1966

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

United States Department of the Interior
Geological Survey - Water Resources Division

WATER RESOURCES DATA FOR MARYLAND AND DELAWARE

Part 1. Surface Water Records

1966

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

Copies of this report may be obtained from
District Chief
Water Resources Division
U. S. Geological Survey
724 York Road
Towson, Maryland 21204

1968

CALENDAR FOR WATER YEAR 1966

OCTOBER 1965

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 1965

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28	29	30				

DECEMBER 1965

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19	20	21	22	23	24	25
26	27	28	29	30	31	

JANUARY 1966

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23	24	25	26	27	28	29
30	31					

FEBRUARY 1966

S	M	T	W	T	F	S
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6	7	8	9	10	11	12
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20	21	22	23	24	25	26
27	28					

MARCH 1966

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		

APRIL 1966

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

MAY 1966

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

JUNE 1966

S	M	T	W	T	F	S
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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		

JULY 1966

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						

AUGUST 1966

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			

SEPTEMBER 1966

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	

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Part 1. Surface Water Records

INTRODUCTION

The surface-water records for the 1965 water year for gaging stations, partial-record stations, and miscellaneous sites within the States of Maryland and Delaware are given in this report. For convenience there are also included records for a few pertinent gaging stations in bordering States. The records were collected and computed by the Water Resources Division of the U.S. Geological Survey, under the direction of J. W. Wark, district chief, succeeded by W. F. White.

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." Since 1951 there have been 20 volumes in the series; each volume covered an area whose boundaries coincided with those of certain natural drainage areas. The records in Maryland and Delaware were contained in Parts 1B (North Atlantic Slope basins, New York to York River) and 3A (Ohio River basin except Cumberland and Tennessee River basins) of that series.

Beginning with the 1961 water year, streamflow records and related data have been released by the Geological Survey in annual reports on a State-boundary basis. Distribution of these basic-data reports is limited and primarily for local needs. Records will be published in Geological Survey water-supply papers at 5-year intervals.

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: Delaware Geological Survey, J. J. Groot, State geologist; State Highway Department, E. A. Davidson, director of operations.

Maryland: Maryland Geological Survey, K. N. Weaver, director; State Roads Commission, David H. Fisher, chief engineer; Maryland Department of Health, William J. Peeples, M.D., M.P.H., Commissioner; Maryland National Capital Park and Planning Commission, John S. Hewins, director of planning; Washington Suburban Sanitary Commission, Robert J. McLeod, acting general manager and chief engineer; District of Columbia Department of Sanitary Engineering, Roy L. Orndorff, director; city of Baltimore, R. J. Kretzschmar, acting water engineer.

Assistance in the form of funds or services was given by the Corps of Engineers, U. S. Army, in collecting records for 20 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; 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 AND ABBREVIATIONS

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

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 obtainted.

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

Cubic foot per second (cfs) is the rate of discharge of a stream whose channel is 1 square foot in cross-sectional area and whose average velocity is 1 foot per second.

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.

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.

Acre-foot (ac-ft) is the quantity of water required to cover an acre to the depth of 1 foot and is equivalent to 43,560 cubic feet.

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, 1.983471 acre-feet, or 646,317 gallons, and represents a runoff of 0.0372 inch from 1 square mile.

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.

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

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.

The drainage area of a stream at a specified location is that area, measured in a horizontal plane, which is so enclosed by a topographic divide that direct surface runoff from precipitation normally would drain by gravity into the river above the specified point. Figures of drainage area given herein include all closed basins, or noncontributing areas, within the area unless otherwise noted.

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

DOWNSTREAM ORDER AND STATION NUMBERS

Stations are listed in the same downstream order used in the water-supply papers. Records are listed in a downstream direction along the main stem with all stations on a tributary entering above a main-stem station listed before that station. If a tributary enters between two main-stem stations, it is listed between them. A similar order is followed listing stations on first rank, second rank, and other ranks of tributaries. To indicate the rank of any tributary on which a gaging station is situated and the stream to which it is immediately tributary, each indention in the listing of gaging stations in the table of contents of this report represents one rank. This downstream order and system of indention shows which gaging stations are on tributaries between any two stations on a main stem and the rank of the tributary on which each gaging station is situated.

As an added means of identification, each gaging station and partial-record station has been assigned a station number. The numbers have been assigned in the same downstream order used in the annual series of water-supply papers. In assigning station numbers, no distinction is made between partial-record stations and continuous-record gaging stations, so that 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 01-6465.00, includes the part number "01" plus a six-digit number. In this report, the nonessential zeros are not shown. For example, the complete number 01-6465.00 would appear as 1-6465, just to the left of the station name. 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 DATA

The base data collected at gaging stations consist of records of stage and measurements of discharge. In addition, observations of factors affecting the stage-discharge relation, weather records, and other information are used to supplement base data in determining the daily flow. Records of stage are obtained from a water-stage recorder that gives a continuous chart of the fluctuations (for digital recorders, a tape punched at 15- or 30-minute intervals) or from direct readings on a nonrecording gage. Measurements of discharge are made with a current meter by the general methods adopted by the Geological Survey on the basis of experience in stream gaging since 1888. These methods are described in Water-Supply Paper 888 and are also outlined in standard textbooks on the measurement of stream discharge.

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, or computation of flow over dams or weirs), velocity-area studies, and logarithmic plotting. The application of the daily mean gage height to those rating tables 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 in effect the shifting-control method.

At some gaging stations the stage-discharge relation is affected by ice during 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 engineers, and comparable records of discharge for other stations in the same or nearby basins.

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 the daily discharge. This happens when the recorder stops or otherwise fails to operate properly, intakes are plugged, 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.

The data in this report generally comprise a description of the station, and a table showing the daily discharge and monthly and yearly discharge of the stream. Records are published for the water year which begins on October 1 and ends on September 30. A calendar for the 1966 water year is shown on page II to facilitate finding the day of the week for any date.

The description of the station gives the location, drainage area, records available, type and history of gages, average discharge, extremes of discharge, and general remarks. The location of the gaging station and the drainage area are obtained from the most accurate maps available. Under "Records available" are given periods for which there are published records for the present station or for stations generally equivalent to the present one. Under "Gage" are given the type of gage currently in use and the datum of the gage above mean sea level, and a condensed history of the types, locations and datums of previous gages used during the period of records available. The references to "datum of 1929" and adjustments of other years are to the datum and adjustments of the U.S. Coast and Geodetic Survey. Under "Average discharge" is given the average discharge for the number of years indicated. It is not given for stations having fewer than five complete years of record or for stations where changes in water development during the period of record cause the figure to have little significance. Under "Extremes" are given the maximum discharge and gage height; the minimum discharge if there is extensive regulation (also the minimum discharge if useful); and the minimum gage height if it is significant. In the first paragraph, the data given are for the complete current water year unless otherwise specified. In the second paragraph, the data given are for the periods of record within the calendar year dates in the heading (not necessarily those for the complete years indicated by the heading dates). Reliable information concerning major floods that have occurred outside the period of record are given in the third or last paragraph under "Extremes." Unless otherwise qualified, the maximum discharge corresponds to the crest stage obtained by use of a water-stage recorder, 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, it is given separately. Information pertaining to the accuracy of the records and to conditions which affect the natural flow at the gaging station is given under "Remarks."

The daily table gives the discharge corresponding to the daily mean gage height unless there are large or rapid changes in discharge during a day. For days having large or rapid changes, discharge for the day is computed by averaging the mean discharges 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.

In the table of daily discharge, the figures for the maximum day and the minimum day for each month are underlined. If the figure is repeated, it is underlined only on the first day of its occurrence.

In the monthly summary below the daily table, the line headed "Total" gives the sum of the daily figures; it is the total cfs-days for the month. The line headed "Mean" gives the average flow in cubic feet per second during the month. Discharge for the month may be expressed in cubic feet per second per square mile (line headed "Cfsm"), or in inches (line headed "In.").

In the yearly summary below the monthly summary, the figures of maximum are the maximum daily discharges, not the momentary discharges when the water was at crest stage. Likewise, the minimums in this summary are the minimum daily discharges.

Peak discharges and the times of their occurrence (expressed in 24-hour time) and corresponding gage heights for most stations are listed below the table of daily and monthly discharge. 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 stream for which the peaks are subject to substantial control by man. Time of day is expressed in 24-hour local standard time, for example, 12:30 a.m. is 0030, 1:30 p.m. is 1330.

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 records is affected. Days on which the stage-discharge relation is affected by ice are not indicated. The methods used in computing discharge for various unusual conditions have been explained in preceding paragraphs.

For most gaging stations on lakes and reservoirs the data presented comprise a description of the station and a monthly summary table of stage, contents, and change in contents.

ACCURACY OF FIELD DATA AND COMPUTED RESULTS

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

The station description under "Remarks" states that the degree of accuracy of the records. "Excellent" means that about 95 percent of the daily discharges are within 5 percent; "good," within 10 percent; and "fair," within 15 percent. Poor means that daily discharges have less than "fair" accuracy. The records of monthly and yearly mean discharge and runoff are, in general, more nearly accurate than the daily records.

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

OTHER DATA AVAILABLE

Data collected at partial-record stations and at miscellaneous sites are given at the end of this report. Data for 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 at miscellaneous sites are given in a third table. Occasionally, a series of discharge measurements are made within a short time period to investigate the seepage gains or losses along a reach of a stream or to determine the low-flow characteristics of an area. Such measurements are given in special tables after the list of measurements at miscellaneous sites.

Information of a more detailed nature than that published for most of the gaging stations is on file in the district office, such as discharge measurements and recorder charts or nonrecording-gage readings. Most gaging-station records in the States through 1960 have been analyzed with an electronic computer to give: (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; (3) the highest mean discharge for selected numbers of consecutive days in each year; and (4) the lowest daily discharge not exceeded during selected number 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 DURING 1966

The drought plaguing the northeastern section of the country since 1962 was the dominant factor affecting streamflow for most of the year. However, heavy September rains produced annual maximum flows at many stations in the central and eastern parts of the district. Major flooding in some urbanized areas in the vicinity of Washington, D.C., accompanied the extremely heavy rains of September 14 and floods exceeding those previously recorded occurred at two stations.

By 1963, a significant decrease in runoff was observed in the district, and by 1965 runoff was much below average in the central and northern parts of the district and slightly below average elsewhere. During 1966 the drought deepened and new record-low daily and monthly streamflows were recorded at many gaging stations. Graphical illustrations of streamflow conditions during the year in comparison with previous records for two stations are shown on the following pages. 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 penisula. Annual mean discharge is shown graphically in figure 2 for the period of record of the two stations. Streamflow for the year was 53 percent of average, at Potomac River at Point of Rocks, Md., - the lowest in 71 years of record. However, yearly discharge as a percent of the average, varied considerably upstream from this point. On the south and north branches of the Potomac the yearly flow was about 65 percent of average, whereas at Shenandoah River at Millville, W. Va., it was only 46 percent of average. The average flow during the 1966 water year at Choptank River near Greensboro, Md., was 21 percent of average - lower than any of the previous 17 years of record. However, flow of other streams in the central and southern Delmarva penisula having more than 20 years of record varied from 30 to 70 percent of their long-term averages. In southern Maryland the yearly discharge was about 50 percent of average.

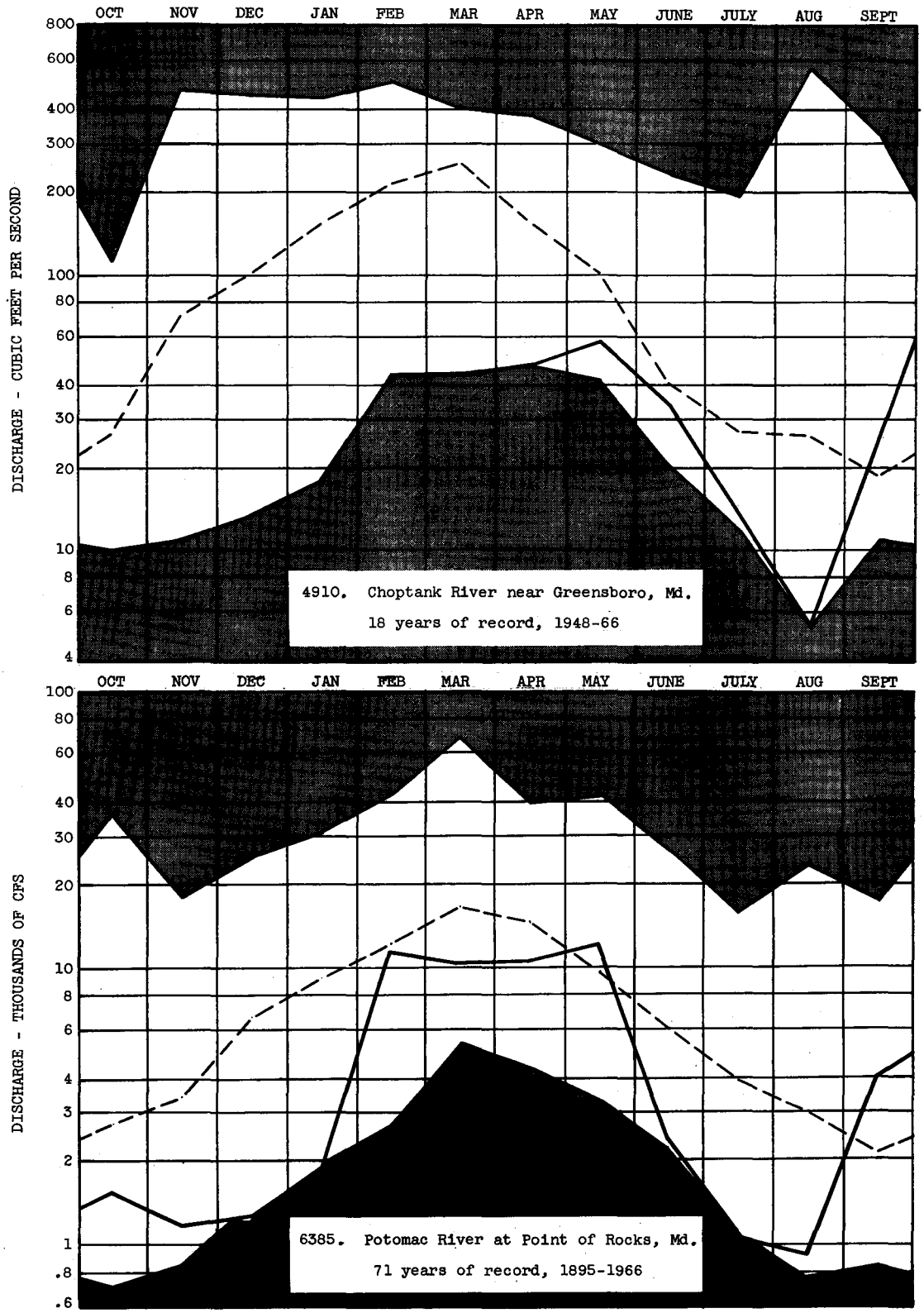
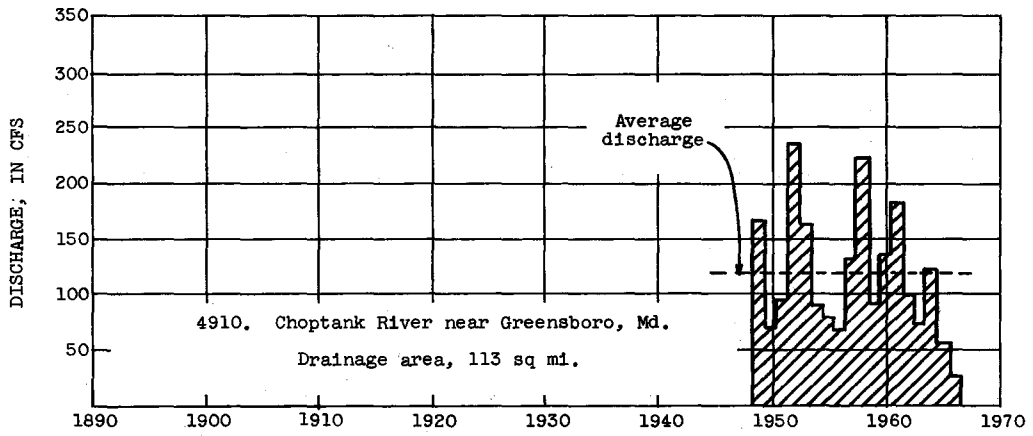


Figure 1.--Monthly streamflow at two gaging stations.

Unshaded area.--Indicates range between highest and lowest mean record for the month.

Dashed line.--Indicates normal of the monthly mean for the period of record through 1965.

Solid line.--Indicates observed monthly mean flow for the 1965-66 water year.



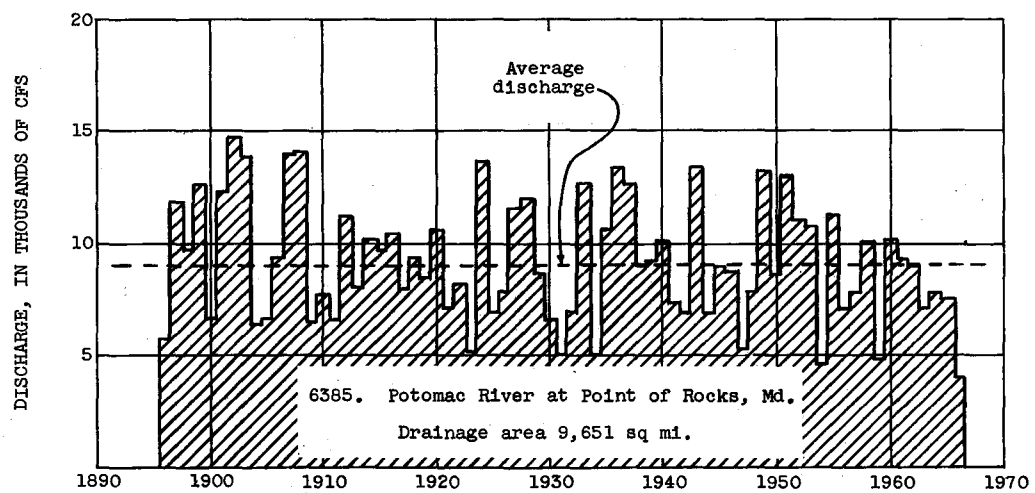


Figure 2.--Annual mean discharge at two gaging stations in Maryland.

DELAWARE RIVER BASIN

1-4778. Shellpot Creek at Wilmington, Del.

Location.--Lat 39°45'39", long 75°31'10", 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, New Castle County, 0.2 mile downstream from Matson Run, and 2.3 miles upstream from mouth.

Drainage area.--7.46 sq mi.

Records available.--December 1945 to September 1966.

Gage.--Digital water-stage recorder and concrete control. Datum of gage is 15.16 ft above mean sea level, datum of 1929, supplementary adjustment of 1959. Prior to Oct. 1, 1961, graphic water-stage recorder at same site and datum.

Average discharge.--20 years (1946-66), 8.74 cfs.

Extremes.--Maximum discharge during year, 695 cfs Feb. 13 (gage height, 3.65 ft); minimum daily, 0.10 cfs Aug. 8, 9, 19-23, Aug. 27 to Sept. 13.

1945-66: Maximum discharge, 4,080 cfs July 9, 1952 (gage height, 7.97 ft in gage well, 8.6 ft from floodmarks), 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 and 7.97 ft; minimum daily, 0.10 cfs Oct. 25, 1959, Aug. 8, 9, 19-23, Aug. 27 to Sept. 13, 1966.

Maximum stage known since at least 1940, that of July 9, 1952. Flood of Aug. 1, 1945, reached a stage of about 8.5 ft, from floodmarks.

Remarks.--Records good.

Discharge, in cubic feet per second, water year October 1965 to September 1966

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	14	0.70	0.70	1.0	2.0	55	1.9	11	1.9	0.70	0.20	0.10
2	4.1	.70	.80	7.0	1.8	7.0	1.9	4.8	1.9	.70	.60	.10
3	.70	.80	.80	10	2.0	4.7	1.7	3.9	1.9	.60	2.0	.10
4	.80	.70	.80	2.6	1.8	6.1	1.7	3.1	1.5	.60	.30	.10
5	.60	.70	.70	2.0	1.8	7.4	1.6	2.8	1.3	.70	1.0	.10
6	.40	.60	1.0	28	1.8	5.8	1.7	2.7	1.3	4.1	.50	.10
7	26	.50	.80	6.1	1.6	3.7	2.0	2.5	1.1	6.4	.20	.10
8	9.6	.80	.80	3.5	2.3	3.1	1.7	2.5	1.2	1.1	.10	.10
9	1.8	.80	.70	2.0	2.9	2.8	1.4	2.5	1.1	.70	.10	.10
10	1.6	.70	.70	2.3	7.0	2.8	1.4	2.4	4.7	.60	.20	.10
11	1.2	1.2	1.0	2.3	74	2.5	1.3	2.3	1.7	.50	.60	.10
12	1.2	1.0	1.4	1.8	24	2.8	3.5	2.4	.90	.40	1.2	.10
13	1.2	.80	24	1.6	308	2.4	38	2.6	.80	.40	.20	.10
14	.80	.80	3.2	1.8	30	2.3	9.4	2.4	.80	.40	.20	99
15	.70	.80	1.8	1.6	7.5	2.2	3.8	2.4	.80	1.2	.30	6.3
16	1.6	3.2	1.8	1.6	15	2.2	2.8	2.4	.80	.50	.30	1.3
17	1.6	3.8	1.6	1.4	9.1	2.1	2.4	3.0	.80	.30	.20	1.0
18	2.0	1.2	1.2	1.6	4.6	2.0	2.4	2.4	.70	.20	.20	.90
19	1.4	.80	1.0	1.6	3.9	2.0	2.5	93	.80	3.3	.10	.90
20	1.0	.70	1.0	1.6	3.0	2.2	2.5	5.5	.70	2.8	.10	8.5
21	.80	.60	1.0	1.6	2.8	2.1	2.5	3.1	.60	.40	.10	154
22	1.2	4.8	1.0	1.6	2.6	2.0	6.8	33	.50	.20	.10	17
23	1.0	2.6	1.0	12	2.5	2.0	3.4	3.5	.50	.20	.10	5.6
24	1.2	1.4	.80	4.8	3.0	13	56	2.6	.50	.20	.20	2.9
25	1.2	.80	13	3.2	17	5.1	48	2.7	.50	.20	.20	2.4
26	.60	1.0	5.7	2.0	9.7	2.7	6.3	2.4	.40	.30	.20	2.5
27	.60	4.1	1.6	2.0	11	2.4	4.7	2.4	.40	8.7	.10	3.2
28	.60	2.0	1.2	1.6	114	2.1	43	5.0	.40	11	.10	6.6
29	.60	1.2	1.2	1.6	—	2.1	6.6	6.8	1.2	.80	.10	18
30	.40	.80	1.2	1.8	------	2.1	14	2.3	.90	.40	.10	4.7
31	.60	------	1.0	2.0	------	2.0	------	1.9	------	.20	.10	------
TOTAL	81.10	40.60	74.50	115.6	666.7	158.7	276.9	222.3	32.60	48.80	10.00	336.10
MEAN	2.62	1.35	2.40	3.73	23.8	5.12	9.23	7.17	1.09	1.57	.32	11.2
CFSM	.351	.181	.322	.500	3.19	.686	1.24	.961	.146	.211	.043	1.50
IN	.40	.20	.37	.58	3.32	.79	1.38	1.11	.16	.24	.05	1.68

CALENDAR YEAR 1965 MAX 175 MIN .40 MEAN 5.00 CFSM .670 INCHES 9.09
WATER YEAR 1965-66 MAX 308 MIN .10 MEAN 5.66 CFSM .759 INCHES 10.29

Peak discharge (base, 550 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
2-13	1330	3.65	695				

Note.--Where daily discharge is less than 1.0 cfs the zero in the hundredths column is not significant.

1-4780. Christina River at Coochs Bridge, Del.

Location.--Lat 39°38'16", long 75°43'46", on left bank at downstream side of highway bridge, 0.3 mile south of Coochs Bridge, New Castle County, 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.

Records available.--April 1943 to September 1966.

Gage.--Digital water-stage recorder and concrete control. Datum of gage is 25.6 ft above mean sea level, datum of 1929. Prior to Sept. 14, 1944, wire-weight gage and crest-stage gage on upstream side of bridge at same datum. Sept. 14, 1944, to Sept. 30, 1961, graphic water-stage recorder at present site and datum.

Average discharge.--23 years, 24.9 cfs.

Extremes.--Maximum discharge during year, 1,430 cfs Feb. 13 (gage height, 10.27 ft); minimum daily, 0.2 cfs Aug. 7, 14, 18, 21, 27, 28.
1943-66: Maximum discharge, 2,620 cfs May 1, 1947 (gage height, 12.41 ft); minimum daily, that of Aug. 7, 14, 18, 21, 27, 28, 1966.

Remarks.--Records good. Low and medium flow regulated by mill above station.

Discharge, in cubic feet per second, water year October 1965 to September 1966

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	2.4	3.9	3.3	1.1	10	252	9.5	42	8.2	5.5	2.8	1.2
2	6.1	1.9	2.1	4.6	11	29	11	19	7.1	1.9	1.3	2.3
3	2.3	1.3	2.1	12	9.4	20	8.2	14	7.6	1.5	1.4	.90
4	1.7	1.4	2.2	5.2	7.4	19	8.6	12	3.8	3.0	2.4	1.9
5	1.6	2.4	1.4	7.8	7.1	34	8.6	10	5.7	4.8	.70	.70
6	1.7	2.4	4.9	27	6.2	28	9.2	11	7.3	2.0	1.5	.60
7	33	.50	.50	17	6.9	16	7.3	7.9	4.3	2.7	.20	.60
8	48	2.4	3.4	8.8	5.5	14	11	8.8	5.4	9.1	.90	.70
9	4.1	3.1	2.8	2.9	6.6	12	5.0	8.7	3.9	6.8	.70	.70
10	3.1	.70	3.5	5.8	8.4	12	7.0	8.2	9.6	1.9	1.7	.70
11	3.6	2.9	2.4	3.7	130	12	11	9.3	12	4.4	1.8	.70
12	4.7	2.5	1.0	6.0	112	11	6.5	5.7	4.4	1.4	6.0	.70
13	2.5	3.1	15	4.4	827	10	63	8.1	5.4	2.0	1.6	.70
14	3.4	2.9	9.8	3.6	159	11	36	7.2	2.8	1.4	.20	178
15	1.5	2.6	4.5	6.8	38	11	14	7.3	4.5	.90	1.6	40
16	2.2	3.4	3.1	3.8	41	11	12	6.8	3.5	.70	3.5	4.8
17	.60	5.2	2.5	1.8	42	11	9.8	6.6	3.7	.40	1.5	3.7
18	2.7	3.4	3.6	5.5	22	8.9	9.5	7.3	5.0	1.8	.20	1.6
19	3.2	1.3	1.3	3.0	21	11	8.9	190	2.5	.40	.40	3.7
20	2.0	2.3	3.7	6.5	18	9.2	9.5	24	4.9	1.5	2.2	9.4
21	3.2	1.0	4.4	5.4	18	9.5	6.7	13	2.8	2.0	.20	130
22	1.3	6.2	1.3	3.4	16	9.5	15	264	1.5	.40	1.3	21
23	2.6	4.9	3.1	28	20	10	13	23	4.1	1.2	1.6	13
24	1.4	3.4	1.3	19	19	22	36	13	3.8	.40	.70	3.9
25	4.2	.50	7.8	9.2	58	26	86	10	3.6	.40	.70	3.4
26	2.8	4.2	8.9	8.8	56	13	22	9.4	2.7	.40	.70	5.7
27	1.5	2.6	4.8	4.9	53	10	15	8.5	1.9	2.6	.20	2.7
28	2.1	2.7	5.3	7.8	203	11	84	18	1.2	30	.20	8.0
29	1.0	4.6	4.1	3.7	-	9.5	25	16	2.1	4.2	.90	25
30	3.7	3.1	3.0	9.1	------	13	39	9.3	1.7	3.2	.30	14
31	.70	------	6.2	9.0	------	9.8	------	7.6	-----	1.4	.50	------
TOTAL	154.90	82.80	123.30	245.6	1,931.5	685.4	607.3	805.7	137.0	100.30	39.90	480.30
MEAN	5.00	2.76	3.98	7.92	69.0	22.1	20.2	26.0	4.57	3.24	1.29	16.0
CFSM	.244	.135	.194	.386	3.37	1.08	.985	1.27	.223	.158	.063	.780
IN	.28	.15	.22	.45	3.50	1.24	1.10	1.46	.25	.18	.07	.87

CALENDAR YEAR 1965 MAX 365 MIN .40 MEAN 12.5 CFSM .610 INCHES 8.25
WATER YEAR 1965-66 MAX 827 MIN .20 MEAN 14.8 CFSM .722 INCHES 9.79

Peak discharge (base, 1,000 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
2-13	1845	10.27	1,430				

Note.--Where daily discharge is less than 1.0 cfs the zero in the hundredths column is not significant.

1-4785. White Clay Creek above Newark, Del.

Location.--Lat 39°42'50", long 75°45'35", 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, New Castle County, and 12.8 miles upstream from mouth.

Drainage area.--66.7 sq mi.

Records available.--February 1952 to September 1959, July 1962 to September 1966.

Gage.--Digital water-stage recorder. Datum of gage is 78.6 ft above mean sea level, datum of 1929. Prior to Oct. 1, 1962, graphic water-stage recorder at same site and datum.

Average discharge.--11 years, 69.9 cfs.

Extremes.--Maximum discharge during year, 3,910 cfs Feb. 13 (gage height, 9.04 ft); minimum daily 5.6 cfs Sept. 10.

1952-59, 1962-66: Maximum discharge, 4,050 cfs Aug. 18, 1955 (gage height, 9.21 ft), from rating curve extended above 1,800 cfs by logarithmic plotting; minimum, 4.6 cfs Dec. 7, 1954 (gage height, 0.55 ft), result of freezeup; minimum daily, that of Sept. 10, 1966.

Remarks.--Records fair. 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 1966 are published in Part 2 of this report.

Discharge, in cubic feet per second, water year October 1965 to September 1966

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	23	19	21	26	31	840	38	115	66	15	12	6.8
2	31	18	21	28	40	130	37	70	54	14	12	6.6
3	18	19	21	45	32	80	36	64	46	13	16	6.6
4	15	19	21	33	30	70	37	58	43	13	12	6.6
5	15	19	21	29	28	90	36	54	41	15	11	6.6
6	17	19	21	63	26	72	35	50	39	18	12	7.2
7	60	19	21	52	26	60	35	47	38	22	11	6.4
8	130	22	22	37	28	56	35	45	37	37	10	6.0
9	35	22	23	28	31	54	34	47	37	18	8.0	5.8
10	30	20	23	31	33	50	34	45	45	15	9.0	5.6
11	26	21	23	25	190	50	34	41	35	14	11	5.8
12	27	21	26	19	250	50	35	41	30	13	19	5.8
13	25	22	39	23	1,600	49	100	43	28	12	11	5.8
14	23	22	37	27	547	47	90	41	28	11	9.0	160
15	23	20	29	25	170	46	60	39	31	12	18	140
16	23	24	27	22	130	45	45	37	28	13	12	25
17	22	35	26	19	100	44	42	36	27	15	10	17
18	22	28	25	19	70	44	40	37	26	12	8.0	15
19	21	26	25	20	65	45	38	250	25	13	7.0	15
20	22	25	24	23	60	48	37	80	24	25	7.0	25
21	21	25	23	21	55	43	37	60	22	14	9.0	190
22	22	29	23	19	50	40	40	200	21	12	7.0	70
23	23	33	23	40	50	40	50	90	20	11	7.0	50
24	22	28	24	35	48	50	70	60	19	13	7.0	25
25	20	27	31	28	60	110	195	56	18	11	6.8	22
26	20	24	43	26	56	56	80	120	18	11	6.6	20
27	20	25	28	26	56	50	50	70	20	19	6.4	20
28	20	24	25	25	190	46	130	110	19	100	10	45
29	19	22	24	22	-	44	60	140	17	30	7.0	50
30	20	21	24	19	------	42	70	70	16	16	7.0	40
31	19	------	25	19	------	40	------	60	-----	13	7.0	------
TOTAL	834	698	789	874	4,052	2,531	1,660	2,276	918	570	305.8	1,010.6
MEAN	26.9	23.3	25.5	28.2	145	81.6	55.3	73.4	30.6	18.4	9.87	33.7
CFSM	.403	.349	.382	.423	2.17	1.22	.829	1.10	.459	.276	.148	.505
IN	.47	.39	.44	.49	2.26	1.41	.93	1.27	.51	.32	.17	.56

CALENDAR YEAR 1965 MAX 663 MIN 13 MEAN 44.3 CFSM .664 INCHES 9.01
WATER YEAR 1965-66 MAX 1,600 MIN 5.6 MEAN 45.3 CFSM .679 INCHES 9.21

Peak discharge (base, 1,500 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
2-13	2000	9.04	3,910	3-1	0130	6.32	2,070

1-4790. White Clay Creek near Newark, Del.

Location.--Lat 39°42'00", long 75°41'10", on left bank 300 ft upstream from Baltimore & Ohio Railroad bridge, 0.4 mile downstream from Pike Creek, 3.5 miles east of Newark, New Castle County, and 5.5 miles upstream from mouth.

Drainage area.--87.8 sq mi.

Records available.--October 1931 to September 1936, June 1943 to September 1957, October 1959 to September 1966. Monthly discharge only for some periods, published in WSP 1302.

Gage.--Digital water-stage recorder. Datum of gage is 11.6 ft above mean sea level, datum of 1929. Nov. 17, 1931, to Sept. 30, 1936, at site 15 ft downstream at same datum. Prior to Oct. 1, 1961, graphic water-stage recorder.

Average discharge.--26 years, 103 cfs.

Extremes.--Maximum discharge during year, 3,770 cfs Feb. 14 (gage height, 13.17 ft); minimum, 4.7 cfs Sept. 11 (gage height, 3.78 ft); minimum daily, 5.0 cfs Sept. 10.
1931-36, 1943-57, 1959-66: Maximum discharge, 6,340 cfs Sept. 12, 1960 (gage height, 16.11 ft); minimum, that of Sept. 11, 1966; minimum gage height, 3.66 ft July 26, 1954; minimum daily discharge, that of 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. 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.

Discharge, in cubic feet per second, water year October 1965 to September 1966

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	30	27	27	26	30	1,050	48	155	73	21	17	7.0
2	43	24	27	32	45	183	48	98	59	20	17	6.8
3	24	24	27	55	35	114	47	80	53	19	22	7.0
4	18	27	28	38	32	103	48	71	49	19	16	7.0
5	18	21	29	29	30	122	46	66	46	21	16	6.6
6	18	22	27	90	29	109	45	64	43	24	17	7.6
7	72	23	25	75	29	82	45	59	41	30	15	6.6
8	211	25	23	46	31	74	47	58	40	54	14	6.0
9	44	26	24	35	35	68	44	59	36	25	11	5.4
10	35	22	24	40	40	62	43	57	62	20	12	5.0
11	28	24	25	32	250	60	44	52	50	20	17	5.6
12	31	25	30	25	294	58	47	53	38	18	27	5.6
13	25	28	56	26	1,420	56	146	54	38	17	18	5.6
14	22	29	45	30	970	54	107	53	37	16	13	129
15	23	26	29	23	248	52	67	52	42	16	25	214
16	22	28	26	21	192	50	57	47	36	17	19	30
17	23	42	24	20	141	50	53	46	36	18	14	20
18	22	35	23	20	100	50	51	47	35	15	12	19
19	21	27	22	22	93	49	49	339	35	19	9.4	18
20	22	27	21	23	78	48	47	105	33	35	9.1	32
21	22	28	21	21	74	47	47	71	30	18	12	220
22	23	37	18	20	68	46	65	290	27	15	9.0	87
23	28	38	22	45	64	45	65	91	27	14	10	66
24	26	31	24	40	62	60	114	68	26	17	10	33
25	26	27	39	31	89	131	233	63	25	14	9.1	30
26	24	28	56	28	77	78	101	137	24	13	8.8	31
27	23	37	29	28	70	64	77	76	26	21	8.8	28
28	25	36	26	28	241	55	195	105	24	144	12	40
29	25	30	24	25	-	52	114	163	24	31	6.6	57
30	25	28	24	22	------	51	109	80	23	21	6.8	48
31	26	------	26	20	------	50	------	67	------	19	6.6	------
TOTAL	1,025	852	871	1,016	4,867	3,173	2,249	2,826	1,138	771	420.2	1,183.8
MEAN	33.1	28.4	28.1	32.8	174	102	75.0	91.2	37.9	24.9	13.6	39.5
CFSM	.377	.324	.320	.374	1.98	1.16	.854	1.04	.432	.284	.155	.450
IN	.43	.36	.37	.43	2.06	1.34	.95	1.20	.48	.33	.18	.50

CALENDAR YEAR 1965 MAX 1,100 MIN 14 MEAN 55.6 CFSM .633 INCHES 8.59
WATER YEAR 1965-66 MAX 1,420 MIN 5.0 MEAN 55.9 CFSM .637 INCHES 8.64

Peak discharge (base, 2,000 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
2-14	0115	13.17	3,770				

1-4800. Red Clay Creek at Wooddale, Del.

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

Drainage area.--47.0 sq mi.

Records available.--April 1943 to September 1966.

Gage.--Digital water-stage recorder and concrete control. Datum of gage is 81.46 ft above mean sea level, datum of 1929. Prior to Sept. 21, 1950, wire-weight and crest-stage gage at site 10 ft downstream at same datum. Sept. 21, 1950, to September 1961, graphic water-stage recorder at present site and datum.

Average discharge.--23 years, 60.2 cfs.

Extremes.--Maximum discharge during year, 3,000 cfs Feb. 13 (gage height, 7.00 ft); minimum, 2.9 cfs Sept. 4; minimum daily, 4.5 cfs Sept. 4.
1943-66: Maximum discharge, 6,000 cfs Sept. 12, 1960 (gage height, 9.93 ft), from rating curve extended above 1,600 cfs on basis of contracted-opening measurement of peak flow; minimum, that of Sept. 4, 1966; minimum daily, that of 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 1966 are published in Part 2 of this report.

Discharge, in cubic feet per second, water year October 1965 to September 1966

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	20	15	17	17	18	623	30	89	30	14	11	5.8
2	29	17	17	20	25	93	30	52	28	13	12	5.3
3	15	17	18	42	21	66	29	43	26	11	16	5.8
4	12	17	18	24	19	64	29	39	26	11	11	4.5
5	11	17	17	20	18	77	28	35	25	20	13	5.3
6	12	17	17	59	17	71	28	35	24	18	13	5.4
7	71	18	17	38	17	53	27	31	24	24	10	5.2
8	213	18	16	26	18	47	27	31	24	16	9.0	4.6
9	29	20	17	18	19	44	27	32	22	15	9.1	4.9
10	24	17	17	19	20	42	27	30	31	13	9.7	5.1
11	21	19	17	20	145	42	26	28	29	13	11	4.7
12	22	19	19	15	136	41	27	28	22	12	21	4.7
13	19	19	33	15	1,370	40	84	30	22	12	11	5.0
14	18	20	26	17	355	38	60	29	23	11	9.3	111
15	18	17	20	17	110	37	38	28	24	13	11	86
16	17	20	19	15	86	34	33	26	21	12	12	18
17	16	27	18	13	84	33	30	28	21	9.9	14	13
18	16	19	17	13	55	33	29	27	22	9.8	9.6	11
19	17	17	17	13	49	34	29	216	22	12	8.0	11
20	18	17	16	15	42	33	28	60	20	14	7.5	20
21	18	17	17	15	36	32	28	42	19	9.8	7.0	99
22	18	21	15	15	36	32	42	120	17	8.7	7.5	47
23	21	24	16	32	35	32	37	46	17	8.5	8.5	37
24	17	20	16	26	40	44	124	36	17	8.1	7.7	21
25	17	18	25	18	48	64	177	34	16	7.9	7.0	18
26	18	18	36	16	44	39	55	33	15	8.1	6.5	18
27	18	21	19	16	42	36	43	32	17	11	6.8	18
28	17	21	18	15	224	33	116	46	16	38	6.1	22
29	17	19	17	14	-	31	62	66	16	17	5.8	28
30	17	17	17	13	------	31	58	35	15	13	6.4	28
31	17	------	17	13	------	32	------	30	-----	13	6.0	------
TOTAL	813	563	586	629	3,129	1,951	1,408	1,437	651	416.8	303.5	672.3
MEAN	26.2	18.8	18.9	20.3	112	62.9	46.9	46.4	21.7	13.4	9.79	22.4
CFSM	.557	.400	.402	.432	2.38	1.34	.998	.987	.462	.285	.208	.477
IN	.64	.45	.46	.50	2.48	1.54	1.11	1.14	.52	.33	.24	.53

CALENDAR YEAR 1965 MAX 515 MIN 10 MEAN 35.8 CFSM .762 INCHES 10.34
WATER YEAR 1965-66 MAX 1,370 MIN 4.5 MEAN 34.4 CFSM .732 INCHES 9.94

Peak discharge (base, 1,200 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
2-13	2130	7.00	3,000	3-1	0245	5.64	1,840

1-4801. Little Mill Creek at Elsmere, Del.

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

Drainage area.--6.70 sq mi.

Records available.--October 1963 to September 1966.

Gage.--Water-stage recorder. Prior to March 19, 1964, staff gage at same site and datum. Datum of gage is 48.62 ft above mean sea level, datum of 1929, supplementary adjustment of 1959.

Extremes.--Maximum discharge during year, 567 cfs Sept. 21 (gage height, 5.19 ft); minimum, 0.10 cfs July 17, 18, Sept. 18, 19; minimum gage height, 1.42 ft Aug. 29.
1963-66: Maximum discharge, 735 cfs Jan. 9, 1964 (gage height, 5.75 ft, from graph based on gage readings); minimum, that of July 17, 18, Sept. 18, 19, 1966; minimum gage height, 1.36 ft Sept. 6, 7, 8, Oct. 10, 11, 1964.

Remarks.--Records fair.

