1	256
MAX	53	122	678	507	435	326	118	377	85	290	350	3,100
MIN	13	49	57	58	48	99	34	31	13	11	18	30
CFSM	.42	1.38	3.58	2.78	3.91	3.27	1.47	2.43	.67	.79	1.90	5.24
IN.	.48	1.54	4.12	3.21	4.06	3.78	1.64	2.80	.75	.91	2.20	5.84

CAL YR 1970 TOTAL 36,569 MEAN 100 MAX 1,340 MIN 10 CFSM 2.05 IN 27.82
WTR YR 1971 TOTAL 41,191 MEAN 113 MAX 3,100 MIN 11 CFSM 2.31 IN 31.34

PEAK DISCHARGE (BASE, 600 CFS)

DATE	TIME	G. H.	DISCHARGE	DATE	TIME	G. H.	DISCHARGE
12-23	1130	4.95	1,130	7-30	2245	4.13	700
1- 4	2400	4.01	644	9-14	Unknown	9.6	4,650

Note: No gage-height record Aug. 3 to Sept. 30.

03078000 Casselman River at Grantsville, Md.

LOCATION.--Lat 39°42'08", long 79°08'12", Garrett County, on left bank at downstream side of highway bridge, 0.3 mile upstream from Slaubaugh Run, 0.7 mile downstream from U. S. Highway 40, and 1 mile northeast of Grantsville.

DRAINAGE AREA.--62.5 sq mi.

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

GAGE.--Water-stage recorder and concrete control. Datum of gage is 2,089.03 ft above mean sea level (levels by Corps of Engineers).

AVERAGE DISCHARGE.--24 years, 114 cfs (24.77 inches per year).

EXTREMES.--Current year: Maximum discharge, 3,010 cfs Sept. 14 (gage height, 5.87 ft); minimum, 8.6 cfs July 5, 6.
Period of record: Maximum discharge, 8,400 cfs Oct. 15, 1954 (gage height, 10.70 ft), from rating curve extended above 1,600 cfs on basis of contracted-opening measurement at gage height 8.13 ft; no flow Aug. 31, 1962, result of regulation from unknown source.

REMARKS.--Records good except those for period of no gage-height record and those for winter months, which are poor. Records of chemical analyses for the water year 1971 are published in Part 2 of this report.

REVISIONS (WATER YEARS).--WSP 1143: 1948.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	24	209	69	105	90	458	159	41	31	24	207	55
2	21	126	62	130	74	362	169	39	32	20	316	51
3	27	272	61	100	66	298	156	43	42	15	215	45
4	21	233	217	270	58	229	132	43	33	12	267	40
5	16	194	156	960	68	205	118	41	41	9.2	245	38
6	14	137	129	350	150	187	110	714	62	9.2	124	46
7	13	105	104	300	110	194	118	410	75	25	83	39
8	12	86	96	270	90	183	137	631	77	15	65	66
9	11	76	93	200	80	140	140	344	47	13	53	75
10	11	70	116	180	68	132	180	205	42	24	45	49
11	24	70	98	150	66	121	153	153	32	57	62	132
12	39	78	334	160	74	132	124	132	29	106	68	343
13	24	75	290	140	662	447	121	390	53	35	45	406
14	17	75	220	340	498	573	132	318	85	97	36	1,830
15	19	103	170	560	339	631	118	191	129	39	30	742
16	17	92	140	300	217	540	103	169	80	25	28	369
17	15	76	166	230	250	366	86	147	64	19	27	368
18	13	70	194	170	281	277	86	108	51	16	24	255
19	13	65	205	140	353	318	78	88	44	24	26	265
20	12	88	245	104	688	375	74	77	39	33	24	348
21	41	153	213	104	888	245	70	69	38	22	25	281
22	108	101	755	104	895	225	70	62	60	16	393	291
23	57	87	1,240	118	993	229	68	54	42	13	380	153
24	41	71	832	106	510	194	62	49	33	12	162	124
25	35	68	385	94	353	147	56	46	28	38	87	99
26	31	68	286	130	371	140	51	42	24	24	67	143
27	28	67	241	68	937	113	47	39	20	17	100	156
28	26	65	201	76	769	147	46	37	18	14	232	103
29	25	63	176	84	------	277	47	35	17	35	110	85
30	104	82	135	140	------	225	43	38	14	47	76	77
31	205	------	120	120	------	169	------	37	------	265	62	------
TOTAL	1,064	3,125	7,749	6,303	9,998	8,279	3,054	4,792	1,382	1,120.4	3,684	7,074
MEAN	34.3	104	250	203	357	267	102	155	46.1	36.1	119	236
MAX	205	272	1,240	960	993	631	180	714	129	265	393	1,830
MIN	11	63	61	68	58	113	43	35	14	9.2	24	38
CFSM	.55	1.66	4.00	3.25	5.71	4.27	1.63	2.48	.74	.58	1.90	3.78
IN.	.63	1.86	4.61	3.75	5.95	4.93	1.82	2.85	.82	.67	2.19	4.21

CAL YR 1970 TOTAL 54,746.0 MEAN 150 MAX 2,250 MIN 8.6 CFSM 2.40 IN 32.58
WTR YR 1971 TOTAL 57,624.4 MEAN 158 MAX 1,830 MIN 9.2 CFSM 2.53 IN 34.30

PEAK DISCHARGE (BASE, 1,000 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
12-23	1430	4.36	1,590	2-27	2000	3.95	1,260
2-13	1800	4.30	1,540	5- 6	1415	3.83	1,160
2-20	2345	3.88	1,200	9-14	1215	5.87	3,010

NOTE.--No gage height record Dec. 30 to Feb. 11.

As the number of streams on which streamflow information is likely to be desired far exceeds the number of stream-gaging stations feasible to operate at one time, the Geological Survey collects limited streamflow data at sites other than stream-gaging stations. When limited streamflow data are collected on a systematic basis over a period of years for use in hydrologic analyses, the site at which the data are collected is called a partial-record station. Data collected at these partial-record stations are usable in low-flow or floodflow analyses, depending on the type of data collected. In addition, discharge measurements are made at other sites not included in the partial-record program. These measurements are generally made in times of drought or flood to give better areal coverage to those events. Those measurements and others collected for some special reason are called measurements at miscellaneous sites.

Records collected at partial-record stations are presented in two tables. The first is a table of discharge measurements at low-flow partial-record stations and the second is a table of annual maximum stage and discharge at crest-stage stations. Discharge measurements made at miscellaneous sites for both low flow and high flow are given in a third table.

Low-flow partial-record stations

Measurements of streamflow in the area covered by this report made at low-flow partial-record stations are given in the following table. These measurements were made during periods of base flow when streamflow is primarily from ground-water storage. These measurements, when correlated with the simultaneous discharge of a nearby stream where continuous records are available, will give a picture of the low-flow potentiality of the stream. The column headed "Period of record" shows the water years in which measurements were made at the same, or practically the same site.

Discharge measurements made at low-flow partial-record stations during water year 1971, in North Atlantic Slope basins

Station No.	Station name	Location	Drainage area (sq mi)	Period of record	Measurements	
					Date	Discharge (cfs)
		Delaware River basin				
01477400	South Branch Naaman Creek near Claymont, Del.	Lat 39°49'00", long 75°29'40", New Castle County, at dam 800 ft above bridge on Marsh Road, 2.2 miles west of Claymont.	3.83	1955-66 1968-71	4-27-71	2.14
01479500	Mill Creek at Stanton, Del.	Lat 39°42'50", long 75°40'00", New Castle County, at highway bridge, 1.2 miles west of Stanton.	12.4	1931-34‡ 1955-66 1968-71	4-27-71	9.60
01482300	Red Lion Creek at Red Lion, Del.	Lat 39°36'20", long 75°39'55", New Castle County, at bridge on State Highway 7, 0.2 mile south of Red Lion.	3.20	1955-60 1962-71	4-27-71	1.13
01483150	Wiggins Millpond Outlet at Townsend, Del.	Lat 39°24'12", long 75°42'16", New Castle County, at bridge on State Highway 446, 0.8 mile northwest of Townsend.	3.82	1957-60 1962-66 1968-71	4-26-71	2.68
		St. Jones River basin				
01483650	Fork Branch at Dupont, Del.	Lat 39°11'56", long 75°34'40", Kent County, at highway bridge, 0.8 mile northwest of Dupont.	7.50	1955-57 1959-60 1962-66 1968-71	4-27-71	3.90
01483680	Maidstone Branch at Dupont, Del.	Lat 39°11'18", long 75°34'04", Kent County, at highway bridge, 0.4 mile southwest of Dupont.	17.3	1955-57 1959-60 1962-66 1968-71	4-26-71	9.37
		Murderkill River basin				
01484020	Browns Branch near Houston, Del.	Lat 38°57'31", long 75°30'33", Kent County, at highway bridge, 2.9 miles north of Houston.	12.4	1955-71	4-27-71	15.5
*01484050	Pratt Branch near Felton, Del.	Lat 39°00'37", long 75°31'46", Kent County, at highway bridge, 2.6 miles east of Felton.	3.29	1955-57 1959-60 1962-71	4-27-71	3.15
01484060	Double Run near Magnolia, Del.	Lat 39°03'16", long 75°29'43", Kent County, at highway bridge, 1.5 miles southwest of Magnolia.	5.68	1955-57 1959-60 1962-64 1966-71	4-28-71	5.27