Discharge, in cubic feet per second, water year October 1965 to September 1966

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	13	2.0	1.6	1.6	1.0	44	1.4	8.7	3.4	2.0	0.40	1.2
2	3.8	3.0	1.6	8.9	1.6	5.8	1.2	5.4	3.0	1.0	4.1	1.8
3	1.9	3.4	1.6	10	1.8	4.0	1.2	4.0	3.0	.70	2.2	1.4
4	2.2	3.4	1.6	4.4	1.8	5.0	1.4	3.4	2.0	.70	.60	.60
5	2.5	2.6	1.6	3.7	1.2	5.5	1.4	3.0	1.8	1.6	3.9	.40
6	2.8	1.6	1.8	25	.80	5.1	1.2	3.0	2.6	6.9	.60	2.7
7	36	1.2	1.8	5.3	.80	3.4	1.2	1.8	2.6	4.0	.40	4.4
8	5.8	3.1	2.0	2.6	1.4	3.0	1.2	1.8	2.3	.60	.40	5.1
9	1.0	1.8	2.3	1.4	2.3	3.0	1.0	2.3	2.3	.30	.50	5.1
10	.40	1.4	2.3	1.6	8.8	2.6	1.2	2.0	19	20	.80	3.4
11	30	4.9	2.9	1.8	53	2.6	1.4	2.0	2.1	.20	5.2	1.8
12	2.1	2.3	3.6	2.3	22	1.8	5.4	2.3	80	.20	2.3	2.6
13	.40	3.8	23	1.8	227	1.8	30	2.3	1.2	.20	.80	5.1
14	.40	2.0	4.4	2.0	28	2.0	6.2	1.8	1.6	.20	.60	104
15	.60	2.3	2.3	1.6	10	2.6	2.3	1.4	1.6	.30	1.3	6.8
16	.60	7.7	2.6	1.2	14	3.0	1.8	1.8	1.6	.20	1.8	.60
17	.50	5.2	2.3	1.4	8.7	2.6	1.2	2.6	1.8	.20	.60	.40
18	1.0	1.2	1.8	2.0	5.4	3.0	1.4	2.6	1.4	.20	.40	.20
19	1.4	1.2	1.6	2.0	4.4	3.0	1.4	68	1.4	11	.40	.20
20	1.4	1.2	1.8	2.0	3.0	3.0	1.4	5.4	1.8	3.7	.40	7.2
21	1.6	1.4	2.6	2.0	3.0	3.4	1.4	2.6	2.0	.30	.30	145
22	3.4	8.2	2.6	1.8	3.4	3.4	7.6	34	1.8	.30	.40	17
23	3.0	2.3	2.6	16	2.6	3.7	2.6	6.6	1.8	.20	.40	6.3
24	2.0	1.4	1.8	4.4	4.7	13	32	5.4	1.8	.20	.30	3.0
25	2.3	1.2	12	1.2	24	4.6	25	5.8	1.4	.20	.30	2.0
26	3.0	1.1	5.2	.60	11	2.0	5.4	5.4	1.2	.20	.30	2.0
27	3.4	5.2	1.8	.60	7.9	1.8	5.8	5.4	1.8	9.2	.40	3.4
28	3.0	1.2	1.8	.50	76	1.8	31	9.0	2.7	27	20	9.3
29	3.0	1.2	2.0	.30	-	1.6	6.6	9.9	3.7	1.0	20	14
30	2.6	1.6	2.0	20	------	1.6	13	3.0	2.3	.60	.40	4.0
31	1.8	------	1.8	.60	------	1.6	------	3.4	------	.40	.70	------
Total	107.20	80.1	100.7	110.80	529.60	145.3	195.3	216.1	77.80	74.00	31.60	361.00
Mean	3.46	2.67	3.25	3.57	18.9	4.69	6.51	6.97	2.59	2.39	1.02	12.0
Cfsm	.516	.399	.485	.533	2.82	.700	.972	1.04	.387	.357	.152	1.79
In.	.60	.44	.56	.62	2.94	.81	1.08	1.20	.43	.41	.18	2.00

Calendar year 1965: Max 172 Min .30 Mean 6.28 Cfsm .937 In. 12.73
Water year 1965-66: Max 227 Min .20 Mean 5.56 Cfsm .830 In. 11.27

Peak discharge (base, 350 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
2-13	1515	4.80	465	9-21	1015	5.19	567
9-14	1830	4.76	455				

Note.--Where daily discharge is less than 1.0 cfs the zero in the hundredths column is not significant.

1-4810. Brandywine Creek at Chadds Ford, Pa.

Location.--Lat 29°52'10", long 75°35'35", on left bank 27 ft upstream from Pennsylvania Railroad bridge at Chadds Ford, Delaware County, and 1,200 ft downstream from highway bridge on U. S. Highway 1.

Drainage area.--287 sq mi.

Records available.--August 1911 to December 1953, October 1962 to September 1966. Monthly discharge only for some periods, published in WSP 1302.

Gage.--Digital water-stage recorder. Datum of gage is 150.45 ft above mean sea level, datum of 1929. Prior to May 21, 1927, chain gage and May 21, 1927, to Mar. 28, 1966, graphic water-stage recorder at same site and datum.

Average discharge.--46 years, 376 cfs.

Extremes.--Maximum discharge during year, 8,600 cfs Feb. 14 (gage height, 10.99 ft); minimum, 39 cfs Sept. 12 (gage height, 0.91 ft).

1911-53, 1962-66: 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 A$\sqrt{d}$ 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 months, which are fair. Records of chemical analyses, water temperatures, and suspended sediment loads for the water year 1966 are published in Part 2 of this report.

Discharge, in cubic feet per second, water year October 1965 to September 1966

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	110	101	98	124	88	3,100	244	815	257	120	84	55
2	176	95	98	137	100	1,100	240	514	240	116	84	52
3	124	98	98	278	110	627	232	411	220	113	100	52
4	98	98	101	206	100	560	232	366	216	107	84	91
5	89	95	101	154	100	670	228	334	208	120	87	66
6	86	98	98	316	96	532	220	326	197	138	87	53
7	182	98	95	446	94	462	216	308	197	138	81	49
8	815	104	92	250	94	356	220	304	201	127	78	47
9	258	104	95	130	94	330	212	304	193	110	75	44
10	180	104	95	130	100	317	208	295	197	103	81	44
11	137	104	95	120	500	304	204	274	189	113	91	44
12	133	104	110	110	1,000	295	208	274	170	107	120	42
13	130	107	161	110	3,250	291	495	291	170	103	78	44
14	124	114	191	130	4,760	282	438	278	185	97	75	481
15	114	104	137	120	1,320	269	295	265	189	100	78	938
16	110	114	124	110	845	253	257	253	166	97	81	193
17	107	169	114	100	714	240	236	370	166	87	249	127
18	104	133	107	100	528	236	228	308	166	84	113	107
19	101	107	107	100	457	240	224	1,100	163	87	84	97
20	101	104	101	117	370	240	216	594	159	163	75	130
21	101	101	98	114	310	224	212	361	148	100	69	570
22	101	117	89	104	300	220	321	575	138	87	69	415
23	104	140	95	162	295	224	321	379	138	81	72	265
24	101	120	101	130	308	284	457	304	134	78	78	174
25	95	110	138	120	343	643	642	282	130	75	69	138
26	95	107	203	110	325	352	288	276	127	72	64	127
27	95	117	130	100	312	304	308	261	134	75	61	120
28	98	127	114	96	559	269	704	299	152	356	61	123
29	98	114	110	94	-	261	523	384	178	134	58	144
30	95	104	110	90	------	257	438	274	130	103	58	155
31	101	------	120	88	------	252	------	244	------	94	55	------
Total	4,363	3,312	3,526	4,496	17,472	13,994	9,267	11,623	5,258	3,485	2,599	4,987
Mean	141	110	114	145	624	451	309	375	175	112	83.8	166
Cfsm	.491	.383	.397	.505	2.17	1.57	1.08	1.31	.610	.390	.292	.578
In.	.57	.43	.46	.58	2.26	1.81	1.20	1.51	.68	.34	.34	.65

Calendar year 1965: Max 3,810 Min 86 Mean 227 Cfsm .791 In. 10.73
Water year 1965-66: Max 4,760 Min 42 Mean 231 Cfsm .805 In. 10.94

Peak discharge (base, 3,500 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
2-14	0200	10.99	8,600	3-1	1000	8.48	4,650

1-4815. Brandywine Creek at Wilmington, Del.

Location.--Lat 39°46'10", long 75°34'20", on right bank in Rockford Park, 0.2 mile downstream from Henry Clay Bridge, in Wilmington, New Castle County, and 4.2 miles upstream from mouth.

Drainage area.--314 sq mi.

Records available.--October 1946 to September 1966. Prior to December 1946, monthly discharge only, published in WSP 1302.

Gage.--Digital water-stage recorder and concrete control. Datum of gage is 68.23 ft above mean sea level, datum of 1929. Prior to Oct. 1, 1961 graphic water-stage recorder at same site and datum.

Average discharge.--20 years, 435 cfs.

Extremes.--Maximum discharge during year, 10,900 cfs Feb. 14 (gage height, 9.93 ft); minimum, 57 cfs Aug. 29; minimum daily, 60 cfs Sept. 2, 3.
1946-66: Maximum discharge, 17,800 cfs Aug. 19, 1955 (gage height, 13.89 ft); minimum, 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 1966 are published in Part 2 of this report.

Discharge, in cubic feet per second, water year October 1965 to September 1966

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	111	101	112	139	152	3,410	299	894	277	121	90	61
2	170	100	111	152	155	1,290	294	638	260	113	88	60
3	135	100	111	330	151	737	278	529	236	110	101	60
4	106	100	114	280	149	652	279	475	223	102	88	87
5	94	102	113	192	146	691	276	438	213	109	88	85
6	91	102	113	355	139	641	264	430	205	131	90	70
7	139	103	108	566	138	541	258	404	198	127	84	63
8	866	107	104	337	142	485	260	393	199	120	79	62
9	299	111	106	183	144	454	254	395	190	104	77	63
10	184	109	107	181	157	436	252	386	195	96	79	65
11	146	110	108	172	479	426	245	362	193	94	79	67
12	136	110	120	126	877	419	251	358	164	98	125	70
13	136	109	174	141	3,520	409	552	375	164	91	86	74
14	124	112	219	155	6,500	396	556	368	169	86	77	304
15	121	109	160	142	1,380	386	396	356	184	87	81	1,160
16	116	111	140	135	868	364	335	337	161	87	82	254
17	112	145	129	125	743	349	308	433	160	80	223	147
18	109	146	122	128	594	345	289	405	162	76	130	120
19	106	119	121	124	534	347	282	1,250	157	80	93	107
20	104	113	117	133	476	352	275	734	154	130	79	133
21	104	112	113	129	384	325	270	431	147	95	73	710
22	104	124	106	124	389	315	369	620	137	80	73	565
23	106	153	107	179	371	313	429	458	134	75	75	321
24	104	139	112	180	371	337	583	360	130	70	75	211
25	102	123	149	145	412	719	816	333	126	68	75	155
26	101	120	233	140	414	458	562	327	124	69	66	140
27	101	129	157	124	384	384	441	309	127	70	66	133
28	101	138	134	140	694	340	776	354	131	327	64	139
29	101	130	134	110	-	323	675	433	189	156	62	164
30	101	116	129	110	------	314	567	328	134	111	62	181
31	101	------	131	103	------	314	------	278	------	101	62	------
TOTAL	4,531	3,503	4,014	5,580	20,863	17,272	11,691	14,191	5,243	3,264	2,672	5,831
MEAN	146	117	129	180	745	557	390	458	175	105	86.2	194
CFSM	.465	.373	.411	.573	2.37	1.77	1.24	1.46	.557	.334	.275	.618
IN	.54	.41	.48	.66	2.47	2.05	1.38	1.68	.62	.39	.32	.69

CALENDAR YEAR 1965 MAX 5,910 MIN 83 MEAN 260 CFSM .828 INCHES 11.26
WATER YEAR 1965-66 MAX 6,500 MIN 60 MEAN 270 CFSM .860 INCHES 11.68

Peak discharge (base, 4,000 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
2-14	0545	9.93	10,900	3-1	1315	7.59	4,780

1-4832. Blackbird Creek at Blackbird, Del.

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

Drainage area.--3.85 sq mi.

Records available.--Annual maximum, water years 1952-56, and occasional low-flow measurements, water years 1952-53, 1955-56. October 1956 to September 1966.

Gage.--Water-stage recorder. Datum of gage is 19.38 ft above mean sea level, datum of 1929, releveling of 1963 (unadjusted). Mar. 5, 1951, to Oct. 16, 1956, staff gage and crest-stage gage at site 15 ft upstream at same datum.

Average discharge.--10 years, (1956-66), 4.29 cfs.

Extremes.--Maximum discharge during year, 82 cfs Sept. 21 (gage height, 1.75 ft); no flow for many days in July, August, September.
1951-66: Maximum discharge, 510 cfs Sept. 12, 1960 (gage height, 4.10 ft).
1956-66: No flow at times during 1964, 1965, 1966.

Remarks.--Records good.

Discharge, in cubic feet per second, water year October 1965 to September 1966

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.30	0.50	0.60	0.60	1.8	9.2	1.4	3.3	1.2	0.20	0	0
2	.50	.50	.60	.70	1.8	3.5	1.4	2.6	1.1	.20	0	0
3	.30	.50	.60	1.2	1.5	2.5	1.2	2.2	.90	.20	0	0
4	.20	.50	.60	.80	1.3	2.5	1.4	1.9	.80	.10	0	0
5	.20	.50	.50	.70	1.2	2.5	1.2	1.8	.80	.10	0	0
6	.20	.50	.50	3.9	1.0	2.2	1.2	1.6	.60	.30	0	0
7	.50	.50	.50	4.6	1.1	2.0	1.2	1.5	.60	.60	0	0
8	1.6	.50	.50	2.4	1.0	1.8	1.2	1.5	.60	.20	0	0
9	.40	.80	.60	1.8	1.1	1.6	1.2	1.5	.50	.20	0	0
10	.30	.70	.60	1.6	2.4	1.6	1.1	1.5	.60	.10	0	0
11	.30	.80	.60	1.5	6.0	1.6	1.1	1.4	.50	.10	0	0
12	.30	.80	.60	1.4	10	1.6	1.5	1.4	.50	0	0	0
13	.30	.70	2.5	1.2	20	1.6	7.3	1.4	.50	0	.10	0
14	.20	.60	1.9	1.4	18	1.6	4.8	1.6	.60	0	0	0
15	.30	.50	1.0	1.2	5.2	1.5	2.5	1.5	.50	0	0	0
16	.30	.60	.80	1.1	3.7	1.4	2.0	1.2	.50	.10	20	0
17	.30	1.4	.70	1.1	3.5	1.4	1.8	1.2	.50	0	.10	0
18	.30	.90	.60	1.0	2.4	1.4	1.6	1.8	.60	0	0	0
19	.30	.80	.50	1.1	2.2	1.4	1.6	2.5	.60	0	0	0
20	.30	.80	.50	1.1	1.9	1.4	1.6	1.6	.60	0	0	0
21	.30	.80	.50	1.1	1.8	1.4	1.5	1.1	.40	0	0	33
22	.40	1.6	.40	1.1	1.6	1.4	2.8	10	.40	0	0	22
23	.40	1.4	.40	4.6	1.5	1.4	2.4	2.8	.40	0	0	7.8
24	.40	.80	.40	5.0	1.6	1.8	1.9	1.5	.30	0	0	1.9
25	.40	.60	.60	2.6	5.7	2.5	2.5	2.4	.20	0	0	.80
26	.40	.60	1.6	1.5	5.7	1.6	2.2	2.0	.30	0	0	.50
27	.40	.70	.80	1.4	3.3	1.5	2.2	1.6	.30	0	0	.60
28	.40	.70	.50	1.2	3.9	1.4	4.8	2.8	.20	0	0	1.2
29	.40	.60	.50	1.0	-	1.4	2.8	3.0	.40	0	0	7.9
30	.40	.60	.50	1.2	------	1.4	3.3	1.6	.30	0	0	6.2
31	.40	------	.50	1.5	------	1.4	------	1.4	------	0	0	------
Total	11.70	21.80	22.00	52.60	112.2	61.5	64.7	65.2	16.30	2.40	0.40	81.90
Mean	.38	.73	.71	1.70	4.01	1.98	2.16	2.10	.54	.08	.01	2.73
Cfsm	.099	.190	.184	.442	1.04	.514	.561	.545	.140	.021	.003	.709
In.	.11	.21	.21	.51	1.08	.59	.62	.63	.16	.02	0	.79

Calendar year 1965: Max 17 Min 0 Mean 1.97 Cfsm .512 In. 6.93
Water year 1965-66: Max 33 Min 0 Mean 1.40 Cfsm .364 In. 4.95

Peak discharge (base, 50 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
9-21	1915	1.75	82				

Note.--Where daily discharge is less than 1.0 cfs the zero in the hundredths column is not significant.

1-4837. St. Jones River at Dover, Del.

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

Drainage area.--31.9 sq mi.

Records available.--January 1958 to September 1966.

Gage.--Water-stage recorder. Datum of gage is 0.50 ft above mean sea level, datum of 1929, supplementary adjustment of 1963.

Average discharge.--8 years, 28.8 cfs.

Extremes.--Maximum discharge during year, 93 cfs Jan. 23 and Sept. 21 (gage height, 3.38 ft); minimum, 0.4 cfs Nov. 16.
1958-66: 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.

Discharge, in cubic feet per second, water year October 1965 to September 1966

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	8.9	4.9	4.6	1.1	0.70	25	7.7	19	8.5	2.5	0.60	0.60
2	6.9	5.2	.60	1.6	.70	22	9.3	17	8.1	2.2	.60	.60
3	5.9	5.5	.60	1.3	.70	17	6.9	14	6.9	1.6	1.0	.70
4	3.1	5.5	.90	1.3	.80	14	8.1	13	6.2	1.4	.60	.60
5	.70	4.9	2.5	1.4	.90	13	7.7	10	5.5	2.0	.80	.60
6	1.0	4.9	.70	2.2	.90	12	7.3	10	3.9	7.3	.60	.60
7	9.6	6.5	.50	1.0	.90	11	7.7	8.5	4.6	1.3	.60	.60
8	1.9	7.7	.60	.90	.90	10	8.1	8.5	6.2	6.5	.60	.60
9	8.1	9.7	.60	.90	1.0	9.3	7.3	9.3	4.6	3.6	.60	.60
10	6.5	11	.60	.80	1.2	9.3	7.3	8.5	3.9	2.2	.60	.60
11	5.9	7.3	.60	.80	2.0	9.3	6.9	6.9	3.6	1.8	.90	.70
12	5.5	5.2	.60	.90	1.0	8.9	8.6	7.3	2.9	1.2	.80	.50
13	5.2	5.9	1.0	.70	6.9	9.3	28	8.5	3.1	1.2	.70	.50
14	5.5	5.9	1.0	.60	44	8.9	36	9.7	1.8	1.1	.60	2.2
15	5.5	2.2	1.3	.70	49	8.9	29	9.7	2.5	1.4	.60	1.6
16	5.5	.50	1.8	.60	33	8.5	19	8.1	6.0	1.2	.70	.60
17	4.9	1.0	2.7	.60	21	8.5	13	8.1	9.7	1.0	.90	.60
18	4.6	11	3.1	.60	15	8.5	11	9.7	7.3	.90	.70	.60
19	3.0	12	2.0	.60	13	8.9	10	11	6.2	.90	.60	.60
20	.60	5.9	2.2	.60	11	9.7	10	10	4.9	1.0	.70	3.7
21	8.5	6.5	1.6	.60	8.9	8.1	9.7	9.7	3.9	1.0	.70	28
22	5.9	11	.60	.60	8.1	8.5	14	13	2.7	1.1	.70	15
23	5.2	10	.60	25	7.7	8.1	16	10	2.2	1.0	.80	12
24	4.9	10	.60	.80	10	11	15	8.1	2.4	1.0	.70	9.7
25	4.3	10	1.0	.60	16	12	15	14	2.0	.90	.60	6.9
26	4.6	8.5	2.0	.70	17	10	13	15	1.4	.90	.60	5.9
27	4.9	6.9	2.9	.70	17	10	13	15	1.2	1.2	.70	5.9
28	5.2	6.5	1.0	.60	19	8.1	21	23	1.4	1.3	.60	6.5
29	4.9	8.1	1.0	.60	-	6.9	20	22	5.9	1.3	.60	16
30	4.3	9.3	1.0	.80	---	7.3	20	14	4.6	.70	.50	14
31	4.6	---	1.1	.70	---	9.3	---	10	---	.60	1.0	---
Total	173.20	209.50	41.90	50.90	308.30	331.3	405.6	360.6	134.1	65.00	21.30	137.60
Mean	5.59	6.98	1.35	1.64	11.0	10.7	13.5	11.6	4.47	2.10	.69	4.59
Cfsm	.175	.219	.042	.051	.345	.335	.423	.364	.140	.066	.022	.144
In.	.20	.24	.05	.06	.36	.39	.47	.42	.16	.08	.02	.16

Calendar year 1965: Max 93 Min .30 Mean 14.7 Cfsm .461 In. 6.27
Water year 1965-66: Max 49 Min .50 Mean 6.14 Cfsm .192 In. 2.61

Note.--Where daily discharge is less than 1.0 cfs the zero in the hundredths column is not significant.

1-4840. Murderkill River near Felton, Del.

Location.--Lat 38°58'33", long 75°34'03", 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, Kent County, and 17.6 miles upstream from mouth.

Drainage area.--13.6 sq mi.

Records available.--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 September 1966.

Gage.--Water-stage recorder. Datum of gage is 22.18 ft above mean sea level, datum of 1929, supplementary adjustment of 1954. July 1931 to October 1933, staff gage read twice daily at bridge 200 ft upstream at datum 2.00 ft higher. March 1951 to May 1960, wire-weight gage and crest-stage gage at bridge 200 ft upstream at datum 2.00 ft higher.

Average discharge.--8 years, 15.0 cfs.

Extremes.--Maximum discharge during year, 69 cfs May 28 (gage height, 3.94 ft); minimum, 0.80 cfs Aug. 28.
1931-33, 1951-66: Maximum discharge, 805 cfs Sept. 12, 1960 (gage height, 6.87 ft).
1931-33, 1960-66: Minimum discharge, that of Aug. 28, 1966.

Remarks.--Records good.

Discharge, in cubic feet per second, water year October 1965 to September 1966

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2.0	3.0	3.5	3.6	4.5	24	7.8	19	12	3.8	2.5	2.0
2	1.8	3.5	3.3	4.5	4.7	16	7.2	19	11	3.2	2.5	2.0
3	1.2	3.5	3.5	4.7	4.0	14	6.4	17	9.6	2.7	2.5	1.4
4	1.2	3.5	3.5	4.0	4.2	13	6.8	14	8.0	2.6	2.5	1.2
5	1.4	3.6	2.8	3.8	3.5	12	6.8	12	6.9	3.8	3.2	1.2
6	1.5	3.6	2.9	13	3.2	11	6.4	11	6.7	5.2	2.7	2.1
7	2.0	3.0	3.5	6.8	3.0	11	6.2	9.2	6.3	4.2	2.2	1.8
8	3.0	3.3	3.6	4.3	3.5	10	6.2	8.4	6.5	3.7	2.6	1.8
9	1.9	3.6	3.8	3.5	3.3	10	5.8	9.2	7.4	3.0	2.6	2.0
10	1.5	3.3	4.0	3.6	6.2	9.8	5.2	8.6	6.3	2.6	2.7	1.4
11	1.8	3.2	3.8	3.5	18	9.8	5.4	8.0	5.6	2.7	2.6	1.1
12	1.9	3.2	3.5	3.2	16	9.2	7.9	7.8	5.2	2.9	3.2	1.3
13	1.8	3.8	6.0	3.0	32	8.6	26	7.4	6.1	2.9	2.5	1.7
14	1.9	3.0	5.8	3.3	32	9.2	22	8.8	6.1	2.9	2.1	3.2
15	2.1	3.2	5.0	2.8	14	9.2	15	8.0	5.8	4.0	2.5	4.4
16	1.9	4.2	4.7	2.4	13	8.8	12	7.2	5.8	3.3	2.7	2.6
17	1.8	4.2	4.5	2.6	15	8.4	10	6.8	9.8	2.7	2.2	2.0
18	2.3	3.5	4.2	2.8	11	8.2	9.8	13	6.9	2.7	2.1	1.4
19	2.6	3.8	3.8	2.5	8.8	8.0	9.5	9.8	6.3	2.7	2.1	1.7
20	2.6	3.6	4.0	2.6	7.8	7.8	9.0	9.2	5.8	2.7	1.7	5.0
21	2.8	3.2	4.3	2.6	7.4	7.6	8.6	7.0	5.4	2.5	1.5	20
22	3.3	5.0	4.3	2.4	7.2	7.8	22	7.8	4.7	2.5	1.8	11
23	3.2	5.2	4.7	5.0	6.8	7.6	22	6.8	4.5	2.1	2.0	9.7
24	2.5	4.2	4.8	4.0	8.4	11	16	5.8	4.2	2.0	2.0	3.7
25	2.8	3.8	4.7	3.0	17	14	17	7.2	3.7	2.2	1.8	2.6
26	3.2	3.5	5.2	2.8	16	9.5	15	12	3.5	2.2	1.8	3.0
27	3.2	3.6	4.5	2.8	11	8.2	13	20	3.8	2.2	1.4	3.8
28	3.0	2.9	4.5	2.6	13	8.0	29	54	4.0	2.5	1.1	4.7
29	3.2	3.0	3.8	2.8	-	7.6	23	30	4.7	3.5	1.4	13
30	2.8	3.5	4.2	5.4	----------	7.8	20	16	4.2	2.9	1.7	11
31	2.6	----------	4.0	4.8	----------	8.6	----------	13	----------	2.5	1.8	----------
Total	70.8	107.5	128.7	118.7	294.5	315.7	377.0	393.0	186.8	91.4	68.0	123.8
Mean	2.28	3.58	4.15	3.83	10.5	10.2	12.6	12.7	6.23	2.95	2.19	4.13
Cfsm	.168	.263	.305	.282	.772	.750	.926	.934	.458	.217	.161	.304
In.	.19	.29	.35	.32	.81	.86	1.03	1.07	.51	.25	.19	.34

Calendar year 1965: Max 40 Min 1.2 Mean 8.39 Cfsm .617 In. 8.37
Water year 1965-66: Max 54 Min 1.1 Mean 6.24 Cfsm .459 In. 6.22

Peak discharge (base, 130 cfs).--No peak above base.

1-4841. Beaverdam Branch at Houston, Del.

Location.--Lat 38°54'20", long 75°30'49", on left bank 15 ft upstream from bridge on State Highway 384, 0.8 mile south of Houston, Kent County, 2,000 ft upstream from unnamed stream, 1¼ miles upstream from Blairs Pond, and 1.2 miles upstream from mouth.

Drainage area.--2.83 sq mi.

Records available.--May 1958 to September 1966.

Gage.--Water-stage recorder and timber control. Datum of gage is 35.67 ft above mean sea level, datum of 1929, supplementary adjustment of 1956.

Average discharge.--8 years, 3.42 cfs.

Extremes.--Maximum discharge during year, 26 cfs June 17 (gage height, 3.10 ft); minimum daily, 0.20 cfs Sept. 18, 19.
1958-66: Maximum discharge, 176 cfs Sept. 12, 1960 (gage height, 5.55 ft); minimum daily, that of Sept. 18, 19, 1966.

Remarks.--Records fair.

Discharge, in cubic feet per second, water year October 1965 to September 1966

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.60	0.50	0.40	0.60	0.60	2.7	1.8	2.5	2.5	1.7	0.80	0.40
2	.60	.50	.40	.60	.50	1.7	1.8	2.5	2.5	1.6	.70	.40
3	.50	.50	.40	.60	.40	1.6	1.8	2.5	2.5	1.6	.70	.40
4	.50	.50	.40	.60	.40	1.6	1.8	2.5	2.4	1.5	.70	.40
5	.50	.50	.40	.60	.40	1.7	1.8	2.5	2.3	1.5	.70	.40
6	.60	.50	.40	.90	.40	1.7	1.8	2.5	2.0	1.5	.70	.40
7	.60	.50	.40	.70	.40	1.7	1.8	2.5	2.0	1.6	.70	.40
8	.60	.50	.40	.60	.40	1.7	2.0	2.7	2.0	1.5	.70	.40
9	.60	.50	.40	.60	.40	1.7	1.8	2.8	2.8	1.4	.70	.40
10	.60	.50	.40	.60	.60	1.7	1.6	2.8	2.3	1.4	.60	.30
11	.60	.50	.40	.50	1.6	1.8	1.5	2.7	2.1	1.4	.70	.30
12	.60	.50	.40	.60	1.2	1.8	1.6	2.7	2.0	1.3	.90	.30
13	.60	.50	.40	.60	3.0	1.7	2.5	2.7	2.0	1.2	.80	.40
14	.60	.50	.40	.60	1.7	1.7	2.3	2.7	2.0	1.1	.80	.50
15	.60	.50	.40	.50	1.2	1.6	1.8	2.8	2.1	1.3	.90	.50
16	.60	.50	.40	.50	1.2	1.6	1.7	2.7	3.2	1.3	.80	.40
17	.60	.50	.40	.50	1.3	1.6	1.7	2.5	9.3	1.3	.70	.30
18	.60	.50	.50	.50	1.2	1.6	1.7	2.7	3.0	1.3	.60	.20
19	.60	.50	.50	.50	1.2	1.7	1.7	2.5	2.7	1.3	.60	.20
20	.60	.50	.60	.40	1.2	1.7	1.6	2.5	2.4	1.2	.60	.70
21	.60	.50	.60	.40	1.2	1.7	1.6	2.5	2.3	1.1	.60	1.3
22	.60	.60	.60	.40	1.1	1.6	2.4	3.1	2.3	1.0	.60	1.3
23	.60	.50	.60	.60	1.1	1.6	2.3	2.5	2.3	.80	.60	1.0
24	.60	.40	.50	.60	1.2	1.7	2.1	2.4	2.1	.70	.60	.60
25	.60	.40	.50	.50	1.6	1.7	2.1	2.5	2.0	.70	.60	.50
26	.60	.40	.60	.60	1.5	1.7	2.0	2.8	2.0	.70	.60	.50
27	.60	.40	.60	.70	1.3	1.6	2.0	3.0	2.0	.70	.50	.50
28	.50	.40	.60	.60	1.4	1.6	4.2	3.8	1.8	.80	.40	.60
29	.50	.40	.60	.60	-	1.6	2.8	3.0	2.0	.80	.40	.80
30	.50	.40	.60	.60	----------	1.6	2.5	2.7	1.7	.90	.40	.70
31	.50	----------	.60	.60	----------	1.7	----------	2.5	----------	.90	.40	----------
Total	17.90	14.40	14.80	17.80	29.70	52.7	60.1	83.1	74.6	37.10	20.10	15.50
Mean	.58	.48	.48	.57	1.06	1.70	2.00	2.68	2.49	1.20	.65	.52
Cfsm	.205	.170	.170	.201	.375	.601	.707	.947	.880	.424	.230	.184
In.	.24	.19	.19	.23	.39	.69	.79	1.09	.98	.49	.26	.20

Calendar year 1965: Max 6.5 Min .40 Mean 1.73 Cfsm .611 In. 8.29
Water year 1965-66: Max 9.3 Min .20 Mean 1.20 Cfsm .424 In. 5.75

Peak discharge (base, 30 cfs).--No peak above base.

Note.--Where daily discharge is less than 1.0 cfs the zero in the hundredths column is not significant.

1-4843. Sowbridge Branch near Milton, Del.

Location.--Lat 38°48'51", long 75°19'39", on left bank at downstream side of highway bridge 1 mile downstream from Reynolds Pond, 2½ miles north of Milton, Sussex County, and 0.7 mile upstream from mouth.

Drainage area.--7.08 sq mi.

Records available.--October 1956 to September 1966.

Gage.--Water-stage recorder. Datum of gage is 3.43 ft above mean sea level, datum of 1929, supplementary adjustment of 1962.

Average discharge.--10 years, 9.92 cfs.

Extremes.--Maximum discharge during year, 22 cfs June 18 (gage height, 4.96 ft); minimum, 2.8 cfs Oct. 17, 18; minimum gage height, 4.02 ft Sept. 6, 7, 8.
1956-66: Maximum discharge, 80 cfs Aug. 25, 1958 (gage height, 5.86 ft); minimum, 1.3 cfs Oct. 3, 4, 5, 6, 1957 (gage height, 3.79 ft).

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

Discharge, in cubic feet per second, water year October 1965 to September 1966

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	3.6	3.2	3.3	3.6	4.0	8.0	5.6	10	8.5	7.1	4.2	3.4
2	3.8	3.0	3.3	3.8	4.0	7.4	5.6	10	8.1	6.9	4.2	3.4
3	3.6	3.0	3.3	3.7	4.0	6.8	5.5	9.4	7.8	6.4	4.2	3.3
4	3.5	3.2	3.3	3.6	4.0	6.8	5.5	8.7	6.9	6.0	4.2	3.3
5	3.4	3.2	3.3	3.6	4.0	6.8	5.5	8.1	6.1	5.8	4.4	3.3
6	3.4	3.2	3.3	5.5	4.0	6.6	5.3	7.8	5.8	5.8	4.4	3.2
7	3.4	3.2	3.3	5.6	4.0	6.6	5.0	7.4	6.0	5.8	4.4	3.0
8	3.4	3.2	3.3	5.3	4.0	6.4	4.9	7.3	7.1	6.3	4.4	3.3
9	3.2	3.2	3.4	5.0	4.0	6.4	4.7	7.3	11	6.4	4.2	3.3
10	3.2	3.2	3.4	4.7	4.4	6.4	4.7	7.3	11	6.3	4.2	3.2
11	3.2	3.2	3.4	4.6	6.4	6.4	4.5	7.1	9.8	6.0	4.1	3.2
12	3.2	3.3	3.5	4.5	6.1	6.4	5.5	6.9	8.7	5.6	4.5	3.2
13	3.0	3.3	4.0	4.1	11	6.4	11	6.8	8.7	5.3	4.2	3.3
14	3.0	3.3	3.8	4.4	14	6.6	11	6.8	8.3	5.0	4.1	3.6
15	3.0	3.3	3.7	4.2	11	6.6	9.6	6.8	7.4	5.6	4.1	3.8
16	3.0	3.5	3.7	4.2	10	6.6	8.7	6.6	9.2	5.6	4.1	3.5
17	2.9	3.6	3.7	4.1	9.1	6.6	8.0	6.3	19	5.3	4.0	3.4
18	2.9	3.3	3.6	4.1	8.0	6.4	7.4	7.3	21	5.2	3.8	3.4
19	2.9	3.2	3.6	4.0	7.1	6.8	7.3	8.1	19	4.9	3.7	3.4
20	2.9	3.3	3.5	4.0	6.8	6.6	6.9	7.8	16	4.6	3.7	4.1
21	3.0	3.4	3.5	4.0	6.3	6.4	6.9	8.1	14	4.5	3.7	6.0
22	3.0	4.0	3.4	4.1	6.0	6.4	9.4	12	12	4.5	3.7	5.0
23	3.0	3.7	3.4	5.2	5.6	6.4	10	11	11	4.4	3.6	4.6
24	3.0	3.6	3.5	4.7	6.3	6.9	9.8	9.8	9.4	4.2	3.4	4.1
25	3.0	3.6	4.1	4.4	7.6	7.6	9.2	9.4	8.7	4.2	3.4	4.1
26	3.0	3.5	4.4	4.2	7.3	6.9	8.5	12	8.5	3.2	3.4	4.1
27	3.0	3.5	4.0	5.0	6.8	6.4	8.5	11	8.3	3.3	3.3	4.2
28	3.0	3.4	3.8	4.5	6.9	6.1	11	11	7.8	3.7	3.3	4.2
29	3.0	3.4	3.7	3.6	-	5.8	10	11	7.6	4.2	3.3	4.7
30	3.2	3.3	3.7	4.2	---	5.6	9.6	9.6	7.3	4.2	3.3	4.6
31	3.2	---	3.7	4.0	---	5.8	---	9.1	---	4.4	3.3	---
Total	97.9	100.3	110.9	134.5	182.7	203.9	225.1	267.8	300.0	160.7	120.8	113.2
Mean	3.16	3.34	3.58	4.34	6.52	6.58	7.50	8.64	10.0	5.18	3.90	3.77
Cfsm	.446	.472	.506	.613	.921	.929	1.06	1.22	1.41	.732	.551	.532
In.	.51	.53	.58	.71	.96	1.07	1.18	1.41	1.58	.84	.63	.59

Calendar year 1965: Max 15 Min 2.9 Mean 6.02 Cfsm .850 In. 11.55
Water year 1965-66: Max 21 Min 2.9 Mean 5.53 Cfsm .781 In. 10.60

1-4845. Stockley Branch at Stockley, Del.

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

Drainage area.--5.24 sq mi.

Records available.--April 1943 to September 1966.

Gage.--Water-stage recorder and concrete control. Datum of gage is 24.54 ft above mean sea level, datum of 1929. Prior to Aug. 16, 1950, staff gage and crest-stage gage at same site and datum.

Average discharge.--23 years, 7.05 cfs.

Extremes.--Maximum discharge during year, 73 cfs June 11 (gage height, 3.28 ft); minimum, 0.60 cfs Feb. 1.
1943-66: 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 by logarithmic plotting; minimum observed, 0.13 cfs Sept. 1-11, 1944.

Remarks.--Records good.

Discharge, in cubic feet per second, water year October 1965 to September 1966

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2.0	1.4	1.2	1.2	0.70	5.5	4.0	7.9	6.1	5.2	2.8	1.4
2	2.0	1.4	1.2	1.2	1.3	4.2	3.8	7.9	5.8	4.8	2.6	1.4
3	2.0	1.4	1.2	1.2	1.2	4.2	3.5	7.6	5.5	4.6	2.6	1.4
4	1.9	1.4	1.2	1.2	1.2	4.2	3.5	7.0	5.5	4.6	2.6	1.4
5	1.9	1.3	1.1	1.2	1.2	4.2	3.5	6.7	5.2	4.6	3.0	1.4
6	1.9	1.3	1.1	1.9	1.2	4.2	3.5	6.7	4.8	4.6	2.6	1.4
7	1.9	1.3	1.1	1.6	1.2	4.0	3.5	6.4	4.2	4.6	2.4	1.3
8	1.9	1.3	1.1	1.4	1.2	4.0	3.5	6.1	4.6	4.2	2.4	1.3
9	1.7	1.2	1.1	1.3	1.2	4.0	3.5	6.1	5.9	4.0	2.4	1.4
10	1.7	1.2	1.1	1.3	1.6	4.0	3.5	6.1	15	4.0	2.4	1.3
11	1.7	1.2	1.1	1.3	3.5	4.0	3.5	5.8	32	3.8	2.2	1.2
12	1.7	1.3	1.1	1.3	2.6	4.0	4.0	5.8	9.8	3.8	2.2	1.2
13	1.7	1.3	1.4	1.3	8.2	4.0	5.8	5.8	9.2	3.5	2.2	1.2
14	1.7	1.3	1.3	1.3	4.2	4.0	4.2	5.5	8.9	3.5	2.2	1.4
15	1.7	1.3	1.3	1.3	3.3	4.0	3.8	5.5	7.9	4.0	2.0	1.6
16	1.7	1.3	1.2	1.2	3.3	3.8	3.8	5.5	8.7	3.8	2.0	1.4
17	1.7	1.3	1.2	1.2	3.3	3.8	3.5	5.2	21	3.5	2.0	1.3
18	1.6	1.3	1.2	1.2	3.3	3.8	3.5	7.0	13	3.0	1.9	1.2
19	1.6	1.2	1.2	1.2	3.3	4.0	3.5	7.0	12	3.0	1.9	1.2
20	1.6	1.3	1.2	1.2	3.3	4.0	3.5	6.4	9.8	3.0	1.9	1.9
21	1.6	1.3	1.2	1.2	3.3	3.8	3.3	6.4	9.2	2.8	1.9	3.8
22	1.7	1.4	1.2	1.2	3.0	3.5	4.0	7.3	8.2	2.8	1.7	2.2
23	1.6	1.3	1.2	1.6	3.0	3.5	4.6	5.8	7.9	2.6	1.7	2.0
24	1.6	1.2	1.2	1.4	3.8	4.2	4.0	5.5	7.3	2.6	1.6	1.6
25	1.6	1.2	1.2	1.3	4.8	4.6	3.8	5.8	6.7	2.6	1.6	1.4
26	1.6	1.2	1.3	1.3	3.8	4.0	3.8	8.9	6.4	2.6	1.6	1.4
27	1.6	1.2	1.2	1.3	3.5	4.0	3.8	7.0	6.1	2.6	1.6	1.4
28	1.6	1.2	1.2	1.2	4.2	4.0	8.5	7.6	5.8	2.6	1.6	1.7
29	1.6	1.2	1.2	1.0	-	4.0	6.4	7.6	5.5	2.8	1.4	1.7
30	1.6	1.2	1.2	1.4	------	4.0	6.1	6.7	5.5	3.0	1.4	1.7
31	1.4	------	1.2	1.2	------	4.0	------	6.4	------	3.0	1.4	------
Total	53.1	38.4	36.9	40.1	79.70	125.5	123.2	203.0	263.5	110.1	63.8	46.2
Mean	1.71	1.28	1.19	1.29	2.85	4.05	4.11	6.55	8.78	3.55	2.06	1.54
Cfsm	.326	.244	.227	.246	.544	.773	.784	1.25	1.68	.677	.393	.294
In.	.38	.27	.26	.28	.57	.89	.87	1.44	1.87	.78	.45	.33

Calendar year 1965: Max 14 Min 1.1 Mean 3.73 Cfsm .712 In. 9.67
Water year 1965-66: Max 32 Min .70 Mean 3.24 Cfsm .618 In. 8.40

Peak discharge (base, 45 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
6-11	0045	3.28	73				

Note.--Where daily discharge is less than 1.0 cfs the zero in the hundredths column is not significant.

1-4850. Pocomoke River near Willards, Md.

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

Drainage area.--60.5 sq mi.

Records available.--December 1949 to September 1966.

Gage.--Water-stage recorder. Datum of gage is 13.95 ft above mean sea level, datum of 1929, supplementary adjustment of 1962.

Average discharge.--16 years, (1950-66), 66.5 cfs.

Extremes.--Maximum discharge during year, 445 cfs Feb. 14 (gage height, 9.05 ft); minimum, 3.5 cfs Sept. 11-13. 1949-66: 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 1965 to September 1966

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	22	12	9.1	9.4	19	223	51	168	108	25	8.5	4.2
2	21	12	9.1	10	20	169	50	259	113	24	7.8	4.2
3	19	11	9.1	10	18	132	45	262	93	22	7.6	3.9
4	18	11	9.3	10	18	118	44	181	76	20	7.6	3.9
5	17	11	9.1	10	18	114	43	134	65	19	9.6	4.5
6	16	11	9.1	18	18	102	41	111	56	18	8.3	4.1
7	16	11	8.7	20	18	90	40	93	48	18	7.6	3.7
8	18	11	8.7	19	19	82	38	80	44	28	7.4	3.7
9	18	11	8.7	18	20	74	38	73	55	24	7.2	3.8
10	16	11	8.9	18	24	70	37	66	88	19	7.0	3.7
11	16	11	8.9	18	129	68	36	59	104	17	6.8	3.6
12	15	10	8.9	18	215	64	36	54	80	16	6.6	3.5
13	14	11	10	18	306	62	75	52	76	14	6.5	3.6
14	14	11	11	18	391	59	100	51	76	14	6.3	4.5
15	13	10	10	17	244	58	89	52	86	15	6.3	8.7
16	13	11	9.9	17	180	54	78	47	72	15	6.3	5.7
17	13	11	9.9	16	210	52	68	44	115	13	6.0	4.8
18	13	10	9.7	16	157	50	61	42	164	12	5.7	4.5
19	13	10	9.7	16	156	51	57	44	129	12	5.5	4.2
20	12	10	9.5	15	162	56	50	44	103	11	5.4	7.7
21	12	10	9.5	15	126	53	48	40	80	11	5.4	15
22	14	11	9.3	14	110	50	48	38	66	10	5.4	14
23	14	11	9.1	19	99	48	104	36	56	9.8	5.2	9.8
24	14	9.9	9.1	20	104	48	102	34	48	9.6	4.9	7.9
25	14	9.7	10	19	189	63	88	35	42	9.2	4.9	7.2
26	13	9.7	10	18	156	60	78	95	38	8.9	4.8	7.2
27	13	9.7	9.9	23	127	58	69	112	34	8.7	4.6	7.4
28	12	9.7	9.4	20	118	52	156	207	32	8.5	4.5	8.1
29	12	9.5	9.4	16	-	49	212	318	29	8.7	4.4	8.5
30	12	9.3	9.4	16	------	48	158	195	27	8.9	4.4	8.7
31	12	------	9.4	18	-----	50	-----	131	-----	9.2	4.4	------
Total	459	316.5	291.8	509.4	3,371	2,327	2,140	3,157	2,203	458.5	192.9	184.3
Mean	14.8	10.6	9.41	16.4	120	75.1	71.3	102	73.4	14.8	6.22	6.14
Cfsm	.245	.175	.156	.271	1.98	1.24	1.18	1.69	1.21	.245	.103	.101
In.	.28	.19	.18	.31	2.07	1.43	1.32	1.94	1.35	.28	.12	.11

Calendar year 1965: Max 474 Min 8.7 Mean 38.7 Cfsm .640 In. 8.69
Water year 1965-66: Max 391 Min 3.5 Mean 42.8 Cfsm .707 In. 9.60

Peak discharge (base, 500 cfs).--No peak above base.

1-4855. Nassawango Creek near Snow Hill, Md.

Location.--Lat 38°13'45", long 75°28'20", 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, Worcester County, and 6.5 miles upstream from mouth.

Drainage area.--44.9 sq mi.

Records available.--December 1949 to September 1966.

Gage.--Water-stage recorder and concrete control. Datum of gage is 12.29 ft above mean sea level, datum of 1929, supplementary adjustment of 1942.

Average discharge.--16 years (1950-66), 51.5 cfs.

Extremes.--Maximum discharge during year, 200 cfs Feb. 15 (gage height, 4.99 ft); minimum, 0.80 cfs Sept. 8, 9, 10.

1949-66: Maximum discharge, 988 cfs Aug. 16, 1953 (gage height, 7.82 ft); minimum, that of Sept. 8, 9, 10, 1966.

Remarks.--Records good.

Discharge, in cubic feet per second, water year October 1965 to September 1966

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	21	6.6	5.4	7.0	15	93	27	88	95	6.3	2.0	0.90
2	18	6.6	5.4	7.0	15	98	24	93	68	6.0	1.8	1.0
3	16	6.3	5.7	7.0	13	112	24	112	53	6.0	1.7	1.0
4	13	6.3	5.7	6.6	11	96	23	136	40	5.1	1.8	1.0
5	10	6.3	5.4	6.3	10	81	22	114	32	4.5	2.0	1.0
6	9.0	6.3	5.4	14	10	70	20	86	24	4.0	2.2	1.0
7	8.6	6.3	5.1	15	9.5	65	19	66	19	4.2	2.0	.90
8	9.0	9.0	5.1	13	10	60	18	54	16	4.0	1.8	.80
9	8.6	10	5.2	11	12	54	17	41	16	3.2	1.7	.80
10	7.8	7.8	5.4	9.9	15	47	16	35	16	3.0	1.8	.80
11	7.0	6.6	5.7	9.5	40	39	16	31	23	2.8	1.8	.90
12	6.6	6.3	5.7	9.0	65	37	17	26	25	2.4	2.0	.90
13	6.6	6.3	6.3	8.6	111	35	38	24	33	2.2	2.0	.90
14	6.6	6.3	6.6	8.2	163	32	50	23	32	2.2	1.8	.90
15	6.6	6.3	6.6	7.8	190	31	58	23	31	4.0	1.8	1.0
16	6.3	6.0	6.6	7.4	161	27	62	22	26	5.1	1.7	1.1
17	6.3	6.3	6.6	7.4	119	25	57	20	35	4.8	1.6	1.1
18	6.0	6.0	6.6	7.0	97	23	47	19	38	4.0	1.4	1.1
19	5.4	6.0	6.6	7.0	93	25	38	20	54	3.0	1.6	1.1
20	5.7	6.0	6.3	6.6	85	29	31	22	65	2.8	1.6	2.2
21	6.6	6.0	6.3	6.6	71	28	27	20	54	2.6	1.4	6.6
22	12	6.3	6.0	6.3	64	28	25	18	38	2.4	1.4	6.0
23	10	6.6	6.0	14	59	28	31	16	27	2.2	1.4	3.2
24	9.0	6.6	6.3	16	57	30	29	14	20	2.2	1.2	2.4
25	8.2	6.3	7.0	14	66	43	29	14	15	1.8	1.1	2.0
26	7.4	5.7	9.5	13	73	43	28	28	12	1.8	1.2	1.7
27	7.4	5.7	8.2	25	87	42	27	34	10	1.7	1.2	1.8
28	7.4	5.7	7.8	21	86	39	54	59	8.2	1.7	1.2	2.6
29	7.0	5.7	7.4	15	-	35	64	88	7.8	1.8	1.1	4.5
30	6.6	5.7	7.4	12	------	31	76	158	6.6	2.0	1.1	6.0
31	6.6	------	7.0	17	------	28	------	146	------	2.4	1.0	------
Total	272.3	193.9	196.3	335.2	1,807.5	1,454	1,014	1,650	939.6	102.2	49.4	57.20
Mean	8.78	6.46	6.33	10.8	64.6	46.9	33.8	53.2	31.3	3.30	1.59	1.91
Cfsm	.196	.144	.141	.241	1.44	1.04	.753	1.18	.697	.073	.035	.043
In.	.23	.16	.16	.28	1.50	1.20	.84	1.37	.78	.08	.04	.05

Calendar year 1965: Max 108 Min 3.2 Mean 22.0 Cfsm .490 In. 6.66
Water year 1965-66: Max 190 Min .80 Mean 22.1 Cfsm .492 In. 6.69

Peak discharge (base, 280 cfs).--No peak above base.

Note.--Where daily discharge is less than 1.0 cfs the zero in the hundredths column is not significant.

1-4860. Manokin Branch near Princess Anne, Md.

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

Drainage area.--5.8 sq mi, approximately.

Records available.--April 1951 to September 1966.

Gage.--Water-stage recorder. Datum of gage is 8.03 ft above mean sea level, datum of 1929, supplementary adjustment of 1943.

Average discharge.--15 years, 4.05 cfs.

Extremes.--Maximum discharge during year, 46 cfs Feb. 13 (gage height, 3.00 ft); no flow for many days.
1951-66: Maximum discharge, 237 cfs Aug. 13, 1955 (gage height, 6.63 ft), from rating curve extended above 120 cfs by logarithmic plotting; no flow at times in 1954, 1963, 1964, 1966.

Remarks.--Records fair.

Discharge, in cubic feet per second, water year October 1965 to September 1966

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.60	0.30	0.90	0.50	1.6	2.5	1.8	5.2	1.9	0.40	0.10	0
2	.60	.20	.90	.50	1.4	10	1.8	11	1.7	.40	0	0
3	.60	.20	1.0	.40	.80	7.0	1.6	12	1.4	.40	0	0
4	.50	.20	1.0	.40	.60	8.0	1.6	6.9	1.2	.40	0	0
5	.50	.10	1.0	.30	.60	8.0	1.6	4.9	1.0	.40	0	0
6	.50	.10	1.0	.60	.60	5.0	1.5	4.0	1.0	.40	0	0
7	.60	.10	1.0	.50	.60	3.2	1.5	3.2	.90	.30	0	0
8	.80	.20	1.0	.40	.70	3.0	1.5	2.6	.90	.30	0	0
9	.60	.30	1.0	.40	.80	3.1	1.4	2.4	.90	.20	0	0
10	.60	.30	1.0	.40	1.8	3.1	1.4	2.1	1.1	.20	0	0
11	.60	.40	1.0	.40	12	3.2	1.3	1.9	1.8	.20	0	0
12	.50	.50	1.0	.40	9.4	2.8	1.5	1.8	1.1	.20	0	0
13	.50	.70	1.0	.30	29	2.5	3.6	1.6	1.0	.20	0	0
14	.50	.70	1.0	.40	22	2.4	4.2	1.8	1.0	.20	0	.20
15	.60	.70	.90	.30	10	2.4	3.2	2.0	.90	.30	0	0
16	.60	.80	.80	.30	11	2.1	2.5	1.7	.80	.20	0	0
17	.60	1.0	.80	.30	16	1.9	2.1	1.5	1.4	.20	0	0
18	.60	.80	.70	.30	9.1	2.0	1.9	1.3	1.8	.10	0	0
19	.60	.80	.70	.30	8.0	2.2	1.8	1.3	1.4	.10	0	0
20	.60	.80	.70	.30	7.1	2.8	1.6	1.2	1.2	.10	0	.10
21	.70	.80	.70	.30	5.8	2.4	1.6	1.1	.90	.10	0	.10
22	1.0	1.0	.70	.30	5.4	2.2	1.6	1.0	.70	.10	0	0
23	.60	1.0	.60	.60	5.3	2.1	2.8	1.0	.70	.10	0	0
24	.60	1.0	.60	.60	8.0	2.1	2.7	.90	.60	.10	0	0
25	.60	.90	.70	.50	16	2.8	2.5	.90	.60	.10	0	0
26	.50	.90	.70	.50	10	2.5	2.4	1.3	.60	.10	0	0
27	.40	1.0	.60	.70	7.8	2.3	2.1	1.3	.60	.10	0	0
28	.40	1.0	.50	.60	9.2	2.1	7.5	3.8	.50	.10	0	0
29	.30	.90	.50	.60	-	1.9	7.8	5.3	.50	.10	0	.10
30	.30	.90	.50	2.0	------	1.9	5.4	3.2	.50	.10	0	0
31	.30	------	.50	1.3	------	1.9	------	2.3	------	.10	0	------
Total	17.30	18.60	25.00	15.70	210.60	123.9	75.8	92.50	30.60	6.30	0.10	0.50
Mean	.56	.62	.81	.51	7.52	4.00	2.53	2.98	1.02	.20	.003	.017
Cfsm	.097	.107	.140	.088	1.30	.690	.436	.514	.176	.034	.0005	.0029
In.	.11	.12	.16	.10	1.35	.79	.49	.59	.20	.04	.0006	.003

Calendar year 1965: Max 18 Min .10 Mean 2.08 Cfsm .359 In. 4.86
Water year 1965-66: Max 29 Min 0 Mean 1.69 Cfsm .291 In. 3.96

Peak discharge (base, 50 cfs).--No peak above base.

Note.--Where daily discharge is less than 1.0 cfs the zero in the hundredths column is not significant.

1-4865. Beaverdam Creek near Salisbury, Md.

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

Drainage area.--19.5 sq mi.

Records available.--October 1929 to August 1933, May 1934 to September 1935, May 1936 to September 1966. 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 benchmark). Prior to Sept. 28, 1938, at site on left bank at datum 9.02 ft higher.

Average discharge.--31 years (1929-32, 1938-66), 23.4 cfs.

Extremes.--Maximum discharge during year, 135 cfs July 22; maximum gage height, 10.78 ft May 30; minimum daily discharge, 0.60 cfs July 28 (leakage under dam following closing of floodgate).
1929-66: 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 1966 are published in Part 2 of this report.

Discharge, in cubic feet per second, water year October 1965 to September 1966

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	17	9.0	7.8	7.5	7.0	50	16	49	39	12	0.90	4.0
2	17	9.4	7.8	7.5	8.4	49	16	57	36	12	1.0	4.3
3	16	9.0	7.8	55	8.4	46	16	59	27	12	1.0	4.0
4	15	9.4	7.5	32	8.4	40	16	54	24	11	1.9	4.0
5	14	9.4	7.8	32	8.4	35	15	42	21	11	7.0	4.0
6	14	9.8	7.8	33	8.0	31	15	32	19	11	6.7	3.8
7	16	9.8	7.5	.80	8.4	29	14	27	17	9.2	5.6	3.8
8	17	10	7.5	.80	11	26	13	21	16	11	6.2	3.8
9	15	9.4	7.5	.90	10	24	12	19	18	9.6	6.2	3.8
10	14	9.0	7.5	1.0	12	23	12	24	28	9.2	6.4	3.8
11	16	9.4	7.5	1.0	29	21	12	21	36	8.8	5.9	3.8
12	15	9.0	7.8	1.6	27	20	16	17	26	8.8	6.2	3.8
13	13	9.4	9.8	5.3	52	20	30	15	26	8.0	6.4	3.8
14	11	9.4	10	7.0	79	20	29	17	24	8.4	6.4	5.6
15	9.8	9.4	9.4	7.0	73	20	23	20	28	21	6.7	8.4
16	9.4	9.4	9.0	7.0	59	19	19	16	24	14	6.4	5.9
17	8.6	8.6	8.6	7.0	45	18	22	15	42	12	5.9	5.0
18	8.2	8.2	8.2	6.7	31	17	16	16	50	10	5.6	4.6
19	8.6	8.6	8.2	6.7	32	19	16	14	46	9.2	4.6	4.8
20	9.0	8.6	7.8	6.7	32	21	16	16	36	9.2	4.6	9.2
21	10	8.6	7.8	12	33	20	15	15	28	8.4	4.8	28
22	12	9.4	7.8	18	37	18	15	13	24	55	4.8	18
23	9.8	9.4	7.5	21	29	18	18	15	21	31	4.6	5.9
24	9.4	8.6	7.5	13	31	18	16	14	18	13	4.0	4.8
25	9.4	8.6	8.6	11	40	22	16	15	15	11	4.3	4.6
26	9.8	8.2	9.8	10	39	21	16	34	14	11	4.3	4.6
27	10	8.2	8.2	11	39	20	15	57	12	5.6	4.0	5.0
28	9.8	7.8	7.5	9.2	38	18	42	78	12	.60	4.0	5.9
29	9.4	7.8	7.5	8.4	-	18	48	92	11	.70	4.0	7.0
30	9.4	7.8	7.5	8.4	----------	17	40	83	11	.80	3.8	7.4
31	9.4	----------	7.5	6.2	----------	17	----------	50	----------	.90	3.8	----------
Total	372.0	268.6	250.0	354.70	835.0	755	585	1,017	749	355.40	148.00	185.4
Mean	12.0	8.95	8.06	11.4	29.8	24.4	19.5	32.8	25.0	11.5	4.77	6.18
Cfsm	.615	.459	.413	.585	1.53	1.25	1.00	1.68	1.28	.590	.245	.317
In.	.71	.51	.48	.68	1.59	1.44	1.12	1.94	1.43	.68	.28	.35

Calendar year 1965: Max 214 Min 7.5 Mean 15.4 Cfsm .790 In. 10.75
Water year 1965-66: Max 92 Min .60 Mean 16.1 Cfsm .826 In. 11.20

Note.--Where daily discharge is less than 1.0 cfs the zero in the hundredths column is not significant.

1-4870. Nanticoke River near Bridgeville, Del.

Location.--Lat 38°43'42", long 75°33'44", on left bank at highway bridge, 800 ft downstream from Gum Branch, 2.5 miles southeast of Bridgeville, Sussex County, and 50.5 miles upstream from mouth.

Drainage area.--75.4 sq mi.

Records available.--April 1943 to September 1966. Prior to October 1955, published as Gravelly Fork near Bridgeville.

Gage.--Water-stage recorder. Timber control since Sept. 3, 1947. Datum of gage is 13.64 ft above mean sea level (levels by Soil Conservation Service). Prior to Apr. 19, 1947, staff gage and crest-stage gage at same site and datum.

Average discharge.--23 years, 89.9 cfs.

Extremes.--Maximum discharge during year, 435 cfs May 22 (gage height, 6.05 ft); minimum, 19 cfs Jan. 27, result of freezeup; minimum gage height, 2.61 ft Aug. 27.
1943-66: Maximum discharge, 2,300 cfs Aug. 26, 1958 (gage height, 8.84 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 1966 are published in Part 2 of this report.

Discharge, in cubic feet per second, water year October 1965 to September 1966

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	39	35	26	22	20	104	56	111	112	59	32	22
2	38	36	26	23	21	86	55	117	106	57	30	22
3	32	35	27	23	21	77	53	111	100	56	31	22
4	29	35	27	22	22	73	53	102	94	52	30	22
5	30	35	27	23	22	73	52	93	89	56	34	23
6	31	35	27	34	22	69	50	90	84	59	32	23
7	35	34	26	29	23	66	50	86	81	52	32	23
8	40	33	26	26	23	64	49	82	80	56	31	23
9	38	33	25	24	23	62	48	82	101	50	30	23
10	35	32	25	24	27	62	48	78	96	47	29	22
11	33	32	25	24	51	62	47	74	95	46	30	22
12	34	33	26	22	55	60	50	73	82	44	36	21
13	36	32	27	23	92	60	85	73	81	42	32	21
14	37	28	25	24	106	59	86	72	80	40	30	21
15	39	27	24	23	72	59	75	70	78	43	30	22
16	40	30	24	23	67	58	69	67	80	42	31	22
17	35	30	23	23	74	57	65	65	268	39	29	22
18	36	28	22	22	65	57	61	71	172	38	27	22
19	38	28	23	22	60	57	60	70	137	38	26	22
20	38	29	22	22	57	57	58	68	122	35	25	24
21	38	28	22	23	54	55	57	70	104	34	26	37
22	38	32	22	23	53	54	78	336	95	34	25	34
23	37	32	21	26	52	54	103	197	89	33	24	32
24	32	30	21	24	58	58	90	142	85	32	24	30
25	32	30	24	23	75	67	83	124	80	31	23	29
26	32	30	24	23	74	60	80	154	76	32	23	28
27	32	29	22	24	68	57	75	157	74	32	22	28
28	33	27	22	24	69	56	124	166	71	34	21	28
29	35	26	22	22	-	56	135	172	69	35	22	32
30	35	25	22	25	------	55	112	143	63	38	23	39
31	35	------	22	22	------	58	------	122	------	36	23	------
Total	1,092	929	747	737	1,426	1,952	2,107	3,438	2,944	1,322	863	761
Mean	35.2	31.0	24.1	23.8	50.9	63.0	70.2	111	98.1	42.6	27.8	25.4
Cfsm	.467	.411	.320	.316	.675	.836	.931	1.47	1.30	.565	.369	.337
In.	.54	.46	.37	.36	.70	.96	1.04	1.70	1.45	.65	.43	.38

Calendar year 1965: Max 170 Min 21 Mean 59.2 Cfsm .785 In. 10.66
Water year 1965-66: Max 336 Min 20 Mean 50.2 Cfsm .666 In. 9.04

Peak discharge (base, 360 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
5-22	0830	6.05	435				

1-4875. Trap Pond Outlet near Laurel, Del.

Location.--Lat 38°31'40", long 75°29'00", on left bank at downstream end of concrete spillway channel, 200 ft downstream from Trap Pond Dam, and 5 miles southeast of Laurel, Sussex County.

Drainage area.--16.7 sq mi.

Records available.--June 1951 to September 1966.

Gage.--Water-stage recorder and concrete control. Datum of gage is 27.57 ft above mean sea level, datum of 1929, supplementary adjustment of 1943.

Average discharge.--15 years, 16.2 cfs.

Extremes.--Maximum discharge during year, 259 cfs Oct. 29 (gage height, 2.96 ft); no flow Sept. 11-13. 1951-66: Maximum discharge, 462 cfs Jan. 7, 1962 (gage height, 3.55 ft); no flow Aug. 12-14, Sept. 6, 1957, Sept. 11-13, 1966.

Remarks.--Records good. Flow regulated by Trap Pond.

Discharge, in cubic feet per second, water year October 1965 to September 1966

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	3.0	2.2	2.0	0.30	3.3	31	13	48	25	4.8	1.8	0.50
2	2.7	2.5	2.0	.20	3.0	32	12	74	23	4.3	1.7	.50
3	2.5	2.4	2.1	.20	3.1	25	11	66	21	4.1	1.6	.40
4	2.3	2.3	1.8	.20	2.5	22	10	45	17	3.8	1.6	.50
5	2.3	2.2	2.2	.20	2.5	21	9.1	32	14	4.1	1.6	.40
6	2.3	2.2	2.0	.10	3.1	19	9.1	26	12	4.5	1.6	.30
7	3.0	2.3	1.6	.30	2.8	17	8.5	22	11	3.9	1.8	.30
8	3.1	2.4	1.7	.30	2.7	16	7.7	19	13	4.5	1.8	.20
9	3.0	2.0	1.7	.30	4.1	14	8.0	17	20	3.8	1.8	.10
10	2.5	2.2	1.8	.30	3.6	14	7.7	16	20	3.3	1.6	.10
11	2.4	2.2	2.0	.40	4.1	13	7.4	15	18	3.1	1.6	0
12	2.3	2.3	2.0	.40	11	13	11	14	15	2.8	1.3	0
13	2.4	2.5	3.6	.40	29	12	22	13	16	3.0	1.2	0
14	2.4	2.3	3.6	.50	38	12	24	13	16	3.0	1.3	.20
15	2.5	2.4	2.5	.70	27	12	23	14	13	3.6	1.2	.40
16	2.5	2.7	2.2	1.0	24	11	18	12	12	3.8	1.3	.40
17	2.4	1.5	1.7	1.5	26	11	16	12	18	3.1	1.2	.40
18	2.4	2.1	1.7	2.1	24	10	14	16	22	2.8	1.2	.40
19	2.4	2.4	1.7	2.1	21	12	13	16	22	2.8	1.2	.40
20	2.4	2.4	1.7	1.8	21	12	12	15	18	3.0	1.3	.30
21	2.4	2.3	1.6	1.7	20	12	11	13	14	2.8	1.2	.40
22	2.3	3.1	1.6	1.5	17	11	14	12	12	2.5	1.1	.60
23	2.2	3.1	1.0	1.0	16	11	24	11	10	2.3	.90	.60
24	2.1	2.5	.40	.90	20	12	30	9.4	8.8	2.1	.70	.50
25	2.0	2.4	.40	1.0	29	16	26	13	8.3	1.8	.80	.60
26	1.8	2.4	.30	1.0	30	14	21	43	7.4	1.7	.80	.50
27	2.0	2.5	.30	1.4	23	12	19	56	6.9	1.8	.80	.50
28	2.0	2.2	.30	1.7	24	12	38	50	6.3	2.0	.80	.50
29	3.6	1.8	.30	3.8	-	11	52	73	5.6	2.7	.70	.60
30	12	2.0	.30	5.4	------	11	40	49	5.6	2.3	.70	.50
31	3.6	------	.30	4.1	------	12	------	32	------	2.1	.50	------
Total	119.2	69.8	48.40	36.80	434.8	463	531.5	866.4	430.9	96.2	38.70	11.10
Mean	3.85	2.33	1.56	1.19	15.5	14.9	17.7	27.9	14.4	3.10	1.25	.37
Cfsm	.231	.140	.093	.071	.928	.892	1.06	1.67	.862	.186	.075	.022
In.	.27	.16	.11	.08	.97	1.03	1.18	1.93	.96	.21	.09	.02

Calendar year 1965: Max 36 Min .30 Mean 8.61 Cfsm .516 In. 7.00
Water year 1965-66: Max 74 Min 0 Mean 8.62 Cfsm .516 In. 7.01

Peak discharge (base, 100 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
10-29	1630	2.96	259				

Note.--Where daily discharge is less than 1.0 cfs the zero in the hundredths column is not significant.

1-4885. Marshyhope Creek near Adamsville, Del.

Location.--Lat 38°51'00", long 75°40'29", on left bank 10 ft upstream from highway bridge, 1.5 miles northeast of Adamsville, Kent County, 1.7 miles upstream from Saulsbury Creek, and 5.3 miles northwest of Greenwood.

Drainage area.--44.8 sq mi.

Records available.--April 1943 to September 1966.

Gage.--Water-stage recorder. Datum of gage is 28.21 ft above mean sea level, datum of 1929. Prior to Nov. 24, 1953, wire-weight gage and crest-stage gage at site 10 ft downstream at same datum.

Average discharge.--23 years, 50.8 cfs.

Extremes.--Maximum discharge during year, 126 cfs June 9 (gage height, 6.08 ft); minimum, 1.1 cfs Jan. 31 (result of freezeup).
1943-66: Maximum discharge, 2,270 cfs Aug. 26, 1958 (gage height, 11.55 ft); minimum, 1.0 cfs Sept. 9, 10, 1964, Aug. 20, 1965.
Maximum stage known, 14.5 ft in September 1935, from information by local residents.

Remarks.--Records fair.

Discharge, in cubic feet per second, water year October 1965 to September 1966

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	5.4	4.1	4.3	3.1	2.6	82	18	77	38	13	3.3	2.3
2	5.0	4.1	4.3	3.3	3.3	68	18	73	33	12	3.0	2.1
3	2.7	4.1	3.9	3.4	3.0	48	17	70	28	11	3.0	1.9
4	2.3	3.9	4.1	3.4	2.8	41	17	59	25	11	2.8	1.8
5	2.1	3.9	3.8	3.4	2.8	38	16	50	22	11	3.3	2.6
6	2.3	4.1	3.6	7.6	2.8	36	16	44	20	26	3.1	2.1
7	2.6	4.5	3.3	9.5	3.1	32	15	40	18	17	2.7	1.8
8	3.3	4.8	3.3	8.1	3.3	29	15	36	22	12	2.7	1.8
9	3.6	5.0	3.3	6.3	3.6	27	15	36	85	10	2.4	2.1
10	3.6	5.0	3.4	5.9	5.0	26	14	33	36	9.2	2.3	1.9
11	3.6	5.2	3.3	5.4	22	25	14	30	29	8.6	2.6	1.8
12	3.6	5.4	3.4	4.8	41	24	15	27	24	7.6	6.1	1.8
13	3.3	5.6	3.9	4.5	67	23	38	29	22	7.2	4.8	2.0
14	3.4	5.4	3.8	4.5	108	22	59	28	21	7.0	4.7	3.1
15	3.1	5.4	3.4	4.3	62	22	49	27	20	8.1	4.8	4.5
16	2.7	5.6	3.1	4.3	42	21	38	25	27	7.9	4.8	3.4
17	2.6	5.6	3.0	3.8	47	20	33	24	104	7.0	3.9	2.8
18	2.7	5.6	2.7	3.6	40	20	29	25	59	6.3	3.6	2.3
19	2.8	5.6	2.6	3.6	32	20	27	26	41	6.1	3.6	2.0
20	2.8	5.6	2.4	3.4	28	20	25	26	33	6.1	3.4	3.4
21	3.0	5.4	2.7	3.3	25	18	24	26	27	5.2	3.4	8.3
22	3.4	6.1	2.4	3.1	24	18	38	47	23	5.0	3.4	9.2
23	4.1	5.9	2.3	4.1	22	18	75	36	20	4.8	3.4	5.9
24	4.3	5.2	2.1	4.1	22	19	65	26	19	4.5	3.1	7.6
25	4.5	5.0	3.0	3.6	33	24	55	23	17	4.1	3.1	4.8
26	4.3	4.7	3.1	3.4	54	23	54	27	16	4.1	3.0	3.8
27	4.1	4.5	3.0	3.6	40	21	45	42	16	3.4	2.7	3.3
28	3.9	4.7	3.1	3.4	36	20	78	100	14	3.6	2.4	3.4
29	3.9	4.5	3.1	3.1	-	19	105	98	18	4.1	2.3	3.6
30	4.1	4.1	3.1	4.1	------	18	82	68	15	4.7	2.1	5.6
31	4.1	------	3.1	1.4	------	19	------	48	------	4.1	2.0	------
Total	107.2	148.6	99.9	133.4	777.3	861	1,109	1,326	892	251.7	101.8	103.0
Mean	3.46	4.95	3.22	4.30	27.8	27.8	37.0	42.8	29.7	8.12	3.28	3.43
Cfsm	.077	.110	.072	.096	.621	.621	.826	.955	.663	.181	.073	.077
In.	.09	.12	.08	.11	.65	.71	.92	1.10	.74	.21	.08	.09

Calendar year 1965: Max 155 Min 1.3 Mean 21.0 Cfsm .469 In. 6.37
Water year 1965-66: Max 108 Min 1.4 Mean 16.2 Cfsm .362 In. 4.91

Peak discharge (base, 450 cfs).--No peak above base.

1-4890. Faulkner Branch at Federalsburg, Md.

Location.--Lat 38°42'45", long 75°47'35", on right bank 25 ft downstream from highway bridge on Nichols Road, 0.9 mile upstream from mouth, and 1 mile northwest of Federalsburg, Caroline County.

Drainage area.--7.10 sq mi.

Records available.--July 1950 to September 1966.

Gage.--Water-stage recorder and concrete control. Datum of gage is 16.70 ft above mean sea level, datum of 1929, supplementary adjustment of 1943.

Average discharge.--16 years, 8.56 cfs.

Extremes.--Maximum discharge during year, 33 cfs June 16 (gage height, 1.88 ft); no flow all or part of many days in July, August and September (result of pumpage for irrigation).
1950-66: Maximum discharge 672 cfs Sept. 12, 1960 (gage height, 4.73 ft) from rating curve extended above 210 cfs on basis of slope-area measurement at gage height 4.10 ft; no flow at times in 1954, 1955, 1957, 1959, 1960, 1964, 1965, 1966 (result of pumpage for irrigation).

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

Discharge, in cubic feet per second, water year October 1965 to September 1966

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2.8	2.0	1.3	1.9	1.1	18	4.7	13	9.0	2.6	1.3	0.20
2	2.8	1.7	1.3	1.9	1.2	11	4.7	13	7.8	2.2	1.2	.60
3	2.4	1.5	1.3	1.6	1.3	9.4	4.2	12	6.8	2.0	1.2	.70
4	2.2	1.5	1.4	1.4	1.4	9.4	4.4	9.4	6.1	2.0	.50	.70
5	2.0	1.5	1.4	1.3	1.4	9.8	4.2	8.2	5.8	2.8	2.0	.50
6	2.2	1.7	1.6	3.4	1.4	9.0	4.2	7.8	5.5	3.2	1.4	0
7	2.6	1.7	1.4	2.4	1.6	7.8	4.0	7.1	5.2	2.4	1.3	0
8	3.1	1.6	1.4	1.9	1.8	7.1	4.0	6.4	5.0	2.0	1.3	0
9	2.6	1.6	1.4	1.4	1.9	6.8	4.0	6.4	5.8	1.9	1.4	0
10	2.4	1.6	1.4	1.4	2.8	6.8	3.7	6.1	5.0	1.9	1.4	.80
11	2.2	1.6	1.4	1.4	8.2	6.8	3.4	5.5	4.4	1.8	1.6	.80
12	2.2	1.6	1.4	1.2	8.2	6.8	4.7	5.5	4.4	1.6	1.6	1.0
13	2.2	1.4	1.6	1.2	20	6.4	8.2	5.5	4.4	1.6	1.3	1.1
14	2.2	1.4	1.6	1.2	17	6.4	6.8	5.5	4.2	1.4	1.2	1.4
15	2.2	1.3	1.4	1.2	9.0	6.1	5.8	5.2	4.0	2.0	1.3	1.6
16	2.2	1.3	1.4	1.1	9.8	5.5	5.2	5.0	7.9	1.9	.80	1.2
17	2.2	1.3	1.4	.80	10	5.2	5.0	4.7	12	1.6	0	1.1
18	2.2	1.1	1.4	.80	7.4	5.0	4.7	5.5	6.4	1.4	0	1.1
19	2.2	1.1	1.4	.80	6.4	5.2	4.7	5.5	8.2	1.4	.80	1.1
20	2.2	1.1	1.4	.80	5.2	4.7	4.4	5.8	5.8	1.3	.80	1.8
21	2.2	1.1	1.6	.80	4.4	4.4	4.4	5.7	5.0	1.3	1.0	6.9
22	2.4	1.6	1.6	.80	4.2	4.4	11	17	4.4	1.3	1.1	3.7
23	2.4	1.6	1.6	1.3	4.0	4.4	11	7.4	4.2	1.3	.80	3.7
24	2.2	1.4	1.8	1.1	5.0	5.4	9.0	6.1	3.7	1.3	0	1.9
25	2.2	1.3	2.0	1.0	9.0	5.5	9.0	7.1	3.2	1.3	0	1.8
26	2.4	1.3	2.2	1.0	7.4	4.7	8.2	9.4	3.0	1.3	.20	1.8
27	2.4	1.4	2.0	1.0	6.1	4.7	7.4	14	3.0	.90	.50	1.9
28	2.2	1.4	1.9	1.1	8.6	4.4	17	21	2.8	.20	.50	2.2
29	2.2	1.3	1.9	.80	-	4.4	13	16	3.4	0	.30	3.0
30	2.2	1.3	1.9	.80	---	4.4	11	12	2.8	3.0	0	2.8
31	2.2	---	1.9	1.0	---	5.2	---	9.8	---	1.8	0	---
Total	72.1	43.3	48.7	39.80	165.8	205.1	196.0	268.6	159.2	52.70	26.80	45.40
Mean	2.33	1.44	1.57	1.28	5.92	6.62	6.53	8.66	5.31	1.70	.86	1.51
Cfsm	.328	.203	.221	.180	.834	.932	.920	1.22	.748	.239	.121	.213
In.	.38	.23	.26	.21	.87	1.07	1.03	1.41	.83	.28	.14	.24

Calendar year 1965: Max 104 Min 0 Mean 5.08 Cfsm .715 In. 9.71
Water year 1965-66: Max 21 Min 0 Mean 3.63 Cfsm .511 In. 6.93

Peak discharge (base, 60 cfs).--No peak above base.

Note.--Where daily discharge is less than 1.0 cfs the zero in the hundredths column is not significant.

1-4900. Chicamacomico River near Salem, Md.

Location.--Lat 38°30'45", long 75°52'50", on left bank 30 ft downstream from Big Mill Pond dam, 1.6 miles east of Salem, Dorchester County, 3.5 miles northwest of Vienna, and 13 miles upstream from mouth.

Drainage area.--15.0 sq mi.

Records available.--April 1951 to September 1966.

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

Average discharge.--15 years, 16.8 cfs.

Extremes.--Maximum discharge during year, 128 cfs Mar. 2 (gage height, 2.99 ft); minimum, 2.1 cfs Sept. 8; minimum gage height, 0.23 ft June 16 (result of regulation); minimum daily, 2.2 cfs Sept. 8.
1951-66: Maximum discharge, 470 cfs Jan. 1, 1961 (gage height, 4.40 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.

Discharge, in cubic feet per second, water year October 1965 to September 1966

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	4.0	7.0	5.5	4.7	6.4	34	13	34	15	6.8	4.8	2.6
2	5.5	5.8	5.7	4.7	6.6	51	13	42	14	6.4	4.6	2.9
3	3.4	5.8	6.0	4.7	6.6	26	12	36	13	6.2	4.4	2.8
4	3.0	7.0	6.0	5.0	6.6	20	12	26	12	6.2	4.5	3.4
5	2.5	7.0	5.8	4.9	6.4	20	12	20	11	11	5.8	4.1
6	2.6	7.0	16	10	6.4	19	11	18	10	17	5.7	3.3
7	3.6	7.4	9.8	11	6.1	18	11	16	9.7	26	5.2	2.5
8	8.7	22	5.9	8.1	6.3	16	11	15	9.6	14	5.0	2.2
9	5.8	10	5.3	6.8	6.4	15	11	14	12	7.5	4.8	2.3
10	4.1	5.3	5.2	6.4	7.8	15	11	13	13	6.2	4.8	2.3
11	3.4	4.6	5.2	6.6	20	15	10	12	20	4.9	4.8	2.4
12	3.4	4.3	5.2	6.1	22	15	5.1	12	15	3.2	5.4	2.3
13	3.1	4.6	5.6	6.0	22	14	3.7	12	13	3.2	4.8	2.4
14	2.9	5.0	5.6	6.4	32	14	13	11	12	3.3	4.5	3.5
15	3.2	4.7	5.3	6.4	20	14	15	12	11	4.3	4.6	6.0
16	3.3	5.1	5.2	6.3	18	13	20	11	8.5	6.3	4.5	4.6
17	2.8	6.3	5.2	6.0	20	13	19	11	52	6.4	4.3	3.8
18	2.8	5.8	4.8	5.5	17	13	16	11	34	6.1	3.9	3.5
19	3.1	5.5	4.8	5.5	16	13	14	11	27	6.0	3.8	3.5
20	3.2	5.5	4.8	5.8	9.4	14	13	13	21	5.8	3.6	7.2
21	3.4	5.8	4.8	5.9	4.3	13	13	13	16	5.3	3.4	17
22	3.7	7.2	4.7	5.9	8.2	13	14	23	12	5.0	3.4	15
23	4.9	7.5	4.7	8.0	10	12	21	17	9.6	4.8	3.5	10
24	5.0	6.8	4.7	7.5	13	15	20	18	8.8	4.6	3.2	5.6
25	4.0	6.1	5.6	5.9	22	20	18	12	8.1	4.4	3.2	4.1
26	4.1	6.4	7.3	5.6	20	15	18	23	7.5	4.2	3.2	4.0
27	4.2	6.7	5.3	6.6	17	14	15	15	7.7	4.5	3.1	4.6
28	4.6	6.3	4.9	6.4	18	12	39	17	7.7	5.0	3.1	6.6
29	4.1	6.0	4.7	6.0	-	12	44	23	8.4	5.6	2.9	7.3
30	4.4	5.5	4.7	6.4	------	12	30	18	7.3	5.2	2.8	7.7
31	6.2	------	4.5	6.4	------	14	------	16	------	5.0	2.8	------
Total	123.0	200.0	178.8	197.5	374.5	524	477.8	545	425.9	210.4	128.4	149.5
Mean	3.97	6.67	5.77	6.37	13.4	16.9	15.9	17.6	14.2	6.79	4.14	4.98
Cfsm	.265	.445	.385	.425	.893	1.13	1.06	1.17	.947	.453	.276	.332
In.	.30	.50	.44	.49	.93	1.30	1.18	1.35	1.06	.52	.32	.37

Calendar year 1965: Max 135 Min .50 Mean 11.9 Cfsm .793 In. 10.78
Water year 1965-66: Max 52 Min 2.2 Mean 9.68 Cfsm .645 In. 8.76

1-4910. Choptank River near Greensboro, Md.

Location.--Lat 38°59'50", long 75°47'10", on left bank at highway bridge, 0.1 mile upstream from Gravelly Branch, 2.0 miles northeast of Greensboro, Caroline County, and 60.0 miles upstream from mouth.

Drainage area.--113 sq mi.

Records available.--January 1948 to September 1966.

Gage.--Water-stage recorder and concrete control. Datum of gage is 3.51 ft above mean sea level, datum of 1929, supplementary adjustment of 1943.

Average discharge.--18 years, 118 cfs.

Extremes.--Maximum discharge during year, 150 cfs Feb. 17 (gage height, 2.60 ft); minimum, 1.2 cfs Aug. 29 (gage height, 1.58 ft); minimum daily, 1.5 cfs Aug. 29.
1948-66: Maximum discharge, 5,040 cfs Sept. 13, 1960 (gage height, 12.45 ft, from high-water mark in well); minimum, that of 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 1966 are published in Part 2 of this report.

Discharge, in cubic feet per second, water year October 1965 to September 1966

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	11	8.4	12	12	13	74	34	115	56	16	8.4	2.5
2	12	8.8	12	14	13	100	33	108	52	12	7.2	2.8
3	10	8.8	12	17	13	85	33	82	45	12	5.5	2.3
4	9.2	8.8	12	17	13	55	33	72	42	10	5.5	2.8
5	8.8	9.2	12	17	13	45	33	64	40	12	5.5	2.5
6	8.4	9.2	12	30	13	44	32	58	38	44	8.4	4.6
7	9.2	9.2	12	33	13	40	32	55	33	38	8.0	6.4
8	16	10	11	26	14	39	30	47	33	28	6.1	5.5
9	14	10	12	34	16	38	27	44	33	27	6.4	4.9
10	12	10	12	33	20	36	26	40	32	26	6.1	4.9
11	11	10	12	20	32	36	28	40	32	21	6.1	4.9
12	11	10	12	17	39	36	30	39	32	19	7.6	5.8
13	11	10	14	14	60	36	58	38	30	14	8.8	6.4
14	10	10	19	17	98	38	72	40	30	11	8.4	6.4
15	10	12	17	14	85	39	68	44	27	11	8.0	12
16	9.2	11	14	14	55	39	55	40	28	13	6.8	13
17	11	12	13	13	98	38	48	38	44	12	5.8	8.8
18	11	12	13	13	112	38	45	50	52	11	4.9	7.2
19	9.2	12	12	13	52	39	45	50	45	8.4	3.4	6.8
20	8.8	11	12	21	44	40	42	45	39	8.0	2.8	8.4
21	8.8	11	12	17	55	38	40	40	34	6.8	4.3	53
22	8.8	12	12	13	47	38	52	50	30	6.4	4.6	108
23	8.8	16	12	19	39	38	66	55	27	6.1	4.6	138
24	8.4	14	12	21	39	38	68	45	27	5.5	4.0	93
25	8.4	12	14	19	45	42	62	44	26	5.5	4.6	48
26	8.4	12	23	13	55	39	56	50	24	5.5	2.8	34
27	8.0	12	19	13	53	39	53	52	23	4.6	2.3	30
28	8.4	12	14	17	48	38	62	68	20	4.3	2.1	33
29	8.2	12	12	13	-	38	74	105	20	6.4	1.5	44
30	8.0	12	12	10	------	36	80	100	19	8.8	1.9	62
31	8.4	------	12	12	------	36	------	75	------	8.8	2.1	------
Total	305.4	327.4	411	556	1,197	1,355	1,417	1,793	1,013	422.1	164.5	761.9
Mean	9.85	10.9	13.3	17.9	42.8	43.7	47.2	57.8	33.8	13.6	5.31	25.4
Cfsm	.087	.096	.118	.158	.379	.387	.418	.512	.299	.120	.047	.225
In.	.10	.11	.14	.18	.39	.45	.47	.59	.33	.14	.05	.25

Calendar year 1965: Max 407 Min 4.6 Mean 55.3 Cfsm .489 In. 6.65
Water year 1965-66: Max 138 Min 1.5 Mean 26.6 Cfsm .235 In. 3.20

Peak discharge (base, 1,000 cfs).--No peak above base.

1-4920. Beaverdam Branch at Matthews, Md.

Location.--Lat 38°48'40", long 75°58'15", on left bank 50 ft upstream from bridge on State Highway 328, 1 mile west of Matthews, Talbot County, 1.2 miles upstream from mouth, and 6 miles northeast of Easton.

Drainage area.--5.85 sq mi.

Records available.--July 1950 to September 1966.

Gage.--Water-stage recorder and concrete control. Datum of gage is 2.33 ft above mean sea level, datum of 1929, supplementary adjustment of 1943.