Discharge measurements made at low-flow partial-record stations during water year 1971, in North Atlantic Slope basins--Continued

Station No.	Station name	Location	Drainage area (sq mi)	Period of record	Measurements	
					Date	Discharge (cfs)
		Broadkill River basin				
01484240	Pemberton Branch near Milton, Del.	Lat 38°46'26", long 75°20'29", Sussex County, at highway bridge, 1.5 miles west of Milton.	6.68	1955-66 1968-71	4-27-71	15.7
*01484270	Beaverdam Creek near Milton, Del.	Lat 38°45'41", long 75°16'03", Sussex County, at highway bridge, 2.5 miles east of Milton.	6.10	1955-71	10- 7-70 4-27-71	7.41 11.9
		Indian River basin				
*01484550	Pepper Creek at Dagsboro, Del.	Lat 38°32'50", long 75°14'40", Sussex County, at bridge on State Highway 26, at Dagsboro.	8.78	1955-71	4-27-71	4.41
		Nanticoke River basin				
01487700	Elliott Pond Branch near Laurel, Del. b/	Lat 38°34'39", long 75°31'42", Sussex County, at highway bridge, 2.9 miles northeast of Laurel.	8.55	1955-66 1968-71	4-27-71	11.5
		Choptank River basin				
01491180	Watts Creek near Denton, Md.	Lat 38°52'29", long 75°47'38", Caroline County, at bridge on State Highway 474, 1.6 miles southeast of Denton.	a11	1964-71	10-12-70 4-27-71	.98 6.00
		Chester River basin				
01492980	Cypress Branch at Millington, Md.	Lat 39°15'28", long 75°50'01", Kent County, at bridge on State Highway 291, 0.04 mile east of Millington.	a38	1964-66 1968-71	10- 9-70 4-28-71	1.67 12.0
01494100	Old Mill Stream Branch at Centreville, Md.	Lat 39°02'23", long 76°04'22", Queen Annes County, at bridge on U.S. Highway 213, at Centreville.	11.2	c1953-54 1964-71	10- 7-70 4-28-71	3.42 6.99
		Elk River basin				
01495550	Perch Creek near Elkton, Md.	Lat 39°34'16", long 75°48'53", Cecil County, at bridge on U.S. Highway 213, 2.5 miles south of Elkton.	a6.0	1964-71	7- 7-71	1.00
		Northeast River basin				
01496050	Little Northeast Creek at Mechanic Valley, Md.	Lat 39°38'26", long 75°55'49", Cecil County, at highway bridge, 0.8 mile northwest of Mechanic Valley.	a14	1964-71	7- 7-71	5.60
		Potomac River basin				
01601300	North Branch Jennings Run at Barrelville, Md.	Lat 39°42'13" long 78°50'38", at bridge on State Highway 47, at Barrelville, Allegany County.	a12	1964-71	7- 8-71	1.18
01604150	Collier Run at Spring Gap, Md.	Lat 39°34'03", long 78°43'23", at culvert on State Highway 51, 0.6 mile west of Spring Gap, Allegany County.	a11	1964-71	7- 8-71	.12
01619150	Marsh Run at Fiddlesburg, Md.	Lat 39°39'29", long 77°41'16", at bridge on Old Forge Road, at Fiddlesburg, 0.6 miles above mouth, and 0.5 mile east of Hagerstown city limits, Washington County.	a31	1965-71	7- 8-71	9.74

Discharge measurements made at low-flow partial-record stations during water year 1971, in Ohio River basin

Station No.	Station name	Location	Drainage area (sq mi)	Period of record	Measurements Date	Measurements Discharge (cfs)
		Monongahela River basin				
03075400	Laurel Run at Crellin, Md.	Lat 39°23'04", long 79°28'25", 800 ft above mouth, 0.5 mile southwest of Crellin, Garrett County.	10.9	1964-71	10-14-70 7- 8-71	4.69 3.22
03076580	South Branch Bear Creek near Accident, Md.	Lat 39°36'39", long 79°20'02", at culvert on U. S. Highway 219, 1.5 miles southwest of Accident, Garrett County.	6.01	1964-71	10-14-70 7- 8-71	.59 .85

* Also a crest-stage partial-record station
‡ Operated as a continuous-record gaging station.
a Approximately.
b From 1958 to 1965 published as "Chipman Pond Branch."
c Miscellaneous measurements during this period.

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 1971, in North Atlantic Slope basins

Station No.	Station name	Location	Drainage area (sq mi)	Period of record	Annual maximum Date	Gage height (feet)	Discharge (cfs)
		Delaware River basin					
01478950	Pike Creek near Newark, Del.	Lat 39°42'11", long 75°41'41", New Castle County, on right upstream wingwall of bridge on State Highway 2, 2.6 miles northeast of Newark, and 0.4 mile upstream from mouth.	6.04	1969-71	2- 7-71	5.40	494
01479200	Mill Creek at Hockessin, Del.	Lat 39°46'31", long 75°41'26", New Castle County, 20 ft above bridge on Brackenville Road, and 0.9 mile southeast of Hockessin.	b4.19	1966-71	2- 7-71	6.38	524
01479950	Red Clay Creek tributary near Yorklyn, Del.	Lat 39°47'50", long 75°39'33", New Castle County, 8 ft above culvert and 1.1 miles southeast of Yorklyn.	0.38	1966-71	2- 7-71	5.48	64
01481200	Brandywine Creek tributary near Centerville, Del.	Lat 39°50'08", long 75°35'57", New Castle County, 30 ft above bridge on State Highway 100, and 1.4 miles northeast of Centerville.	0.97	1966-71	9-13-71	9.35	405
01481450	Willow Run at Rockland, Del.	Lat 39°47'32", long 75°33'16", New Castle County, 15 ft above culvert on Country Club Drive, and 1.0 mile east of Rockland.	0.37	1966-71	9-13-71	12.70	620
01482310	Doll Run at Red Lion, Del.	Lat 39°35'53", long 75°39'43", New Castle County, 10 ft above culvert on secondary road, 0.7 mile south of Red Lion.	a1.2	1966-71	8-27-71	4.71	140
		Smyrna River basin					
01483290	Paw Paw Branch tributary near Clayton, Del.	Lat 39°18'41", long 75°40'08", New Castle County, 6 ft above culverts on secondary road, and 2.4 miles northwest of Clayton.	a1.3	1966-71	8-28-71	7.79	207
01483400	Sawmill Branch tributary near Blackbird, Del.	Lat 39°20'57", long 75°38'31", New Castle County, 10 ft above culvert on U.S. Highway 13, and 1.8 miles southeast of Blackbird.	a0.6	1966-71	8-28-71	4.30	28
		Leipsic River basin					
01483500	Leipsic River near Cheswold, Del.	Lat 39°13'58", long 75°37'57", Kent County, 75 ft below highway bridge, 1.9 miles east of Kenton, and 2.6 miles northwest of Cheswold.	9.35	1931-33‡ 1943-57‡ 1958-71	9-11-71	4.71	424
		St. Jones River basin					
01483720	Puncheon Branch at Dover, Del.	Lat 39°08'25", long 75°32'20", Kent County, 10 ft above bridge on New Burton Road, and at Dover.	a2.3	1966-71	8-28-71	4.32	172
		Murderkill River basin					
01484002	Murderkill River tributary near Felton, Del.	Lat 38°58'19", long 75°33'31", Kent County, 6 ft above culvert on secondary road, and 2.9 miles south of Felton.	a1.0	1966-71	8-28-71	4.17	19

See footnotes at end of table, p.

Annual maximum discharge at crest-stage partial-record stations during water year 1971, in North Atlantic Slope basins--Continued

Station No.	Station name	Location	Drainage area (sq mi)	Period of record	Annual maximum Date	Gage height (feet)	Discharge (cfs)
		Murderkill River basin--Continued					
*01484050	Pratt Branch near Felton, Del.	Lat 39°00'37", long 75°31'46", Kent County, at highway bridge, and 2.6 miles east of Felton.	3.29	1966-71	2- 8-71	8.24	65
		Broadkill River basin					
*01484270	Beaverdam Creek near Milton, Del.	Lat 38°45'41", long 75°16'03", Sussex County, at highway bridge on secondary road, and 2.5 miles east of Milton.	6.10	1966-71	8-28-71	4.28	34
		Indian River basin					
*01484550	Pepper Creek at Dagsboro, Del.	Lat 38°32'50", long 75°14'39", Sussex County, at bridge on State Highway 26, and at Dagsboro.	8.78	1960-71	8-28-71	4.80	259
		Wicomico River basin					
01486100	Andrews Branch near Delmar, Md.	Lat 38°26'15", long 75°31'46", Wicomico County, at culvert on Rum Ridge Road, 1.2 miles above Williams Pond, and 2.8 miles southeast of Delmar.	a4.1	1967-71	5-16-71	6.34	93
		Nanticoke River basin					
01486980	Toms Dam Branch near Greenwood, Del.	Lat 38°48'04", long 75°33'28", Sussex County, 16 ft above bridge on State Highway 16, and 1.5 miles east of Greenwood.	a6.4	1966-71	5-16-71	4.45	26
01487900	Meadow Branch near Delmar, Del.	Lat 38°29'05", long 75°35'16", Sussex County, 14 ft above culverts on secondary road, 2.1 miles northwest of Delmar, and 3.1 miles upstream from confluence with Holly Branch.	a3.9	1967-71	8-28-71	4.77	61
01488000	Holly Ditch near Laurel, Del.	Lat 38°32'20", long 75°35'55", Sussex County, 10 ft above culvert on secondary road, and 1.5 miles southwest of Laurel.	2.19	1951-56‡ 1959-71	2-23-71	2.09	4.4
		Choptank River basin					
01490470	Tappahanna Ditch near Hartly, Del.	Lat 39°08'07", long 75°41'30", Kent County, 100 ft below bridge on State Highway 103, and 2.7 miles southeast of Hartly.	5.93	1952-71	2-24-71	6.84	119
01490490	Beachy Neidig Ditch near Willow Grove, Del.	Lat 39°04'57", long 75°39'27", Kent County, 10 ft above culvert on secondary road, and 1.8 miles northwest of Willow Grove.	a2.3	1966-71	8-28-71	7.38	†
01490600	Meredith Branch near Sandtown, Del.	Lat 39°02'23", long 75°41'52", Kent County, at bridge on State Highway 10, and 1.2 miles east of Sandtown.	a8.4	1966-71	8-28-71	3.70	210
01491010	Sangston Prong near Whiteleysburg, Del.	Lat 38°58'25", long 75°43'32", Kent County, 10 ft above culvert on secondary road, and 1.2 miles north of Whiteleysburg.	a1.9	1966-71	8-28-71	5.60	70
01491050	Spring Branch near Greensboro, Md.	Lat 38°56'34", long 75°47'25", Caroline County, at culvert on Knife Box Road, 2.0 miles above mouth, and 2.2 miles southeast of Greensboro.	a3.8	1967-71	8-28-71	5.87	78
		Wye River basin					
01492500	Sallie Harris Creek near Carmichael, Md.	Lat 38°57'55", long 76°06'30", on upstream wingwall of bridge on U. S. Highway 50, 2.0 miles northeast of Carmichael, Queen Annes County, and 2.2 miles northwest of Wye Mills.	8.09	1952-56‡ 1957-71	8-27-71	4.37	220

See footnotes at end of table, p.

Annual maximum discharge at crest-stage partial-record stations during water year 1971, in North Atlantic Slope basins--Continued

Station No.	Station name	Location	Drainage area (sq mi)	Period of record	Annual maximum Date	Gage height (feet)	Discharge (cfs)
		Wye River basin--Continued					
01492550	Mill Creek near Skipton, Md.	Lat 38°55'00", long 76°03'42", Talbot County, at upstream side of culvert at U. S. Route 50, 1.5 miles north of Skipton, and 2.0 miles southeast of Wye Mills.	a4.6	1966-71	8- 4-71	5.44	150
		Northeast River basin					
01496080	Northeast River tributary near Charlestown, Md.	Lat 39°35'53", long 75°58'37", at culvert on U. S. Highway 40, 1.3 miles above mouth, and 1.6 miles north of Charlestown, Cecil County.	a1.7	1967-71	8-28-71	4.66	170
		Susquehanna River basin					
01579000	Basin Run at Liberty Grove, Md.	Lat 39°39'30", long 76°06'10", on left bank 100 ft upstream from highway bridge, 0.9 mile east of Liberty Grove, Cecil County, 1.0 mile southwest of Colora, and 3 miles upstream from mouth.	5.31	1948-58‡ 1965-71	8-28-71	4.98	1,200
		Bush River basin					
01581500	Bynum Run at Bel Air, Md.	Lat 39°32'30", long 76°19'50", Harford County, 30 ft downstream from bridge on State Highway 22, 1.0 mile east of Bel Air, and 8.5 miles upstream from mouth.	8.52	1945-50‡ 1955-70‡ 1971	8-1-71	5.72	1,650
		Gunpowder River basin					
01582510	Piney Creek near Hereford, Md.	Lat 39°34'38", long 76°40'39", at culvert on Interstate Route 83, 1.1 miles southwest of Hereford, Baltimore County, and 5.3 miles above mouth.	a1.5	1966-71	9-11-71	13.27	790
01583495	Western Run tributary at Western Run, Md.	Lat 39°31'01", long 76°41'04", at culvert on Western Run Road, 0.05 mile above mouth, and 0.3 mile northwest of Western Run, Baltimore County.	0.26	1966-71	8- 1-71	7.15	175
01583580	Baisman Run at Broadmoor, Md.	Lat 39°28'45", long 76°40'42", Baltimore County, at upstream side of bridge on Ivy Hill Road, 0.3 mile upstream from mouth, and 1.8 miles west of Cockeysville.	1.47	1965-69‡ 1970-71	6-27-70 8- 1-71	3.13 3.80	c144 245
		Patapsco 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 miles southwest of Bel Air, and 10.5 miles upstream from mouth.	36.1	1927-70‡ 1971	8- 1-71	6.90	3,900
01587050	Hay Meadow Branch tributary at Poplar Springs, Md.	Lat 39°20'55", long 77°06'02", at culvert on U. S. Route 40, 0.4 mile northwest of Poplar Springs, Howard County, and 0.5 mile above mouth.	0.54	1966-71	9-11-71	10.55	630
01588000	Piney Run near Sykesville, Md.	Lat 39°22'55", long 76°58'00", 75 ft below bridge on State Highway 32, 1½ miles north of Sykesville, Carroll County, and 5¼ miles above mouth.	11.4	1932-58‡ 1959-71	9-11-71	7.68	2,000
01589240	Gwynns Falls at McDonogh, Md.	Lat 39°23'28", long 76°45'56", Baltimore County, at bridge on McDonogh Road, at McDonogh.	19.3	1958-71	8-3-71	8.00	About 1,300

See footnotes at end of table, p.