Average discharge.--16 years, 6.48 cfs.

Extremes.--Maximum discharge during year, 181 cfs June 8 (gage height, 3.32 ft); no flow at times.
1950-66: 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 1950, 1951, 1957, 1962, 1963, 1964, 1965 and 1966.

Remarks.--Records good.

Discharge, in cubic feet per second, water year October 1965 to September 1966

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.10	0.30	0.40	0.70	1.1	25	5.0	12	3.8	1.1	0.10	0.60
2	.30	.20	.40	1.1	1.2	7.4	3.5	11	3.0	.70	0	.20
3	.10	.30	.40	1.2	1.4	5.4	3.0	8.6	2.3	.40	0	.10
4	.10	.20	.40	.90	1.6	5.4	2.8	6.2	1.8	.40	0	.10
5	0	.20	.40	.80	1.6	5.8	2.6	5.0	1.6	.30	.10	.10
6	.10	.20	.40	6.5	1.4	4.6	2.4	4.4	1.3	1.4	.10	.10
7	.50	.30	.40	3.2	1.4	3.8	2.3	3.5	1.1	.60	.10	.10
8	1.3	.30	.40	1.8	1.6	3.0	2.1	5.0	25	.30	.10	0
9	.40	.30	.40	1.3	1.7	3.0	2.1	11	55	.20	.10	0
10	.30	.30	.40	1.2	4.3	3.0	2.1	5.4	7.4	.20	.10	0
11	.30	.30	.40	1.1	24	3.0	2.0	4.0	5.0	.10	.10	0
12	.30	.30	.40	1.0	11	2.8	5.4	3.5	2.6	.10	.40	0
13	.30	.30	1.2	1.0	56	2.8	25	3.2	2.1	.10	.10	.10
14	.30	.30	1.1	1.1	23	2.8	12	5.0	2.0	.10	.10	1.7
15	.30	.30	.90	1.0	7.4	3.0	6.6	4.0	2.0	.20	.10	.80
16	.30	.40	.80	1.0	10	2.8	4.6	3.0	9.5	.10	.10	.20
17	.30	.40	.70	1.0	11	2.4	3.8	2.4	12	.10	0	.10
18	.30	.40	.60	.90	6.2	2.4	3.2	11	5.4	.10	0	.10
19	.30	.40	.60	.90	5.0	2.6	3.2	4.4	11	.10	0	.10
20	.30	.40	.60	.90	4.0	2.6	2.8	3.8	3.8	.10	0	1.0
21	.30	.40	.60	.90	3.2	2.4	2.6	3.2	2.1	0	0	15
22	.30	.70	.60	.90	3.0	2.4	16	3.2	1.6	0	.10	5.2
23	.40	.60	.60	1.7	3.0	2.4	11	2.3	1.3	0	0	4.4
24	.30	.40	.60	1.4	4.4	6.2	7.0	1.8	1.0	0	0	1.0
25	.30	.40	.90	1.1	16	8.5	7.4	2.1	.90	0	0	.60
26	.30	.40	1.8	.90	10	4.4	6.2	2.3	.80	0	0	.50
27	.20	.40	1.0	1.0	6.2	3.5	4.6	26	.80	0	0	.60
28	.30	.40	.80	1.1	13	2.8	33	37	4.5	.10	0	1.0
29	.40	.40	.70	1.0	-	2.6	13	13	16	.20	0	7.2
30	.30	.40	.70	.70	------	2.6	11	5.4	2.1	.20	0	5.9
31	.30	------	.70	.80	------	6.2	------	4.0	------	.20	.10	------
Total	9.60	10.60	20.30	40.10	233.7	137.6	208.3	216.7	188.80	7.40	1.80	46.80
Mean	.31	.35	.65	1.29	8.35	4.44	6.94	6.99	6.29	.24	.06	1.56
Cfsm	.053	.060	.111	.221	1.43	.759	1.19	1.19	1.08	.041	.010	.267
In.	.06	.07	.13	.25	1.49	.87	1.32	1.38	1.20	.05	.01	.30

Calendar year 1965: Max 189 Min 0 Mean 3.62 Cfsm .619 In. 8.39
Water year 1965-66: Max 56 Min 0 Mean 3.07 Cfsm .525 In. 7.13

Peak discharge (base, 120 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
6-8	2130	3.32	181				

Note.--Where daily discharge is less than 1.0 cfs the zero in the hundredths column is not significant.

1-4930. Unicorn Branch near Millington, Md.

Location.--Lat 39°15'00", long 75°51'40", on right bank 20 ft upstream from bridge on State Highway 313, 0.9 mile upstream from mouth, and 1.4 miles southwest of Millington, Kent County.

Drainage area.--22.3 sq mi.

Records available.--January 1948 to September 1966.

Gage.--Water-stage recorder and concrete control. Datum of gage is 3.57 ft above mean sea level, datum of 1929, supplementary adjustment of 1943.

Average discharge.--18 years, 22.9 cfs.

Extremes.--Maximum discharge during year, 85 cfs Sept. 22 (gage height, 2.87 ft); minimum, 0.20 cfs Oct. 2 (gage height, 1.60 ft); minimum daily, 2.0 cfs Aug. 29.
1948-66: 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.

Discharge, in cubic feet per second, water year October 1965 to September 1966

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	10	4.4	5.2	5.2	5.2	21	8.4	15	6.4	3.7	3.7	2.5
2	4.5	4.8	5.2	6.0	5.6	13	8.0	13	6.4	3.4	3.7	2.5
3	4.0	5.2	5.2	6.0	5.6	11	8.0	12	6.0	3.1	3.4	2.5
4	4.4	5.6	5.2	5.6	5.6	11	8.0	11	5.6	3.1	3.7	2.3
5	4.8	4.8	5.2	6.0	5.6	11	8.0	10	4.8	7.7	4.0	2.3
6	5.2	4.4	4.8	9.0	5.6	10	7.6	9.0	4.4	45	4.0	2.3
7	7.2	4.8	4.8	7.2	5.6	9.0	7.6	9.0	4.4	11	3.7	2.1
8	7.6	5.2	5.2	5.6	5.6	9.0	7.6	8.4	4.4	6.4	4.8	2.1
9	5.6	4.8	5.2	5.6	6.0	8.4	7.2	8.0	4.4	5.2	3.7	2.3
10	5.2	4.8	5.2	5.6	6.8	8.4	7.2	9.0	5.2	4.8	3.4	2.5
11	5.2	5.6	5.2	5.6	12	8.4	7.2	7.6	4.8	4.4	4.4	2.8
12	5.6	5.2	5.2	5.2	12	8.4	9.2	7.6	4.4	4.4	4.4	2.8
13	5.2	5.6	7.6	5.2	33	8.4	22	7.2	4.4	4.0	3.4	2.8
14	5.2	5.2	6.0	5.6	42	8.4	22	7.6	5.2	3.7	3.4	5.1
15	4.8	5.2	5.6	5.6	16	8.0	15	7.6	4.4	4.4	4.0	6.0
16	4.4	5.2	5.2	5.6	14	8.0	12	7.6	4.4	3.7	4.0	4.0
17	4.8	4.8	5.2	5.2	14	8.0	11	7.2	4.4	3.4	3.1	3.7
18	4.8	4.8	5.2	5.2	13	8.0	10	8.4	4.4	3.1	2.3	3.4
19	4.8	4.8	5.2	5.2	12	8.0	10	8.4	4.8	2.8	2.5	3.7
20	5.2	4.8	4.8	5.2	12	8.0	9.0	7.6	5.2	2.8	2.3	5.6
21	5.2	4.8	4.8	5.2	11	8.0	9.0	7.2	4.0	2.8	2.5	40
22	5.6	5.6	4.8	5.2	11	8.0	12	21	3.4	2.8	2.5	62
23	5.2	5.6	5.2	7.6	11	8.0	13	7.6	3.4	2.8	2.3	30
24	4.8	4.8	5.2	6.4	12	9.0	11	6.4	3.4	3.1	2.3	11
25	4.8	4.8	6.0	5.6	14	11	12	7.6	3.1	3.1	2.3	8.4
26	5.2	4.8	6.0	6.0	16	9.0	11	8.4	3.4	2.5	2.5	8.0
27	4.8	4.8	5.6	6.0	13	8.4	10	7.6	3.4	2.5	2.5	11
28	4.8	4.8	5.2	5.6	13	8.0	13	9.5	3.1	2.8	2.3	16
29	4.8	4.8	5.2	5.6	-	8.4	13	9.5	5.2	4.4	2.0	20
30	4.8	4.8	5.2	6.0	----------	8.4	13	7.6	4.4	4.0	2.3	31
31	4.8	----------	5.2	5.2	----------	8.4	----------	6.8	----------	4.0	2.3	----------
Total	163.3	149.6	164.8	179.8	338.2	288.0	322.0	280.4	135.2	164.9	97.7	300.7
Mean	5.27	4.99	5.32	5.80	12.1	9.29	10.7	9.05	4.51	5.32	3.15	10.0
Cfsm	.236	.224	.239	.260	.543	.417	.480	.406	.202	.239	.141	.448
In.	.27	.25	.27	.30	.56	.48	.54	.47	.23	.28	.16	.50

Calendar year 1965: Max 86 Min .10 Mean 11.8 Cfsm .529 In. 7.16
Water year 1965-66: Max 62 Min 2.0 Mean 7.08 Cfsm .317 In. 4.31

Peak discharge (base, 180 cfs).--No peak above base.

1-4935. Morgan Creek near Kennedyville, Md.

Location.--Lat 39°16'50", long 76°00'55", on right bank 200 ft upstream from highway bridge, 2 miles southwest of Kennedyville, Kent County, and 4½ miles upstream from mouth.

Drainage area.--10.5 sq mi.

Records available.--May 1951 to September 1966.

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

Average discharge.--15 years, 9.26 cfs.

Extremes.--Maximum discharge during year, 129 cfs Feb. 13 (gage height, 4.04 ft); minimum, 0.60 cfs Aug. 28, 29. 1951-66: Maximum discharge, 1,530 cfs Sept. 12, 1960 (gage height, 8.88 ft), from rating curve extended above 440 cfs by logarithmic plotting; minimum, that of Aug. 28, 29, 1966.

Remarks.--Records good.

Discharge, in cubic feet per second, water year October 1965 to September 1966

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	3.0	2.5	3.0	3.0	4.3	17	3.0	6.9	3.0	1.1	0.90	0.80
2	3.8	2.5	3.0	3.0	4.3	7.6	3.3	4.6	2.5	1.1	.90	.80
3	2.8	2.5	3.0	4.1	3.6	5.0	3.0	3.8	2.3	1.0	1.1	.80
4	2.0	2.8	3.3	3.3	3.3	5.0	3.3	3.3	2.0	1.1	.90	.70
5	1.8	2.8	3.3	3.0	3.0	5.7	3.3	3.0	2.0	1.4	1.0	.80
6	1.8	2.8	3.3	9.4	2.8	5.4	3.0	2.8	2.0	1.8	1.0	.90
7	3.3	2.8	3.0	7.3	3.3	4.1	3.0	2.5	2.0	1.6	.90	.80
8	9.9	2.8	3.0	4.3	3.0	3.8	3.0	2.5	2.0	1.4	.90	.70
9	4.6	2.8	3.0	2.8	3.6	3.6	3.0	2.5	2.0	1.2	10	.70
10	3.6	2.5	3.3	3.0	6.1	3.6	3.0	2.3	4.3	1.2	4.6	.70
11	3.3	2.8	3.3	3.3	16	3.6	2.8	2.0	3.6	1.2	1.6	.70
12	3.6	3.0	3.3	2.8	28	3.6	4.2	2.3	2.0	1.2	2.3	.70
13	3.6	3.3	6.5	2.8	66	3.6	16	2.3	1.8	1.2	1.2	.70
14	2.8	3.6	5.0	3.3	60	3.6	10	3.0	2.0	1.1	1.1	4.3
15	2.5	3.0	3.3	3.3	16	3.6	5.0	3.0	2.0	1.4	1.2	6.5
16	2.5	3.3	3.0	3.3	7.6	3.6	4.1	2.3	1.8	1.4	1.4	2.3
17	2.5	3.8	3.0	3.0	7.3	3.6	3.6	2.3	1.8	1.2	1.1	1.2
18	2.5	3.3	3.0	3.0	5.0	3.6	3.6	3.8	1.8	1.1	1.0	1.1
19	2.5	3.0	3.0	3.0	4.6	3.3	3.6	8.9	2.3	.90	.90	1.1
20	2.8	3.0	2.8	3.0	4.1	3.3	3.6	4.6	2.3	.80	.90	2.8
21	2.8	3.0	2.8	3.0	3.6	3.3	3.6	2.8	1.8	.70	.90	20
22	2.8	4.1	2.5	3.0	3.6	3.3	5.4	14	1.6	.80	.90	14
23	2.8	4.6	2.8	8.0	3.8	3.0	4.6	8.0	1.4	.80	.90	4.3
24	2.8	3.6	3.0	7.6	4.6	5.0	3.8	3.0	1.2	.80	.90	2.8
25	2.5	3.3	3.8	4.1	12	8.0	4.6	2.8	1.1	.80	.80	2.0
26	2.5	3.3	4.3	3.0	11	4.1	3.8	2.8	1.1	.80	.80	2.3
27	2.5	3.6	2.5	2.5	6.1	3.3	3.8	3.0	1.2	.80	.80	2.5
28	2.5	3.6	2.5	2.3	7.6	3.0	6.5	6.1	1.2	1.0	.70	3.8
29	2.5	3.3	2.5	2.3	-	3.0	4.6	5.0	1.4	1.4	.70	9.9
30	2.5	3.0	2.5	2.5	---	3.0	6.5	3.0	1.2	1.1	.70	9.9
31	2.5	---	2.8	3.6	---	3.3	---	2.8	---	1.1	.70	---
Total	93.9	94.3	99.4	115.9	304.2	138.5	134.6	122.0	58.7	34.50	43.70	100.60
Mean	3.03	3.14	3.21	3.74	10.9	4.47	4.49	3.94	1.96	1.11	1.41	3.35
Cfsm	.289	.299	.306	.356	1.04	.426	.428	.375	.187	.106	.134	.319
In.	.33	.33	.35	.41	1.08	.49	.48	.43	.21	.12	.15	.36

Calendar year 1965: Max 45 Min 1.6 Mean 4.72 Cfsm .450 In. 6.10
Water year 1965-66: Max 66 Min .70 Mean 3.67 Cfsm .350 In. 4.75

Peak discharge (base, 200 cfs).--No peak above base.

Note.--Where daily discharge is less than 1.0 cfs the zero in the hundredths column is not significant.

1-4950. Big Elk Creek at Elk Mills, Md.

Location.--Lat 39°39'26", long 75°49'20", on right bank 100 ft downstream from highway bridge at Elk Mills, Cecil County, 3½ miles north of Elkton, and 7 miles upstream from confluence with Little Elk Creek.

Drainage area.--52.6 sq mi.

Records available.--April 1932 to September 1966. Monthly discharge only for some periods, published in WSP 1302.

Gage.--Digital water-stage recorder. Datum of gage is 68.5 ft above mean sea level, datum of 1929. Prior to Oct. 7, 1939, wire-weight gage and Oct. 7, 1939, to May 16, 1946, wire-weight gage and crest-stage gage at bridge 100 ft upstream at same datum. Oct. 7, 1939, to Sept. 30, 1961, graphic water-stage recorder at present site and datum.

Average discharge.--34 years, 67.1 cfs.

Extremes.--Maximum discharge during year, 3,690 cfs Feb. 13 (gage height, 8.19 ft); minimum, 4.6 cfs Sept. 8, 9; minimum daily, 4.8 cfs Sept. 8-10.

1932-66: 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, that of 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. Slight diurnal fluctuation caused by mills above station.

Discharge, in cubic feet per second, water year October 1965 to September 1966

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	18	13	17	17	14	627	29	109	43	14	9.6	5.5
2	28	13	17	19	25	105	29	64	36	12	9.5	5.3
3	16	13	18	32	22	72	28	53	32	11	11	5.0
4	13	14	18	25	20	67	29	46	30	11	9.8	5.0
5	12	13	18	20	19	75	28	42	28	11	10	5.3
6	12	13	17	43	18	64	27	41	27	12	11	5.4
7	30	14	17	43	18	52	27	37	25	17	9.2	5.2
8	97	15	17	27	19	47	27	36	26	16	8.6	4.8
9	27	17	17	18	21	43	26	36	24	13	8.4	4.8
10	22	15	17	20	25	41	26	35	27	11	9.8	4.8
11	19	16	17	15	115	41	24	32	28	11	9.8	5.0
12	18	16	19	12	210	40	27	32	22	11	14	5.0
13	16	16	30	15	1,570	39	85	33	22	10	10	5.0
14	15	18	32	19	385	36	69	32	23	9.9	8.7	124
15	15	15	21	16	124	35	41	31	31	10	9.7	137
16	15	16	19	14	92	32	35	29	23	9.9	9.9	19
17	15	26	18	12	87	32	32	28	22	9.0	8.9	12
18	15	21	17	12	62	32	30	29	22	8.5	7.5	10
19	15	17	17	13	54	32	30	136	21	8.4	7.1	9.6
20	15	17	16	14	47	32	28	57	21	15	6.8	16
21	15	17	16	13	44	30	28	39	19	11	6.5	231
22	16	21	15	12	40	30	43	192	17	8.9	6.6	60
23	17	24	15	32	30	29	43	56	16	8.3	7.0	48
24	16	20	16	25	35	41	72	42	16	7.8	7.0	23
25	15	18	22	18	44	78	140	38	15	7.4	6.5	18
26	14	17	33	17	41	40	64	48	15	7.7	6.2	17
27	14	20	20	17	40	35	48	40	16	11	6.1	16
28	13	21	16	16	204	31	124	67	16	101	5.9	20
29	13	19	16	14	--	31	73	87	16	18	5.7	25
30	13	17	16	12	------	31	68	46	15	12	5.6	29
31	13	------	16	12	------	31	------	38	------	11	5.4	------
TOTAL	592	512	580	594	3,425	1,951	1,380	1,631	694	434.8	257.8	880.7
MEAN	19.1	17.1	18.7	19.2	122	62.9	46.0	52.6	23.1	14.0	8.32	29.4
CFSM	.363	.325	.356	.365	2.32	1.20	.875	1.00	.439	.266	.158	.559
IN	.42	.36	.41	.42	2.42	1.38	.98	1.15	.49	.31	.18	.62

CALENDAR YEAR 1965 MAX 538 MIN 9.8 MEAN 33.2 CFSM .631 INCHES 8.56
WATER YEAR 1965-66 MAX 1,570 MIN 4.8 MEAN 35.4 CFSM .673 INCHES 9.14

Peak discharge (base, 1,700 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
2-13	1915	8.19	3,690	3-1	0230	6.27	1,870

1-4960. Northeast Creek at Leslie, Md.

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

Drainage area.--24.3 sq mi.

Records available.--October 1948 to September 1966.

Gage.--Digital water-stage recorder and concrete control. Datum of gage is 115.0 ft above mean sea level, datum of 1929. Prior to Oct. 1, 1961, graphic water-stage recorder at same site and datum.

Average discharge.--18 years, 31.8 cfs.

Extremes.--Maximum discharge during year, 2,000 cfs Feb. 13 (gage height, 5.45 ft); minimum, 1.2 cfs Sept. 8, 9, 10, 11, 12, 13, 14; minimum daily, 1.2 cfs Sept. 9, 10, 12, 13.
1948-66: Maximum discharge, 3,220 cfs July 27, 1958 (gage height, 6.92 ft), from rating curve extended above 640 cfs on basis of slope-area measurement at gage height 5.06 ft; minimum, that of Sept. 8, 9, 10, 11, 12, 13, 14, 1966; minimum daily, that of Sept. 9, 10, 12, 13, 1966.

Remarks.--Records good. Slight diurnal fluctuation at low flow caused by power plant above station.

Discharge, in cubic feet per second, water year October 1965 to September 1966

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	5.0	3.1	4.5	5.0	5.0	357	9.7	74	16	4.1	3.3	1.6
2	6.4	3.2	4.8	5.5	7.0	45	9.6	31	14	3.9	3.3	1.5
3	4.8	3.4	4.8	9.2	6.4	25	8.8	23	12	3.8	3.3	1.5
4	3.2	3.6	4.9	8.2	6.0	22	9.0	20	11	3.5	3.2	1.5
5	2.8	3.9	4.8	5.9	5.8	25	9.0	17	10	3.6	3.2	1.4
6	2.7	3.6	4.7	14	5.6	21	8.2	16	9.7	3.8	3.5	1.4
7	7.2	3.7	4.6	17	5.6	16	8.2	15	9.0	3.7	3.3	1.3
8	22	3.9	4.5	9.4	6.0	14	8.2	14	8.9	3.4	3.0	1.3
9	9.5	4.2	4.8	5.4	6.4	13	7.8	14	8.8	3.3	2.9	1.2
10	5.3	4.1	4.8	6.0	8.2	13	7.7	13	8.2	3.2	3.1	1.2
11	4.4	4.2	5.1	4.5	60	13	7.7	12	7.8	3.2	3.2	1.3
12	4.3	4.7	5.4	3.9	130	13	8.4	12	7.4	3.0	3.3	1.2
13	4.2	4.6	8.4	4.5	603	12	47	13	7.2	2.9	3.1	1.2
14	4.0	4.6	9.9	6.0	562	12	38	13	7.5	2.9	2.8	25
15	3.9	4.4	6.0	4.8	48	11	19	13	12	2.8	2.8	51
16	3.8	4.5	5.2	4.2	32	11	15	11	7.6	2.6	2.9	8.2
17	3.5	6.5	5.1	3.7	34	9.9	13	11	6.8	2.6	2.9	4.2
18	3.5	6.2	4.8	3.7	21	10	11	11	6.6	2.6	2.6	3.3
19	3.5	4.8	4.6	3.9	19	10	11	74	6.4	2.4	2.3	3.1
20	3.5	4.4	4.6	4.2	16	11	10	28	6.4	2.4	2.3	4.5
21	3.5	4.4	4.5	3.9	14	9.5	10	17	5.9	2.3	2.2	98
22	3.5	5.2	4.5	3.7	13	9.4	21	45	5.5	2.3	2.2	29
23	3.4	6.7	4.5	10	9.0	9.3	22	20	5.2	2.4	2.2	19
24	3.3	5.9	4.4	8.2	12	14	24	15	5.0	2.2	2.2	9.4
25	3.5	5.6	6.2	6.0	15	40	107	13	5.1	2.0	2.0	6.4
26	3.5	5.5	9.2	5.1	17	17	31	14	5.7	2.0	1.8	5.7
27	3.5	5.4	6.0	5.1	17	14	21	15	5.1	4.9	1.7	5.4
28	3.5	5.7	4.5	4.8	67	12	113	42	5.9	23	1.6	6.8
29	3.4	5.3	4.5	4.2	-	11	40	44	4.9	6.6	1.6	9.9
30	3.3	4.8	4.5	3.7	------	11	36	21	4.6	4.0	1.6	12
31	3.3	------	4.7	3.7	------	11	------	16	------	3.4	1.5	------
TOTAL	145.2	140.1	163.8	187.4	1,751.0	822.1	691.3	697	236.2	118.8	80.9	318.5
MEAN	4.68	4.67	5.28	6.05	62.5	26.5	23.0	22.5	7.87	3.83	2.61	10.6
CFSM	.193	.192	.217	.249	2.57	1.09	.947	.926	.324	.158	.107	.436
IN	.22	.21	.25	.29	2.68	1.26	1.06	1.07	.36	.18	.12	.49

CALENDAR YEAR 1965	MAX 552	MIN 2.1	MEAN 14.3	CFSM .589	INCHES 7.97
WATER YEAR 1965-66	MAX 603	MIN 1.2	MEAN 14.7	CFSM .605	INCHES 8.19

Peak discharge (base, 800 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
2-13	2345	5.45	2,000				

1-5800. Deer Creek at Rocks, Md.

Location.--Lat 39°37'49", long 76°24'13", on right bank a quarter of a mile downstream from Maryland & Pennsylvania Railroad bridge, three-quarters of a mile southeast of Rocks, Harford County, 1.2 miles upstream from Stirrup Run, 7 miles northwest of Bel Air, and 23½ miles upstream from mouth.

Drainage area.--94.4 sq mi.

Records available.--October 1926 to September 1966. Monthly discharge only for November and December 1926, published in WSP 1302.

Gage.--Digital 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). Prior to Oct. 1, 1962, graphic water-stage recorder at same site and datum.

Average discharge.--40 years, 118 cfs.

Extremes.--Maximum discharge during year, 3,510 cfs Feb. 13 (gage height, 9.14 ft); minimum, 8.6 cfs Sept. 8-12 (gage height, 1.61 ft).
1926-66: 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: minimum daily, 8.6 cfs Sept. 11, 12, 1966.
Maximum stage known since at least 1888, that of Aug. 23, 1933.

Remarks.--Records good. Some regulation at low flow by mills above station.

Discharge, in cubic feet per second, water year October 1965 to September 1966

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	48	34	36	36	40	704	53	171	57	28	18	11
2	73	34	35	40	51	208	52	127	56	26	17	11
3	41	34	35	57	55	148	50	109	54	26	16	10
4	35	34	36	45	52	130	52	97	52	24	16	10
5	33	33	35	39	48	131	51	89	51	26	19	10
6	33	34	35	72	44	115	49	85	50	32	23	10
7	52	34	34	70	47	97	49	78	49	28	19	9.5
8	150	36	33	51	49	87	49	77	49	26	18	9.0
9	61	38	34	44	48	81	48	76	52	24	17	9.0
10	51	35	34	59	53	78	48	72	47	22	18	9.0
11	48	37	34	56	186	78	48	68	45	22	19	8.6
12	47	37	35	55	255	75	52	68	43	21	26	8.6
13	44	37	42	58	1,600	71	145	71	43	20	19	9.5
14	41	38	43	41	610	68	118	71	45	19	17	140
15	40	36	37	37	234	66	78	67	47	20	20	115
16	39	38	36	34	166	62	68	63	43	20	22	40
17	37	44	36	35	145	60	63	61	43	19	21	30
18	37	38	35	32	111	60	59	61	42	18	17	26
19	37	36	35	36	99	60	58	232	41	18	15	24
20	37	36	33	36	84	58	56	96	39	17	15	38
21	37	36	34	34	77	56	56	77	37	15	14	160
22	37	41	36	33	79	56	77	84	36	15	18	74
23	37	44	55	48	72	56	69	70	35	15	24	55
24	36	38	36	43	69	68	87	65	34	15	18	40
25	35	37	38	39	74	86	182	66	32	15	16	35
26	35	36	53	37	69	62	103	64	31	15	15	34
27	35	39	41	36	66	58	94	62	34	14	14	33
28	35	42	39	34	189	56	201	65	33	22	13	36
29	34	37	40	33	-	54	133	80	33	26	12	43
30	34	36	51	33	------	55	131	61	30	22	12	47
31	35	------	37	30	------	55	------	59	------	20	12	------
TOTAL	1,374	1,109	1,173	1,293	4,672	3,099	2,379	2,592	1,283	650	540	1,095.2
MEAN	44.3	37.0	37.8	41.7	167	100	79.3	83.6	42.8	21.0	17.4	36.5
CFSM	.469	.392	.400	.442	1.77	1.06	.840	.886	.453	.223	.184	.387
IN	.54	.44	.46	.51	1.84	1.22	.94	1.02	.51	.26	.21	.43

CALENDAR YEAR 1965 MAX 680 MIN 28 MEAN 66.1 CFSM .700 INCHES 9.51
WATER YEAR 1965-66 MAX 1,600 MIN 8.6 MEAN 58.2 CFSM .617 INCHES 8.38

Peak discharge (base, 1,900 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
2-13	1900	9.14	3,510				

1-5815. Bynum Run at Bel Air, Md.

Location.--Lat 39°32'30", long 76°19'50", on right bank 30 ft downstream from bridge on State Highway 22, 1.0 mile east of Bel Air, Harford County, and 8.5 miles upstream from mouth.

Drainage area.--8.52 sq mi.

Records available.--June 1944 to April 1951, July 1955 to September 1966. October 1950 to September 1955 at site 0.5 mile upstream, published as "near Bel Air"; records not equivalent.

Gage.--Digital water-stage recorder and concrete control. Datum of gage is 251.94 ft above mean sea level (Maryland State Roads Commission bench mark). Prior to Jan. 21, 1964, graphic water-stage recorder at same site and datum.

Average discharge.--17 years (1944-50, 1955-66), 10.2 cfs.

Extremes.--Maximum discharge during year, 856 cfs Feb. 13 (gage height, 5.54 ft); no flow for part of each day Sept. 8-10; minimum daily, 0.1 cfs Sept. 4, 5, 7-12.
1944-51, 1955-66: Maximum discharge, 3,620 cfs July 19, 1945 (gage height, 6.25 ft), from rating curve extended above 560 cfs on basis of contracted-opening measurement at gage height 6.18 ft; no flow for part of each day Sept. 8-10; minimum daily that of Sept. 4, 5, 7-12, 1966.

Remarks.--Records good. Prior to April 1955, small diversion above station for municipal supply of Bel Air; no diversion since April 1955, when pumping plant was put on standby basis.

Discharge, in cubic feet per second, water year October 1965 to September 1966

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	17	1.4	1.6	2.2	1.5	2.4	3.4	19	5.7	2.0	0.6	0.2
2	3.4	1.4	1.5	2.4	1.8	10	3.4	10	4.3	1.9	.5	.2
3	1.4	1.4	1.6	3.0	2.0	7.2	3.2	7.4	3.6	1.6	.5	.2
4	1.0	1.5	1.6	2.0	2.0	6.2	3.4	6.3	3.4	1.5	.5	.1
5	.8	1.4	1.6	1.9	2.0	6.2	3.2	5.7	3.0	2.4	1.1	.1
6	.8	1.5	1.5	1.3	1.9	5.6	3.0	5.4	3.0	2.2	.8	.2
7	8.2	1.5	1.5	4.8	2.0	5.4	3.0	4.6	3.0	1.6	1	.1
8	1.3	1.9	1.5	3.0	2.2	4.8	3.0	4.6	3.0	1.4	.6	.1
9	2.6	1.6	1.5	3.0	2.2	4.3	3.0	4.6	3.0	1.4	.6	.1
10	2.2	1.6	1.5	2.0	3.0	4.3	2.8	4.3	3.8	1.2	.6	.1
11	1.9	1.9	1.6	1.9	38	4.3	2.8	4.0	2.6	1.1	2.2	.1
12	1.9	1.6	1.6	1.6	32	4.3	6.0	4.3	2.4	1.1	.8	.1
13	1.8	1.9	3.2	1.6	34.3	4.6	4.6	4.3	2.4	1.1	.5	1.0
14	1.6	1.8	2.2	1.8	40	3.8	15	5.0	3.8	1.1	.5	150
15	1.2	1.6	1.9	1.6	14	4.0	6.8	4.3	2.8	1.4	1.1	7.4
16	1.6	2.2	1.8	1.6	14	3.4	5.4	3.8	2.4	1.4	.7	2.6
17	1.6	2.0	1.6	1.5	11	3.4	4.6	3.8	2.4	1.1	.6	1.5
18	1.5	1.6	1.6	1.4	6.6	3.4	4.3	4.3	2.3	.8	.4	1.0
19	1.5	1.5	1.6	1.5	6.0	3.8	4.0	36	2.6	.8	.3	1.0
20	1.5	1.6	1.5	1.6	4.3	3.6	3.8	6.6	2.3	1.0	.2	1.5
21	1.5	1.6	1.6	1.6	3.8	3.4	3.8	20	2.0	.7	.3	24
22	1.6	3.0	1.5	1.6	3.6	3.4	8.3	67	1.9	.6	11	5.4
23	1.6	2.2	1.6	4.0	3.6	3.4	6.0	6.6	1.9	.6	1.6	3.6
24	1.5	1.8	1.6	3.6	4.0	16	8.3	4.6	1.9	.6	.5	2.6
25	1.4	1.6	2.8	2.4	6.0	9.4	15	4.3	1.8	.6	.4	2.0
26	1.5	1.8	2.3	1.9	6.0	5.0	6.8	4.8	1.8	.6	.4	2.0
27	1.5	2.3	1.6	1.8	6.0	4.3	15	17	4.8	.6	.4	1.8
28	1.4	1.9	1.6	1.8	80	3.8	46	28	2.4	.6	.3	3.4
29	1.4	1.6	1.6	1.6		3.6	12	22	2.0	1.0	.3	12
30	1.4	1.6	1.6	1.2		3.6	25	5.7	1.9	.6	.2	6.0
31	1.5		2.0	1.4		3.6		6.8		.6	.2	
Total	156.6	52.3	53.8	76.3	642.5	176.1	276.3	335.1	84.2	35.2	29.7	230.4
Mean	5.05	1.74	1.74	2.46	22.9	5.68	9.21	10.8	2.81	1.14	.96	7.68
Cfsm	.593	.204	.204	.289	2.69	.667	1.08	1.27	.330	.134	.112	.901
In.	.68	.23	.23	.33	2.80	.77	1.21	1.46	.37	.15	.13	1.01

Calendar year 1965: Max 254 Min .7 Mean 6.94 Cfsm .815 In. 11.06
Water year 1965-66: Max 343 Min .1 Mean 5.89 Cfsm .691 In. 9.38

Peak discharge (base, 440 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
10- 7	1745	4.19	448	5-22	0045	4.22	455
2-13	1500	5.54	856	9-14	*1400	4.81	603

* About.

1-5820. Little Falls at Blue Mount, Md.

Location.--Lat 39°36'16", long 76°37'16", on left bank at downstream side of Pennsylvania Railroad bridge, 0.2 mile north of Blue Mount, Baltimore County, 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.

Records available.--June 1944 to September 1966.

Gage.--Digital water-stage recorder. Altitude of gage is 305 ft (from topographic map). Prior to Oct. 1, 1961, graphic water-stage recorder at same site and datum.

Average discharge.--22 years, 64.1 cfs.

Extremes.--Maximum discharge during year, 1,740 cfs Feb. 13 (gage height, 5.59 ft); minimum, 1.9 cfs Aug. 29 (gage height, 0.19 ft).
1944-66: 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, that of Aug. 29, 1966; minimum daily, 4.5 cfs Sept. 11, 1966.
Flood in August 1933 reached a stage of about 14 ft, from information by Pennsylvania Railroad.

Remarks.--Records fair. Slight diurnal fluctuation at low flow caused by mill above station.

Discharge, in cubic feet per second, water year October 1965 to September 1966

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	39	20	21	22	25	282	36	85	31	16	8.8	5.6
2	31	21	20	26	30	93	35	64	30	15	8.3	5.1
3	20	21	20	34	34	71	34	56	29	15	9.3	4.8
4	19	21	20	25	32	67	36	50	29	14	7.9	5.5
5	18	20	19	23	31	69	34	47	28	20	11	6.6
6	18	21	19	48	28	58	33	44	27	20	12	5.1
7	85	21	19	38	28	49	33	41	27	17	9.7	4.6
8	85	23	19	28	28	45	33	41	31	15	9.3	4.7
9	33	23	19	25	25	42	32	41	33	14	9.4	4.9
10	30	21	19	26	25	41	32	39	28	13	13	4.6
11	27	23	19	23	105	40	32	37	25	13	13	4.5
12	27	22	19	23	89	39	38	38	25	12	16	5.2
13	24	24	25	21	785	37	95	40	25	12	10	7.9
14	23	23	22	23	258	36	60	40	26	11	11	104
15	22	22	21	23	116	35	43	37	28	13	13	43
16	21	24	20	21	88	34	39	35	25	12	13	19
17	21	27	20	20	74	33	37	35	25	11	13	15
18	21	23	19	21	57	33	35	35	24	11	9.7	14
19	21	22	19	20	51	32	34	127	23	10	8.6	13
20	20	23	19	20	42	31	33	49	22	9.6	7.8	26
21	20	24	20	20	44	31	33	42	21	8.7	7.4	64
22	21	30	19	22	44	31	47	42	20	8.7	8.0	32
23	21	28	21	24	35	30	39	37	20	8.5	9.9	26
24	20	26	20	23	36	47	48	36	19	8.4	8.3	20
25	20	25	33	22	40	50	76	37	18	8.3	7.4	18
26	21	25	29	20	36	40	49	36	19	8.0	7.2	18
27	21	29	21	22	36	38	51	35	19	8.2	6.6	18
28	20	27	22	21	136	37	102	37	18	9.7	6.9	21
29	20	25	22	20	—	36	66	42	17	14	5.3	27
30	20	22	23	19	------	37	72	33	17	11	5.9	25
31	21	------	21	18	------	38	------	32	------	11	5.8	------
TOTAL	830	706	649	741	2,358	1,582	1,367	1,390	729	378.1	292.5	572.1
MEAN	26.8	23.5	20.9	23.9	84.2	51.0	45.6	44.8	24.3	12.2	9.44	19.1
CFSM	.507	.444	.395	.452	1.59	.964	.862	.847	.459	.231	.178	.361
IN	.58	.50	.46	.52	1.66	1.11	.96	.98	.51	.27	.21	.40

CALENDAR YEAR 1965 MAX 503 MIN 15 MEAN 36.1 CFSM .682 INCHES 9.26
WATER YEAR 1965-66 MAX 785 MIN 4.5 MEAN 31.8 CFSM .601 INCHES 8.15

Peak discharge (base, 1,000 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
2-13	1830	5.59	1,740				

1-5830. Slade Run near Glyndon, Md.

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

Drainage area.--2.09 sq mi.

Records available.--September 1947 to September 1966.

Gage.--Digital Water-stage recorder and concrete control. Altitude of gage is 420 ft (from topographic map). Prior to Oct. 1, 1961, graphic water-stage recorder at same site and datum.

Average discharge.--19 years, 2.18 cfs.

Extremes.--Maximum discharge during year, 119 cfs Feb. 13 (gage height, 2.76 ft) from rating curve extended as explained below; no flow many days in August and September.
1947-66: Maximum discharge, 485 cfs July 21, 1956 (gage height, 4.68 ft), from rating curve extended above 92 cfs by logarithmic plotting; no flow many days in August and September 1966.

Remarks.--Records good.

Discharge, in cubic feet per second, water year October 1965 to September 1966

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2.3	0.6	0.6	0.7	0.6	18	1.0	4.0	0.9	0.4	0.1	0
2	.7	.6	.6	.9	.6	2.9	1.0	2.2	.9	.4	.1	0
3	.5	.6	.6	.9	.6	2.0	.9	1.9	.9	.4	.1	0
4	.5	.6	.6	.8	.6	1.9	1.0	1.7	.9	.4	.1	0
5	.5	.6	.6	.8	.6	2.0	1.0	1.6	.8	.5	.2	.1
6	.5	.6	.6	1.5	.6	1.7	.9	1.5	.8	.6	.2	.1
7	17	.6	.6	1.1	.6	1.4	.9	1.4	.8	.5	.3	0
8	2.9	.7	.6	.9	.6	1.4	.9	1.4	.8	.4	.3	0
9	.9	.6	.6	.8	.6	1.3	.9	1.3	.8	.4	.2	0
10	.8	.6	.6	.8	.7	1.3	.9	1.3	.8	.4	.2	0
11	.7	.6	.6	.8	4.4	1.3	.9	1.3	.7	.3	.2	0
12	.7	.6	.6	.7	1.9	1.3	1.6	1.3	.7	.3	.3	.1
13	.7	.8	.9	.8	54	1.2	7.8	1.3	.7	.3	.2	.1
14	.6	.7	.7	.7	11	1.0	2.4	1.3	.8	.2	.2	18
15	.6	.6	.7	.7	2.8	1.1	1.5	1.2	.8	.3	.3	1.7
16	.6	.7	.7	.7	2.3	1.1	1.3	1.1	.7	.3	.2	.5
17	.6	.7	.7	.7	1.9	1.1	1.2	1.1	.7	.3	.2	.4
18	.6	.6	.7	.7	1.6	1.1	1.1	1.4	.6	.3	.1	.4
19	.6	.6	.7	.7	1.4	1.1	1.1	6.6	.7	.2	.1	.4
20	.6	.6	.7	.6	1.2	1.0	1.1	1.4	.6	.2	.1	2.5
21	.6	.7	.7	.6	1.1	1.0	1.1	1.2	.6	.2	.1	5.0
22	.6	.8	.8	.6	1.1	1.0	1.6	1.3	.6	.1	.1	2.5
23	.7	.7	.7	.6	1.1	1.0	1.4	1.1	.5	.1	.1	1.2
24	.6	.7	.7	.6	1.1	2.0	1.8	1.0	.5	.1	.1	.7
25	.6	.7	.9	.6	1.1	1.3	3.0	1.1	.5	.2	0	.6
26	.6	.7	.8	.6	1.1	1.1	1.7	1.1	.5	.1	0	.5
27	.6	.8	.9	.6	1.1	1.1	2.1	1.0	.6	.2	0	.5
28	.6	.7	.7	.6	12	1.0	5.4	1.1	.6	.2	0	.6
29	.6	.8	.8	.6	-	1.0	2.1	1.2	.5	.3	0	1.2
30	.6	.8	.7	.5	------	1.0	4.8	1.0	.5	.2	0	.7
31	.6	------	.6	.5	------	1.0	------	1.0	------	.2	0	------
Total	39.6	20.0	21.3	22.7	108.3	57.7	54.4	48.4	20.8	9.0	4.1	37.8
Mean	1.28	.67	.69	.73	3.87	1.86	1.81	1.56	.69	.29	.13	1.26
Cfsm	.612	.321	.330	.349	1.85	.890	.866	.746	.330	.139	.062	.603
In.	.70	.36	.38	.40	1.93	1.03	.97	.86	.37	.16	.07	.67

Calendar year 1965: Max 22 Min .4 Mean 1.41 Cfsm .675 In. 9.16
Water year 1965-66: Max 54 Min 0 Mean 1.22 Cfsm .584 In. 7.90

Peak discharge (base, 90 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
10-7	2030	2.65	106	2-13	1400	2.76	119

1-5835. Western Run at Western Run, Md.

Location.--39°30'38", long 76°40'37", on right bank 100 ft downstream from bridge on Western Run Road, 0.3 mile southeast of Western Run, Baltimore County, 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.

Records available.--September 1944 to September 1966.

Gage.--Digital water-stage recorder. Altitude of gage is 260 ft (from topographic map). Prior to Oct. 1, 1961, graphic water-stage recorder at same site and datum.

Average discharge.--22 years, 63.4 cfs.

Extremes.--Maximum discharge during year, 1,820 cfs Feb. 13 (gage height, 6.23 ft); minimum, 2.4 cfs Sept. 12 (gage height 0.41 ft).
1944-66: Maximum discharge, 5,590 cfs July 21, 1956 (gage height, 10.84 ft), from rating curve extended above 1,100 cfs on basis of slope-area measurements at gage heights 8.55 and 9.88 ft; minimum, that of Sept. 12, 1966.

Remarks.--Records fair.