Annual maximum discharge at crest-stage partial-record stations during water year 1971, in North Atlantic Slope basins--Continued

Station No.	Station name	Location	Drainage area (sq mi)	Period of record	Annual maximum Date	Gage height (feet)	Discharge (cfs)
		South River basin					
01590500	Bacon Ridge Branch at Chesterfield, Md.	Lat 39°00'07", long 76°36'53", on left bank 50 ft downstream from timber highway bridge, 0.5 mile east of Chesterfield, Anne Arundel County, 1.4 miles upstream from confluence with North River, and 6.8 miles northwest of Annapolis.	6.92	1942-52‡ 1965-71	8- 2-71	3.83	270
		Patuxent River basin					
01593350	Little Patuxent River tributary at Guilford Downs, Md.	Lat 39°13'39", long 76°50'41", at culvert on U. S. Route 29 at Guilford Downs, Howard County, and 0.3 mile above mouth.	0.95	1966-71	8- 2-71	7.16	265
		Potomac River basin					
01601000	Wills Creek below Hyndman, Pa.	Lat 39°48'43", long 78°43'00", above county highway bridge, 150 ft downstream from Pennsylvania Railroad bridge, and 0.5 mile south of Hyndman, Bedford County.	146	1951-67‡ 1968-71	12-23-70	6.13	3,240
01609500	Sawpit Run near Oldtown, Md.	Lat 39°32'50", long 78°33'20", 900 ft above bridge on State Highway 51, 1.0 mile above mouth, and 3.0 miles east of Oldtown, Allegany County.	5.08	1948-58‡ 1963-71	5-20-71	3.03	230
01613150	Ditch Run near Hancock, Md.	Lat 39°41'32", long 78°07'56", at culvert on U. S. Route 40, 0.3 mile above mouth, 2.1 miles south of the Mason and Dixon Line, and 2.7 miles east of Hancock, Washington County.	a4.8	1965-71	11-13-70	7.69	400
01613160	Potomac River tributary near Hancock, Md.	Lat 39°41'29", long 78°07'37", at culvert on Md. Route 615, 0.3 mile above mouth, 2.1 miles south of the Mason and Dixon Line, and 3.0 mile east of Hancock, Washington County.	a1.2	1965-71	12-23-70	4.52	78
01619475	Dog Creek tributary near Locust Grove, Md.	Lat 39°27'57", long 77°39'38", at culvert on Md. Route 67, 0.4 mile above mouth, and 1.3 miles north of Locust Grove, Washington County.	0.13	1966-71	2-13-71	4.47	12
01637600	Hollow Road Creek near Middletown, Md.	Lat 39°26'07", long 77°31'15", at culvert on Alternate U. S. Route 40, 1.4 miles southeast of Middletown, Frederick County and 2.0 miles above mouth.	a2.3	1965-71	2-13-71	4.43	160
01639095	Piney Creek tributary at Taneytown, Md.	Lat 39°39'53", long 77°09'59", at culvert under Pennsylvania Railroad, 0.1 mile above mouth, and 0.6 mile northeast of Taneytown, Carroll County.	0.62	1967-71	8- 4-71	5.27	53
01640000	Little Pipe Creek at Avondale, Md.	Lat 39°33'40", long 77°02'38", at private bridge, 0.1 mile below Copps Branch, 1/2 mile northwest of Avondale, and 3 miles southwest of Westminster, Carroll County.	8.10	1948-56‡ 1959-64 1967-71	8- 1-71	5.08	554
01640700	Owens Creek tributary near Rocky Ridge, Md.	Lat 39°37'16", long 77°20'26", at culvert on Appolds Crossing Road, 0.8 mile above mouth, and 1.6 miles northwest of Rocky Ridge, Frederick County.	a1.2	1967-71	7- 9-70 2-13-71	13.40 4.73	d383 93

See footnotes at end of table, p.

Annual maximum discharge at crest-stage partial-record stations during water year 1971, in North Atlantic Slope basins--Continued and Ohio (Monongahela) River basin

Station No.	Station name	Location	Drainage area (sq mi)	Period of record	Annual Maximum Date	Annual Maximum Gage height (feet)	Annual Maximum Discharge (cfs)
		Potomac River basin--Continued					
01642400	Dollyhyde Creek at Libertytown, Md.	Lat 39°28'55", long 77°13'38", above culvert on State Highway 26, 0.9 mile east of Libertytown, Frederick County.	a2.7	1967-71	8- 3-71	6.94	450
01644420	Bucklodge Branch tributary near Barnesville, Md.	Lat 39°12'42", long 77°21'02", at culvert on Barnesville Road, 0.6 mile above mouth, and 1.6 miles southeast of Barnesville, Montgomery County.	0.27	1967-71	9-11-71	9.58	127
01660900	Wolf Den Branch near Cedarville, Md.	Lat 38°38'29", long 76°49'02" at culvert on Forest Road, 1.5 miles above mouth, 1.6 miles southwest of Cedarville, Prince Georges County, and within Cedarville State Forest.	a2.3	1966-71	1- 4-71	4.67	76
01660930	Clark Run near Bel Alton, Md.	Lat 38°28'21", long 76°57'22", at bridge on Newtown Road, 1.5 miles northeast of Bel Alton, Charles County, and 1.8 miles above mouth.	10.4	1966-71	8-27-71	6.79	285
01661430	Glebe Branch at Valley Lee, Md.	Lat 38°11'40", long 76°31'13", at culvert on private road, 200 ft downstream from culvert on Md. State Highway 244, 0.2 mile above mouth, and 0.3 mile west of Valley Lee, St. Marys County.	a0.3	1968-71	5-29-71	3.66	14
		Monongahela River basin					
03075450	Little Youghiogheny River tributary near Deer Park, Md.	Lat 39°24'37", long 79°21'00", at culvert on Md. Route 135, 0.7 mile above mouth, and 1.6 miles southwest of Deer Park, Garrett County.	0.57	1965-71	12-22-70	4.69	23
03075600	Toliver Run tributary near Hoyes Run, Md.	Lat 39°29'39", long 79°25'14", at culvert on Swallow Falls Road, 100 feet above mouth, and 2.4 miles south of Hoyes Run, Garrett County.	0.53	1965-71	8-26-71	5.89	60
03076505	Youghiogheny River tributary near Friendsville, Md.	Lat 39°39'48", long 79°25'42", at culvert on Md. Route 42, and 1.3 miles west of Friendsville, Garrett County.	0.22	1965-71	12-23-70	3.72	18
03077700	North Branch Casselman River tributary at Foxtown, Md.	Lat 39°37'58", long 79°14'36", at culvert on Dunghill Road, at Foxtown, Garrett County, and 2.0 miles above mouth.	a1.0	1965-71	9-14-71	6.31	84

* Also a crest-stage partial-record station.
† Not determined.
‡ Operated as a continuous-record station.
a Approximately.
b 0.15 sq mi is probably noncontributing.
c Not previously published.
d Revised.

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. Drainage areas given to two significant figures are approximate.

Discharge measurements made at miscellaneous sites during water year 1971, in North Atlantic Slope basins

Stream	Tributary to	Location	Drainage area (sq mi)	Measured previously (water years)	Date	Discharge (cfs)
		Delaware River basin				
Matson Run	Shellpot Creek	Lat 39°45'58", long 75°31'36", New Castle County, at culvert on Lea Boulevard, 0.7 mile upstream from mouth, at Wilmington, Del.	0.94	1967	9-13-71	†1,580
		Leipsic River basin				
*Leipsic River	Delaware Bay	Lat 39°13'58", long 75°37'57", Kent County, 75 ft below highway bridge, 1.9 miles east of Kenton, and 2.6 miles northwest of Cheswold, Del.	9.35	1931-33‡ 1943-57‡ 1968-70	4-28-71	7.03
		St. Jones River basin				
Tidbury Creek	St. Jones River	Lat 39°05'53", long 75°31'43", Kent County, at bridge on County Road 360, 0.7 mile west of Rising Sun, Del., 1.5 miles southeast of Camden, and 2.6 miles above mouth.	a8.6	1968-70	10- 8-70	4.86
		Mispillion River basin				
Tantrough Branch	Mispillion River	Lat 38°53'22", long 74°29'27", Kent County, at culvert on County Road 620, 1.0 mile above Beaverdam Branch, and 3.8 miles southwest of Milford, Del.	a4.2	1968-70	10- 8-70	1.32
		Love Creek basin				
Bundicks Branch	Love Creek	Lat 38°43'17", long 75°12'23", Sussex County, at bridge on County Road 285, 1.2 miles above confluence with Gosling Creek, 1.3 miles southwest of Jimtown, Del., and 6.5 miles west of Rehoboth Beach.	a5.5	1968-70	10- 6-70	1.49
		Herring Creek basin				
Unity Branch	Herring Creek	Lat 38°39'45", long 75°13'21", Sussex County, at culvert on State Highway 5 at Fairmount, Del., 1.6 miles above Phillips Branch, and 8 miles north of Dagsboro.	a3.3	1968-70	10- 6-70	.17
		Indian River basin				
Deep Branch	Cow Bridge Branch	Lat 38°39'45", long 75°17'58", Sussex County, at bridge on State Highway 30, 0.1 mile above White Oak Swamp Ditch, 2.0 miles north of Mt. Joy, Del., and 5.1 miles north of Millsboro.	a6.4	1968-70	10- 6-70	.38
Shoals Branch	Long Drain Ditch	Lat 38°34'37", long 75°20'38", Sussex County, at bridge on County Road 412, 0.8 mile above mouth, and 3.0 miles west of Millsboro, Del.	a7.2	1968-70	10- 6-70	.97
Phillips Ditch	Shoals Branch	Lat 38°34'03", long 75°20'24", Sussex County, at bridge on County Road 472, 1.2 miles above mouth, and 3.1 miles southwest of Millsboro, Del.	a3.8	1968-69	10- 6-70	.01

* Also a crest-stage partial-record station.
† Peak flow.
‡ Operated as a continuous-record station.
a Approximately.

Discharge measurements made at miscellaneous sites during water year 1971, in North Atlantic Slope basins--Continued

Stream	Tributary to	Location	Drainage area (sq mi)	Measured previously (water years)	Date	Discharge (cfs)
		Indian River basin--Continued				
Blackwater Creek	Indian River	Lat 38°32'43", long 75°09'49", Sussex County, at bridge on State Highway 54, 1.0 mile west of Clarksville, Del., and 3.1 miles above mouth.	a4.5	1968-69	10- 6-70	0
Whartons Branch	Indian River	Lat 38°33'42", long 75°16'30", Sussex County, at bridge on U. S. 113, 1.7 miles above mouth, and 2.3 miles southeast of Millsboro, Del.	a5.9	1968-69	10- 6-70	**<.01
		Dirickson Creek basin				
Bearhole Ditch	Dirickson Creek	Lat 38°28'17", long 75°09'22", Sussex County, at bridge on County Road 390A, 0.6 mile north of Bunting, Del., 1.6 miles above mouth, and 3.7 miles east of Selbyville.	a6.2	1968-70	10- 6-70	.60
		St. Martin River basin				
Middle Branch	South Branch	Lat 38°24'02", long 75°12'45", Worcester County, at culvert on U. S. Highway 113 at Showell, Md., and 0.9 mile above mouth.	a3.7	1968-70	10- 6-70	.01
Birch Branch	Shingle Landing Prong	Lat 38°24'33", long 75°12'48", Worcester County, at culvert on U. S. Highway 113, 0.7 mile north of Showell, Md., and 1.0 mile above mouth.	a6.5	1968-70	10- 6-70	.29
		Pocomoke River basin				
North Fork Green Run	Green Run	Lat 38°27'07", long 75°22'41", Wicomico County, at culvert on State Highway 54 at Maryland-Delaware state line, 1.8 miles above confluence with South Fork, and 2.8 miles east of Whitesville, Del.	a2.6	1968-70	10- 6-70	.27
South Fork Green Run	Green Run	Lat 38°25'50", long 75°22'36", Wicomico County, at culvert on Burnt Mill Road, 2.1 miles above confluence with North Fork, and 3.0 miles northwest of Willards, Md.	a5.7	1968-70	10- 6-70	.18
Burnt Mill Branch	Pocomoke River	Lat 38°24'55", long 75°24'25", Wicomico County, at bridge on State Highway 353, 1.4 miles north of Pittsville, Md., and 1.7 miles above Aydylotte Branch.	a4.2	1968-70	10- 6-70	.11
Adkins Race	Pocomoke River	Lat 38°19'53", long 75°22'25", Wicomico County, at outlet of Adkins Pond on State Highway 354, at Powellville, Md.	18.7	1950-53 1969	10- 7-70	.98
Burnt Mill Branch	Pocomoke River	Lat 38°23'20", long 75°20'15", Wicomico County, 0.5 mile upstream from Gordys Branch, 0.75 mile east of Willards, Md., and 0.8 mile upstream from mouth.	18.1	1950-53 1969-70	10- 6-70	3.25
Tilghman Race	Pocomoke River	Lat 38°16'55", long 75°22'45", Worcester County, at bridge on State Highway 354, 0.7 mile above mouth, and 3.2 miles south of Powellville, Md.	a5.8	1968-70	10- 7-70	.10
Pollitts Branch	Dividing Creek	Lat 38°12'53", long 75°35'27", Somerset County, at culvert on county road, 0.4 mile south of West, Md., and 0.9 mile above mouth.	a2.3	1968-70	10- 7-70	.04

** Field estimate.
a Approximately.

Discharge measurements made at miscellaneous sites during water year 1971, in North Atlantic Slope basins--Continued

Stream	Tributary to	Location	Drainage area (sq mi)	Measured previously (water years)	Date	Discharge (cfs)
		Manokin River basin				
Loretto Branch	Manokin River	Lat 38°12'57", long 75°41'28", Somerset County, at culvert under Pennsylvania Railroad, 0.7 mile above confluence with Manokin Branch, and 1.0 mile north of Princess Anne, Md.	a4.0	1968-70	10- 7-70	0.39
Jones Creek	Taylor Branch	Lat 38°10'29", long 75°41'06", Somerset County, at bridge on county road, 1.1 miles above mouth, and 2 miles south of Princess Anne, Md.	a3.2	1968, 1970	10- 7-70	**.004
		Wicomico River basin				
Connelly Mill Branch	Leonard Pond Run	Lat 38°25'59", long 75°35'41", Wicomico County, at culvert on Jersey Road, 1.4 miles above mouth, and 1.5 miles southwest of Delmar, Md.	3.66	1964, 1968-70	10- 8-70	1.13
Leonard Pond Run	North Prong Wicomico River	Lat 38°25'24", long 75°33'56", Wicomico County at Leonard Pond, 0.6 mile above Wood Creek, 2.4 miles southeast of Delmar, Md.	13.4	1950-51 1963-65 1967, 1969-70	10- 8-70	2.54
Little Burnt Branch	North Prong Wicomico River	Lat 38°24'49", long 75°36'04", Wicomico County, at culvert on Jersey Road, 0.5 mile upstream from Naylors Pont, 2.1 miles northwest of Salisbury, Md.	3.39	1964, 1967-70	10- 8-70	1.37
North Prong Wicomico	Wicomico River	Lat 38°24'32", long 75°35'42", Wicomico County, at bridge on Naylor Mill Road, 0.1 mile below confluence of Leonard Pond Run and Little Burnt Branch, and 1.9 miles north of Salisbury, Md.	24.8	1963-65 1967-70	10- 8-70	18.8
Middle Neck Branch	North Prong Wicomico River	Lat 38°23'18", long 75°33'01", Wicomico County, at culvert on Parker Road, 1.4 miles above Peggy Branch, and 1.7 miles northeast of Salisbury, Md.	a2.1	1964, 1968-70	10- 7-70	.76
Tonytank Creek	Wicomico River	Lat 38°19'52", long 75°35'54", Wicomico County, at dam, at Fooks Pond Outlet, 1.0 mile northeast of Fruitland, Md.	4.98	1950-51 1953 1962-64 1968-69	10- 7-70	2.63
Passerdyke Creek	Wicomico Creek	Lat 38°17'47", long 75°40'07", Wicomico County, at bridge on private road, 1.3 miles northeast of Allen, Md., and 1.5 miles above mouth.	a7.2	1968-70	10- 7-70	.31
Barkley Branch	Passerdyke Creek	Lat 38°16'54", long 75°40'50", Somerset County, at culvert on county road, 0.6 mile southeast of Allen, Md., and 0.6 mile above mouth.	a2.7	1968-70	10- 7-70	.35
		Nanticoke River basin				
Nanticoke River	Chesapeake Bay	Lat 38°48'20", long 75°34'53", Sussex County, at bridge on State Highway 16, 0.6 mile east of Greenwood, Del., 1.2 miles above Cart Branch, and 11 miles southwest of Milford.	a16	1968-70	10- 7-70	5.31
Gum Branch	Nanticoke River	Lat 38°46'07", long 75°30'59", Sussex County, at bridge on County Road 594, 0.6 mile below Parker Branch, and 5 miles northeast of Bridgeville, Del.	a7.5	1968-70	10- 7-70	1.89
Gum Branch	Nanticoke River	Lat 38°35'53", long 75°37'49", Sussex County, at bridge on County Road 487, 1.6 miles above mouth, and 3.2 miles south of Seaford, Del.	a5.8	1966-70	10- 8-70	.20

** Field estimate.
a Approximately.

Discharge measurements made at miscellaneous sites during water year 1971, in North Atlantic Slope basins--Continued