Discharge, in cubic feet per second, water year October 1965 to September 1966

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	23	19	19	18	40	294	30	62	28	15	8.5	4.5
2	28	18	19	20	54	85	29	61	27	14	7.6	4.0
3	17	19	19	25	48	63	29	53	26	13	8.1	3.7
4	15	19	19	21	43	59	29	48	26	13	7.6	4.5
5	15	19	19	19	41	59	28	44	25	17	9.2	5.7
6	15	19	19	37	40	53	28	42	24	19	10	5.4
7	50	19	18	31	41	47	28	39	24	16	8.6	4.5
8	92	21	18	24	39	43	28	38	24	14	8.5	4.0
9	27	21	18	22	36	41	27	37	24	13	7.9	4.0
10	22	20	18	22	36	40	27	36	23	13	9.7	3.0
11	21	20	18	20	105	39	27	35	22	12	9.6	3.5
12	20	20	18	21	99	38	29	35	21	11	13	2.5
13	19	22	23	19	733	37	83	36	21	11	9.1	6.2
14	18	22	22	19	241	36	61	36	22	10	8.9	88
15	18	20	19	19	92	35	43	34	24	12	11	46
16	18	21	19	18	74	34	37	32	21	11	11	18
17	18	24	19	17	69	33	33	32	22	10	9.7	14
18	18	20	18	18	57	33	35	35	21	10	8.0	12
19	18	20	18	18	52	33	34	91	20	9.7	7.1	12
20	18	20	18	17	46	32	33	43	20	8.9	6.2	22
21	18	20	18	18	43	31	33	36	19	8.4	6.0	44
22	19	23	18	19	40	31	41	43	18	8.4	6.7	26
23	20	24	20	23	38	31	37	34	18	8.1	6.6	20
24	19	21	18	20	39	37	42	32	17	8.3	6.4	16
25	19	20	21	20	41	41	63	33	16	8.4	5.6	15
26	18	20	25	19	39	33	47	32	16	8.1	5.6	15
27	19	21	18	19	38	32	45	31	17	7.7	5.2	15
28	19	22	19	19	89	30	80	32	17	8.5	5.2	17
29	18	20	18	18	-	30	58	39	16	11	4.9	21
30	19	19	18	18	------	30	64	30	15	9.8	4.9	22
31	19	------	18	16	------	31	------	29	------	9.6	4.9	------
TOTAL	697	613	589	634	2,353	1,489	1,208	1,260	634	348.9	241.3	476.5
MEAN	22.5	20.4	19.0	20.5	84.0	48.0	40.3	40.6	21.1	11.3	7.78	16.0
CFSM	.376	.341	.318	.343	1.40	.803	.674	.679	.353	.189	.130	.268
IN	.43	.38	.37	.39	1.46	.93	.75	.78	.39	.22	.15	.30

CALENDAR YEAR 1965 MAX 309 MIN 12 MEAN 35.3 CFSM .590 INCHES 8.01
WATER YEAR 1965-66 MAX 733 MIN 2.5 MEAN 28.9 CFSM .483 INCHES 6.56

Peak discharge (base, 1,000 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
2-13	1700	6.23	1,820				

1-5835.8. Baisman Run at Broadmoor, Md.

Location.--Lat 39°28'45", long 76°40'42", on right bank at upstream side of bridge on Ivy Hill Road, 0.3 mile above mouth, 0.6 mile southwest of Broadmoor, Baltimore County, and 1¾ miles west of Cockeysville.

Drainage area.--1.47 sq mi.

Records available.--August 1964 to September 1966.

Gage.--Water-stage recorder. Altitude of gage is 330 ft (from topographic map).

Extremes.--Maximum discharge during year, 12 cfs Feb. 13 (gage height, 2.14 ft); no flow many days in August and September.

1964-66: Maximum discharge, 70 cfs Aug. 4, 1965 (gage height, 2.70 ft), from rating curve extended above 8 cfs on basis of slope-area measurement made prior to establishment of station at gage height 2.87 ft; no flow many days in August and September 1966.

Flood of July 3, 1964, reached a stage of 2.87 ft, from floodmarks (discharge 111 cfs from rating curve extended as explained above).

Remarks.--Records good.

Discharge, in cubic feet per second, water year October 1965 to September 1966

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1.0	0.4	0.4	0.4	0.4	3.2	0.7	2.4	0.8	0.2	0.1	0
2	.6	.4	.4	.6	.4	1.7	.7	2.0	.7	.2	.1	0
3	.4	.4	.4	.6	.4	1.4	.7	1.7	.7	.2	.1	0
4	.4	.4	.4	.5	.4	1.3	.7	1.5	.7	.2	.1	0
5	.3	.4	.4	.4	.4	1.4	.7	1.4	.7	1.0	.2	.1
6	.4	.4	.4	1.3	.4	1.1	.7	1.3	.6	.4	.2	.1
7	1.8	.4	.4	.7	.4	1.0	.7	1.2	.6	.3	.1	0
8	.9	.5	.4	.5	.4	.9	.6	1.2	.6	.2	.1	0
9	.6	.4	.4	.4	.5	.9	.6	1.2	.6	.2	.1	0
10	.5	.4	.4	.4	.6	.9	.6	1.1	.6	.2	.1	0
11	.4	.5	.4	.4	1.1	.9	.6	1.1	.5	.2	.3	0
12	.4	.4	.4	.4	1.0	.8	.9	1.1	.5	.2	.2	0
13	.4	.5	.6	.4	5.3	.8	2.5	1.1	.5	.2	.1	.1
14	.4	.5	.5	.4	2.6	.8	1.6	1.2	.6	.2	.2	2.8
15	.4	.4	.4	.4	1.6	.8	1.1	1.0	.6	.2	.2	.7
16	.4	.5	.4	.4	1.5	.7	.9	.9	.5	.2	.2	.3
17	.4	.5	.4	.4	1.3	.7	.9	.9	.5	.2	.2	.2
18	.4	.4	.4	.4	1.0	.7	.9	1.1	.5	.1	.1	.2
19	.4	.4	.4	.4	.9	.7	.8	1.9	.5	.1	.1	.2
20	.4	.4	.4	.4	.8	.7	.8	1.1	.4	.1	.1	.9
21	.4	.5	.4	.4	.7	.7	.8	1.1	.4	.1	.1	1.5
22	.5	.6	.4	.4	.7	.7	1.3	1.6	.4	.1	.1	.7
23	.5	.5	.4	.5	.7	.7	1.0	1.1	.4	.1	.1	.4
24	.4	.4	.4	.4	.7	1.1	1.3	1.0	.3	.1	.1	.4
25	.4	.4	.5	.4	.7	.9	2.4	1.0	.3	.1	.1	.4
26	.4	.4	.4	.4	.7	.7	1.4	1.0	.3	.1	.1	.4
27	.4	.6	.4	.4	.7	.7	1.5	1.0	.3	.1	.1	.4
28	.4	.5	.4	.4	2.1	.7	2.4	1.1	.3	.1	0	.4
29	.4	.4	.4	.4	-	.7	1.8	1.1	.2	.2	0	.6
30	.4	.4	.4	.4	------	.7	2.2	.8	.2	.1	0	.5
31	.4	------	.4	.3	------	.8	------	.8	------	.1	0	------
Total	15.5	13.3	12.8	14.2	28.4	29.8	33.8	38.0	14.8	6.0	3.6	11.3
Mean	.50	.44	.41	.46	1.01	.96	1.13	1.23	.49	.19	.12	.38
Cfsm	.340	.299	.279	.313	.687	.653	.769	.837	.333	.129	.082	.259
In.	.39	.34	.32	.36	.72	.75	.86	.96	.37	.15	.09	.29

Calendar year 1965: Max 4.5 Min 0.2 Mean .84 Cfsm .571 In. 7.80
Water year 1965-66: Max 5.3 Min 0 Mean .61 Cfsm .415 In. 5.60

Peak discharge (base 15 cfs).--No peak above base.

1-5845. Little Gunpowder Falls at Laurel Brook, Md.

Location.--Lat 39°30'18", long 76°25'56", on right bank 700 ft upstream from Laurel Brook, 0.4 mile southwest of Laurel Brook railroad station, Harford County, 1 mile downstream from Maryland and Pennsylvania Railroad bridge, 5 miles southwest of Bel Air, and 10½ miles upstream from mouth.

Drainage area.--36.1 sq mi.

Records available.--October 1926 to September 1966. Monthly discharge only for some periods, published in WSP 1302.

Gage.--Digital water-stage recorder. Datum of gage is 261.43 ft above mean sea level (city of Baltimore bench mark). Prior to Oct. 1, 1963, graphic water-stage recorder at same site and datum.

Average discharge.--40 years, 45.3 cfs.

Extremes.--Maximum discharge during year, 1,860 cfs Feb. 13 (gage height, 5.56 ft); minimum daily, 3.0 cfs Sept. 7-11 (during period of no gage-height record).
1926-66: Maximum discharge, 9,200 cfs Aug. 23, 1933 (gage height, 10.3 ft), from rating curve extended above 2,300 cfs on basis of slope-area measurements at gage heights 5.70, 6.15, and 10.3 ft; minimum recorded, 3.1 cfs Feb. 15, 1931, Mar. 15, 1932, Feb. 20, 1947, result of freezeup; minimum daily, that of Sept. 7-11, 1966.

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

Discharge, in cubic feet per second, water year October 1965 to September 1966

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	22	13	13	14	13	245	19	67	22	9.4	5.5	3.5
2	23	13	13	14	16	57	19	40	20	8.9	5.0	3.5
3	13	13	13	19	16	41	18	33	18	8.8	5.5	3.2
4	12	13	13	15	16	39	19	30	18	8.7	5.0	3.5
5	11	13	13	14	16	39	18	27	17	18	6.0	4.5
6	11	13	13	29	15	34	18	26	16	15	6.0	3.5
7	29	13	13	25	16	30	18	24	16	11	5.0	3.0
8	41	14	13	18	16	28	18	24	16	9.4	4.5	3.0
9	18	14	13	17	16	26	17	24	17	8.6	4.5	3.0
10	16	13	13	16	18	26	17	23	16	8.0	6.0	3.0
11	15	14	13	16	70	25	17	22	15	7.3	6.0	3.0
12	15	14	13	22	76	25	20	22	14	6.8	7.0	4.0
13	14	14	17	17	713	24	72	23	14	6.6	5.0	6.0
14	13	15	16	14	149	24	46	23	15	6.2	5.5	80
15	13	14	14	15	62	23	28	22	16	6.4	6.0	30
16	13	15	14	14	49	22	24	20	14	6.4	6.0	18
17	13	16	14	14	45	21	22	20	14	6.4	6.0	12
18	13	14	13	18	34	21	21	23	14	6.4	5.5	10
19	13	14	13	13	32	21	21	42	14	6.2	5.0	9.5
20	13	14	13	13	27	21	20	25	13	6.0	4.8	11
21	13	14	13	15	27	20	20	90	13	5.5	4.5	24
22	14	16	15	18	31	20	30	115	12	5.5	10	39
23	14	15	14	20	23	20	27	31	12	5.0	6.0	17
24	13	14	13	18	23	27	28	26	11	5.0	5.5	13
25	13	14	15	17	27	32	42	24	11	5.0	5.0	12
26	13	14	17	14	25	23	29	23	11	5.0	5.0	12
27	13	15	14	14	25	22	29	23	11	5.0	4.5	13
28	13	15	15	15	128	20	74	24	12	5.0	4.5	13
29	13	14	19	13	-	20	40	28	11	7.0	3.5	18
30	13	13	18	11	------	20	48	21	10	6.0	3.5	18
31	13	------	13	11	------	20	------	22	------	6.0	3.5	------
TOTAL	476	420	436	503	1,724	1,036	839	947	433	230.5	165.3	396.2
MEAN	15.4	14.0	14.1	16.2	61.6	33.4	28.0	30.5	14.4	7.44	5.33	13.2
CFSM	.427	.388	.391	.449	1.71	.925	.776	.845	.399	.206	.148	.366
IN	.49	.43	.45	.52	1.78	1.07	.86	.98	.45	.24	.17	.41

CALENDAR YEAR 1965 MAX 321 MIN 9.7 MEAN 25.2 CFSM .698 INCHES 9.48
WATER YEAR 1965-66 MAX 713 MIN 3.0 MEAN 20.8 CFSM .576 INCHES 7.84

Peak discharge (base, 1,000 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
2-13	1815	5.56	1,860	5-21	2400	4.79	1,160

Note.--No gage-height record July 11 to Sept. 16.

1-5851. Whitemarsh Run at White Marsh, Md.

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

Drainage area.--7.61 sq mi.

Records available.--February 1959 to September 1966.

Gage.--Water-stage recorder and concrete control. Altitude of gage is 40 ft (from topographic map).

Average discharge.--7 years, 8.60 cfs.

Extremes.--Maximum discharge during year, 823 cfs Feb. 13 (gage height, 4.48 ft) from rating curve extended as explained below; minimum daily, 0.1 cfs Sept. 11.
1959-66: Maximum discharge, 1,580 cfs Sept. 12, 1960 (gage height, 6.60 ft) from rating curve extended above 350 cfs on basis of computation of peak flow over broad-crested weir; no flow Mar. 20, 1965 result of regulation caused by construction work above station; minimum daily, that of 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 1965 to September 1966

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	12	1.2	1.5	1.8	1.2	73	2.8	17	3.0	1.1	1.0	0.6
2	3.0	1.2	1.5	3.1	1.2	11	2.4	8.6	2.4	.9	1.5	.6
3	1.5	1.2	1.5	3.2	1.2	7.3	2.4	6.5	2.2	.8	1.9	.3
4	1.0	1.4	1.5	2.0	1.2	7.7	2.8	4.7	2.0	7.8	1.4	.3
5	.9	1.2	1.5	1.6	1.5	7.3	2.4	4.4	2.0	7.0	2.3	.3
6	1.0	1.2	1.5	18	1.5	5.0	2.4	3.8	1.8	2.6	.7	.2
7	54	1.4	1.4	6.0	1.5	4.1	2.4	3.2	1.8	1.4	.4	.4
8	13	2.0	1.5	2.6	2.0	3.5	2.6	3.2	2.9	.9	1.2	.8
9	4.2	1.6	1.6	2.0	5.0	3.5	2.2	3.2	2.9	.8	2.1	.5
10	3.0	1.5	1.6	1.5	50	3.5	2.2	3.0	1.8	.7	2.5	.5
11	2.2	2.0	1.6	1.4	54	3.5	2.2	2.8	1.5	.5	12	1
12	2.2	1.8	1.6	1.5	32	3.2	13	3.0	1.4	.5	3.0	.9
13	1.6	2.2	5.5	1.4	319	3.2	7.0	3.0	1.4	.5	.8	1.7
14	1.5	1.8	2.6	1.5	41	3.2	19	4.2	3.2	.4	.6	144
15	1.6	1.6	2.0	1.5	13	3.2	7.3	2.8	2.2	.7	.8	14
16	1.6	2.8	1.8	1.2	19	2.8	5.4	2.6	1.4	.4	1.1	2.8
17	1.4	2.2	1.8	1.4	11	2.8	4.4	2.4	1.4	.4	.9	1.6
18	1.2	1.5	1.8	1.2	6.5	3.0	4.1	7.1	1.2	.4	.9	1.4
19	1.2	1.5	1.6	1.4	5.8	3.2	3.5	40	1.8	.4	.9	1.4
20	1.4	1.5	1.5	1.5	3.5	2.8	4.5	5.0	1.2	2.0	.3	17
21	1.5	1.6	1.4	1.4	3.5	2.6	3.5	3.8	1.0	3.5	.3	52
22	1.8	4.3	1.2	1.4	3.2	2.6	8.4	7.9	.8	1.3	56	15
23	2.2	2.4	1.2	30	3.2	2.6	4.7	3.0	.8	.2	6.9	5.0
24	1.4	1.8	1.2	7.2	3.0	15	6.9	2.6	.7	.2	1.5	2.4
25	1.2	1.6	2.4	3.5	15	6.8	24	2.6	.5	.6	.9	2.2
26	1.2	1.6	1.5	1.8	14	3.8	6.9	2.8	.6	1.1	.7	2.2
27	1.4	3.1	1.2	1.2	12	3.2	11	14	1.4	1.4	.5	5.4
28	1.2	2.2	1.2	1.2	94	2.8	37	11	1.4	1.4	.5	5.7
29	1.2	1.6	1.2	1.2	-	2.8	9.6	19	7.1	.9	.6	23
30	1.2	1.6	1.5	1.0	------	3.0	36	3.8	1.6	.4	.6	6.1
31	1.4	------	1.6	1.0	------	3.5	------	3.5	------	.3	.6	------
Total	125.2	54.6	52.5	106.7	719.0	205.5	306.0	204.5	80.6	41.5	105.4	308.4
Mean	4.04	1.82	1.69	3.44	25.7	6.63	10.2	6.60	2.69	1.34	3.40	10.3
Cfsm	.531	.239	.222	.452	3.38	.871	1.34	.867	.353	.176	.477	1.35
In.	.61	.27	.26	.52	3.51	1.00	1.50	1.00	.39	.20	.52	1.51

Calendar year 1965: Max 157 Min .2 Mean 6.21 Cfsm .816 In. 11.07
Water year 1965-66: Max 319 Min .1 Mean 6.33 Cfsm .832 In. 11.29

Peak discharge (base, 390 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
2-13	1400	4.48	823	9-14	1845	4.00	655
8-22	1700	3.38	438				

1-5852. West Branch Herring Run at Idlewylde, Md.

Location.--Lat 39°22'25", long 76°35'35", on left bank at downstream side of highway bridge on Regester Avenue 0.1 mile north of Baltimore city limits, 1 mile upstream from mouth, and 1.3 miles east of U. S. Highway 111 in Idlewylde, Baltimore County.

Drainage area.--2.13 sq mi.

Records available.--July 1957 to May 1965, January to September 1966.

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

Average discharge.--7 years (1958-1964), 2.16 cfs.

Extremes.--Maximum discharge during water year, 237 cfs Sept. 14 (gage height, 3.21 ft), from rating curve extended above 90 cfs by logarithmic plotting; minimum daily, 0.1 cfs Aug. 26-29, Sept. 2, 4.
1957-66: Maximum discharge, 602 cfs July 6, 1958 (gage height, 5.78 ft, datum then in use), from rating curve extended above 110 cfs on basis of computation of peak flow through culvert; no flow Aug. 14-24, 1957.

Remarks.--Records fair. Slight diurnal fluctuation (occasionally extensive) caused by ready-mixed concrete plant above station.

Discharge, in cubic feet per second, January to September 1966

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1				0.6	0.7	4.5	0.8	2.3	0.7	0.5	0.2	0.2
2				1.2	.7	1.6	.8	1.8	.7	.4	.8	.1
3				1.0	.7	1.2	.8	1.2	.6	.4	.3	.2
4				.7	.7	2.1	.8	1.0	.6	.9	.2	.1
5				.6	.7	1.8	.8	1.0	.6	1.4	2.3	.2
6				5.0	.8	1.0	.7	.9	.6	.5	.2	.7
7				1.3	.8	1.0	.7	.8	.6	.3	.2	.4
8				.7	.9	1.0	.8	.8	1.2	.3	.2	.4
9				.7	1.0	.9	.7	.8	.6	.3	.5	.3
10				.6	4.2	.8	.6	.8	.5	.3	.6	.2
11				.6	12	.8	.6	.7	.5	.3	1.6	.2
12				.6	6.7	.8	6.4	.8	.5	.3	.2	.3
13				.6	4.3	.8	11	1.0	.5	.3	.2	1.0
14				.6	4.8	1.2	2.3	1.3	1.5	.3	.2	4.4
15				.5	2.5	.8	1.0	.8	.5	.8	.4	2.0
16				.5	4.2	.8	.8	.7	.4	.3	.2	.7
17				.5	1.6	.8	.8	.7	.4	.2	.4	.2
18				.5	1.2	.8	1.1	1.4	.4	.3	.5	.2
19				.5	1.1	1.1	.8	3.0	.8	.3	.3	.5
20				.5	.9	.8	2.4	1.5	.5	.2	.3	11
21				.5	.8	.7	1.0	1.2	.5	.2	.3	12
22				.6	.8	.7	3.4	3.0	.5	.2	.3	5.6
23				6.7	.8	.7	1.0	1.4	.5	.2	.3	1.1
24				1.6	1.8	6.6	1.5	1.0	.5	.2	.6	.7
25				.8	4.8	1.1	3.3	.9	.5	.2	.2	.8
26				.8	2.4	.9	.9	.9	.5	.2	.1	.6
27				.7	1.2	.8	2.7	1.5	2.8	.9	.1	3.6
28				.7	8.0	.8	2.5	1.3	3.0	.4	.1	2.5
29				.7	-	.8	1.2	1.8	1.5	.3	.1	6.2
30				.7	------	.8	7.0	1.0	.6	.2	.2	.9
31		------		.7	------	1.5	------	.9	------	.2	.2	-------
Total				32.3	109.8	40.0	59.2	38.2	23.6	11.8	12.3	96.9
Mean				1.04	3.92	1.29	1.97	1.23	.79	.38	.40	3.23
Cfsm				.488	1.84	.606	.925	.577	.371	.178	.188	1.52
In.				.56	1.92	.70	1.03	.67	.41	.21	.21	1.69

Calendar year 1965: Max - Min - Mean - Cfsm - In. -
Water year 1965-66: Max - Min - Mean - Cfsm - In. -

Peak discharge (base, 230 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
9-14	1415	3.21	237	9-22	1530	3.18	231

1-5853. Stemmers Run at Rossville, Md.

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

Drainage area.--4.94 sq mi.

Records available.--December 1958 to September 1966.

Gage.--Digital water-stage recorder and concrete control. Prior to Nov. 4, 1963, graphic water-stage recorder at same site and datum. Altitude of gage is 20 ft (from topographic map).

Average discharge.--7 years, 5.73 cfs.

Extremes.--Maximum discharge during year, 858 cfs Sept. 14 (gage height, 5.84 ft), from rating curve extended above 500 cfs on basis of contracted-opening measurement at gage height 7.86 ft; minimum daily, 0.1 cfs many days in July, August, and September.
1959-66: Maximum discharge, 1,720 cfs Aug. 4, 1965 (gage height, 7.86 ft), from rating curve extended as explained above; minimum daily, 0.1 cfs many days in 1962, 1964, and 1966.

Remarks.--Records good.

Discharge, in cubic feet per second, water year October 1965 to September 1966

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	9.4	0.6	0.5	0.7	1.3	14	1.3	9.3	1.7	0.6	0.2	0.4
2	1.3	.6	.5	2.1	1.0	4.2	1.3	4.6	1.3	.5	.1	.2
3	.6	.7	.6	1.7	1.0	3.3	1.2	3.3	1.3	.4	.5	.2
4	.5	.6	.6	.7	1.2	3.8	1.5	2.7	1.2	6.1	.2	.1
5	.4	.6	.6	.6	1.0	3.3	1.3	2.4	1.2	19	1.9	.1
6	.5	.6	.6	16	1.0	2.4	1.2	2.2	1.0	1.5	.5	.1
7	47	.7	.5	2.4	1.0	2.1	1.3	2.1	1.0	.7	.3	.1
8	3.1	1.0	.5	1.0	1.2	1.9	1.3	2.1	1.0	.5	.2	.1
9	1.7	.7	.5	.7	2.1	1.7	1.2	1.9	1.2	.4	.3	.1
10	1.2	.6	.5	.9	9.3	1.7	1.2	1.7	1.3	.4	2.4	.1
11	.7	.9	.6	.6	34	1.7	1.2	1.7	.9	.3	20	.1
12	1.0	.7	.6	.6	23	1.7	14	1.7	.7	.3	1.0	.1
13	.7	1.3	3.8	.6	278	1.7	61	1.7	.9	.2	.3	.1
14	.7	.9	.9	.7	17	1.9	8.9	2.7	2.4	.2	.3	165
15	.7	.6	.6	.7	5.4	1.7	3.6	1.7	1.0	.4	.4	4.6
16	.7	1.7	.6	.6	12	1.3	2.7	1.3	.7	.3	.3	1.9
17	.6	.9	.6	.6	5.0	1.3	2.1	1.3	.7	.2	.2	1.3
18	.6	.6	.6	.5	3.1	1.3	1.9	6.4	.7	.2	.2	1.3
19	.6	.5	.6	.6	2.7	1.9	1.7	4.2	1.3	.2	.1	1.3
20	.6	.5	.6	1.2	2.1	1.3	2.4	2.7	.6	.2	.1	19
21	.6	.6	.6	.6	2.1	1.3	1.7	4.2	.5	.1	.1	47
22	.9	2.7	.5	.6	1.7	1.3	5.4	8.8	.4	.1	38	4.6
23	1.0	.9	.6	24	1.7	1.3	2.4	2.2	.4	.1	1.7	2.7
24	.6	.6	.6	3.1	2.7	11	3.1	1.9	.4	.1	.9	1.9
25	.5	.5	4.2	1.7	12	2.9	20	1.9	.3	.1	.6	1.9
26	.6	.5	1.0	.9	9.3	1.9	3.3	2.7	.4	.1	.5	1.9
27	.6	1.7	.5	1.2	6.4	1.5	8.2	12	14	.2	.4	4.7
28	.6	.6	.6	1.0	121	1.3	31	5.7	19	1.3	.4	7.1
29	.5	.5	.6	1.3	-	1.3	4.6	14	2.4	.4	.4	19
30	.6	.5	.6	1.7	------	1.3	35	2.1	.9	.2	.4	3.8
31	.7	------	.6	1.7	------	2.1	------	2.1	------	.2	.4	------
Total	79.8	24.5	25.3	71.3	559.3	81.4	227.0	153.1	60.8	35.5	73.3	290.8
Mean	2.57	.82	.82	2.30	20.0	2.63	7.57	4.94	2.03	1.15	2.36	9.69
Cfsm	.520	.166	.166	.466	4.05	.532	1.53	1.00	.411	.233	.478	1.96
In.	.60	.18	.19	.54	4.21	.61	1.71	1.15	.46	.27	.55	2.19

Calendar year 1965: Max 135 Min .3 Mean 4.17 Cfsm .844 In. 11.45
Water year 1965-66: Max 278 Min .1 Mean 4.61 Cfsm .933 In. 12.66

Peak discharge (base, 400 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
2-13	1300	5.59	793	8-22	1515	5.09	663
2-28	1445	4.15	424	9-14	1600	5.84	858
6-28	2115	4.21	438				

1-5854. Brien Run at Stemmers Run, Md.

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

Drainage area.--1.97 sq mi.

Records available.--May 1958 to September 1966.

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

Average discharge.--8 years, 1.96 cfs.

Extremes.--Maximum discharge during year, 251 cfs Sept. 14 (gage height, 3.47 ft); minimum, 0.2 cfs several days in June, August, and September.
1958-66: Maximum discharge, 506 cfs Sept. 12, 1960 (gage height, 5.03 ft); from rating extended above 180 cfs on basis of logarithmic plotting and velocity-area study; no flow at times many years.

Remarks.--Records fair.

Discharge, in cubic feet per second, water year October 1965 to September 1966

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1.5	0.4	0.4	0.5	0.5	11	0.4	4.7	0.6	0.4	0.3	0.3
2	.5	.4	.4	.8	.5	1.7	.4	1.8	.5	.4	.3	.3
3	.4	.4	.4	.8	.5	1.0	.4	1.1	.5	.4	.3	.3
4	.3	.4	.4	.6	.5	1.0	.4	.8	.4	.4	.3	.3
5	.3	.4	.4	.5	.5	1.0	.4	.6	.4	3.9	.4	.3
6	.3	.4	.4	5.9	.6	.7	.4	.6	.4	1.0	.4	.3
7	14	.4	.4	1.2	.5	.6	.4	.5	.4	.7	.3	.2
8	2.0	.4	.4	.7	.6	.6	.4	.4	.4	.5	.3	.2
9	.6	.4	.4	.5	.8	.6	.4	.4	.4	.4	.8	.3
10	.4	.4	.4	.5	3.0	.6	.4	.4	.5	.4	1.8	.3
11	.4	.4	.4	.5	12	.5	.3	.4	.4	.4	3.8	.2
12	.4	.4	.4	.4	7.4	.5	4.1	.4	.4	.4	.7	.2
13	.4	.5	1.4	.4	93	.4	20	.4	.4	.4	.3	.3
14	.3	.4	.6	.4	8.4	.4	4.8	.7	.6	.4	.3	45
15	.3	.4	.5	.4	2.2	.4	1.6	.4	.4	.4	.3	3.2
16	.3	.6	.4	.4	4.3	.4	.8	.4	.4	.4	.3	1.2
17	.3	.6	.4	.4	2.2	.4	.6	.4	.3	.3	.3	.6
18	.3	.4	.4	.4	1.0	.4	.5	3.0	.3	.3	.2	.5
19	.3	.4	.5	.4	.8	.4	.5	9.6	.8	.4	.2	.4
20	.3	.4	.5	.4	.6	.4	.5	1.2	.3	.3	.2	5.3
21	.3	.4	.4	.4	.5	.4	.5	.7	.3	.3	.2	15
22	.4	1.1	.4	.4	.5	.4	1.4	9.0	.3	.3	1.9	2.3
23	.4	.6	.5	12	.5	.4	.8	1.1	.3	.3	1.7	1.1
24	.4	.4	.5	1.5	.7	3.6	.8	.6	.2	.3	.8	.6
25	.4	.4	2.1	.8	6.0	1.1	8.5	.5	.2	.3	.4	.5
26	.4	.4	.8	.6	4.9	.6	1.6	.5	.2	.3	.3	.5
27	.6	.8	.5	.5	2.8	.5	2.2	2.6	2.2	.3	.2	.9
28	.4	.5	.5	.5	25	.5	11	1.9	5.0	.4	.2	1.9
29	.4	.4	.5	.5	-	.4	1.8	4.2	1.0	.4	.2	4.1
30	.4	.4	.5	.6	------	.4	14	.8	.5	.3	.2	1.2
31	.4	------	.5	.5	------	.5	-----	.8	------	.3	.2	------
Total	28.1	13.9	16.7	34.4	180.8	31.8	80.3	50.9	19.0	15.7	35.2	87.8
Mean	.91	.46	.54	1.11	6.46	1.03	2.68	1.64	.63	.51	1.14	2.93
Cfsm	.462	.234	.274	.563	3.28	.523	1.36	.832	.320	.259	.579	1.49
In.	.53	.26	.32	.65	3.41	.60	1.52	.96	.36	.30	.66	1.66

Calendar year 1965: Max 46 Min 0 Mean 1.46 Cfsm .741 In. 10.08
Water year 1965-66: Max 93 Min .2 Mean 1.63 Cfsm .827 In. 11.22

Peak discharge (base, 120 230 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
2-13	1530	3.38	239	9-14	1745	3.47	251
8-22	1700	2.97	186				

1-5855. Cranberry Branch near Westminster, Md.

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

Drainage area.--3.29 sq mi.

Records available.--September 1949 to September 1966.

Gage.--Digital water-stage recorder and concrete control. Altitude of gage is 670 ft (from topographic map). Prior to Apr. 7, 1964, graphic water-stage recorder at same site and datum.

Average discharge.--17 years, 3.35 cfs (unadjusted for storage).

Extremes.--Maximum discharge during year, 95 cfs Feb. 13 (gage height, 3.06 ft); minimum daily, 0.3 cfs Sept. 16 (regulated).
1949-66: Maximum discharge, 720 cfs July 4, 1951 (gage height, 5.14 ft, from high-water mark in well), from rating curve extended above 200 cfs; minimum daily, that of Sept. 16, 1966.
Flood of July 12, 1949, reached a stage of 5.2 ft, from floodmarks (discharge, 750 cfs).

Remarks.--Records good. Flow regulated by Cranberry Reservoir, 1 mile above station, since August 1957 (capacity, 113,700,000 gal).

Discharge, in cubic feet per second, water year October 1965 to September 1966

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	3.1	1.0	1.1	1.1	0.60	14	0.80	5.2	1.8	1.3	1.4	1.8
2	1.5	1.1	1.1	1.7	.70	3.3	1.4	3.6	1.8	1.5	1.2	1.7
3	1.1	1.1	1.1	2.1	.70	1.6	.40	3.1	1.7	1.3	1.1	1.6
4	1.0	1.1	1.1	1.4	.70	1.1	.80	2.7	1.6	1.3	1.3	1.3
5	1.0	1.0	1.1	1.3	.70	1.0	1.0	2.6	1.5	1.9	1.4	1.0
6	1.0	1.1	1.1	2.0	.70	.80	.80	1.8	1.5	1.4	1.0	1.3
7	8.3	1.1	1.0	1.0	.70	1.2	1.4	2.2	1.5	1.2	1.0	1.7
8	2.3	1.2	1.0	1.6	.80	2.5	.70	2.2	1.5	1.1	1.5	1.3
9	.80	1.1	1.1	1.3	1.2	2.4	1.4	1.7	1.5	1.0	1.5	1.6
10	.90	1.1	1.1	1.3	1.4	1.3	.40	2.2	1.4	1.0	1.3	1.8
11	1.1	1.1	1.1	1.2	4.7	.50	.70	2.1	1.3	1.0	2.1	1.2
12	.80	1.1	1.1	1.1	3.2	.50	2.0	2.2	1.3	1.4	1.1	1.3
13	.60	1.2	1.8	1.1	37	.50	5.7	2.3	1.4	1.5	1.2	1.1
14	1.2	1.1	1.2	1.2	8.4	.50	1.7	2.2	1.7	1.6	.90	11
15	1.2	1.1	.90	1.1	2.7	.90	.80	2.0	1.6	1.6	1.2	.70
16	1.2	1.3	.90	1.1	2.5	1.1	.70	2.0	1.4	.90	1.2	.30
17	1.1	1.4	.80	1.1	1.8	.80	1.5	1.5	1.4	1.1	1.2	.40
18	1.1	1.1	.80	1.0	1.7	1.4	1.6	1.5	1.4	1.2	1.3	1.2
19	1.1	1.1	.80	1.0	1.5	1.5	2.0	2.1	1.4	1.4	1.3	1.2
20	1.1	1.1	.80	1.0	.50	.40	2.0	1.2	1.3	1.2	1.6	1.4
21	1.1	1.2	1.1	1.0	1.0	.80	2.2	1.9	1.2	1.2	.90	3.6
22	1.2	1.4	1.0	1.1	2.0	1.4	2.1	1.9	1.3	1.4	1.3	2.4
23	1.2	1.2	1.1	1.0	1.0	1.0	1.8	1.8	1.2	1.4	1.3	1.6
24	1.1	1.1	1.1	1.0	.80	1.8	2.8	1.8	1.3	1.2	1.3	1.3
25	1.1	1.1	1.8	.90	2.2	1.0	3.5	1.6	1.2	1.4	1.7	1.2
26	1.1	1.1	1.4	.80	2.1	.60	2.5	1.9	1.3	1.8	1.5	1.2
27	1.1	1.5	1.1	.70	2.1	.50	3.4	2.1	1.5	1.8	1.5	1.3
28	1.1	1.2	1.1	.60	8.1	.90	6.0	3.3	1.3	1.3	1.2	1.6
29	1.1	1.1	1.1	.50	—	1.0	2.8	3.1	1.2	1.1	1.7	1.2
30	1.1	1.1	1.1	.50	------	.80	5.6	2.0	1.2	1.1	1.6	.90
31	1.1	------	1.1	.50	------	1.3	------	1.9	------	.80	1.8	------
TOTAL	43.80	34.5	34.00	34.30	91.50	48.40	60.50	69.7	42.7	40.40	41.60	51.20
MEAN	1.41	1.15	1.10	1.11	3.27	1.56	2.02	2.25	1.42	1.30	1.34	1.71

CALENDAR YEAR 1965 MAX 23 MIN .60 MEAN 1.76
WATER YEAR 1965-66 MAX 37 MIN .30 MEAN 1.62

Peak discharge (base, 80 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
2-13	1415	3.06	95				

Note.--Where daily discharge is less than 1.0 cfs the zero in the hundredths column is not significant.

1-5860. North Branch Patapsco River at Cedarhurst, Md.

Location.--Lat 39°30'00", long 76°53'00", on left bank at downstream side of private footbridge at Cedarhurst, Carroll County, 0.8 mile downstream from Roaring Run, 8 miles southeast of Westminster, and 16½ miles upstream from mouth.

Drainage area.--56.6 sq mi.

Records available.--September 1945 to September 1966.

Gage.--Digital water-stage recorder and concrete control. Altitude of gage is 425 ft (from topographic map). Prior to Oct. 1, 1961, graphic water-stage recorder at same site and datum.

Average discharge.--21 years, 59.6 cfs.

Extremes.--Maximum discharge during year, 2,150 cfs Feb. 13 (gage height, 6.54 ft); minimum, 1.9 cfs Sept. 10 (gage height 1.13 ft), result of filling pond above station; minimum daily 3.1 cfs Sept. 10, 12.
1945-66: Maximum discharge, 4,130 cfs Aug. 13, 1955 (gage height, 10.38 ft), from rating curve extended above 1,700 cfs by logarithmic plotting; minimum, that of Sept. 10, 1966, result of filling pond above station; minimum daily, that of 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 1.36 cfs diverted above station for municipal supply of Westminster; sewage effluent discharged into Little Pipe Creek.

Discharge, in cubic feet per second, water year October 1965 to September 1966

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	30	15	15	16	14	416	28	110	29	11	6.4	3.8
2	29	14	15	20	15	109	27	73	27	11	5.7	3.6
3	14	14	15	31	17	79	26	61	26	11	6.2	3.4
4	12	14	15	21	16	74	28	54	24	11	5.3	4.3
5	11	14	15	18	15	76	27	48	23	20	6.7	5.6
6	11	14	15	48	14	62	25	45	23	25	7.8	4.3
7	167	14	14	35	15	52	25	40	23	15	7.0	3.5
8	109	17	14	20	16	45	25	39	23	13	5.8	3.4
9	27	16	14	15	17	43	25	38	25	11	6.2	3.4
10	25	15	14	20	17	41	25	36	22	11	11	3.1
11	22	16	14	17	80	39	23	33	20	10	11	3.6
12	22	15	15	14	93	37	28	32	19	10	18	3.1
13	18	15	22	15	934	39	121	35	19	9.0	7.9	4.1
14	17	16	19	17	263	36	75	33	20	9.0	8.1	351
15	17	15	16	16	102	35	47	31	25	10	9.6	74
16	16	16	15	15	84	34	39	29	19	9.0	9.0	22
17	16	20	15	14	79	33	36	28	21	8.0	10	15
18	15	16	14	12	56	32	35	30	19	7.5	7.3	13
19	15	15	15	13	52	31	33	118	18	7.5	6.4	13
20	15	15	14	14	40	29	32	42	18	7.0	6.0	36
21	15	15	14	14	35	28	30	36	16	6.6	6.1	101
22	16	19	13	13	30	29	53	36	15	5.9	5.4	39
23	17	18	15	16	30	28	39	32	14	6.1	5.6	27
24	16	16	15	15	30	50	44	29	14	6.6	5.3	19
25	16	15	21	15	36	48	71	35	13	6.0	4.7	18
26	15	16	24	15	32	33	46	30	13	5.8	4.6	17
27	15	19	15	15	34	32	45	32	15	5.8	4.3	17
28	15	19	14	15	126	30	119	58	17	6.4	4.7	19
29	14	16	14	13	-	29	70	69	14	10	4.0	31
30	15	15	14	12	------	29	82	35	12	8.2	4.1	26
31	15	------	16	12	------	31	------	31	------	7.9	4.1	------
TOTAL	777	474	480	546	2,292	1,709	1,329	1,378	586	301.3	214.3	887.2
MEAN	25.1	15.8	15.5	17.6	81.9	55.1	44.3	44.5	19.5	9.72	6.91	29.6
CFSM	.444	.279	.274	.311	1.45	.974	.783	.786	.345	.172	.122	.523
IN	.51	.31	.32	.36	1.51	1.12	.87	.91	.39	.20	.14	.58

CALENDAR YEAR 1965 MAX 438 MIN 9.1 MEAN 31.1 CFSM .550 INCHES 7.45
WATER YEAR 1965-66 MAX 934 MIN 3.1 MEAN 30.1 CFSM .532 INCHES 7.21

Peak discharge (base, 1,000 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
2-13	1600	6.54	2,150				

1-5875. South Branch Patapsco River at Henryton, Md.

Location.--Lat 39°21'05", long 76°54'50", on right bank at downstream side of bridge on State Highway 101 at Henryton, Carroll County, 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.

Records available.--August 1948 to September 1966.

Gage.--Digital water-stage recorder and concrete control. Datum of gage is 289.15 ft above mean sea level, datum of 1929. Prior to Oct. 1, 1961, graphic water-stage recorder at same site and datum.

Average discharge.--18 years, 64.8 cfs.

Extremes.--Maximum discharge during year, 2,640 cfs Sept. 14 (gage height, 7.73 ft); minimum, 0.4 cfs Sept. 9-12.

1948-66: 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, that of Sept. 9-12, 1966.

Remarks.--Records good. Records of chemical analyses for the water year 1966 are published in Part 2 of this report.

Discharge, in cubic feet per second, water year October 1965 to September 1966

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	29	15	16	17	12	389	30	132	35	12	6.9	4.7
2	33	15	16	19	13	142	29	93	33	12	6.1	4.2
3	15	15	16	25	13	100	28	74	31	12	6.1	1.2
4	13	15	16	20	13	81	30	62	29	11	6.2	.50
5	13	15	16	18	13	76	28	55	27	15	9.0	.50
6	13	15	16	45	13	69	27	51	26	25	9.8	.50
7	195	16	15	36	14	59	26	45	26	17	7.8	1.7
8	111	20	15	25	15	51	25	43	33	13	7.4	.80
9	32	20	15	18	17	46	25	41	42	12	7.3	.40
10	24	16	15	20	17	42	25	40	27	12	8.1	.40
11	22	17	15	17	41	38	25	37	24	12	9.0	.40
12	20	17	16	15	63	36	34	38	22	12	11	.40
13	19	17	20	16	819	36	156	40	22	11	8.1	1.0
14	17	17	18	17	303	34	104	42	23	10	7.4	938
15	17	16	16	16	122	34	60	38	28	11	8.8	243
16	17	17	16	15	95	34	50	34	22	11	8.8	48
17	16	18	16	14	89	33	44	33	23	9.8	11	28
18	17	15	16	14	63	33	40	41	21	9.6	8.1	21
19	16	15	16	14	56	33	38	137	19	9.2	6.9	18
20	16	15	15	15	47	31	36	59	18	9.0	6.1	50
21	15	16	15	15	40	31	36	44	16	8.3	5.6	100
22	18	19	13	14	40	31	44	83	15	7.8	5.6	60
23	20	20	16	20	37	31	41	44	15	7.1	6.4	40
24	17	17	16	17	37	49	44	38	15	6.9	5.9	30
25	16	16	20	16	42	56	68	41	14	6.8	4.7	25
26	16	16	22	14	39	38	50	38	14	6.8	4.4	25
27	16	20	16	13	37	34	47	36	14	6.4	3.9	25
28	15	22	16	13	136	32	116	39	13	8.3	3.4	30
29	15	17	16	12	-	31	74	109	14	9.6	2.5	40
30	15	16	17	11	------	31	108	46	13	8.3	4.4	35
31	16	------	17	11	------	31	------	38	------	7.8	4.7	------
TOTAL	834	505	504	552	2,246	1,792	1,488	1,691	674	329.7	211.4	1,772.70
MEAN	26.9	16.8	16.3	17.8	80.2	57.8	49.6	54.5	22.5	10.6	6.82	59.1
CFSM	.418	.261	.253	.276	1.25	.898	.770	.846	.349	.165	.106	.918
IN	.48	.29	.29	.32	1.30	1.03	.86	.98	.39	.19	.12	1.02

CALENDAR YEAR	1965	MAX	705		MIN	9.4		MEAN	41.4	CFSM	.643	INCHES 8.73
WATER YEAR	1965-66	MAX	938		MIN	.40		MEAN	34.5	CFSM	.536	INCHES 7.28

Peak discharge (base, 950 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
10-'7	2100	4.26	1,110	9-14	1900	7.73	2,640
2-13	1700	5.61	1,700				

Note.--Where daily discharge is less than 1.0 cfs the zero in the hundredths column is not significant.