Stream	Tributary to	Location	Drainage area (sq mi)	Measured previously (water years)	Date	Discharge (cfs)
		Nanticoke River basin--Continued				
Little Creek	Broad Creek	Lat 38°31'19", long 75°34'45", Sussex County, at culvert on County Road 501, 0.1 mile below confluence of Holly Branch and Meadow Branch, 2.4 miles south of Laurel, Del., and 3.4 miles above mouth.	a15	1968-70	10- 7-70	1.74
Tussocky Branch	Broad Creek	Lat 38°32'30", long 75°38'16", Sussex County, at culvert on County Road 494, 1.4 miles south of Portsville, Del., and 1.8 miles above mouth.	a8.7	1968-70	10- 7-70	.01
Wright Creek	Nanticoke River	Lat 38°35'06", long 75°41'50", Sussex County, at culvert on County Road 538, 2.0 miles above mouth, and 3.8 miles northwest of Portsville, Del.	a3.6	1968-70	10- 8-70	.72
Chicone Creek	Nanticoke River	Lat 38°31'55", long 75°49'06", Dorchester County, on upstream side of bridge on county road, 0.5 mile east of Reids Grove, Md., and 4.25 miles upstream from mouth.	4.69	1951-53 1969-70	10-14-70	.49
Plum Creek	Nanticoke River	Lat 38°31'00", long 75°42'36", Wicomico County, at culvert on San Domingo Road, 1.7 miles south of Sharptown, Md., and 2.6 miles above mouth.	a2.8	1968-70	10- 8-70	.87
Nanticoke River tributary	Nanticoke River	Lat 38°30'43", long 75°43'59", Wicomico County, at culvert on Cooper Mill Road, 1.5 miles above mouth, and 2.0 miles southwest of Sharptown, Md.	a1.4	1968-70	10- 8-70	.02
Green Branch	Marshyhope Creek	Lat 38°53'24", long 75°40'00", Kent County, at bridge on State Highway 14, 0.7 mile west of Vernon, Del., 3.0 miles above mouth, and 5 miles southwest of Harrington.	a3.9	1968-70	10 -8-70	.17
Smithville Ditch	Marshyhope Creek	Lat 38°45'45", long 75°44'14", Caroline County, at bridge on county road, 0.3 mile above mouth, 0.8 mile south of Smithville, Md., and 5.5 miles northeast of Federalsburg.	a12	1968-70	10-12-70	1.50
Brights Branch	Houston Branch	Lat 38°43'34", long 75°42'05", Sussex County, at bridge on County Road 567A, 1.0 mile above mouth, 1.7 miles northwest of Atlanta, Del., and 7 miles northwest of Seaford.	a4.6	1968-70	10- 7-70	.42
Sullivan Branch	Marshyhope Creek	Lat 38°44'38", long 75°46'45", Caroline County, at bridge on Long Swamp Road, 1.5 miles above mouth, and 3.5 miles north of Federalsburg, Md.	a7.6	1968-70	10-12-70	.63
Tanyard Branch	Marshyhope Creek	Lat 38°41'44", long 75°44'27", Caroline County, at culvert on State Highway 318, 2.0 miles east of Federalsburg, Md., and 2.2 miles above mouth.	a2.8	1968-70	10-12-70	.26
North Branch Davis Millpond Branch	Davis Millpond Branch	Lat 38°39'53", long 75°45'17", Dorchester County, at bridge on State Highway 313, 0.2 mile above confluence with South Branch, and 2.3 miles southeast of Federalsburg, Md.	a2.8	1968-70	10-14-70	.82
Skinners Run	Marshyhope Creek	Lat 38°40'30", long 75°49'20", Dorchester County, at bridge on State Highway 307, 1.7 miles above mouth, and 3.0 miles southwest of Federalsburg, Md.	a3.2	1968-70	10-14-70	.47

a Approximately.

Discharge measurements made at miscellaneous sites during water year 1971, in North Atlantic Slope basins--Continued

Stream	Tributary to	Location	Drainage area (sq mi)	Measured previously (water years)	Date	Discharge (cfs)
		Nanticoke River basin--Continued				
Wrights Branch	Marshyhope Creek	Lat 38°36'46", long 75°49'55", Dorchester County, at culvert on Rosedale-Harrison Ferry Road, 0.6 mile above mouth, and 2 miles southeast of Hurlock, Md.	a3.4	1968-70	10-14-70	b2.96
Marshyhope Creek tributary	Marshyhope Creek	Lat 38°36'18", long 75°50'05", Dorchester County, at culvert on Rosedale-Harrison Ferry Road, 0.6 mile above mouth, and 0.9 mile east of Petersburg, Md.	a3.0	1968-70	10- 4-70	1.25
Puckum Branch	Marshyhope Creek	Lat 38°36'44", long 75°47'50", Dorchester County, at culvert on Puckum Road, 1.8 miles above mouth, and 2.0 miles north of Eldorado, Md.	a2.5	1968-70	10-14-70	.26
Baron Creek	Nanticoke River	Lat 38°27'30", long 75°42'00", Wicomico County, at county road 0.3 mile west of Delaware-Maryland corner, 1 mile upstream from Mockingbird Pond, and 3 miles east of Mardela Springs, Md.	8.93	1950-53 1969	10- 8-70	1.66
Rewastico Creek	Nanticoke River	Lat 38°25'05", long 75°44'06", Wicomico County, at county road, 1.3 miles upstream from gaging station and 2.1 miles west of Hebron, Md.	8.40	1950-53 1969	10- 8-70	2.02
		Transquaking River basin				
Transquaking River	Fishing Bay	Lat 38°33'33", long 75°55'29", Dorchester County at culvert on Red Hill Road, 3.1 miles upstream from higgins Millpond, and 0.3 mile west of Hawkeye, Md.	a2.2	1966-70	10-14-70	.13
		Choptank River basin				
Harrington Beaverdam Ditch	Tidy Island Creek	Lat 39°06'38", long 75°44'25", Kent County, at bridge on State Highway 8, 0.2 mile above confluence with Tappahanna Ditch, and at Marydel, Del.	a9.8	1968-70	10- 8-70	.40
Tappahanna Ditch	Tidy Island Creek	Lat 39°06'36", long 75°43'40", Kent County, at bridge on County Road 222, 0.9 mile above confluence with Harrington-Beaverdam Ditch, and 1.0 mile east of Marydel, Del.	a16	1968-70	10- 8-70	.57
Cow Marsh Creek	Choptank River	Lat 39°02'55", long 75°41'06", Kent County, at bridge on County Road 212, 1.9 miles west of Petersburg, Del., 3.6 miles above mouth, and 5.5 miles southeast of Marydel.	a20	1968-70	10- 8-70	.90
Gravelly Branch	Choptank River	Lat 38°59'27", long 75°45'50", Caroline County, at bridge on Boyce Mill Road, 1.6 miles above mouth, and 2.5 miles northeast of Greensboro, Md.	a16	1968-70	10- 8-70	1.76
Forge Branch	Choptank River	Lat 38°58'43", long 75°49'10", Caroline County, at bridge on Marble Head Road, 0.8 mile west of Greensboro, Md., and 2.8 miles above mouth.	a10	1968-70	10- 8-70	.79
Forge Branch tributary	Forge Branch	Lat 38°57'23", long 75°50'27", Caroline County, at culvert on Holly Road, 1.3 miles above mouth, and 2.5 miles east of Ridgely, Md.	a2.6	1968-70	10- 8-70	.20
Spring Branch	Choptank River	Lat 38°56'37", long 75°48'45", Caroline County, at bridge on State Highway 313, 0.8 mile above mouth, and 2.1 miles south of Greensboro, Md.	a5.3	1968-70	10- 8-70	1.39

a Approximately.
b Includes sewage from Hurlock, Md.

Discharge measurements made at miscellaneous sites during water year 1971, in North Atlantic Slope basins--Continued

Stream	Tributary to	Location	Drainage area (sq mi)	Measured previously (water years)	Date	Discharge (cfs)
		Choptank River basin--Continued				
Herring Run	Watts Creek	Lat 38°51'00", long 75°47'46", Caroline County, at culvert on county road, 0.9 mile southwest of Hobbs, Md., 1.4 miles above mouth, and 3.0 miles southeast of Denton.	a4.9	1968-70	10-12-70	0.14
Mill Creek	Choptank River	Lat 38°49'12", long 75°49'36", Caroline County, at culvert on county road 1.6 miles southeast of Williston, Md., 2.2 miles above mouth, and 3.5 miles south of Denton.	a4.5	1968-70	10-12-70	1.10
Robins Creek	Choptank River	Lat 38°48'42", long 75°51'51", Caroline County, at culvert on State Highway 16, 0.5 mile southwest of Bureau, Md., 1.4 miles above mouth, and 5.3 miles southwest of Denton.	a4.5	1968-70	10-12-70	.19
Fowling Creek	Choptank River	Lat 38°47'02", long 75°52'28", Caroline County, at culvert on State Highway 16, 0.5 mile northeast of Harmony, Md., and 2.8 miles above mouth.	a6.1	1968-70	10-12-70	1.47
Beaverdam Ditch	Mason Branch	Lat 39°05'32", long 75°52'37", Queen Annes County, at bridge on State Highway 19 at Ingleside, Md., 3.0 miles above mouth, and 9 miles northwest of Greensboro.	a4.5	1968-70	10- 6-70	.68
Mason Branch	Tuckahoe Creek	Lat 39°01'59", long 75°53'00", Caroline County, at bridge on State Highway 405, 0.5 mile west of Bridgetown, Md., and 4.9 miles above confluence with German Branch.	32.5	1968-70	10- 6-70	7.68
German Branch	Tuckahoe Creek	Lat 39°03'02", long 75°57'04", Queen Annes County, at bridge on Hope-Roe Road, 0.1 mile below Wildcat Branch, 5.0 miles southwest of Ingleside, Md., and 6.2 miles east of Centreville.	a11	1968-70	10- 6-70	1.19
Blockston Branch	Tuckahoe Creek	Lat 38°58'06", long 75°56'45", Queen Annes County, at bridge on county road, 0.2 mile above mouth, and 2.5 miles south of Ruthsburg, Md.	a8.4	1968-70	10- 6-70	1.42
Piney Branch	Tuckahoe Creek	Lat 38°57'39", long 75°55'09", Caroline County, at culvert on Crouse Mill Road, 1.1 miles above mouth, and 2.2 miles northwest of Ridgely, Md.	a4.8	1968-70	10- 6-70	1.06
Norwich Creek	Tuckahoe Creek	Lat 38°55'22", long 75°58'25", Queen Annes County, at bridge on State Highway 404, 1.0 mile west of Queen Anne, Md., and 2.0 miles above mouth.	a9.7	1968-70	10- 6-70	.50
Knott Millpond	Tuckahoe Creek	Lat 38°52'54", long 75°55'33", Caroline County, at bridge on Tuckahoe Road, 0.9 mile above mouth, and 2.5 miles south of Hillsboro, Md.	8.45	1952-53 1968-70	10- 9-70	3.68
Deep Branch	Tuckahoe Creek	Lat 38°51'25", long 75°54'41", Caroline County, at bridge on Tuckahoe Road, 0.7 mile above mouth, and 4.8 miles southwest of Denton, Md.	a3.3	1968-70	10- 9-70	1.83
Hog Creek	Choptank River	Lat 38°45'52", long 75°54'58", Caroline County, at culvert on State Highway 578, 2.0 miles northeast of Bethlehem, Md., 2.6 miles above mouth, and 9 miles northwest of Federalsburg.	3.64	1952-53 1968-70	10-12-70	.91
Wootenaux Creek	Kings Creek	Lat 38°47'48", long 76°01'32", Talbot County, at bridge on State Highway 328, 0.3 mile above Galloway Run, and 3.0 miles northeast of Easton, Md.	a4.8	1968-70	10- 9-70	.05

a Approximately.

Discharge measurements made at miscellaneous sites during water year 1971, in North Atlantic Slope basins--Continued

Stream	Tributary to	Location	Drainage area (sq mi)	Measured previously (water years)	Date	Discharge (cfs)
		Choptank River basin--Continued				
Gravel Run	Hunting Creek	Lat 38°40'31", long 75°52'38", Dorchester County, at culvert on Gravel Branch Road, 1.0 mile southeast of Ellwood, Md., and 2.0 miles above mouth.	a4.3	1968-70	10-14-70	1.08
		Wye River basin				
Wye River	Eastern Bay	Lat 38°59'21", long 76°08'28", Queen Annes County, at bridge on county road, 0.5 mile above State Highway 404, and 0.9 mile east of Queenstown, Md.	a3.8	1968-70	10- 6-70	.73
Wye East River	Wye River	Lat 38°56'33", long 76°04'53", Talbot County, at bridge on State Highways 404 and 662 at Wye Mills, Md., 1.8 miles above Sallie Harris Creek.	a10	1968-70	10- 6-70	2.20
*Sallie Harris Creek	Wye East River	Lat 38°57'55", long 76°06'30", Queen Annes County, at bridge on U. S. Highway 50, 2.0 miles northeast of Carmichael, Md., and 2.2 miles northwest of Wye Mills.	8.09	1952-56‡ 1966,68 1969-70	10- 6-70	1.62
Skipton Creek	Wye East River	Lat 38°52'46", long 76°03'14", Talbot County, at bridge on State Highway 662, 1.1 miles south of Skipton, Md., 1.9 miles above Mill Creek, and 4.5 Miles south of Wye Mills.	a4.6	1968-70	10- 9-70	.33
Mill Creek	Skipton Creek	Lat 38°54'36", long 76°04'26", Talbot County, at bridge on State Highway 662, 1.4 miles northwest of Skipton, Md.	a6.4	1964-70	10- 9-70	2.76
		Chester River basin				
Gravelly Run	Andover Branch	Lat 39°13'07", long 75°45'41", Queen Annes County, at bridge on Stulltown-Blanco Road, 0.5 mile downstream from Delaware state line, 0.5 mile above mouth, and 5 miles southeast of Millington, Md.	a12	1968-70	10- 7-70	.22
Sewell Branch	Andover Branch	Lat 39°15'20", long 75°44'02", Kent County, at bridge on County Road 131, 0.6 mile above Jordon Branch, 2.0 miles southwest of Blackiston, Del., and 6 miles southwest of Clayton.	a6.5	1968-70	10- 9-70	.07
Jordon Branch	Sewell Branch	Lat 39°14'04", long 75°43'13", Kent County, at bridge on County Road 94, 1.3 miles above mouth, and 3 miles west of Kenton, Del.	a4.5	1968-70	10- 9-70	.06
Mills Branch	Chester River	Lat 39°16'34", long 75°52'10", Kent County, at bridge on Millington Road, 1.5 miles above mouth, and 2.1 miles northwest of Millington, Md.	9.98	1953-54 1968-70	10- 9-70	.90
Unicorn Branch	Chester River	Lat 39°11'28", long 75°50'03", Queen Annes County, at bridge on State Highway 300, 1.2 miles above Chapel Branch Ditch, and 1.4 miles east of Sudlersville, Md.	a8.1	1968-70	10- 7-70	.71
Red Lion Branch	Chester River	Lat 39°13'11", long 75°54'01", Queen Annes County, at bridge on Pondtown-Millington Road, 0.8 mile northeast of Pondtown, Md., 2.5 miles above mouth, and 9 miles east of Chestertown.	a22	1968-70	10- 7-70	4.51

* Also a crest-stage partial-record station.
‡ Operated as a continuous-record station.
a Approximately.

Discharge measurements made at miscellaneous sites during water year 1971, in North Atlantic Slope basins--Continued

Stream	Tributary to	Location	Drainage area (sq mi)	Measured previously (water years)	Date	Discharge (cfs)
		Chester River basin--Continued				
Chester River trib-	Chester River	Lat 39°16'28", long 75°56'22", Kent County, at bridge on State Highway 447, 1.3 miles west of Chesterville, Md., and 2.8 miles above mouth.	a3.6	1968-70	10- 9-70	1.82
Southeast Creek	Chester River	Lat 39°07'57", long 75°58'51", Queen Annes County, at bridge on private road, 0.7 mile south of Church Hill, Md.	12.5	1952-56‡ 1957,63 1968-70	9-10-68 8-13-70 10- 7-70	b2.84 b3.65 2.14
Three Bridges Branch	Yellow Bank Stream	Lat 39°03'14", long 76°03'17", Queen Annes County, at bridge on State Highway 213, 0.7 mile above confluence with Gravel Run, and 0.9 mile northeast of Centreville, Md.	a8.5	1968-70	10- 7-70	.95
East Fork Langford trib- utary	East Fork Langford Creek	Lat 39°11'13", long 76°06'56", Kent County, at bridge on Langford-Brices Mill Road, 400 ft below Mill Pond, 0.1 mile above mouth, and 3 miles southwest of Chestertown, Md.	a5.4	1968-70	10- 9-70	2.64
		Worton Creek basin				
Mill Creek	Worton Creek	Lat 39°17'00", long 76°08'06", Kent County, at bridge on St. James-Smithville Road, 0.5 mile north of Hanesville, Md., and 2.6 miles above mouth.	a4.5	1953-54 1968-70	10- 9-70	.78
		Churn Creek basin				
Churn Creek	Chesapeake Bay	Lat 39°18'22", long 76°06'15", Kent County, at culvert on gravel road, 0.6 mile north of Smithville, Md. and 3.5 miles above mouth.	a1.7	1968-70	10- 9-70	.93
		Sassafras River basin				
Duffy Creek	Sassafras River	Lat 39°23'45", long 75°49'31", Cecil County, at bridge on Wards Hill Road, 1.4 miles above mouth, and 2.4 miles east of Cecilton, Md.	a1.6	1968-70	10- 9-70	.58
Jacobs Creek	Sassafras River	Lat 39°21'50", long 75°49'13", Kent County, at bridge on State Highway 290, 1.2 miles southwest of Sassafras, Md.	5.39	1951-56‡ 1963,66 1968-69	10- 9-70	2.51
		Elk River basin				
Sandy Branch	Great Bohemia Creek	Lat 39°27'36", long 75°46'27", Cecil County, at bridge on Sandy Branch Road, 300 ft downstream from Delaware state line, 0.5 mile above mouth, and 0.4 mile south of Bohemia Mills, Md.	a2.8	1968-70	10- 9-70	1.57
		Gunpowder River basin				
Bean Creek	Gunpowder Falls	Lat 39°24'37", long 76°24'50", Baltimore County, downstream from culvert on Interstate Highway 95, 0.5 mile upstream from mouth, and 0.7 mile northwest of Loveley, Md.	a1.0	-	8- 1-71	†1,940
Gunpowder Falls	Gunpowder River	Lat 39°24'48", long 76°24'12", Baltimore County, 900 ft downstream from bridge on State Highway 7, 0.5 mile north of Loveley, Md., and 3.6 miles upstream from mouth.	347	-	8- 1-71	†19,700