1-5890. Patapsco River at Hollofield, Md.

Location.--Lat 39°18'36", long 76°47'39", on right bank at downstream side of highway bridge at Hollofield, Howard County, 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.

Records available.--May 1944 to September 1966.

Gage.--Digital water-stage recorder. Altitude of gage is 190 ft (from topographic map). Prior to Oct. 1, 1961, graphic water-stage recorder at same site and datum.

Extremes.--Maximum discharge during year, 2,980 cfs Feb. 13 (gage height, 4.86 ft); minimum 9.9 cfs Sept. 7, 8 (gage height, 0.87 ft).
1944-66: 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 beginning July 22, 1954 (usable capacity, 42,070,000,000 gal; dead storage, 1,260,000,000 gal). Diversion 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.

Discharge, in cubic feet per second, water year October 1965 to September 1966

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	43	32	33	31	36	658	55	259	64	24	21	22
2	86	31	32	36	42	251	54	172	62	23	19	19
3	37	31	37	47	42	158	50	142	57	22	18	17
4	28	32	34	40	30	139	54	118	55	21	18	16
5	26	31	33	34	37	147	52	106	52	29	30	16
6	26	32	32	72	33	123	49	98	50	58	22	14
7	196	33	32	69	37	103	49	87	50	37	15	10
8	358	37	31	45	37	92	49	82	52	29	16	14
9	57	42	32	32	38	85	47	80	89	23	27	19
10	40	35	32	32	40	80	47	78	58	21	31	20
11	35	34	32	32	123	78	47	72	49	20	21	19
12	32	35	33	30	203	76	60	70	44	22	28	20
13	30	35	38	28	1,340	72	284	76	45	20	17	20
14	28	37	42	28	595	72	206	78	47	18	14	912
15	28	34	36	30	223	70	120	72	55	20	14	516
16	29	35	34	28	167	64	98	66	46	19	18	87
17	29	39	33	26	158	60	85	62	46	16	19	46
18	29	34	32	24	113	60	76	80	44	15	19	34
19	29	32	31	22	98	60	72	215	42	15	15	30
20	29	32	30	24	82	57	72	118	40	14	17	71
21	30	33	30	24	66	55	68	82	37	15	18	248
22	32	39	29	26	64	55	82	142	34	19	20	122
23	37	42	29	38	60	55	85	82	33	23	24	86
24	34	37	32	38	64	74	85	70	32	23	20	52
25	31	34	33	30	74	123	139	72	30	23	17	42
26	31	34	40	26	73	74	110	74	29	22	16	40
27	32	38	33	30	70	66	94	66	30	22	21	42
28	31	44	29	30	238	68	212	74	29	25	22	54
29	31	38	28	24	-	57	144	167	29	20	22	76
30	31	34	30	26	------	57	184	89	27	17	22	95
31	31	------	32	30	------	57	------	72	------	22	22	------
TOTAL	1,546	1,056	1,014	1,032	4,183	3,238	2,829	3,121	1,357	694	623	2,779
MEAN	49.9	35.2	32.7	33.3	149	104	94.3	101	45.2	22.4	20.1	92.6
(†)	29,160	26,750	25,100	24,440	27,550	29,320	30,850	32,000	30,650	27,590	24,860	24,510
(‡)	+98	+160	+134	+95	+80	+75	+78	+88	+123	+161	+136	+112

CALENDAR YEAR 1965 MAX 997 MIN 20 MEAN 75.0 ‡ +118
WATER YEAR 1965-66 MAX 1,340 MIN 10 MEAN 64.3 ‡ +112

† Month-end total contents, in millions of gallons, in Liberty Reservoir (contents on Sept. 30, 1965 29,610 million gallons): furnished by Baltimore Department of Public Works.
‡ Diversions, in cubic feet per second, above station for municipal supply of Westminster, and from Liberty Reservoir for municipal supply of Baltimore. Records furnished by City of Westminster and Baltimore Department of Public Works, respectively.

1-5891. East Branch Herbert Run at Arbutus, Md.

Location.--Lat 39°14'24", long 76°41'33", on right bank at downstream side of highway bridge on Tom Day Boulevard at U. S. Route 1 in Arbutus, Baltimore County, ½ mile above mouth, and 2 miles south of Baltimore city limits.

Drainage area.--2.47 sq mi.

Records available.--August 1957 to September 1966.

Gage.--Digital water-stage recorder and concrete control. Altitude of gage is 45 ft (from topographic map). Prior to Oct. 1, 1965, graphic water-stage recorder at same site and datum.

Average discharge.--9 years, 2.85 cfs.

Extremes.--Maximum discharge during year, 425 cfs May 21 (gage height, 3.50 ft); minimum daily, 0.3 cfs July 24, Sept. 4, 11.

1958-66: Maximum discharge, 824 cfs July 12, 1958 (gage height, 4.83 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, that of 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 1965 to September 1966

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	4.8	0.80	1.0	0.70	0.90	7.8	1.4	3.6	1.3	0.90	0.60	0.70
2	1.1	1.0	1.1	2.3	1.2	3.9	1.1	2.7	1.3	.60	.80	.70
3	.60	1.0	1.1	1.2	1.4	3.3	.90	2.0	1.2	.50	.80	.50
4	1.0	1.0	.80	1.1	1.4	2.5	1.5	1.8	1.1	.50	.80	.30
5	1.0	1.0	.60	1.4	1.3	2.1	1.3	1.7	.80	3.9	4.5	.30
6	1.1	.90	.70	7.7	1.0	1.4	1.3	1.7	1.0	.90	.60	.50
7	18	.50	.80	1.4	1.2	1.5	1.3	1.5	1.2	.80	.40	.60
8	1.7	1.3	.80	1.0	1.6	1.6	1.3	1.1	2.3	.60	.60	.60
9	1.3	1.0	.80	.70	1.8	1.6	1.1	1.4	1.2	.50	1.5	.60
10	.80	1.0	1.0	.80	4.5	1.6	.70	1.5	1.3	.40	.90	.50
11	1.1	1.2	.80	1.1	7.6	1.6	.80	1.4	.90	.60	2.6	.30
12	1.5	1.0	.50	1.1	4.7	1.4	10	1.4	.60	.70	.80	.60
13	1.3	1.2	3.6	1.1	39	1.1	17	1.5	1.0	.60	.60	1.0
14	1.2	.50	1.1	1.2	5.0	1.6	3.8	2.6	2.3	1.9	.40	75
15	1.3	.70	1.0	.80	2.7	1.5	2.1	.90	1.1	1.0	.90	2.9
16	1.0	1.6	1.0	.60	5.1	1.5	1.7	1.2	1.1	.50	2.3	1.2
17	.60	1.5	1.0	.80	2.3	1.5	1.2	3.4	1.1	.40	.90	.90
18	1.0	.80	.80	1.1	1.9	1.5	1.5	6.3	.90	.60	.80	.60
19	1.2	1.0	.50	1.0	1.7	1.5	1.5	12	.60	.80	.80	1.4
20	1.2	.80	.70	1.1	1.1	.90	1.6	2.0	.80	.70	.60	14
21	1.1	.60	.90	1.1	1.4	1.2	1.5	14	.90	.70	.40	23
22	2.3	2.2	.90	1.1	1.5	1.4	4.5	4.7	1.0	.60	.60	2.3
23	1.1	1.1	.90	11	1.5	1.4	1.4	1.7	1.0	.60	.80	1.3
24	.50	1.1	.50	1.4	2.8	6.0	1.2	1.5	.90	.30	.80	1.1
25	1.6	.70	3.7	1.3	7.6	1.6	5.2	1.8	.80	.60	.80	.80
26	1.5	.70	.60	1.2	3.6	1.3	1.7	3.0	.60	.60	.80	.90
27	1.1	1.6	.70	1.4	3.0	.90	4.6	3.4	.90	.80	.60	2.7
28	1.0	.50	.80	1.1	17	1.2	5.0	4.7	4.5	.80	.40	5.7
29	1.0	.70	.80	1.5	—	1.4	2.2	3.0	1.1	.80	.60	6.3
30	.80	1.1	.80	.50	———	1.5	9.9	1.1	.90	.70	.70	1.5
31	.50	———	.60	.70	———	1.4	———	1.5	———	.40	.70	———
TOTAL	55.30	30.10	30.90	50.50	125.80	60.70	90.30	92.10	35.70	24.30	29.40	148.80
MEAN	1.78	1.00	1.00	1.63	4.49	1.96	3.01	2.97	1.19	.78	.95	4.96
CFSM	.721	.405	.404	.660	1.82	.794	1.22	1.20	.482	.317	.384	2.01
IN	.83	.45	.47	.76	1.89	.91	1.36	1.39	.54	.37	.44	2.24

CALENDAR YEAR 1965 MAX 40 MIN .50 MEAN 2.10 CFSM .850 INCHES 11.54
WATER YEAR 1965-66 MAX 75 MIN .30 MEAN 2.12 CFSM .858 INCHES 11.65

Peak discharge (base, 260 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
5-21	2300	3.50	425	9-14	1445	3.47	416

Note.--Where daily discharge is less than 1.0 cfs the zero in the hundredths column is not significant.

1-5892. Gwynns Falls near Owings Mills, Md.

Location.--Lat 39°26'16", long 76°46'57", on left bank at downstream side of bridge on railroad siding, 0.4 mile upstream from small tributary, 1¼ miles north of Owings Mills, Baltimore County, and 21 miles above mouth.

Drainage area.--4.90 sq mi.

Records available.--July 1958 to September 1966.

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

Average discharge.--8 years, 4.11 cfs.

Extremes.--Maximum discharge during year, 163 cfs Feb. 13 (gage height, 2.34 ft); minimum daily, 0.5 cfs Sept. 6, 8.

1958-1966: Maximum discharge, 240 cfs Jan. 9, 1964 (gage height, 2.60 ft), from rating curve extended above 100 cfs by logarithmic plotting; minimum daily, that of Sept. 6, 8, 1966.

Remarks.--Records fair. Occasional diversion from gage pool to nearby fire-control reservoir.

Discharge, in cubic feet per second, water year October 1965 to September 1966

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	8.0	1.8	1.6	1.8	1.5	2.3	1.8	8.8	2.2	1.3	1.1	0.8
2	2.5	1.8	1.6	2.5	1.5	4.8	1.8	4.8	2.2	1.3	.8	.8
3	1.6	1.8	1.6	2.9	1.5	3.3	1.8	3.3	1.8	1.3	1.1	.8
4	1.6	1.8	1.6	2.2	1.5	3.8	2.2	2.9	1.8	1.3	1.3	.8
5	1.6	1.8	1.6	1.8	1.5	4.3	2.2	2.9	1.8	5.1	2.2	.6
6	1.6	1.8	1.6	6.6	1.5	3.3	2.2	2.5	1.8	2.2	1.3	.5
7	2.2	1.8	1.6	2.9	1.5	2.9	2.2	2.5	1.8	2.0	1.3	.6
8	5.2	2.2	1.6	2.2	1.6	2.5	1.8	2.5	2.2	1.6	1.3	.5
9	2.9	1.8	1.6	1.8	1.8	2.5	1.8	2.9	2.5	1.6	1.6	.6
10	2.5	1.8	1.6	1.6	2.5	2.5	1.8	2.5	1.8	1.6	1.6	.6
11	2.2	1.8	1.6	1.3	14	2.5	1.8	2.5	1.8	1.6	2.2	.6
12	2.5	1.8	1.8	1.3	9.9	2.5	5.6	2.5	1.6	1.6	1.6	.6
13	1.8	2.5	2.7	1.3	78	2.5	18	2.9	1.6	1.3	1.3	.8
14	1.8	2.2	2.2	1.6	15	2.5	6.0	3.3	2.3	1.3	1.3	2.9
15	1.8	1.8	1.8	1.6	6.0	2.5	3.3	2.5	2.2	1.6	1.6	6.3
16	1.8	2.5	1.8	1.3	6.5	2.2	2.9	2.2	1.8	1.3	1.6	2.2
17	1.8	1.8	1.6	1.3	4.8	2.2	2.5	2.5	1.8	1.3	1.6	1.6
18	1.8	1.6	1.6	1.3	3.3	2.2	2.5	4.5	1.8	1.3	1.3	1.6
19	1.8	1.6	1.6	1.3	2.9	2.2	2.5	9.0	1.8	1.3	1.1	2.2
20	1.8	1.6	1.6	1.3	2.2	2.2	2.5	2.9	1.8	1.3	1.1	6.5
21	1.8	1.6	1.6	1.3	2.2	1.8	2.9	4.6	1.6	1.1	1.0	14
22	1.8	2.5	1.6	1.3	2.2	1.8	5.2	8.6	1.6	1.0	1.3	5.0
23	1.8	2.2	1.6	1.8	1.8	1.8	3.3	2.9	1.6	1.0	1.4	2.5
24	1.8	1.6	1.6	1.3	2.2	6.1	10	2.5	1.6	1.1	1.0	1.8
25	1.8	1.6	2.6	1.3	2.5	2.9	13	2.9	1.6	1.1	1.0	1.6
26	1.8	1.6	2.2	1.3	2.5	2.2	3.8	2.5	1.6	1.1	1.0	1.8
27	1.8	2.3	1.6	1.3	2.5	2.2	5.6	2.5	1.6	1.1	1.0	2.2
28	1.8	1.8	1.6	1.3	24	1.8	12	2.5	1.6	1.1	1.0	2.5
29	1.8	1.8	1.6	1.3	-	1.8	4.3	3.6	1.6	1.1	1.0	4.4
30	1.8	1.6	1.6	1.0	------	1.8	14	2.2	1.3	1.1	1.0	2.5
31	1.8	------	1.6	1.0	------	1.8	------	2.2	------	1.1	1.0	------
Total	88.4	56.2	53.5	54.1	198.9	102.4	141.3	107.4	54.1	45.1	40.0	96.3
Mean	2.85	1.87	1.73	1.75	7.10	3.30	4.71	3.46	1.80	1.45	1.29	3.21
Cfsm	.582	.382	.353	.357	1.45	.673	.961	.706	.367	.296	.263	.655
In.	.67	.43	.41	.41	1.51	.78	1.07	.82	.41	.34	.30	.73

Calendar year 1965: Max 50 Min 1.3 Mean 3.37 Cfsm .688 In. 9.34
Water year 1965-66: Max 78 Min .5 Mean 2.84 Cfsm .580 In. 7.88

Peak discharge (base, 100 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
2-13	1645	2.34	163				

1-5893. Gwynns Falls at Villa Nova, Md.

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

Drainage area.--32.5 sq mi.

Records available.--February 1957 to September 1966.

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

Average discharge.--9 years, 29.0 cfs.

Extremes.--Maximum discharge during year, 1,130 cfs Feb. 13 (gage height, 6.44 ft); minimum 1.7 cfs Sept. 7-8 (gage height, 0.50 ft).
1957-1966: Maximum discharge, 1,280 cfs Sept. 12, 1960 (gage height, 7.00 ft); minimum, that of Sept. 7-8, 1966.
Maximum discharge known, 5,270 cfs July 21, 1956 (gage height, 12.6 ft) by 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 1965 to September 1966

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	41	9.5	8.7	8.7	90	221	16	91	15	5.2	3.3	2.7
2	24	9.5	8.3	13	10	50	15	46	14	5.2	3.3	2.7
3	11	9.9	9.1	16	12	34	15	33	13	5.0	4.2	2.5
4	8.6	9.9	9.1	9.9	11	33	16	28	13	5.0	3.3	2.5
5	8.2	9.5	9.1	9.1	11	44	15	24	12	27	12	2.7
6	8.2	9.5	8.7	52	11	38	14	24	11	19	5.7	2.3
7	139	9.5	8.7	23	11	28	14	21	11	14	4.2	1.7
8	84	14	8.7	13	12	25	14	21	19	9.7	4.2	2.1
9	16	12	8.7	12	15	23	15	21	26	6.2	5.0	2.1
10	13	9.5	8.7	13	35	22	15	20	11	6.0	8.2	2.1
11	11	9.9	9.1	12	162	21	14	18	9.3	5.7	17	2.1
12	11	9.5	8.7	11	142	20	33	18	8.6	5.4	12	2.5
13	9.5	10	15	11	635	20	164	20	8.6	5.4	4.7	5.8
14	9.1	11	11	12	160	19	69	23	10	4.7	4.7	255
15	9.1	9.1	9.5	13	58	18	29	19	14	6.4	5.2	57
16	9.5	11	9.1	11	58	18	23	18	8.9	5.0	5.2	10
17	8.7	13	9.1	10	53	17	20	17	8.9	4.4	7.1	6.7
18	8.3	9.5	8.7	10	31	16	18	33	8.9	4.7	4.4	5.0
19	8.7	9.1	8.7	10	26	16	17	91	8.6	4.4	3.7	5.0
20	9.1	9.1	8.3	10	20	16	18	25	7.5	4.4	3.5	48
21	9.1	9.5	7.9	10	20	15	17	20	7.6	3.7	3.3	133
22	11	14	8.3	10	20	16	33	74	6.9	4.0	4.0	31
23	12	12	8.7	14	18	16	23	22	6.5	3.7	4.2	23
24	10	9.5	8.7	11	18	39	29	18	6.2	3.7	3.7	9.9
25	9.9	9.1	9.5	10	26	34	97	18	6.0	3.7	3.1	7.9
26	9.5	9.1	12	10	24	20	34	18	6.0	3.7	2.9	7.2
27	9.5	14	8.3	10	24	18	38	17	6.5	4.2	2.7	12
28	9.9	12	10	10	171	16	102	24	9.0	4.7	2.7	14
29	9.9	9.1	8.7	9.0	-	16	42	37	7.9	5.0	2.7	34
30	9.5	9.1	9.1	8.0	------	18	98	16	5.7	4.2	2.7	17
31	10	------	8.3	8.0	------	18	------	16	------	4.0	2.7	------
Total	557.3	311.4	284.5	389.7	1803.0	925	1067	891	306.6	197.4	155.6	709.5
Mean	18.0	10.4	9.18	12.6	64.4	29.8	35.6	28.7	10.2	6.37	5.02	23.6
Cfsm	.554	.320	.282	.388	1.98	.917	1.10	.883	.314	.196	.154	.726
In.	.64	.36	.33	.45	2.06	1.06	1.22	1.02	.35	.23	.18	.81

Calendar year 1965: Max 385 Min 6.2 Mean 22.2 Cfsm .683 In. 9.26
Water year 1965-66: Max 635 Min 1.7 Mean 20.8 Cfsm .640 In. 8.69

Peak discharge (base, 540 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
2-13	1700	6.44	1,130	9-14	1530	4.79	658
2-28	2330	4.66	625				

1-5893.3. Dead Run at Franklintown, Md.

Location.--Lat 39°18'40", long 76°43'02", on right bank at downstream side of bridge on Colonial Road at Security Boulevard at Franklintown, Baltimore County, 0.3 mile west of Baltimore City limits, 1.2 miles southwest of Woodlawn, and 2½ miles upstream from mouth.

Drainage area.--5.52 sq mi.

Records available.--October 1959 to September 1966.

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

Average discharge.--7 years, 5.73 cfs.

Extremes.--Maximum discharge during year, 935 cfs Sept. 14 (gage height, 4.77 ft); minimum, 0.1 cfs Sept. 11-12 (gage height, 0.57 ft).
1959-1966: Maximum discharge, 1,960 cfs Jan. 1, 1961 (gage height, 6.16 ft), from rating curve extended above 770 cfs on basis of logarithmic plotting; minimum, that of Sept. 11-12, 1966.

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 1965 to September 1966

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	11	0.4	0.5	0.5	0.5	31	1.1	12	1.5	0.6	0.3	0.2
2	.9	.5	.5	1.5	.6	4.7	1.1	6.3	1.2	.5	.2	.3
3	.6	.5	.5	1.1	.6	3.2	1.1	3.7	.9	.4	.3	.2
4	.4	.6	.4	.6	.6	4.2	1.1	2.8	1.1	.4	.2	.3
5	.4	.4	.4	.6	.6	7.3	1.1	2.4	.9	7.2	8.5	.2
6	.4	.5	.4	16	.6	3.7	1.1	2.1	.9	.9	.4	.2
7	68	.6	.4	1.2	.7	2.4	1.1	1.8	.9	.6	.4	.2
8	2.8	1.2	.4	.7	.7	2.1	1.1	1.5	1.3	.4	.4	.2
9	1.1	.6	.4	.7	.8	1.8	1.1	1.5	1.1	.4	.4	.2
10	.9	.5	.5	.7	2.1	1.8	1.1	1.5	6.2	.4	2.7	.2
11	.7	.8	.5	.6	58	1.8	1.1	1.2	1.1	.4	6.1	.2
12	.9	.6	.5	.5	8.2	1.8	21	1.2	.9	.4	.7	.3
13	.6	.8	2.3	.6	225	1.8	64	1.5	1.1	.4	.3	1.1
14	.6	.6	.6	.6	19	2.1	13	2.9	1.7	.4	.4	246
15	.6	.5	.6	.6	5.2	1.8	3.2	1.5	1.5	5.7	.6	5.7
16	.6	.8	.6	.5	12	1.5	2.8	1.2	.9	.4	.6	.9
17	.5	.9	.6	.5	4.7	1.5	2.1	1.1	1.1	.4	.6	.6
18	.6	.5	.6	.5	2.4	1.5	2.1	8.5	.9	.4	.3	.6
19	.6	.6	.7	.5	2.4	1.8	1.8	20	.9	.4	.3	.7
20	.5	.6	.7	.5	1.2	1.5	3.2	2.1	.7	.3	.2	28
21	.5	.8	.5	.5	1.2	1.2	2.1	15	.7	.3	.3	75
22	2.2	2.3	.4	.5	1.2	1.1	8.0	7.0	.7	.3	.3	3.2
23	.8	.7	.4	3.5	1.2	1.1	3.2	1.5	.7	.3	.3	1.5
24	.5	.5	.4	1.2	2.4	12	3.2	1.2	.6	.3	.2	1.1
25	.5	.5	1.4	.7	8.4	2.4	24	1.5	.6	.3	.2	1.1
26	.6	.5	.6	.6	6.0	2.4	3.7	3.4	.6	.3	.2	.9
27	.5	1.4	.4	.6	4.7	1.2	10	2.4	.8	.4	.2	3.2
28	.5	.6	.4	.6	113	1.2	30	12	.7	.7	.2	8.0
29	.5	.5	.4	.5	-	1.1	5.7	9.1	.6	.5	.2	22
30	.5	.5	.4	.4	------	1.1	44	1.5	.6	.3	.2	3.2
31	.5	------	.4	------	------	1.1	------	1.8	------	.3	.2	------
Total	100.3	20.8	17.8	38.5	484.0	105.2	259.2	133.2	48.7	25.0	26.4	405.5
Mean	3.24	.69	.57	1.24	17.3	3.39	8.64	4.30	1.62	.81	.85	1.35
Cfsm	.587	.125	.103	.225	3.13	.614	1.57	.779	.293	.147	.154	.245
In.	.68	.14	.12	.26	3.26	.71	1.75	.90	.33	.17	.18	2.73

Calendar year 1965: Max 188 Min 0.4 Mean 4.24 Cfsm .768 In. 10.42
Water year 1965-66: Max 246 Min 0.2 Mean 4.56 Cfsm .826 In. 11.21

Peak discharge (base, 550 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
2-13	1230	4.26	706	9-14	1615	4.77	935

1-5894.4 Jones Falls at Sorrento, Md.

Location.--Lat 39°23'30", long 76°39'42", on right bank 0.3 mile downstream from bridge on State Highway 25 (Falls Road), 10 ft east of the highway, 0.4 mile downstream from Slaughterhouse Branch and Sorrento, Baltimore County, and 18 miles upstream from mouth.

Drainage area.--25.2 sq mi.

Records available.--April to September 1966.

Gage.--Water-stage recorder and crest-stage gage. Altitude of gage is 240 ft (from topographic map).

Extremes.--Maximum discharge during period April to September, 371 cfs Sept. 14 (gage height, 4.42 ft); minimum, 1.8 cfs Sept.7, 8,(gage height 1.16 ft).
1966: Maximum discharge, 620 cfs Feb. 13 (gage height, 5.8 ft), from rating curve extended above 530 cfs by logarithmic plotting; minimum, that of Sept. 7, 8, 1966.

Remarks.--Records good.

Discharge, in cubic feet per second, April to September 1966

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1							15	44	14	6.6	2.7	2.2
2							15	33	13	6.1	2.4	2.1
3							15	27	13	5.7	3.4	2.1
4							15	24	13	6.6	3.4	2.2
5							15	22	12	9.2	5.7	2.4
6							15	21	12	8.5	4.7	2.2
7							15	20	11	7.0	4.4	2.1
8							15	20	12	5.7	4.0	2.2
9							15	20	13	5.7	4.7	2.2
10							15	19	11	5.7	5.7	2.2
11							15	18	10	5.4	8.8	2.4
12							24	18	9.6	4.7	6.6	3.1
13							73	19	10	4.0	4.0	2.7
14							36	20	9.6	3.7	4.7	100
15							25	18	10	4.4	5.4	21
16							21	17	8.7	4.0	4.7	8.3
17							19	17	8.3	4.7	4.7	6.6
18							19	23	7.8	4.0	3.7	6.6
19							18	37	7.8	3.4	3.4	5.8
20							18	20	7.8	3.4	2.7	19
21							17	18	7.4	3.1	3.4	44
22							24	42	7.0	3.1	3.4	22
23							20	20	7.0	3.1	3.4	14
24							23	16	6.6	3.1	3.1	9.1
25							42	16	6.6	2.7	2.7	8.7
26							26	16	6.6	2.7	2.4	7.8
27							28	16	7.4	3.1	2.2	9.8
28							49	18	8.8	4.0	2.2	9.6
29							31	22	8.0	5.0	2.2	17
30					------		44	15	6.6	4.4	2.2	11
31		------			------		------	16	------	4.0	2.2	------
Total							722	672	285.6	146.8	119.2	350.4
Mean							24.1	21.7	9.52	4.74	3.85	11.7
Cfsm							.956	.861	.378	.188	.153	.464
In.							1.07	.99	.42	.22	.18	.52

1-5900. North River near Annapolis, Md.

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

Drainage area.--8.5 sq mi, approximately.

Records available.--December 1931 to September 1966.

Gage.--Digital water-stage recorder and concrete control. Altitude of gage is 10 ft (from topographic map). Prior to Nov. 2, 1933, staff gage at same site and datum. Prior to Oct. 13, 1964, graphic water-stage recorder at same site and datum.

Average discharge.--34 years (1932-66), 10.2 cfs.

Extremes.--Maximum discharge during year, 84 cfs Feb. 13 (gage height, 2.09 ft); minimum, 0.90 cfs Sept. 12 (gage height, 0.78 ft).
1931-66: 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, that of Sept. 12, 1966.

Remarks.--Records good.

Discharge, in cubic feet per second, water year October 1965 to September 1966

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	5.0	3.0	3.2	3.7	2.7	22	4.7	11	5.0	3.4	1.5	1.3
2	3.0	2.9	3.2	4.0	2.5	11	4.5	11	4.7	2.9	1.3	1.3
3	2.6	3.0	3.6	7.0	3.5	8.2	4.2	8.5	3.9	2.5	1.3	1.2
4	2.5	3.1	3.6	4.2	3.3	7.8	4.6	6.8	3.6	2.3	1.2	1.2
5	2.4	3.0	3.3	3.8	3.0	7.4	4.2	6.1	3.2	2.2	1.8	1.5
6	2.3	3.0	3.3	9.0	3.3	6.6	4.2	5.9	3.3	2.3	1.7	1.3
7	11	3.2	3.2	7.0	3.5	5.7	4.1	5.3	3.1	2.2	1.5	1.1
8	7.0	3.3	3.2	5.0	4.0	5.2	4.1	6.0	4.3	2.0	1.5	1.1
9	3.7	3.3	3.3	4.0	4.5	5.0	4.1	9.9	14	1.8	1.4	1.1
10	3.4	3.1	3.3	3.8	6.2	5.1	3.9	6.0	5.5	1.8	1.5	1.1
11	3.1	3.4	3.4	3.5	13	5.2	3.9	5.3	4.3	1.8	1.7	1.1
12	2.9	3.3	3.6	2.9	14	5.0	7.1	5.3	3.3	2.1	2.6	1.0
13	2.8	3.7	6.9	2.7	47	5.0	33	5.2	3.2	1.9	1.7	1.2
14	2.7	3.7	5.3	3.2	37	5.3	19	7.5	3.6	1.7	1.7	25
15	2.6	3.3	4.0	3.1	16	5.3	11	6.0	4.2	1.8	2.0	22
16	2.6	3.7	3.6	3.0	13	4.7	8.0	4.8	3.1	1.8	2.0	6.3
17	2.6	4.0	3.6	2.8	11	4.5	6.8	4.6	4.1	1.7	1.7	3.2
18	2.6	3.2	3.3	2.8	7.7	4.6	6.3	7.1	3.6	1.6	1.5	2.6
19	2.7	3.2	3.3	3.1	6.8	4.6	6.0	14	4.1	1.6	1.3	2.5
20	2.8	3.3	3.2	3.4	6.1	4.5	5.6	9.3	3.3	1.5	1.3	13
21	2.8	3.3	3.3	3.2	6.0	4.2	5.6	5.7	2.8	1.4	1.3	38
22	3.0	4.7	3.3	3.1	6.0	4.2	11	4.8	2.5	1.3	3.6	14
23	3.2	4.6	3.3	17	6.0	4.2	10	4.5	2.5	1.3	6.0	7.2
24	2.9	3.4	3.3	9.1	5.6	8.9	8.5	4.0	2.3	1.4	2.1	4.0
25	2.8	3.3	3.5	5.3	11	11	9.0	4.0	2.1	1.3	1.7	3.4
26	2.8	3.3	3.8	3.7	11	6.1	7.5	8.2	2.1	1.3	1.6	3.8
27	2.9	4.2	3.5	3.5	8.5	5.3	7.1	6.6	2.1	1.3	1.5	4.3
28	2.9	4.2	3.2	3.0	12	4.7	11	8.5	6.3	1.5	1.3	6.2
29	2.8	3.6	3.4	2.7	—	4.6	7.7	10	35	1.7	1.3	7.6
30	2.8	3.2	3.5	2.5	------	4.7	9.9	5.5	6.0	1.6	1.2	7.1
31	3.0	------	3.5	2.4	------	5.1	------	5.0	------	1.7	1.3	------
TOTAL	102.2	103.5	111.0	137.5	274.2	195.7	236.6	212.4	151.1	56.7	55.1	185.7
MEAN	3.30	3.45	3.58	4.44	9.79	6.31	7.89	6.85	5.04	1.83	1.78	6.19
CFSM	.388	.406	.421	.522	1.15	.742	.928	.806	.593	.215	.209	.728
IN	.45	.45	.49	.60	1.20	.86	1.04	.93	.66	.25	.24	.81

CALENDAR YEAR 1965 MAX 42 MIN 1.8 MEAN 5.57 CFSM .655 INCHES 8.89
WATER YEAR 1965-66 MAX 47 MIN 1.0 MEAN 4.99 CFSM .587 INCHES 7.97

Peak discharge (base, 75 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
2-13	1930	2.09	84	9-14	1930	2.03	77
6-29	0230	2.03	77				

1-5910. Patuxent River near Unity, Md.

Location.--Lat 39°14'18", long 77°03'23", 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, and 1.1 miles northeast of Unity, Montgomery County, and 97 miles upstream from mouth.

Drainage area.--34.8 sq mi.

Records available.--July 1944 to September 1966.

Gage.--Digital 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. Aug. 14, 1946 to Oct. 27, 1961, graphic water-stage recorder at same site and datum.

Average discharge.--22 years, 35.0 cfs.

Extremes.--Maximum discharge during year, 2,920 cfs Sept. 14 (gage height 8.90 ft); minimum 0.2 cfs Sept. 10, 11, 12; minimum gage height 1.66 ft Sept. 11, 12.
1944-66: Maximum discharge, 10,700 cfs July 21, 1956 (gage height, 14.35 ft), from rating curve extended above 870 cfs on basis of slope-area measurement at gage height 13.58 ft; minimum, that of Sept. 10, 11, 12, 1966.

Remarks.--Records good.

Discharge, in cubic feet per second, water year October 1965 to September 1966

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	20	7.7	8.7	8.7	8.4	164	17	78	24	5.5	2.2	1.4
2	18	7.7	8.1	11	7.6	71	16	58	22	5.1	1.8	1.3
3	7.7	8.1	8.9	14	8.0	51	15	48	20	4.8	1.6	1.1
4	6.6	8.1	8.9	9.9	8.5	47	16	41	19	4.2	1.6	.90
5	6.2	8.1	8.7	9.3	8.7	45	15	38	17	5.9	2.4	1.1
6	6.2	8.1	8.1	30	9.0	37	15	35	16	10	2.9	.80
7	52	8.7	7.9	21	10	32	14	31	15	7.7	1.9	.50
8	39	12	7.7	14	11	28	14	30	16	5.9	1.9	.40
9	13	11	8.1	11	12	26	14	28	19	4.8	1.8	.30
10	11	8.7	8.1	10	14	25	14	26	15	4.4	2.6	.20
11	9.9	9.3	8.1	9.0	46	24	13	24	13	4.2	2.9	.20
12	9.3	9.3	8.1	8.0	57	23	23	24	12	4.4	5.5	.40
13	8.4	9.9	11	7.6	464	22	94	27	12	4.2	2.9	2.3
14	8.1	9.9	11	8.6	140	22	68	30	15	3.6	3.0	940
15	8.0	8.7	9.3	8.2	66	22	42	25	19	5.5	3.5	118
16	8.1	9.3	8.7	7.9	54	20	34	22	13	4.8	4.5	32
17	7.7	10	8.6	7.8	48	19	29	21	13	4.2	10	18
18	7.7	7.7	8.1	7.7	37	18	26	32	12	3.6	5.0	13
19	7.7	7.7	8.1	7.6	32	18	23	85	11	3.4	3.5	11
20	7.7	7.7	7.7	7.5	26	17	22	42	9.9	3.2	3.0	33
21	7.7	8.1	8.1	7.6	23	16	21	32	8.7	2.6	2.5	84
22	8.1	10	8.1	8.0	23	17	28	36	8.1	2.6	2.7	42
23	9.9	10	8.0	12	20	16	25	27	7.7	2.4	2.5	27
24	8.1	9.3	8.1	10	21	32	26	23	7.4	2.4	2.3	18
25	7.7	8.7	9.3	8.4	24	33	46	27	7.0	2.4	2.1	16
26	7.7	8.7	9.9	7.6	23	22	33	24	7.0	2.2	1.9	15
27	7.7	10	8.1	9.0	23	20	31	22	7.2	2.1	1.8	19
28	7.7	12	7.7	8.0	75	18	66	27	6.6	2.9	1.7	25
29	7.7	9.3	8.1	7.5	—	17	47	90	7.0	3.6	1.6	36
30	7.7	9.0	8.3	7.0	------	18	64	36	5.9	3.2	1.5	29
31	7.7	------	8.3	6.5	------	18	------	28	------	2.9	1.4	------
TOTAL	350.0	272.8	263.9	310.4	1,299.2	958	911	1,117	385.5	128.7	86.5	1,486.90
MEAN	11.3	9.09	8.51	10.0	46.4	30.9	30.4	36.0	12.9	4.15	2.79	49.6
CFSM	.325	.261	.245	.287	1.33	.888	.874	1.03	.371	.119	.080	1.43
IN	.37	.29	.28	.33	1.39	1.02	.97	1.19	.41	.14	.09	1.59

CALENDAR YEAR 1965 MAX 443 MIN 3.5 MEAN 23.8 CFSM .684 INCHES 9.27
WATER YEAR 1965-66 MAX 940 MIN .20 MEAN 20.7 CFSM .595 INCHES 8.09

Peak discharge (base, 770 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
2-13	1900	6.26	1,080	9-14	1600	8.90	2,920

Note.--Where daily discharge is less than 1.0 cfs the zero in the hundredths column is not significant.

1-5925. Patuxent River near Laurel, Md.

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

Drainage area.--132 sq mi.

Records available.--Oct. 1944 to September 1966.

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

Extremes.--Maximum discharge during year, 182 cfs Nov. 23 (gage height, 3.53 ft); minimum daily 3.7 cfs Aug. 29 to Sept. 12, Sept. 17-20.
1944-66: Maximum discharge, 11,800 cfs July 21, 1956 (gage height, 17.7 ft from floodmarks, present site and datum); minimum 0.1 cfs Sept. 25, 1964 (valve closed for repair); minimum daily, 1.1 cfs June 26, 1956.

Remarks.--Records fair. Records do not include diversion at Patuxent (formerly Willis School) filtration plant for supply of Washington Suburban Sanitary District. Flow regulated by Triadelphia Reservoir, and since March 1954 by 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 1965 to September 1966

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	12	11	9.0	7.8	7.8	7.8	7.6	7.0	12	8.5	7.8	3.7
2	12	11	9.2	7.8	7.8	7.8	7.5	7.0	12	8.3	7.8	3.7
3	12	11	8.8	7.8	7.8	8.0	7.5	7.8	11	8.6	7.8	3.7
4	12	11	8.8	7.8	7.8	7.8	7.5	8.0	11	8.5	7.8	3.7
5	12	11	8.6	7.8	7.8	7.8	7.5	7.8	11	8.5	7.8	3.7
6	12	11	8.8	8.0	7.8	8.0	7.5	7.8	11	8.5	7.8	3.7
7	12	11	8.3	8.0	7.8	8.0	7.5	7.8	11	8.6	7.8	3.7
8	12	11	8.1	7.8	7.8	8.1	7.5	7.6	11	7.5	7.7	3.7
9	12	11	8.6	7.8	7.8	8.0	7.5	7.0	11	7.2	8.0	3.7
10	12	11	8.8	7.8	8.1	8.0	7.5	7.0	9.4	8.1	7.8	3.7
11	12	11	8.5	7.8	8.0	8.0	7.5	7.0	8.3	8.3	8.1	3.7
12	11	11	8.5	7.8	8.0	8.0	7.5	7.3	8.1	8.3	8.3	3.7
13	11	11	8.5	8.0	8.0	8.0	7.5	7.2	8.1	8.3	6.8	3.8
14	12	11	8.5	7.8	8.0	8.0	7.5	7.0	8.1	9.2	5.8	5.7
15	12	11	8.5	7.8	8.0	8.0	7.5	7.0	8.0	9.2	6.1	5.1
16	12	11	8.8	7.8	8.0	8.0	7.5	7.0	8.5	9.2	4.3	4.9
17	11	11	8.5	7.8	8.1	7.8	7.5	7.0	8.3	9.2	4.3	3.7
18	11	12	8.5	7.8	8.0	7.8	7.5	7.2	8.3	9.0	4.4	3.7
19	30	11	8.3	7.8	8.0	7.8	7.5	10	8.3	8.2	4.3	3.7
20	59	11	8.8	8.1	8.0	7.8	7.6	13	8.3	6.8	4.3	3.7
21	53	11	8.8	7.8	8.0	7.8	8.0	13	8.3	7.8	4.2	4.0
22	49	12	8.6	7.8	8.0	7.8	7.5	12	8.3	7.8	3.8	4.6
23	53	18	8.4	7.8	8.0	7.8	7.5	12	8.6	7.8	3.8	6.6
24	52	11	8.0	7.8	8.0	7.8	7.5	12	8.5	7.8	3.8	7.8
25	52	11	8.0	7.8	8.0	7.8	7.6	12	8.5	7.8	4.3	7.6
26	26	11	8.1	7.8	7.8	7.8	7.6	12	8.5	7.8	3.8	7.6
27	12	11	8.0	7.8	7.8	7.8	6.8	12	8.3	7.8	3.8	7.6
28	11	11	8.0	7.8	7.8	7.8	7.2	12	8.6	7.8	3.8	7.6
29	11	10	7.8	7.8	-	7.8	7.2	12	8.5	7.8	3.7	7.6
30	11	9.0	8.0	8.0	----------	7.8	7.0	12	8.5	7.8	3.7	7.6
31	11	----------	7.8	7.8	----------	7.8	----------	12	----------	7.8	3.7	----------
Total	642	336.0	261.9	242.9	221.8	244.3	224.1	287.5	277.3	253.8	177.2	147.3
Mean	20.7	11.2	8.45	7.84	7.92	7.88	7.47	9.27	9.24	8.19	5.72	4.91
(†)	8,690	8,120	7,760	7,660	9,870	11,120	12,290	13,100	12,160	10,510	9,210	10,460
(‡)	+68.2	+58.8	+50.9	+44.5	+46.8	+46.0	+46.3	+75.7	+85.3	+90.3	+75.4	+78.5

Calendar year 1965: Max 155 Min 7.8 Mean 21.4 ‡ 74.1
Water year 1965-66: Max 59 Min 3.7 Mean 9.09 ‡ 64.0

† Combined month-end total contents, in millions of gallons, in Triadelphia and Rocky Gorge Reservoirs (contents on Sept. 30, 1965, 9,350 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.

1-5935. Little Patuxent River at Guilford, Md.

Location.--Lat 39°10'04", long 76°51'07", on left bank 75 ft upstream from bridge on State Highway 32, 1 mile west of Guilford, Howard County, 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.

Records available.--April 1932 to September 1966. Monthly discharge only for April 1932, published in WSP 1302.

Gage.--Digital water-stage recorder. Concrete control since June 20, 1946. Altitude of gage is 260 ft (from topographic map). Prior to June 25, 1946, staff gage at same site and datum. June 25, 1946 to Sept. 30, 1961, graphic water-stage recorder at same site and datum.

Average discharge.--34 years, 39.3 cfs.

Extremes.--Maximum discharge during year, 1,200 cfs Feb. 13 (gage height, 8.94 ft); no flow Sept. 8, and parts of Sept. 6, 7, 9-12.
1932-66: 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, that of Sept. 6, 7, 8, 9, 10, 11, 12, 1966.

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

Discharge, in cubic feet per second, water year October 1965 to September 1966

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	12	12	11	12	11	319	19	79	29	8.2	4.1	2.6
2	17	10	12	14	10	77	18	51	25	8.1	3.4	1.6
3	9.2	11	11	16	10	69	18	45	22	7.8	3.4	1.3
4	8.5	11	11	13	11	61	19	39	20	7.7	2.7	1.6
5	8.1	11	11	12	11	58	18	37	18	15	5.3	1.8
6	8.5	11	11	40	12	47	17	35	16	12	5.0	1.0
7	56	12	11	26	13	39	17	32	15	9.2	4.0	.40
8	82	12	11	17	14	35	17	30	16	7.9	3.8	0
9	16	13	11	16	14	31	17	28	33	7.2	3.1	.40
10	15	12	11	14	16	29	17	26	17	7.1	14	.80
11	14	12	11	12	90	26	17	24	18	7.0	6.4	1.4
12	13	12	11	11	116	25	25	23	14	7.5	11	1.1
13	12	12	13	12	657	23	119	26	14	6.5	5.1	3.6
14	11	13	13	13	426	23	90	30	28	5.9	5.1	239
15	11	12	12	12	85	23	57	25	25	8.4	6.0	208
16	12	12	11	12	75	21	41	21	15	7.0	9.1	36
17	12	13	11	11	68	20	33	19	15	6.2	16	18
18	11	11	11	11	41	20	27	39	14	6.2	6.0	11
19	11	10	11	11	33	20	25	66	14	5.8	5.1	9.9
20	11	10	11	11	27	20	23	41	14	5.1	4.3	19
21	11	11	11	11	32	19	22	38	12	4.4	3.8	160
22	12	13	12	10	28	19	31	80	11	4.4	3.9	81
23	13	13	16	19	22	19	26	41	11	4.5	3.5	58
24	12	12	11	17	23	32	26	37	11	4.3	2.8	30
25	11	11	14	13	28	37	43	37	10	4.3	2.7	18
26	11	11	16	10	29	24	31	53	10	3.8	2.7	15
27	11	13	13	12	29	21	28	36	10	3.7	2.2	15
28	11	13	11	11	139	20	65	36	9.5	5.3	2.1	20
29	10	12	10	10	-	19	40	59	9.4	5.8	1.6	43
30	10	11	10	9.6	------	20	68	39	8.7	5.1	1.1	43
31	11	------	11	9.2	------	20	------	34	------	5.0	3.3	------
TOTAL	473.3	352	361	427.8	2,070	1,236	1,014	1,206	484.6	206.4	152.6	1,041.50
MEAN	15.3	11.7	11.6	13.8	73.9	39.9	33.8	38.9	16.2	6.66	4.92	34.7
CFSM	.403	.308	.305	.363	1.94	1.05	.890	1.02	.426	.175	.130	.913
IN	.46	.34	.35	.42	2.03	1.21	.99	1.18	.47	.20	.15	1.02

CALENDAR YEAR 1965 MAX 552 MIN 6.1 MEAN 26.4 CFSM .695 INCHES 9.44
WATER YEAR 1965-66 MAX 657 MIN 0 MEAN 24.7 CFSM .650 INCHES 8.83

Peak discharge (base, 600 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
2-13	1930	8.94	1,200	3-1	0100	6.27	620

Note.--Where daily discharge is less than 1.0 cfs the zero in the hundredths column is not significant.

1-5945. Western Branch near Largo, Md.

Location.--Lat 38°52'34", long 76°47'54", 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, Prince Georges County, 4.8 miles northwest of Upper Marlboro, and 11 miles upstream from mouth.

Drainage area.--30.2 sq mi.

Records available.--October 1949 to September 1966. Monthly discharge only for some periods, published in WSP 1302.

Gage.--Digital water-stage recorder and concrete control. Datum of gage is 46.50 ft above mean sea level (levels by private consultant engineers). Prior to Oct. 1, 1961, graphic water-stage recorder at same site and datum.

Average discharge.--17 years, 28.0 cfs.

Extremes.--Maximum discharge during year, 518 cfs Feb. 13 (gage height, 5.04 ft); no flow Sept. 8-13. 1949-66: Maximum discharge, 1,580 cfs Aug. 13, 1955 (gage height, 8.51 ft), from high-water mark in well); minimum, that of Sept. 8-13, 1966.

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

Discharge, in cubic feet per second, water year October 1965 to September 1966

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	3.1	4.4	4.4	5.6	4.5	154	11	62	22	6.6	0.50	0.10
2	4.4	3.0	4.1	9.2	5.0	81	11	59	18	4.7	.40	.10
3	3.8	3.0	4.4	10	7.0	41	9.7	49	14	3.5	.30	.10
4	3.2	3.0	4.7	8.6	6.0	30	10	33	11	2.8	.20	.10
5	2.6	3.0	4.6	7.2	7.0	26	9.5	25	9.3	2.5	1.5	.10
6	2.5	3.0	4.5	31	7.0	22	9.1	20	8.0	2.5	1.0	.10
7	7.3	3.0	4.3	27	8.0	19	8.9	17	6.7	2.3	.80	.10
8	20	3.5	4.1	17	9.0	16	8.8	18	32	1.9	.60	0
9	17	3.5	4.1	10	12	15	8.5	26	24	1.5	.50	0
10	9.0	4.0	4.2	8.8	23	14	8.5	19	25	1.4	.60	0
11	6.9	3.5	4.6	8.1	109	14	8.5	15	8.4	1.6	.80	0
12	6.3	3.5	4.9	6.4	138	13	13	14	6.7	2.7	3.0	0
13	5.6	4.0	7.1	5.4	306	13	148	14	6.2	2.1	5.1	0
14	4.9	4.0	7.6	5.7	260	13	139	17	6.0	1.8	3.0	128
15	4.4	3.7	7.1	5.7	90	13	67	16	6.2	2.1	1.9	140
16	4.0	4.0	6.2	5.5	53	11	37	13	5.9	2.1	1.6	36
17	3.5	4.4	5.5	4.9	44	11	26	11	7.4	1.8	1.1	16
18	3.1	3.6	5.2	4.5	31	10	21	13	6.1	1.4	.80	9.7
19	3.1	3.6	5.2	4.2	25	10	18	62	5.6	1.1	.70	6.8
20	3.1	3.6	4.8	4.0	19	10	16	51	4.8	.80	.50	15
21	3.1	3.7	4.8	4.5	17	9.5	15	31	3.9	.70	.40	147
22	3.4	4.9	4.5	4.9	15	9.7	36	20	3.3	.60	.40	75
23	4.1	5.6	4.3	36	14	9.5	36	15	2.9	.50	.40	30
24	3.5	4.8	4.8	24	15	20	32	12	2.7	.40	.30	17
25	3.1	4.4	5.4	17	26	30	32	10	2.4	.40	.20	11
26	3.1	4.4	6.0	11	38	21	31	19	2.3	.40	.20	8.8
27	3.1	4.8	5.1	13	33	17	27	37	2.3	.30	.20	8.1
28	3.0	5.1	4.7	8.0	79	15	33	41	2.6	.30	.20	10
29	2.8	4.8	4.3	6.0	-	13	33	78	28	.60	.10	16
30	2.8	4.6	4.5	4.5	------	12	39	49	16	.60	.10	21
31	3.1	------	4.9	4.0	------	12	------	30	-----	.80	.10	------
TOTAL	152.9	118.4	154.9	321.7	1,400.5	704.7	902.5	896	299.7	52.80	27.50	696.10
MEAN	4.93	3.95	5.00	10.4	50.0	22.7	30.1	28.9	9.99	1.70	.89	23.2
CFSM	.163	.131	.166	.344	1.66	.752	.997	.957	.331	.056	.029	.768
IN	.19	.15	.19	.40	1.72	.87	1.11	1.10	.37	.07	.03	.86

CALENDAR YEAR 1965	MAX	337	MIN	1.2	MEAN	17.4	CFSM	.576	INCHES	7.81
WATER YEAR 1965-66	MAX	306	MIN	0	MEAN	15.7	CFSM	.520	INCHES	7.05

Peak discharge (base, 340 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
2-13	1930	5.04	518	9-14	1700	4.48	417

Note.--No gage-height record July 19 to August 10.

Where daily discharge is less than 1.0 cfs the zero in the hundredths column is not significant.

1-5946. Cocktown Creek near Huntingtown, Md.

Location.--Lat 38°38'27", long 76°38'07", on right bank at downstream side of bridge, 2 miles northwest of Huntingtown, Calvert County, 2¾ miles southeast of Lower Marlboro, and 3½ miles upstream from mouth.

Drainage area.--3.85 sq mi.

Records available.--December 1956 to September 1966.

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

Average discharge.--9 years (1957-66), 4.24 cfs.

Extremes.--Maximum discharge during year, 69 cfs Sept. 21 (gage height, 4.20); minimum daily 0.1 cfs several days in August and September.
1956-66: 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 except those below 1 cfs, which are poor.

Discharge, in cubic feet per second, water year October 1965 to September 1966

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.6	1.1	1.2	1.0	0.9	8.7	2.2	7.9	2.4	0.5	0.1	0.1
2	.6	1.2	1.2	1.4	.9	5.9	2.2	7.0	2.2	.5	.1	.1
3	.4	1.4	1.2	1.2	1.0	5.3	2.1	5.5	2.1	.5	.1	.1
4	.4	1.7	1.3	1.1	1.1	5.3	2.1	4.5	2.1	.5	.2	.1
5	.4	1.4	1.2	1.2	1.1	5.0	2.1	4.3	1.9	.5	.3	.2
6	.4	1.1	1.2	5.4	1.1	4.5	2.0	4.0	1.9	.5	.1	.1
7	2.5	1.3	1.1	2.2	1.1	3.9	1.9	3.7	1.8	.5	.1	.1
8	2.7	1.2	1.1	1.4	1.2	3.7	1.9	3.7	3.7	.5	.1	.1
9	1.3	1.2	1.1	1.4	1.5	3.7	1.9	3.7	4.0	.5	.1	.1
10	1.0	1.1	1.1	1.2	3.0	3.7	1.8	3.3	2.8	.6	.1	.1
11	.9	1.2	1.2	1.0	12	3.7	1.8	3.2	2.3	1.6	3.1	.1
12	.8	1.2	1.2	1.1	10	3.7	3.5	3.2	1.8	.9	1.0	.1
13	.6	1.3	1.1	1.0	2.5	3.3	7.9	3.2	1.7	.4	.3	.1
14	.6	1.2	1.1	1.0	15	3.5	4.1	3.9	2.0	.4	.2	1.3
15	.6	1.1	.9	1.0	8.0	3.4	3.1	3.1	2.0	4.1	.3	.7
16	.6	1.2	.9	.9	7.0	3.1	2.8	2.8	1.5	.3	.3	.2
17	.5	1.1	.9	.7	5.3	3.1	2.6	2.8	2.1	.3	.2	.1
18	.5	1.0	.9	.8	4.0	3.0	2.6	2.9	1.7	.3	.1	.1
19	.6	1.1	.8	.8	3.5	3.0	2.5	3.3	1.8	.2	.1	.2
20	.6	1.1	.8	.8	3.1	2.8	2.4	2.6	1.4	.2	.1	9.2
21	.6	1.1	.8	.9	3.1	2.5	2.4	6.1	1.0	.2	.1	1.6
22	.8	1.8	.7	1.6	2.8	2.5	6.9	7.2	.9	.2	2.1	3.2
23	.9	1.5	.8	6.4	2.7	2.5	4.3	3.4	.8	.2	.7	1.8
24	.8	1.3	.8	2.2	3.1	7.1	3.3	2.9	.8	.2	.2	1.1
25	.7	1.2	1.4	1.5	6.3	4.0	5.3	3.0	.6	.2	.2	.9
26	.8	1.2	1.4	1.2	4.5	3.0	3.3	2.9	.6	.1	.1	.9
27	.8	1.4	1.0	1.8	3.7	2.5	3.5	3.4	.6	.1	.1	1.7
28	.8	1.4	.9	1.5	9.6	2.2	10	4.2	.6	.2	.1	2.5
29	.8	1.3	.9	1.2	-	2.2	5.0	3.3	1.1	.3	.1	5.0
30	.8	1.3	.9	1.0	------	2.2	5.9	2.6	.6	.3	.1	2.7
31	1.0	------	.9	.8	------	2.3	------	2.6	------	.2	.1	------
Total	25.4	37.7	32.0	46.7	141.6	115.3	103.4	120.2	50.8	16.0	10.9	49.0
Mean	0.82	1.26	1.03	1.51	5.06	3.72	3.45	3.88	1.69	0.52	0.35	1.63
Cfsm	0.213	0.327	0.268	0.392	1.31	0.966	0.896	1.01	0.439	0.135	0.091	0.423
In.	0.25	0.36	0.31	0.45	1.37	1.11	1.00	1.16	0.49	0.15	0.11	0.47

Calendar year 1965: Max 41 Min 0.2 Mean 2.88 Cfsm 0.748 In. 10.14
Water year 1965-66: Max 25 Min 0.1 Mean 2.05 Cfsm 0.532 In. 7.23

Peak discharge (base, 80 cfs).--No peak above base.

1-5948. St. Leonard Creek near St. Leonard, Md.

Location.--Lat 38°26'57", long 76°29'43", on left bank at downstream side of highway bridge, 1¾ miles south of St. Leonard, Calvert County, and 5½ miles upstream from mouth.

Drainage area.--6.73 sq mi.

Records available.--December 1956 to September 1966.

Gage.--Water-stage recorder. Timber control since June 13, 1958. Altitude of gage is 5 ft (from topographic map).

Average discharge.--9 years (1957-66), 7.99 cfs.

Extremes.--Maximum discharge during year, 168 cfs Sept. 21 (gage height, 5.30 ft); no flow at times June to September.
1956-66: Maximum discharge, 288 cfs July 30, 1960 (gage height, 6.35 ft); no flow at times during summer months of 1963-1966.

Remarks.--Records fair except those below 2 cfs, which are poor.

Discharge, in cubic feet per second, water year October 1965 to September 1966

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2.3	2.7	2.9	3.5	3.5	21	4.4	9.8	2.5	0.8	0.6	0
2	2.6	2.7	3.1	3.7	4.0	8.0	3.9	11	2.4	.6	.3	0
3	1.8	2.9	3.3	3.7	3.5	6.5	3.7	8.0	2.2	.3	.1	0
4	1.6	2.9	3.3	3.3	4.0	6.5	3.7	5.8	1.8	.2	.3	0
5	1.5	2.9	3.1	3.3	4.5	6.5	3.7	5.2	1.6	.3	2.0	0
6	1.6	2.9	3.1	1.3	4.0	7.2	3.5	4.9	1.4	4.6	.8	0
7	3.6	2.9	3.1	6.5	3.5	5.8	3.5	4.6	1.6	1.1	.2	0
8	9.6	2.9	2.9	4.4	4.0	5.2	3.3	4.4	2.3	.3	.4	0
9	3.5	3.1	2.9	3.5	4.5	4.9	3.3	4.4	2.9	.2	.2	0
10	2.9	2.7	2.9	3.7	5.4	4.9	3.3	4.4	2.1	.2	.2	0
11	2.6	2.9	2.9	3.3	21	4.6	3.3	4.6	1.8	.2	.1	.3
12	2.4	3.2	2.9	3.7	22	4.6	3.9	4.6	1.5	2.3	1.3	1.1
13	2.3	3.3	3.3	3.3	49	4.4	13	4.6	1.5	.3	.5	4.5
14	2.1	3.3	3.7	3.3	26	4.4	8.4	7.2	1.4	.2	.3	17
15	2.3	3.3	3.3	3.3	10	4.4	5.2	5.8	1.1	6.5	1.0	2.5
16	2.3	3.3	3.3	3.0	9.8	4.4	4.4	4.9	1.1	1.8	.5	.4
17	2.1	3.3	3.3	3.5	9.8	4.1	4.1	4.4	3.7	.3	.4	.2
18	2.1	3.1	3.1	3.5	6.2	4.1	4.1	4.1	2.6	.2	.3	.2
19	2.1	2.9	3.1	3.2	5.8	4.1	4.1	4.6	2.9	.2	.2	.4
20	2.4	2.9	3.1	3.1	5.2	3.9	4.1	9.5	2.0	.2	.1	6.6
21	2.3	3.1	3.3	3.0	5.2	3.9	4.1	4.9	1.4	.2	.1	6.9
22	3.1	3.5	3.1	3.5	5.5	3.9	7.2	4.1	1.1	.2	.1	11
23	3.3	3.7	3.5	11	4.9	3.9	9.3	3.9	1.0	.2	.1	3.7
24	2.7	3.3	3.3	6.9	4.4	5.5	5.5	3.5	.6	.2	0	2.1
25	2.4	3.1	3.7	4.5	13	9.2	6.2	3.7	.2	.2	0	1.4
26	2.6	3.1	3.9	4.0	11	4.9	5.2	3.9	.2	.1	0	1.4
27	2.6	3.1	3.1	6.0	7.2	4.4	4.9	5.8	.3	.2	0	2.6
28	2.6	3.1	3.1	4.5	9.9	3.9	16	6.6	.2	.3	0	4.1
29	2.6	2.9	3.3	3.5		3.9	8.4	4.8	4.9	.4	0	4.4
30	2.7	2.9	3.7	3.0	- - - - -	3.9	6.9	3.8	1.4	.8	0	4.9
31	2.7	- - - - -	3.5	2.5	- - - - -	5.2	- - - - -	3.0	- - - - -	1.2	0	- - - - -
Total	83.3	91.9	100.1	134.2	266.8	172.1	164.6	164.8	51.7	24.8	10.1	137.8
Mean	2.69	3.06	3.23	4.33	9.53	5.55	5.49	5.32	1.72	0.80	0.33	4.59
Cfsm	0.400	0.455	0.480	0.643	1.42	0.825	0.816	0.790	0.256	0.119	0.049	0.682
In.	0.46	0.51	0.55	0.74	1.47	0.95	0.91	0.91	0.29	0.14	0.06	0.76

Calendar year 1965: Max 29 Min 0.7 Mean 4.92 Cfsm 0.731 In. 9.91
Water year 1965-66: Max 69 Min 0 Mean 3.84 Cfsm 0.571 In. 7.75

Peak discharge (base, 100 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
9-21	1245	5.30	168				

1-5950. North Branch Potomac River at Steyer, Md.

Location.--Lat 39°18'07", long 79°18'26", on left bank 0.3 mile southeast of Steyer, Garrett County, 0.35 mile downstream from Steyer Run, 2 miles northeast of Gorman, and 81.8 miles upstream from mouth.

Drainage area.--73.0 sq mi.

Records available.--July 1956 to September 1966.

Gage.--Water-stage recorder. Datum of gage is 2,276.01 ft above mean sea level, datum of 1929, Parkersburg - Uniontown supplementary adjustment of 1944.

Average discharge.--10 years, 160 cfs.

Extremes.--Maximum discharge during year, 3,150 cfs May 1 (gage height, 6.85 ft); minimum observed, 6.8 cfs July 23, 24, Aug. 7, 8, (gage height, 2.13 ft).
1956-66: Maximum discharge, 6,240 cfs Mar. 5, 1963 (gage height, 9.13 ft) from rating curve extended above 3,000 cfs by logarithmic plotting; minimum, 2.9 cfs Sept. 10, 1965.
Flood of Oct. 15, 1954 reached a stage of 13.0 ft, from floodmarks.

Remarks.--Records poor.

Discharge, in cubic feet per second, water year October 1965 to September 1966

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	90	11	30	38	34	928	139	2,200	46	20	10	15
2	18	10	30	351	40	480	211	780	42	18	8.8	12
3	17	13	30	390	38	440	190	490	41	16	13	11
4	11	13	28	201	34	610	415	330	38	14	12	10
5	9.0	13	21	141	30	616	345	250	36	22	10	16
6	7.2	13	23	456	28	406	297	210	34	57	8.1	20
7	10	13	24	378	28	284	260	180	33	38	6.8	13
8	40	16	24	230	28	208	252	155	33	28	10	11
9	35	30	24	160	28	173	233	140	32	19	150	9.5
10	36	23	24	140	60	164	230	120	32	14	100	9.5
11	33	20	209	110	1,300	167	233	110	27	19	50	8.8
12	33	17	174	80	1,000	183	349	120	22	29	170	8.8
13	30	17	144	70	1,500	284	700	300	19	19	70	8.8
14	19	17	129	90	1,300	248	798	220	19	14	50	215
15	17	17	101	90	900	200	844	180	18	12	66	112
16	18	17	87	80	660	173	688	155	18	16	45	54
17	13	36	74	60	860	157	569	140	32	14	45	38
18	11	30	64	50	500	139	460	130	24	13	40	30
19	9.3	23	56	48	350	120	387	155	18	12	35	28
20	8.6	20	46	45	250	112	336	130	14	12	30	143
21	10	19	48	41	170	107	331	110	13	10	35	137
22	12	30	42	35	130	104	480	100	12	8.1	44	131
23	29	42	40	37	110	99	480	90	12	7.4	40	145
24	23	34	40	50	110	107	560	74	12	11	30	100
25	33	28	40	37	110	112	800	66	11	32	23	70
26	34	24	40	34	100	109	440	62	11	12	19	66
27	28	87	32	45	88	123	420	56	10	8.1	17	80
28	26	74	30	25	193	114	552	56	20	16	15	500
29	17	45	28	25	-	123	450	76	44	50	12	350
30	17	34	39	22	------	128	1,080	62	27	30	12	220
31	15	------	36	30	------	131	------	49	------	17	12	------
Total	628.1	786	1,757	3,589	9,979	7,349	13,529	7,296	750	607.6	1,188.7	2,572.4
Mean	20.3	26.2	56.7	116	356	237	451	235	25.0	19.6	38.3	85.7
Cfsm	0.278	0.359	0.777	1.59	4.88	3.25	6.18	3.22	0.342	0.268	0.525	1.17
In.	0.32	0.40	0.90	1.83	5.08	3.74	6.89	3.72	0.38	0.31	0.61	1.31

Calendar year 1965: Max 1,230 Min 3.1 Mean 120 Cfsm 1.64 In. 22.24
Water year 1965-66: Max 2,200 Min 6.8 Mean 137 Cfsm 1.88 In. 25.49

Peak discharge (base, 2,200 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
2-13	*	*	*	5- 1	0300	6.85	3,150

* Unknown (discharge greater than base).

Note.--No gage-height record Jan. 23 to Feb. 26, Aug. 9 to Sept. 8.

1-5952. Stony River near Mt. Storm, W. Va.

Location.--Lat 39°16'10", long 79°15'45", on left bank 100 ft downstream from highway bridge on U. S. Highway 50, 1 mile west of Mt. Storm, Grant County.

Drainage area.--48.8 sq mi.

Records available.--October 1961 to September 1966.

Gage.--Water-stage recorder. Datum of gage is 2,554.54 ft above mean sea level, datum of 1929, Parkersburg-Uniontown supplementary adjustment of 1944.

Average discharge.--5 years, 82.1 cfs (unadjusted).

Extremes.--Maximum discharge during year, 1,590 cfs Apr. 30; maximum gage height, 6.45 ft Feb. 11 (ice jam); minimum discharge, 2.2 cfs Oct. 6 (gage height, 2.01 ft).
1961-66: Maximum discharge, 3,120 cfs Mar. 19, 1963; maximum gage height, 8.41 ft Mar. 5, 1963 (ice jam); minimum discharge, that of Oct. 6, 1965.

Remarks.--Records good except those for winter periods, which are poor. Flow regulated by Stony River Reservoir, 14 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 Power and Electric Company dam 4 miles upstream from station.

Discharge, in cubic feet per second, water year October 1965 to September 1966

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	4.5	7.5	6.6	8.4	11	633	74	1,070	11	36	11	13
2	4.8	7.5	6.6	48	11	253	76	406	11	60	12	12
3	2.8	7.0	7.5	52	11	250	77	309	9.7	12	12	11
4	2.5	6.6	7.0	28	11	329	112	216	9.7	42	11	12
5	2.3	7.0	6.6	23	11	336	95	94	8.8	52	11	13
6	2.2	7.0	6.6	95	12	281	86	74	9.2	52	11	11
7	4.6	6.0	6.6	68	15	244	66	70	9.2	30	11	11
8	10	6.6	6.6	39	24	216	43	58	8.8	16	13	11
9	6.6	6.6	6.6	35	37	200	42	64	8.8	23	28	11
10	6.6	6.0	7.5	32	105	187	40	33	16	16	21	11
11	5.7	5.8	31	25	450	185	40	50	9.7	60	16	11
12	7.0	5.8	24	19	247	195	80	46	8.8	15	38	11
13	6.0	5.4	25	25	478	222	142	167	7.5	37	17	12
14	4.5	5.2	23	24	712	219	176	185	6.6	19	17	94
15	3.9	5.4	16	21	474	203	306	84	7.5	25	17	32
16	3.6	5.7	14	19	259	190	222	95	8.8	27	15	17
17	3.3	7.5	13	13	274	180	256	42	31	23	16	14
18	3.1	6.3	11	15	97	172	250	83	30	16	14	13
19	3.1	6.0	10	15	77	165	219	51	30	4.5	13	13
20	3.3	5.7	8.8	17	74	153	165	56	28	4.8	13	223
21	3.4	6.0	9.2	19	70	140	125	20	23	4.2	13	432
22	5.1	11	8.8	16	70	125	374	18	12	36	13	180
23	12	12	8.8	15	70	112	374	41	12	19	13	97
24	11	8.8	8.8	14	72	110	325	46	12	23	12	47
25	11	7.0	8.8	13	86	106	521	14	13	19	12	39
26	10	6.6	7.5	12	81	99	262	13	14	12	12	40
27	9.2	12	5.9	11	77	89	339	14	15	11	12	86
28	8.4	13	8.4	11	104	81	424	50	40	13	12	216
29	7.9	8.8	6.6	11	—	74	329	50	46	16	12	144
30	7.5	8.4	8.4	11	----------	71	726	36	44	14	12	66
31	7.5	----------	8.4	11	----------	68	----------	12	----------	12	13	----------
Total	183.4	220.2	333.6	765.4	4,020	5,878	5,366	3,567	501.1	609.1	453	1,903
Mean	5.92	7.34	10.8	24.7	144	190	212	115	16.7	19.6	14.6	63.4
(†)	20	80	225	597	1,164	1,169	1,827	1,800	1,523	1,003	906	1,782

Calendar year 1965: Max 624 Min 2.2 Mean 70.4 Cfsm 1.44 In. 19.58
Water year 1965-66: Max 1,070 Min 2.2 Mean 67.9 Cfsm 1.39 In. 18.89

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

1-5955. North Branch Potomac River at Kitzmiller, Md.

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

Drainage area.--225 sq mi.

Records available.--October 1949 to September 1966.

Gage.--Water-stage recorder. Datum of gage is 1572.26 ft above mean sea level, datum of 1929, Parkersburg - Uniontown supplementary adjustment of 1944. Prior to Oct. 15, 1954, water-stage recorder at site 0.3 mile upstream at datum 7.58 ft higher. Oct. 15, 1954, to Nov. 20, 1955, wire-weight gage at bridge half a mile upstream at datum 21.51 ft higher.

Average discharge.--17 years, 424 cfs (adjusted for storage).

Extremes.--Maximum discharge during year, 7,140 cfs May 1 (gage height, 7.76 ft); minimum, 14 cfs Oct. 6, 7, July 23 (gage height, 2.09 ft).
1949-66: 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. Regulation at low flow by Stony River Reservoir, 30 miles above station (capacity, 1,948,000,000 gal, of which 1,681,000,000 gal is controlled storage above minimum pool). Records of water temperatures for the water year 1966 are published in Part 2 of this report.

Discharge, in cubic feet per second, water year October 1965 to September 1966

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	21	25	56	60	70	1,750	269	4,720	112	72	32	35
2	32	21	57	460	110	1,340	376	2,310	104	49	28	28
3	33	22	53	786	105	1,250	335	1,570	95	30	30	26
4	21	22	48	400	90	1,750	658	1,140	86	47	30	26
5	17	22	39	265	78	2,010	606	808	78	80	28	36
6	14	22	43	865	74	1,430	529	632	76	160	26	39
7	19	22	35	824	74	1,040	474	534	83	100	24	29
8	61	27	37	485	74	816	405	452	81	53	24	30
9	52	45	40	315	74	678	366	420	88	45	56	27
10	52	41	38	299	100	646	348	331	80	42	242	23
11	58	34	178	212	3,660	646	335	288	76	32	114	23
12	47	30	332	145	2,110	658	441	303	58	32	406	23
13	57	29	227	120	1,150	888	960	778	52	52	173	23
14	38	30	238	150	3,100	888	1,130	800	50	46	122	307
15	29	29	171	150	2,040	744	1,710	600	51	44	155	332
16	30	28	140	130	1,570	646	1,610	496	51	56	93	114
17	25	51	116	91	2,060	570	1,560	395	72	47	95	72
18	20	57	100	80	1,140	518	1,340	400	80	40	81	56
19	18	45	80	76	840	490	1,050	420	69	28	61	48
20	16	36	68	70	632	446	840	380	61	22	52	386
21	16	37	76	60	458	395	698	284	56	22	63	832
22	23	51	66	54	410	366	1,180	238	45	17	74	507
23	44	76	65	60	344	323	1,330	218	35	15	69	353
24	48	70	63	84	340	327	1,450	227	34	33	56	212
25	46	53	63	60	335	335	2,180	176	33	57	44	145
26	52	45	63	54	307	303	1,540	152	32	39	40	150
27	45	74	41	74	273	307	1,450	142	33	27	36	257
28	39	155	52	40	398	269	2,000	173	37	25	33	924
29	34	83	42	40	-	241	1,590	221	125	78	30	620
30	26	60	57	35	------	251	2,780	190	83	61	30	358
31	27	------	62	56	------	262	------	131	------	43	30	------
Total	1,060	1,342	2,746	5,600	24,016	22,583	31,540	19,929	2,016	1,494	2,377	6,041
Mean	34.2	44.7	88.6	213	858	728	1,051	643	67.2	48.2	76.7	201
(†)	20	80	225	597	1,164	1,169	1,827	1,800	1,523	1,003	906	1,782

Calendar year 1965: Max 3,110 Min 9.2 Mean 353 Cfsm 1.57 In. 21.27
Water year 1965-66: Max 4,720 Min 14 Mean 334 Cfsm 1.48 In. 20.12

Peak discharge (base, 3,400 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
2-11	1400	7.28	5,330	5- 1	0230	7.76	7,140
2-13	2300	6.98	4,440				

† Month-end contents, in millions of gallons, in Stony River Reservoir (reservoir was empty on Sept. 30, 1965); furnished by West Virginia Pulp and Paper Co.

1-5965. Savage River near Barton, Md.

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

Drainage area.--49.1 sq mi.

Records available.--September 1948 to September 1966.

Gage.--Digital water-stage recorder and concrete control. Altitude of gage is 1,605 ft (from topographic map). Prior to Oct. 20, 1960, graphic water-stage recorder at same site and datum.

Average discharge.--18 years, 71.6 cfs.

Extremes.--Maximum discharge during year, 1,670 cfs Feb. 13 (gage height, 4.26 ft); minimum, 0.40 cfs Sept. 3, 4 (gage height, 0.96 ft).
1948-66: 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, that of Sept. 3, 4, 1966.

Remarks.--Records good. City of Frostburg diverts about 0.5 cfs from headwaters of stream for municipal supply.

Discharge, in cubic feet per second, water year October 1965 to September 1966

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	11	5.5	15	9.2	10	301	36	313	33	3.8	1.1	0.60
2	13	5.2	14	21	10	272	40	256	28	3.2	1.0	.50
3	8.9	5.0	13	63	9.0	247	41	187	25	2.8	1.2	.50
4	7.1	4.7	12	60	8.0	377	55	139	22	2.5	1.0	.60
5	6.2	4.5	11	51	7.0	495	63	107	20	5.7	.90	1.2
6	5.5	4.3	11	118	7.0	304	68	87	19	6.7	.80	.90
7	15	4.1	8.8	158	7.0	201	66	70	19	4.4	.80	.90
8	43	4.8	7.6	114	7.4	145	61	61	18	3.6	.70	.90
9	23	6.5	8.2	83	8.0	113	58	54	16	2.8	1.1	.60
10	19	6.0	8.5	74	20	96	56	45	15	2.2	2.0	.60
11	18	5.7	10	40	260	94	52	38	13	2.0	1.4	.60
12	19	5.1	12	36	306	106	55	39	11	2.0	2.7	.50
13	18	5.1	15	38	1,150	167	62	51	10	2.0	1.6	.70
14	15	4.9	16	33	687	165	72	57	11	2.1	5.0	13
15	13	4.6	16	25	333	138	125	58	12	5.9	6.3	12
16	11	4.7	16	18	250	116	198	56	11	4.8	4.1	5.7
17	9.3	8.0	16	17	233	94	255	55	11	3.2	2.9	3.7
18	7.9	8.4	15	18	186	82	226	59	9.0	2.4	2.0	3.1
19	7.1	7.8	13	17	149	76	179	155	7.8	2.3	1.5	2.7
20	6.6	7.4	12	18	109	67	138	144	6.9	2.7	1.3	32
21	6.1	8.5	13	16	90	56	109	118	6.3	2.0	1.7	43
22	8.7	16	12	16	80	51	100	93	5.8	1.5	7.5	23
23	15	22	9.4	19	70	48	113	73	5.3	1.4	4.5	18
24	12	23	9.4	17	64	47	220	60	4.9	1.3	2.6	13
25	10	20	11	15	55	43	346	51	4.5	1.8	1.9	9.8
26	9.5	18	9.4	13	47	39	275	44	4.4	1.4	1.4	8.4
27	8.6	20	6.5	11	42	37	242	45	4.4	1.2	1.2	7.6
28	8.0	21	10	10	75	33	408	65	4.0	1.3	1.0	8.2
29	7.2	18	8.2	9.0	-	33	406	54	5.6	1.9	.90	7.5
30	6.6	16	9.4	10	------	32	304	43	4.7	1.8	.70	6.4
31	6.1	------	8.8	10	------	36	------	37	----	1.4	.60	------
TOTAL	374.4	294.8	357.2	1,157.2	4,279.4	4,111	4,429	2,714	367.6	84.1	63.40	226.28
MEAN	12.1	9.83	11.5	37.3	153	133	148	87.5	12.3	2.71	2.05	7.54
CFSM	.246	.200	.234	.760	3.12	2.71	3.01	1.78	.251	.055	.042	.154
IN	.28	.22	.27	.88	3.24	3.11	3.35	2.06	.28	.06	.05	.17

CALENDAR YEAR 1965	MAX	642	MIN	.70	MEAN	59.9	CFSM	1.22	INCHES	16.55		
WATER YEAR 1965-66	MAX	1,150	MIN	.50	MEAN	50.6	CFSM	1.03	INCHES	13.98		

Peak discharge (base, 800 cfs)

Date	Time	Gage height	Discharge
2-13	1345	4.26	1,670

Note.--Where daily discharge is less than 1.0 cfs the zero in the hundredths column is not significant.

1-5970. Crabtree Creek near Swanton, Md.

Location.--Lat 39°30'00", long 79°09'35", on left bank 0.9 mile upstream from Middle Fork, 1.0 mile downstream from Springlick Run, 5.0 miles northeast of Swanton, Garrett County, and about ½ mile upstream from mouth.

Drainage area.--16.7 sq mi.

Records available.--September 1948 to September 1966.

Gage.--Digital water-stage recorder and concrete control. Datum of gage is 1,529.06 ft above mean sea level (Corps of Engineers bench mark). Prior to Dec. 1, 1960, graphic water-stage recorder at same site and datum.

Average discharge.--18 years, 28.3 cfs.

Extremes.--Maximum discharge during year, 395 cfs Feb. 13 (gage height, 2.55 ft); minimum, 0.80 cfs Sept. 11, 12, 13 (gage height, 0.66 ft).
1948-66: 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. Small diversion above station by Baltimore and Ohio Railroad.

Discharge, in cubic feet per second, water year October 1965 to September 1966

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	2.4	1.9	3.8	3.4	4.0	103	14	220	10	2.2	1.3	1.0
2	2.0	1.8	3.4	18	4.0	108	18	162	9.7	2.2	1.3	1.0
3	1.6	1.8	3.2	37	3.6	105	20	100	8.9	2.0	1.5	1.0
4	1.4	1.8	3.2	27	3.4	156	27	66	8.6	2.2	1.3	1.0
5	1.3	1.7	2.9	20	3.0	178	33	49	7.9	6.7	1.3	1.1
6	1.3	1.7	2.9	41	2.9	122	36	40	7.6	4.5	1.2	1.0
7	5.0	1.7	2.7	53	3.0	78	33	30	7.6	2.7	1.2	1.0
8	6.1	2.2	2.4	40	3.2	55	30	27	7.2	2.4	1.2	1.0
9	3.4	2.7	2.4	30	4.2	41	29	23	7.2	2.2	2.7	.90
10	4.5	2.2	2.6	21	8.9	36	26	20	6.7	1.9	2.9	.90
11	4.5	2.3	3.8	16	120	33	23	16	6.1	1.9	1.7	.90
12	5.3	1.8	5.6	14	143	36	26	17	5.6	1.9	1.8	.90
13	4.2	1.8	6.7	15	297	46	28	21	5.0	1.9	1.5	1.0
14	3.6	1.8	6.7	13	228	47	38	23	5.0	2.0	2.4	8.9
15	3.0	1.6	6.4	9.7	146	43	78	24	4.8	2.4	2.7	3.2
16	3.2	1.8	6.1	7.0	119	38	122	26	4.5	2.2	1.7	1.8
17	2.6	2.4	5.6	6.7	125	33	146	25	4.8	1.8	1.6	1.5
18	2.3	2.4	5.0	7.2	95	29	116	29	4.0	1.7	1.4	1.4
19	2.2	2.2	4.2	6.7	69	28	78	51	3.8	1.8	1.3	1.4
20	2.0	2.2	3.8	7.2	49	25	58	51	3.6	2.2	1.3	12
21	2.0	2.6	3.8	6.4	40	21	46	41	3.2	1.8	1.5	7.6
22	2.9	4.0	3.4	6.4	31	20	44	37	3.2	1.6	1.7	5.6
23	3.4	4.0	3.2	7.2	27	19	44	31	2.9	1.5	1.4	5.6
24	2.7	3.8	3.2	6.4	23	19	62	26	2.9	1.5	1.2	3.4
25	2.7	3.6	3.6	5.8	21	16	140	22	2.7	1.6	1.1	2.9
26	2.4	3.4	3.6	5.0	19	15	137	20	2.7	1.5	1.1	2.9
27	2.3	5.6	2.4	4.5	16	14	105	17	2.7	1.4	1.0	2.9
28	2.2	5.3	3.4	3.8	25	13	156	15	2.4	1.6	1.0	6.7
29	2.2	4.8	2.7	3.6	-	12	182	15	2.4	1.8	1.0	5.0
30	2.0	4.2	3.4	4.0	------	13	172	12	2.4	1.5	1.0	4.0
31	2.0	------	3.2	4.0	------	13	------	11	------	1.4	1.0	------
TOTAL	88.7	81.1	119.3	450.0	1,633.2	1,515	2,067	1,267	156.1	66.0	46.3	89.50
MEAN	2.86	2.70	3.85	14.5	58.3	48.9	68.9	40.9	5.20	2.13	1.49	2.98
CFSM	.171	.162	.231	.868	3.49	2.93	4.13	2.45	.311	.128	.089	.178
IN	.20	.18	.27	1.00	3.64	3.37	4.60	2.82	.35	.15	.10	.20

CALENDAR YEAR 1965 MAX 221 MIN 1.1 MEAN 23.8 CFSM 1.43 INCHES 19.35
WATER YEAR 1965-66 MAX 297 MIN .90 MEAN 20.8 CFSM 1.25 INCHES 16.88

(Peak discharge (base, 330 cfs)

Date	Time	Gage height	Discharge
2-13	1115	2.55	395

Note.--Where daily discharge is less than 1.0 cfs the zero in the hundredths column is not significant.

1-5975. Savage River below Savage River Dam, near Bloomington, Md.

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

Drainage area.--106 sq mi.

Records available.--October 1948 to September 1966.

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.--18 years, 159 cfs (adjusted for storage).

Extremes.--Maximum discharge during year, 2,840 cfs Feb. 15 (gage height, 5.45 ft); minimum, 2.8 cfs June 29 (gage height, 0.75 ft); minimum daily, 10 cfs Jan. 18, 20.
1948-66: Maximum discharge, 6,530 cfs Oct. 16, 1954 (gage height, 7.70 ft); minimum 0.4 cfs Nov. 13, 1958 (gage height, 0.58 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).

Discharge, in cubic feet per second, water year October 1965 to September 1966

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	69	64	36	28	37	385	12	769	64	35	56	61
2	72	72	45	32	25	845	13	706	60	28	59	61
3	70	72	49	33	24	853	13	673	54	46	61	58
4	65	72	45	33	24	794	13	303	50	60	60	64
5	74	72	45	33	24	1,110	13	81	47	36	60	66
6	80	72	50	73	24	932	13	42	43	17	60	57
7	83	72	52	276	24	565	13	61	43	14	64	52
8	67	72	64	536	24	269	13	83	42	24	66	66
9	46	64	78	526	24	93	13	108	39	43	57	66
10	38	56	66	250	24	93	13	103	38	47	24	62
11	40	50	51	247	26	93	13	87	31	55	13	70
12	41	50	28	92	541	375	13	78	27	63	13	73
13	41	50	13	92	633	244	14	111	34	61	13	73
14	40	62	11	92	1,200	95	15	118	34	43	13	43
15	47	62	11	92	2,420	97	16	130	43	47	13	13
16	62	55	11	92	2,160	98	17	137	42	46	13	12
17	66	55	11	41	634	98	19	141	40	42	13	12
18	66	48	11	10	494	67	19	157	28	48	13	35
19	74	36	11	11	490	48	19	462	24	53	23	38
20	77	31	33	10	255	48	18	440	33	58	38	24
21	77	31	47	30	89	26	17	320	45	69	39	13
22	72	31	33	45	89	13	17	248	45	23	31	13
23	61	31	30	45	90	13	18	189	58	73	18	13
24	61	23	36	25	84	13	18	150	64	70	30	12
25	57	30	36	24	90	13	250	126	64	67	37	12
26	68	40	36	45	90	13	655	107	64	49	47	12
27	52	43	42	45	90	13	655	95	64	57	51	13
28	46	23	56	45	90	13	877	114	64	62	53	13
29	54	11	63	45	-	12	1,210	112	54	61	57	13
30	59	22	63	45	---------	12	867	86	51	26	60	12
31	59	----------	38	45	---------	12	----------	73	----------	38	61	----------
Total	1,884	1,472	1,201	3,038	9,819	7,355	4,876	5,410	1,389	1,511	1,216	1,132
Mean	60.8	49.1	38.7	98.0	351	237	163	207	46.3	48.7	39.2	37.7
(†)	7,730	5,980	5,080	3,930	4,400	7,730	19,290	20,050	18,860	16,250	14,060	12,660

Calendar year 1965: Max 1,630 Min 11 Mean 132 Cfsm 1.25 In. 16.97
Water year 1965-66: Max 2,420 Min 10 Mean 113 Cfsm 1.07 In. 14.49

† Month-end contents, in acre-ft, in Savage River Reservoir (contents on Sept. 30, 1965, 10,150 acre-ft). Records furnished by Corps of Engineers.