† Peak flow.
‡ Operated as a continuous-record station.
a Approximately.
b Not previously published.

Discharge measurements made at miscellaneous sites during water year 1971, in North Atlantic Slope basins--Continued

Stream	Tributary to	Location	Drainage area (sq mi)	Measured previously (water years)	Date	Discharge (cfs)
		Gunpowder River basin--Continued				
Little Gunpowder Falls	Gunpowder River	Lat 39°25'28", long 76°22'41", Baltimore County, at bridge on State Highway 7, 0.9 mile northeast of Gunpowder, Md., and 1.9 miles upstream from mouth.	55.3	-	8-1-71	†11,800
		Back River basin				
Herring Run	Back River	Lat 39°21'14", long 76°34'25", Baltimore City, Md., at bridge on Echodale Ave., 0.7 mile upstream from Chinquapin Run, 0.7 mile north of Montebello Park.	a8.0	-	8- 1-71	†7,300
		Potomac River basin				
Potomac Blue Spring	North Branch Potomac	Lat 39°34'26", long 78°43'50", Allegany County, 200 ft below abandoned C & O Canal Lock, 1.1 miles northwest of Spring Gap, Md.	-	1958-70	7- 8-71	10.5
Murley Branch Spring	Murley Branch	Lat 39°39'38", long 78°37'08", Allegany County, below dam at spring house of farm on Williams Road, 4.0 miles southwest of Flintstone, Md.	-	1958-70	7- 8-71	1.41

† Peak flow.
a Approximately.

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 mean sea level, datum of 1929, unless otherwise noted. 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 stages at tidal crest-stage partial-record stations

Station No.	Station name	Location	Period of Record	Annual maximum	
				Date	Elevation above mean sea level (feet)
01483335	Duck Creek at Smyrna, Del.	Lat 39°18'31", long 75°36'34", at bridge on U.S.Highway 13, on north edge of Smyrna, Kent County, about 1,000 ft north of traffic light at junction of Route 300 and U.S.Highway 13, on downstream right wingwall of bridge.	1966-71	8-28-71	4.54
01484085	Murderkill River at Bowers, Del.	Lat 39°03'30", long 75°23'51", at Faulkner's Landing in Bowers, Kent County, on left bank, 10 ft southeast of southeast corner of restaurant on Faulkner's Pier.	1966-71	8-28-71	5.56
01484235	Cedar Creek near Slaughter Beach, Del.	Lat 38°56'06", long 75°19'26", at bridge No. S-164 on State Highway 36, 1.79 miles northwest of Slaughter Beach, Sussex County and 6 miles from traffic light at junction of state routes 14 and 36 in Milford, Del.	1966-71	8-28-71	3.92
01484595	Indian River at Oak Orchard, Del.	Lat 38°35'45", long 75°10'24", at Hanes Landing, 2.05 miles southeast of junction of state routes 24 and 5, at Oak Orchard, Sussex County.	1966-71	4-6-71	*3.48

* Gage datum; not to mean sea level datum.

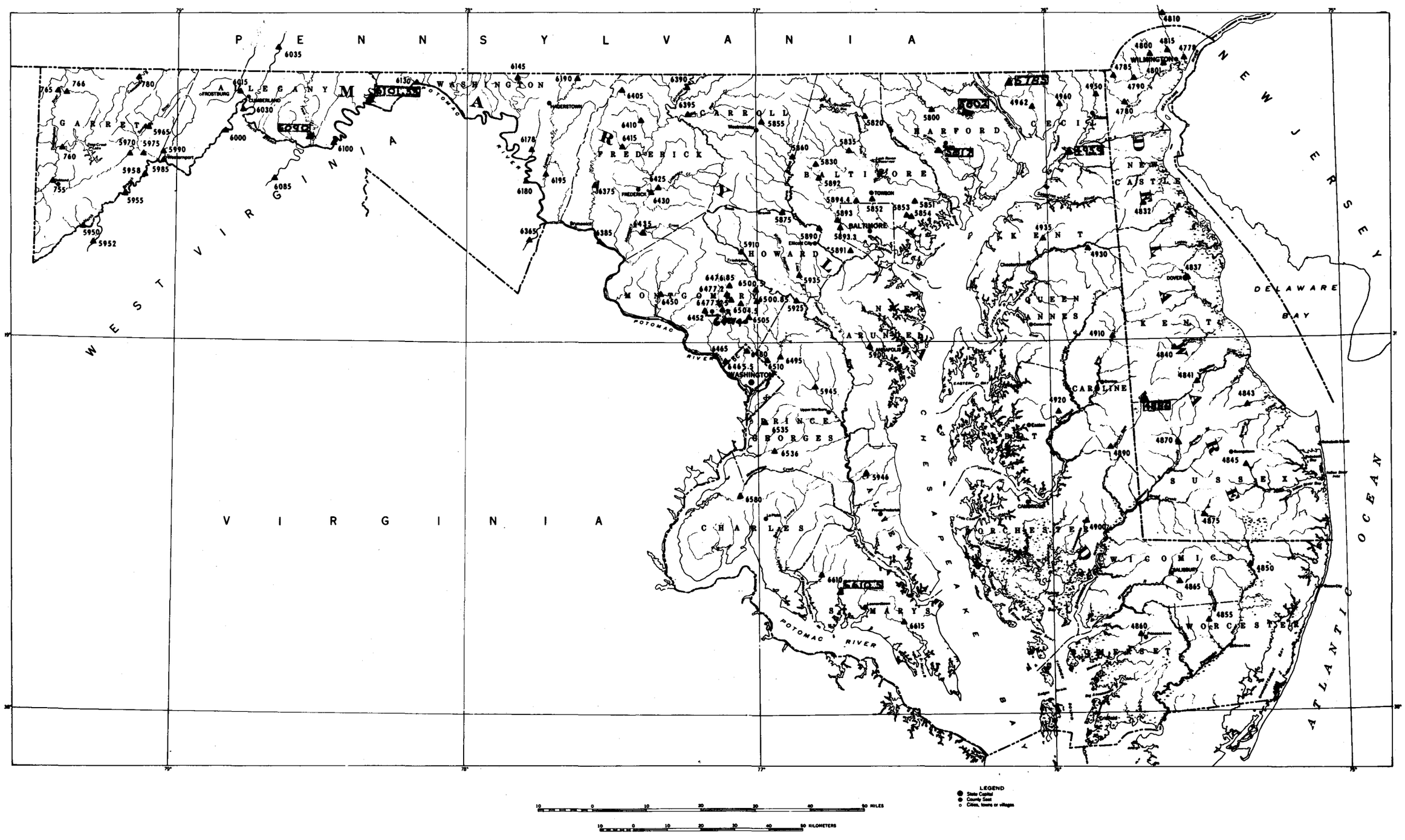

Figure 2.--Map showing location of gaging stations.

U. S. DEPARTMENT OF THE INTERIOR
Geological Survey
724 York Road
Towson, Maryland 21204

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