1-5985. North Branch Potomac River at Luke, Md.

Location.--Lat 39°28'45", long 79°03'55", on right bank 0.2 mile downstream from Savage River, 0.5 mile northwest of Luke, Allegany County, and 53.3 miles upstream from mouth.

Drainage area.--404 sq mi.

Records available.--June 1899 to July 1906 (published as "at Piedmont, W.Va."), October 1949 to September 1966.

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, chain gage at bridge 1.1 miles downstream at datum about 35 feet lower.

Average discharge.--23 years (1899-1905, 1949-66), 681 cfs (adjusted for storage since 1949).

Extremes.--Maximum discharge during year, 9,370 cfs May 1 (gage height, 9.28 ft); minimum, 76 cfs Oct. 4 (gage height, 1.08 ft).
1899-1906, 1949-66: 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 p. 68) and, since December 1950, by Savage River Reservoir, 5 miles above station (see preceding page). 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 1966 are published in Part 2 of this report.

Discharge, in cubic feet per second, water year October 1965 to September 1966

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	96	95	96	95	120	2,070	328	7,030	224	116	93	93
2	96	102	96	318	150	2,390	422	3,770	209	96	86	94
3	107	99	110	907	140	2,270	407	2,710	190	83	88	86
4	93	99	100	530	130	2,690	632	1,800	169	94	89	90
5	96	100	96	354	115	3,550	680	1,200	153	104	91	91
6	96	102	95	788	110	2,750	600	894	144	183	89	99
7	110	102	100	1,250	110	1,860	550	783	144	137	91	84
8	122	104	91	1,130	110	1,350	502	700	144	99	94	90
9	125	104	119	881	110	985	458	667	146	91	91	94
10	100	113	111	624	130	920	446	600	140	94	255	86
11	109	96	104	514	2,400	888	430	506	127	95	157	89
12	107	91	422	330	2,530	1,110	478	506	107	95	323	94
13	104	89	264	260	4,500	1,210	967	897	100	98	268	96
14	102	95	278	290	5,080	1,120	1,110	1,040	96	106	142	201
15	93	99	218	284	5,060	972	1,870	900	100	88	196	473
16	100	90	175	249	4,220	862	1,820	741	106	99	131	166
17	106	95	149	179	3,180	771	1,800	667	103	94	98	104
18	100	116	131	120	1,900	690	1,620	649	125	93	114	97
19	100	93	114	110	1,560	626	1,300	998	106	93	89	91
20	103	80	109	110	1,130	590	1,070	966	103	86	90	306
21	102	77	123	110	695	526	881	747	110	91	100	874
22	103	83	117	120	654	470	1,180	613	104	94	91	609
23	106	104	98	130	564	434	1,430	522	100	93	104	411
24	123	111	109	130	564	415	1,750	478	103	88	89	273
25	111	95	110	105	538	434	2,550	415	102	104	84	186
26	123	95	110	115	514	396	2,530	344	100	108	86	167
27	111	96	95	135	454	382	2,200	310	100	90	88	184
28	95	186	102	100	538	354	3,280	338	100	90	86	865
29	98	131	113	100	—	316	3,230	403	143	107	88	712
30	96	98	119	92	----------	322	3,620	360	151	106	90	430
31	93	----------	114	115	----------	335	----------	278	----------	88	89	----------
Total	3,226	3,040	4,188	10,575	37,306	34,058	40,141	32,832	3,849	3,103	3,670	7,335
Mean	104	101	135	341	1,332	1,099	1,338	1,059	128	101	118	244

Calendar year 1965: Max 4,320 Min 77 Mean 561 Cfsm 1.39 In. 18.84
Water year 1965-66: Max 7,030 Min 77 Mean 502 Cfsm 1.24 In. 16.88

1-5990. Georges Creek at Franklin, Md.

Location.--Lat 39°29'38", long 79°02'42", on right bank at Franklin, Allegany County, 1¼ miles upstream from Westernport and mouth.

Drainage area.--72.4 sq mi.

Records available.--May 1905 to July 1906 (Published as "at Westernport"), October 1929 to September 1966.

Gage.--Water-stage recorder. Datum of gage is 958.96 ft above mean sea level (West Virginia Pulp and Paper Co. bench mark). May 4, 1905, to July 15, 1906, chain gage at bridge three quarters of a mile downstream at different datum. Oct. 16, 1929, to Oct. 1, 1937, graphic water-stage recorder at site 95 ft downstream at present datum.

Average discharge.--37 years, (1929-66), 77.2 cfs.

Extremes.--Maximum discharge during year, 1,290 cfs Feb. 13 (gage height, 6.48 ft); minimum, 2.4 cfs Sept. 2, 3, 4, 7 (gage height, 2.98 ft).
1905-6, 1929-66: 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, and 1966 by the U. S. Geological Survey and in the water years 1958 and 1959 by the Maryland Geological Survey.

Discharge, in cubic feet per second, water year October 1965 to September 1966

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	5.4	5.9	8.5	8.0	3.9	312	36	475	41	9.0	4.3	30
2	5.9	5.9	7.4	20	3.9	260	34	376	38	8.4	3.9	2.7
3	6.4	5.9	7.4	32	3.6	242	34	308	34	7.8	4.6	2.4
4	5.9	6.4	8.0	22	3.2	356	37	235	30	8.4	3.9	2.7
5	5.9	6.4	8.0	16	3.0	470	36	184	29	9.0	4.3	3.3
6	5.9	6.4	8.0	60	3.0	344	34	147	29	9.6	4.3	2.7
7	23	6.4	8.0	61	3.1	249	34	128	28	9.0	3.9	2.4
8	32	7.4	7.4	38	5.6	178	34	112	27	7.8	3.9	3.0
9	16	8.5	7.4	21	8.5	136	33	99	26	6.8	3.9	2.7
10	12	8.0	7.4	23	13	118	33	82	25	6.8	5.9	2.7
11	10	8.0	8.0	16	135	116	31	73	24	6.3	5.0	2.7
12	13	7.4	8.0	13	167	114	36	76	21	6.3	5.9	2.7
13	10	7.4	9.6	14	868	136	49	95	21	6.8	4.6	3.0
14	8.5	6.9	9.6	14	610	125	71	99	21	5.9	12	33
15	8.5	6.4	9.0	11	372	112	114	84	19	12	9.6	14
16	8.0	6.4	8.5	8.0	304	97	153	73	19	8.4	5.9	7.3
17	7.4	8.0	8.5	8.0	272	86	195	67	18	6.8	5.0	5.9
18	6.9	8.0	8.5	6.4	192	78	181	89	17	5.9	4.3	5.0
19	6.9	7.4	8.0	5.9	147	60	147	220	15	5.9	3.6	4.6
20	6.9	7.4	7.4	5.8	110	54	121	145	15	5.9	3.6	56
21	6.4	7.4	8.0	5.6	86	50	99	118	14	5.4	10	54
22	9.6	10	8.0	5.6	78	48	128	101	13	5.0	11	26
23	11	12	8.0	6.2	66	45	147	86	12	4.6	5.9	17
24	10	11	8.0	5.6	62	45	253	73	11	4.6	4.6	12
25	8.5	9.6	8.0	5.0	61	43	304	66	11	5.4	4.3	9.6
26	7.4	9.6	8.0	4.5	54	40	235	61	11	4.6	3.9	9.6
27	7.4	9.6	6.9	4.1	46	38	276	60	11	4.3	3.6	11
28	6.9	9.6	7.4	3.7	85	34	480	68	10	4.6	3.6	15
29	6.9	9.0	5.9	3.5	—	33	425	60	14	5.4	3.3	13
30	6.4	8.5	7.4	3.9	------	34	455	49	10	4.6	3.0	10
31	6.4	------	8.0	3.9	------	37	------	44	------	4.6	3.0	------
Total	291.4	236.8	246.2	454.7	3,765.8	4,090	4,245	3,953	614	205.9	158.6	3390
Mean	9.40	7.89	7.94	14.7	134	132	142	128	20.5	6.64	5.12	11.3
Cfsm	0.130	0.109	0.110	0.203	1.85	1.82	1.96	1.77	0.283	0.092	0.071	0.156
In.	0.15	0.12	0.13	0.23	1.93	2.10	2.18	2.03	0.32	0.11	0.08	0.17

Calendar year 1965: Max 727 Min 3.6 Mean 71.6 Cfsm 0.989 In. 13.42
Water year 1965-66: Max 868 Min 2.4 Mean 51.0 Cfsm 0.704 In. 9.56

Peak discharge (base, 1,200 cfs)

Date	Time	Gage height	Discharge
2-13	1230	6.48	1,290

1-6000. North Branch Potomac River at Pinto, Md.

Location.--Lat 39°33'59", long 78°50'25", on right bank at downstream side of Western Maryland Railway bridge at Pinto, Allegany County, 2.8 miles downstream from Mill Run, and 32.6 miles upstream from mouth.

Drainage area.--596 sq mi.

Records available.--October 1938 to September 1966.

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, wire-weight gage at highway bridge 250 ft downstream at same datum.

Average discharge.--28 years, 859 cfs (unadjusted).

Extremes.--Maximum discharge during year, 11,700 cfs May 1 (gage height, 12.08 ft); minimum, 73 cfs July 4, Sept. 8 (gage height, 1.66 ft).

1938-66: 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 p.68), and since December 1950, by Savage River Reservoir (see p. 71).

Discharge, in cubic feet per second, water year October 1965 to September 1966

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	136	106	113	123	140	2,490	420	9,490	350	152	89	94
2	128	111	113	142	170	3,320	465	5,180	320	118	98	94
3	116	116	116	960	155	3,030	525	3,720	290	100	96	94
4	123	113	131	705	145	3,230	598	2,680	260	82	94	84
5	104	116	118	455	135	4,290	837	1,750	230	103	96	94
6	109	113	113	663	125	3,680	711	1,290	204	136	94	94
7	131	116	116	1,480	125	2,420	642	1,110	191	198	91	103
8	227	123	116	1,340	125	1,830	598	972	204	138	94	82
9	173	123	118	1,030	123	1,270	535	907	198	98	105	96
10	145	128	145	864	150	1,170	515	831	195	98	195	94
11	126	131	128	575	1,740	1,110	485	681	173	98	246	87
12	142	111	334	397	3,470	1,210	515	648	158	103	161	91
13	131	104	348	312	5,340	1,490	985	914	136	105	456	100
14	128	101	308	344	6,860	1,410	1,390	1,230	130	115	218	232
15	116	113	284	332	5,160	1,230	2,430	1,160	122	133	198	540
16	104	113	227	288	5,010	1,080	2,530	920	125	105	198	262
17	118	111	188	237	4,000	972	2,470	862	138	108	130	145
18	118	121	164	145	2,530	888	2,180	771	138	100	115	104
19	113	136	150	131	2,020	771	1,780	1,190	141	100	112	99
20	116	109	123	131	1,570	729	1,440	1,250	118	100	94	251
21	118	97	134	131	946	658	1,200	1,010	118	94	103	989
22	123	99	150	142	855	582	1,390	825	122	98	136	825
23	142	111	128	156	741	540	1,910	705	118	100	108	485
24	139	145	111	150	711	505	2,490	626	112	100	105	372
25	150	134	134	121	687	520	2,970	565	115	100	89	251
26	136	121	136	131	648	490	3,350	480	112	118	89	194
27	150	121	118	156	570	465	2,790	434	112	105	94	201
28	128	149	106	118	765	447	4,300	442	112	94	94	569
29	111	210	123	116	-	406	4,380	510	115	100	94	948
30	116	139	128	106	---	388	4,300	485	195	122	91	560
31	111	---	150	130	---	420	---	402	---	105	94	---
Total	4,028	3,641	4,871	12,111	47,016	43,041	51,131	44,040	5,052	3,426	4,077	8,234
Mean	130	121	157	391	1,679	1,388	1,704	1,421	168	111	132	274

Calendar year 1965: Max 5,910 Min 97 Mean 726 Cfsm 1.22 In. 16.53
Water year 1965-66: Max 9,490 Min 82 Mean 632 Cfsm 1.06 In. 14.39

1-6010. Wills Creek below Hyndman, Pa.

Location.--Lat 39°48'43", long 78°43'00", on left bank 150 ft upstream from county highway bridge, 150 ft downstream from Pennsylvania Railroad bridge, 0.35 mile downstream from Little Wills Creek, and half a mile south of Hyndman, Bedford County, and 14 miles upstream from mouth.

Drainage area.--146 sq mi.

Records available.--June 1951 to September 1966.

Gage.--Digital water-stage recorder. Datum of gage is 891.37 ft above mean sea level (Pennsylvania Railroad bench mark). Prior to Oct. 24, 1960, graphic water-stage recorder at same site and datum.

Average discharge.--15 years, 183 cfs.

Extremes.--Maximum discharge during year, 3,980 cfs Feb. 13 (gage height, 6.68 ft); minimum, 0.70 cfs Aug. 9 (gage height, 1.38 ft).
1951-66: Maximum discharge, 11,600 cfs Oct. 15, 1954 (gage height, 11.02 ft), from rating curve extended above 6,000 cfs by logarithmic plotting; minimum, 0.70 cfs Sept. 10, 11, 1965, Aug. 9, 1966.

Remarks.--Records good.

Discharge, in cubic feet per second, water year October 1965 to September 1966

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	11	5.9	13	12	12	983	78	808	72	7.6	1.3	1.3
2	20	5.7	10	21	12	891	74	705	66	6.0	1.2	1.0
3	13	5.6	13	98	12	705	74	540	58	5.0	1.2	.90
4	8.5	5.6	11	78	12	837	98	400	51	4.3	1.0	1.1
5	6.4	5.5	12	62	12	1,240	108	298	47	4.2	.90	1.3
6	5.4	5.4	11	129	12	865	124	242	64	9.1	.90	1.2
7	15	5.5	10	179	12	554	132	197	54	11	.80	1.5
8	79	6.2	7.6	138	14	376	132	182	49	9.2	.80	1.2
9	30	7.6	11	74	20	273	129	162	42	7.1	.80	1.0
10	20	10	9.4	80	40	224	132	135	37	5.4	.90	.90
11	18	9.4	9.8	50	270	212	129	114	34	5.8	.80	.80
12	16	8.2	10	35	580	212	135	116	29	5.6	.90	.70
13	16	7.4	12	35	2,590	330	175	162	25	4.5	.90	.80
14	13	7.1	12	40	1,930	330	233	149	24	4.1	2.3	13
15	12	7.2	11	35	919	273	412	143	23	9.7	16	28
16	10	7.0	11	28	638	229	567	146	22	12	12	12
17	9.0	7.1	11	23	508	193	602	159	23	7.2	5.9	6.8
18	8.1	11	11	22	376	169	502	156	20	4.9	3.7	4.8
19	7.5	9.8	9.4	22	308	156	376	313	18	3.8	2.7	3.9
20	7.0	8.7	7.9	21	220	141	293	313	16	3.1	2.2	58
21	6.9	9.0	9.0	20	179	121	233	293	14	2.5	3.3	149
22	9.1	15	8.3	17	169	111	209	250	12	2.1	15	72
23	15	19	7.6	21	141	106	190	201	11	1.8	11	70
24	14	17	10	21	127	104	278	166	10	1.7	6.0	44
25	11	14	11	18	118	98	436	143	9.0	1.6	3.9	30
26	9.9	13	11	16	106	89	521	124	8.6	1.3	2.8	23
27	8.7	14	6.2	14	87	85	567	114	8.5	1.3	2.3	19
28	7.7	19	11	13	201	76	910	116	8.1	1.5	1.9	17
29	6.9	16	8.3	12	-	70	1,060	104	10	1.6	1.6	16
30	6.5	13	8.7	12	------	72	857	89	10	1.4	1.3	14
31	6.4	------	11	12	------	78	------	78	------	1.3	1.4	------
TOTAL	427.0	294.9	315.2	1,358	9,625	10,203	9,766	7,118	875.2	147.7	107.70	594.20
MEAN	13.8	9.83	10.2	43.8	344	329	326	230	29.2	4.77	3.47	19.8
CFSM	.095	.067	.070	.300	2.36	2.25	2.23	1.58	.200	.033	.024	.136
IN	.11	.08	.08	.35	2.45	2.60	2.49	1.81	.22	.04	.03	.15

CALENDAR YEAR 1965	MAX 1,750	MIN .80	MEAN 149	CFSM 1.02	INCHES 13.86
WATER YEAR 1965-66	MAX 2,590	MIN .70	MEAN 112	CFSM .767	INCHES 10.40

Peak discharge (base, 2,100 cfs)

Date	Time	Gage height	Discharge
2-13	1700	6.68	3,980

Note.--Where daily discharge is less than 1.0 cfs the zero in the hundredths column is not significant.

1-6015. Wills Creek near Cumberland, Md.

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

Drainage area.--247 sq mi.

Records available.--May 1905 to July 1906 (published as "at Cumberland"), October 1929 to September 1966.

Gage.--Digital 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, chain gage at highway bridge 700 ft upstream at different datum. Oct. 18, 1929, to Mar. 17, 1936, graphic water-stage recorder, and Apr. 1, 1936, to Mar. 19, 1937, tape gage, at site 200 ft upstream at present datum. Mar. 20, 1937, to Sept. 27, 1962, graphic water-stage recorder at present site and datum.

Average discharge.--37 years (1929-66), 310 cfs.

Extremes.--Maximum discharge during year, 5,790 cfs Feb. 13 (gage height, 7.73 ft) maximum gage height, 7.92 ft Feb. 13 (ice jam); minimum, 10 cfs Sept. 10, 11 (gage height, 1.32 ft).
1905-6, 1929-66: 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 p. 73). Slight diurnal fluctuation at low flow caused by quarry upstream.

Discharge, in cubic feet per second, water year October 1965 to September 1966

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	31	20	27	24	21	1,410	143	1,210	147	36	18	14
2	34	19	26	35	21	1,280	137	1,010	134	33	17	13
3	32	18	25	106	21	985	137	814	124	32	16	13
4	23	19	27	117	21	1,060	157	637	116	30	15	13
5	20	20	24	86	21	1,510	169	519	111	30	15	13
6	19	19	24	174	21	1,150	180	445	118	31	15	13
7	62	19	23	269	21	772	190	379	115	34	15	13
8	122	21	21	195	25	558	191	350	109	36	15	12
9	71	23	22	108	35	435	185	320	99	33	16	11
10	49	22	21	112	44	373	190	274	92	30	15	11
11	39	23	20	90	200	344	189	239	86	29	14	11
12	41	23	21	56	772	333	201	238	79	27	14	12
13	36	23	25	56	3,780	420	279	299	71	27	14	13
14	31	22	24	69	2,940	442	415	298	70	27	17	49
15	29	21	20	62	1,380	388	648	285	68	29	20	47
16	27	21	19	47	971	337	789	271	66	31	26	35
17	25	24	25	40	806	293	818	283	66	32	24	24
18	23	23	24	37	599	264	705	274	64	27	21	22
19	22	24	23	36	507	246	568	483	56	25	18	18
20	21	24	22	36	386	228	466	466	51	24	17	125
21	21	24	20	38	298	209	393	452	48	22	23	249
22	29	32	21	32	260	190	366	406	46	22	25	129
23	36	37	21	40	220	180	375	346	43	19	29	103
24	34	36	20	40	200	181	517	297	41	20	23	76
25	30	33	24	35	180	178	623	262	40	20	20	58
26	28	31	24	30	160	163	692	235	39	18	17	48
27	26	30	21	26	158	156	786	215	37	18	16	40
28	24	32	20	23	353	140	1,280	219	37	19	15	38
29	23	34	17	22	-	130	1,450	197	36	19	15	35
30	21	29	22	21	------	142	1,240	174	38	17	15	33
31	21	------	23	21	------	144	------	157	------	17	14	------
TOTAL	1,050	746	696	2,083	14,421	14,641	14,479	12,054	2,247	814	554	1,291
MEAN	33.9	24.9	22.5	67.2	515	472	483	389	74.9	26.3	17.9	43.0
CFSM	.137	.101	.091	.272	2.09	1.91	1.96	1.57	.303	.107	.073	.174
IN	.16	.11	.10	.31	2.17	2.20	2.18	1.81	.34	.12	.08	.19

CALENDAR YEAR 1965	MAX 2,770	MIN 11	MEAN 237	CFSM .960	INCHES 13.03							
WATER YEAR 1965-66	MAX 3,780	MIN 11	MEAN 178	CFSM .721	INCHES 9.80							

Peak discharge (base, 3,500 cfs)

Date	Time	Gage height	Discharge
2-13	1800	7.73	5,790

1-6030. North Branch Potomac River near Cumberland, Md.

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

Drainage area.--875 sq mi.

Records available.--May 1929 to September 1966. 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, chain gage at same site and datum.

Average discharge.--37 years, 1,204 cfs (unadjusted).

Extremes.--Maximum discharge during year, 14,700 cfs Feb. 14 (gage height, 12.92 ft); minimum, 91 cfs Jan. 30 (gage height, 2.11 ft), result of freezeup.
1929-66: 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 p. 68), and since December 1950, by Savage River Reservoir (see p. 71). 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 1966 are published in Part 2 of this report.

Discharge, in cubic feet per second, water year October 1965 to September 1966

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	190	124	152	175	170	3,600	575	10,500	520	210	124	115
2	185	119	143	185	205	5,080	568	7,080	464	178	119	111
3	157	138	143	847	185	4,330	669	4,870	430	147	115	119
4	147	134	166	896	170	4,430	669	3,720	396	133	115	115
5	129	129	157	590	157	5,110	977	2,500	358	133	115	107
6	124	138	147	664	152	5,380	923	1,860	340	160	115	119
7	226	134	138	1,720	152	3,560	860	1,560	340	224	111	124
8	384	152	147	1,500	152	2,750	815	1,370	322	205	115	119
9	295	161	134	1,130	166	1,760	753	1,260	316	160	129	107
10	225	152	175	1,030	200	1,520	719	1,150	306	124	155	129
11	175	166	180	621	1,300	1,420	702	986	278	133	293	111
12	185	152	271	557	4,540	1,400	710	914	253	133	205	111
13	180	134	447	384	9,460	1,880	1,050	1,080	224	142	390	124
14	161	124	346	415	10,800	1,820	1,680	1,530	210	147	289	289
15	161	119	353	428	9,010	1,630	2,950	1,510	205	182	214	584
16	138	147	284	359	5,470	1,430	3,510	1,230	196	160	238	396
17	129	138	246	312	5,400	1,260	3,540	1,170	214	142	182	229
18	143	134	210	230	3,620	1,150	3,140	1,070	201	133	138	169
19	138	161	190	161	2,840	1,020	2,500	1,500	214	133	138	142
20	129	152	166	175	2,220	959	1,980	1,760	191	129	124	352
21	129	129	152	175	1,430	887	1,620	1,520	173	133	139	1,120
22	166	138	175	170	1,190	806	1,580	1,260	173	124	160	1,040
23	185	147	175	210	1,050	753	2,230	1,080	164	129	164	648
24	170	161	147	195	968	710	3,070	950	160	129	147	492
25	180	185	157	180	959	710	3,580	869	151	133	115	352
26	175	157	161	152	914	685	4,420	770	151	142	115	272
27	180	157	152	195	824	645	3,790	689	142	160	115	248
28	175	152	138	157	946	621	5,870	664	155	133	107	393
29	143	252	134	138	-	568	5,430	689	160	133	119	1,020
30	134	200	161	129	------	545	5,800	689	196	133	124	648
31	134	------	170	161	------	568	------	600	------	155	107	------
Total	5,372	4,486	5,917	14,241	64,650	59,987	67,680	58,400	7,603	4,612	4,836	9,905
Mean	173	150	191	459	2,309	1,935	2,256	1,884	253	149	156	330

Calendar year 1965: Max 8,530 Min 119 Mean 1,016 Cfsm 1.16 In. 15.76
Water year 1965-66: Max 10,800 Min 107 Mean 843 Cfsm 0.963 In. 13.08

Peak discharge (base, 10,000 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
2-14	0100	12.92	14,700	5- 1	1300	11.61	12,500

1-6035. Evitts Creek near Centerville, Pa.

Location.--Lat 39°47'23", long 78°38'48", on left bank 2 miles upstream from Thomas W. Koon Dam, 3 miles south of Centerville, Bedford County, 7 miles upstream from Rock Gully Creek, and 16.3 miles upstream from mouth.

Drainage area.--30.2 sq mi.

Records available.--September 1932 to September 1966. Prior to October 1952, published as "near Bedford Valley".

Gage.--Digital water-stage recorder and concrete control. Datum of gage is 1,027.59 ft above mean sea level (city of Cumberland bench mark). Prior to Sept. 26, 1962, graphic water-stage recorder at same site and datum.

Average discharge.--34 years, 29.7 cfs.

Extremes.--Maximum discharge during year, 700 cfs Feb. 13 (gage height, 3.20 ft); minimum, 1.0 cfs Sept. 1, 2, 3, 4, 10, 11, 12, 13 (gage height, 0.93 ft).
1932-66: 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, 0.7 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.

Discharge, in cubic feet per second, water year October 1965 to September 1966

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	5.0	2.1	2.3	2.4	2.2	213	14	91	29	2.9	1.4	1.1
2	4.4	2.1	2.3	3.7	2.2	105	12	67	26	2.6	1.5	1.1
3	2.7	2.2	2.3	7.1	2.2	76	12	58	23	2.4	1.6	1.0
4	2.2	2.2	2.3	4.4	2.2	68	14	50	20	2.4	1.3	1.5
5	2.1	2.2	2.3	3.3	2.2	72	13	44	19	2.5	1.3	1.5
6	2.1	2.2	2.3	10	2.3	61	12	40	19	7.3	1.2	1.1
7	9.5	2.2	2.2	12	2.5	49	12	35	17	4.5	1.2	1.1
8	13	2.3	2.2	5.7	2.7	40	12	34	16	3.1	1.1	1.1
9	4.8	2.5	2.2	4.3	3.1	34	11	32	14	2.6	1.2	1.1
10	3.4	2.4	2.2	4.0	3.5	31	11	28	13	2.4	1.3	1.1
11	3.0	2.4	2.3	3.3	14	29	10	25	11	4.6	1.2	1.1
12	3.0	2.3	2.4	2.9	80	27	13	28	10	2.9	1.3	1.1
13	2.8	2.3	2.7	2.9	402	28	29	36	9.2	2.6	1.1	1.2
14	2.7	2.2	2.7	3.1	216	24	34	37	9.0	2.6	1.9	5.5
15	2.6	2.2	2.5	3.0	96	23	32	32	8.4	5.3	2.8	4.7
16	2.4	2.3	2.5	2.8	78	21	28	28	7.7	2.8	2.0	2.3
17	2.4	2.5	2.4	2.5	68	19	26	32	7.9	2.3	1.6	1.8
18	2.3	2.3	2.3	2.4	47	18	26	29	6.5	2.2	1.4	1.6
19	2.3	2.4	2.3	2.5	41	18	26	70	5.8	2.1	1.3	1.6
20	2.3	2.3	2.2	2.6	36	17	24	51	5.3	2.0	1.4	11
21	2.3	2.4	2.2	2.8	31	16	24	46	4.8	1.8	2.3	21
22	2.9	3.2	2.2	2.7	28	16	25	43	4.4	1.7	2.9	7.1
23	4.9	3.1	2.2	2.8	25	15	26	36	4.1	1.6	2.0	5.1
24	3.1	2.8	2.3	2.9	22	15	33	32	3.9	1.6	1.5	3.2
25	2.6	2.5	2.5	2.7	21	14	36	30	3.6	1.7	1.4	2.7
26	2.4	2.5	2.4	2.5	19	13	29	27	3.5	1.6	1.3	2.5
27	2.3	2.8	2.2	2.4	18	13	39	33	3.6	1.6	1.2	2.5
28	2.3	2.9	2.2	2.3	65	12	85	65	3.3	1.8	1.2	2.5
29	2.1	2.7	2.2	2.2	-	12	71	42	3.6	1.7	1.1	2.5
30	2.2	2.5	2.2	2.2	------	12	75	35	3.2	1.6	1.1	2.3
31	2.2	------	2.4	2.2	------	13	------	32	------	1.5	1.1	------
TOTAL	104.3	73.0	71.9	112.6	1,332.1	1,124	814	1,268	314.8	80.3	46.2	95.0
MEAN	3.37	2.43	2.32	3.63	47.6	36.3	27.1	40.9	10.5	2.59	1.49	3.17
CFSM	.112	.081	.077	.120	1.58	1.20	.897	1.35	.348	.086	.049	.105
IN	.13	.09	.09	.14	1.64	1.38	1.00	1.56	.39	.10	.06	.12

CALENDAR YEAR 1965 MAX 359 MIN 1.6 MEAN 19.0 CFSM .629 INCHES 8.56
WATER YEAR 1965-66 MAX 402 MIN 1.0 MEAN 14.9 CFSM .493 INCHES 6.69

Peak discharge (base, 400 cfs)

Date	Time	Gage height	Discharge
2-13	1830	3.20	700

1-6085. South Branch Potomac River near Springfield, W. Va.

Location.--Lat 39°26'49", long 78°39'16", on left bank at highway bridge, 2 miles east of Springfield, Hampshire County, and 13 miles upstream from confluence with North Branch.

Drainage area.--1,471 sq mi.

Records available.--June 1894 to February 1896 (fragmentary), June 1899 to February 1902, August 1903 to July 1906, August 1928 to September 1966.

Gage.--Water-stage recorder. Datum of gage is 562.02 ft above mean sea level, datum of 1929. June 1894 to February 1896, wire-weight gage at Baltimore & Ohio Railroad bridge 11 1/4 miles upstream at different datum. June 26, 1899, to Feb. 2, 1902, wire-weight gage at bridge 10 miles upstream at different datum, Aug. 28, 1903, to July 14, 1906, chain gage at present site at different datum, Aug. 8 to Sept. 24, 1928, chain gage at present site and datum.

Average discharge.--42 years (1899-1901, 1903-5, 1928-66), 1,238 cfs.

Extremes.--Maximum discharge during year, 12,200 cfs Feb. 14 (gage height, 10.53 ft); minimum, 29 cfs July 30 (gage height, 0.39 ft).

1894-96, 1899-1902, 1903-6, 1928-66: 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 above station adjusted for storage and inflow and slope-area measurement at gage height 29.84 ft; minimum, 29 cfs Jan. 28, 1956 (gage height, 0.40 ft), result of freezeup.

Maximum stage known prior to 1928, about 34 ft in November 1877, from floodmarks (discharge, 140,000 cfs).

Remarks.--Records good.

Discharge, in cubic feet per second, water year October 1965 to September 1966

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	125	135	151	123	130	4,000	385	3,250	518	136	97	72
2	118	130	156	140	140	5,340	369	7,190	487	131	93	68
3	113	128	151	162	150	4,230	364	7,060	458	134	93	66
4	111	133	146	314	160	3,300	369	5,380	430	121	95	63
5	151	130	138	408	170	3,900	364	3,840	388	121	85	60
6	140	125	138	414	190	3,710	396	2,920	378	224	79	61
7	140	120	140	707	210	2,680	396	2,270	368	190	75	58
8	156	128	138	959	230	1,980	385	1,860	378	158	73	56
9	173	125	133	800	246	1,530	379	1,590	425	199	75	55
10	299	118	130	600	286	1,260	385	1,370	394	153	75	54
11	295	118	130	500	677	1,120	374	1,190	359	134	79	52
12	254	120	133	400	5,470	1,000	379	1,050	326	118	104	52
13	226	120	138	350	4,780	950	766	995	303	109	156	54
14	206	123	153	400	9,890	995	5,240	1,020	281	104	158	112
15	190	123	184	350	5,030	1,080	5,560	1,140	260	106	147	907
16	176	125	193	350	3,610	1,030	4,510	1,050	247	113	136	1,090
17	164	128	184	337	3,220	950	3,420	941	243	113	131	599
18	153	123	176	337	2,830	842	2,760	896	239	97	128	414
19	148	123	164	240	2,130	752	2,300	968	228	89	131	312
20	140	123	159	240	1,670	698	1,920	941	232	85	116	344
21	135	133	156	215	1,320	664	1,580	860	206	81	128	982
22	138	143	151	250	1,040	600	1,620	780	186	79	139	3,320
23	138	146	146	167	923	544	4,100	724	176	83	118	2,790
24	138	146	140	150	842	513	5,770	660	167	89	123	1,630
25	138	146	140	140	815	520	5,470	606	158	89	123	1,090
26	156	156	138	130	734	520	4,400	564	147	85	118	812
27	162	159	133	130	672	478	3,460	537	141	81	106	692
28	156	153	133	130	761	450	5,230	525	136	79	97	676
29	151	146	130	130	-	420	5,770	585	150	73	91	1,330
30	146	140	128	130	----------	402	5,710	613	150	58	85	2,980
31	140	----------	125	130	----------	390	----------	585	----------	97	77	----------
Total	5,076	3,966	4,555	9,833	49,326	47,848	78,131	59,960	8,559	3,529	3,331	20,851
Mean	164	132	147	317	1,762	1,543	2,604	1,934	285	114	107	695
Cfsm	.111	.090	.100	.215	1.20	1.05	1.77	1.31	.194	.077	.073	.472
In.	.13	.10	.12	.25	1.25	1.21	1.98	1.52	.22	.09	.08	.53

Calendar year 1965: Max 12,900 Min 56 Mean 1,153 Cfsm .784 In. 10.64
Water year 1965-66: Max 9,890 Min 52 Mean 808 Cfsm .549 In. 7.48

Peak discharge (base, 10,000 cfs).--Feb. 14 (1430) 12,200 cfs (10.53 ft).

1-6100. Potomac River at Paw Paw, W. Va.

Location.--Lat 39°32'13", long 78°27'28", on left bank 250 ft upstream from bridge on Maryland State Highway 51 at Paw Paw, Morgan County, 3.3 miles downstream from Little Cacapon River, and 276.6 miles upstream from mouth.

Drainage area.--3,109 sq mi.

Records available.--October 1938 to September 1966.

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, wire-weight gage at bridge 250 ft downstream at same datum.

Average discharge.--28 years, 3,057 cfs.

Extremes.--Maximum discharge during year, 32,500 cfs Feb. 14 (gage height, 19.80 ft), highwater mark in well; minimum, 164 cfs Sept. 10, 11 (gage height, 2.98 ft).
1938-66: Maximum discharge, 111,000 cfs Oct. 16, 1942 (gage height, 38.36 ft); minimum, that of 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 p. 68) and, since December 1950, by Savage River Reservoir (see p. 71).

Discharge, in cubic feet per second, water year October 1965 to September 1966

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	306	335	365	350	360	10,200	1,190	22,500	1,370	370	267	207
2	360	330	335	375	420	14,800	1,180	18,700	1,210	380	250	192
3	340	320	330	420	400	10,800	1,190	13,900	1,120	335	234	192
4	311	325	320	1,380	400	8,670	1,250	10,900	1,040	306	230	196
5	288	325	325	1,300	400	10,100	1,440	7,790	951	306	226	196
6	316	320	316	1,170	410	10,400	1,560	6,080	874	448	223	182
7	330	316	311	2,150	440	7,440	1,490	4,920	860	487	207	182
8	643	316	306	2,870	470	5,640	1,430	4,210	860	475	200	186
9	720	350	311	2,350	520	4,140	1,360	3,670	860	415	196	192
10	595	345	311	1,910	600	3,480	1,300	3,230	860	395	226	172
11	662	335	345	1,580	2,000	3,110	1,300	2,800	783	306	230	175
12	559	340	360	1,190	10,500	2,930	1,270	2,470	714	298	400	172
13	517	316	523	937	17,000	3,090	1,650	2,490	643	284	330	172
14	475	306	601	867	28,000	3,200	5,790	3,010	595	275	613	330
15	426	288	565	825	18,500	3,170	11,000	3,230	565	302	523	790
16	405	288	589	818	12,300	2,920	9,900	2,980	517	316	410	2,150
17	370	311	541	649	10,600	2,640	8,180	2,660	517	306	420	1,290
18	350	302	487	662	8,300	2,410	6,930	2,560	517	284	355	832
19	340	284	448	577	6,200	2,200	5,840	2,750	499	271	311	613
20	330	302	415	487	4,980	1,990	4,850	3,380	499	254	302	649
21	316	306	395	475	3,660	1,870	4,060	3,060	464	238	288	2,230
22	316	320	375	426	2,930	1,750	4,050	2,650	442	230	335	4,240
23	385	325	380	460	2,570	1,610	6,700	2,350	405	219	355	4,530
24	385	330	380	420	2,340	1,510	11,300	2,100	390	219	325	2,800
25	385	345	345	380	2,280	1,480	10,800	1,910	370	234	302	1,930
26	390	365	360	350	2,160	1,480	10,200	1,760	345	246	288	1,430
27	400	370	355	400	1,970	1,400	8,360	1,600	330	238	271	1,180
28	400	350	345	350	1,870	1,320	11,700	1,490	325	259	250	1,110
29	395	330	330	320	-	1,240	15,700	1,560	320	250	226	1,820
30	355	415	320	320	------	1,160	14,200	1,620	350	238	230	3,660
31	335	------	335	350	------	1,190	------	1,490	------	204	226	------
Total	12,705	9,810	12,024	27,118	142,580	129,340	168,170	145,820	19,595	9,388	9,249	34,000
Mean	410	327	388	875	5,092	4,172	5,606	4,704	653	303	298	1,133

Calendar year 1965: Max 23,000 Min 192 Mean 2,655 Cfsm 0.854 In. 11.59
Water year 1965-66: Max 28,000 Min 172 Mean 1,972 Cfsm 0.634 In. 8.61

Peak discharge (base, 20,000 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
2-14	*0600	19.80	32,500	5- 1	1800	17.74	26,200

* About.

Note.--No gage-height record Jan. 28 to Feb. 15.

1-6130. Potomac River at Hancock, Md.

Location.--Lat 39°41'49", long 78°10'39", on left bank 0.2 mile downstream from Little Tonoloway Creek, half a mile downstream from bridge on U. S. Highway 522 at Hancock, Washington County, 1.1 miles upstream from Tonoloway Creek (formerly called Great or Big Tonoloway Creek), and 238.6 miles upstream from mouth.

Drainage area.--4,073 sq mi.

Records available.--October 1932 to September 1966. Gage-height records collected at same site since June 1925 are contained in reports of U. S. Weather Bureau.

Gage.--Digital water-stage recorder. Datum of gage is 383.46 ft above mean sea level, adjustment of 1912. Oct. 1, 1932, to Aug. 27, 1934, chain gage, and Aug. 28, 1934, to Jan. 5, 1935, Mar. 18, 1936, to Jan. 20, 1937, wire-weight gage, on former highway bridge just upstream at same datum. Jan. 6, 1935, to Mar. 18, 1936, Jan. 21, 1937, to Nov. 3, 1965, graphic water-stage recorder at present site and datum.

Average discharge.--34 years, 3,922 cfs.

Extremes.--Maximum discharge during year, 35,300 cfs Feb. 14 (gage height, 16.60 ft); minimum, 201 cfs Sept. 12 (gage height, 2.12 ft).
1932-66: 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 p. 68) and since December 1950 by Savage River Reservoir (see p. 71). Records of water temperatures for the period July to September 1966 are published in Part 2 of this report.

Discharge, in cubic feet per second, water year October 1965 to September 1966

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	395	390	455	419	440	8,710	1,420	22,600	1,890	455	249	250
2	395	390	455	449	500	18,400	1,420	25,700	1,680	431	241	237
3	419	390	419	490	480	15,400	1,380	17,700	1,500	443	287	225
4	407	384	407	549	480	11,500	1,460	14,500	1,390	407	264	221
5	373	378	401	1,570	480	11,100	1,470	10,700	1,290	390	256	227
6	346	390	407	1,540	500	12,400	1,750	8,160	1,190	462	257	230
7	419	384	407	1,610	540	9,980	1,750	6,580	1,160	496	258	223
8	525	395	395	3,020	580	7,290	1,690	5,540	1,130	524	250	212
9	752	395	401	3,100	620	5,710	1,630	4,820	1,140	552	254	213
10	850	413	401	2,530	740	4,460	1,550	4,250	1,130	466	242	215
11	686	419	401	2,160	1,000	3,890	1,490	3,780	1,060	453	248	217
12	742	419	407	1,700	5,600	3,570	1,510	3,300	970	380	274	205
13	623	401	449	1,490	18,900	3,410	1,690	3,060	860	340	500	217
14	573	407	541	1,230	33,300	3,710	4,040	3,270	780	329	460	325
15	541	384	686	1,100	25,200	3,650	13,800	3,800	702	345	800	395
16	490	378	623	1,080	15,900	3,450	13,700	3,930	655	339	640	1,330
17	462	368	650	1,020	12,900	3,180	10,900	3,460	622	343	500	2,340
18	425	378	597	898	10,900	2,900	9,050	3,300	596	339	460	1,430
19	395	390	541	761	8,000	2,660	7,560	3,230	592	326	420	960
20	390	373	504	600	6,380	2,410	6,280	3,830	565	305	370	850
21	384	373	483	580	4,990	2,250	5,300	3,890	557	286	360	1,640
22	390	407	462	520	3,800	2,130	5,010	3,480	531	272	380	5,240
23	401	395	437	560	3,250	1,980	6,890	3,060	482	263	410	6,110
24	419	407	449	510	2,900	1,850	12,000	2,730	452	258	450	4,430
25	443	407	462	460	2,770	1,760	14,900	2,450	431	256	380	3,030
26	443	413	431	430	2,640	1,720	13,100	2,260	413	260	350	2,210
27	437	449	425	480	2,470	1,710	11,400	2,080	390	272	320	1,700
28	449	449	425	420	2,470	1,630	11,900	1,910	378	268	310	1,460
29	449	437	419	390	-	1,540	18,900	1,830	378	273	281	1,440
30	449	419	401	390	------	1,460	17,300	2,110	541	277	258	2,800
31	413	------	401	420	------	1,410	------	2,080	------	258	245	------
TOTAL	14,885	11,982	14,342	32,476	168,730	157,220	202,240	183,390	25,455	11,068	10,974	40,582
MEAN	480	399	463	1,048	6,026	5,072	6,741	5,916	849	357	354	1,353

CALENDAR YEAR 1965	MAX 37,000	MIN 250	MEAN 3,303	CFSM 0.811	INCHES 7.97
WATER YEAR 1965-66	MAX 33,300	MIN 205	MEAN 2,393	CFSM 0.588	INCHES 11.01

Peak discharge (base, 23,000 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
2-14	1500	16.60	35,300	5- 2	0245	15.13	29,800

1-6145. Conococheague Creek at Fairview, Md.

Location.--Lat 39°42'57" long 77°49'28", on right bank 0.7 mile upstream from highway bridge in Fairview, Washington County, 2 miles upstream from Rockdale Run, 6½ miles northwest of Hagerstown, and 18.7 miles upstream from mouth.

Drainage area.--494 sq mi.

Records available.--June 1928 to September 1966.

Gage.--Digital water-stage recorder. Datum of gage is 391.77 ft above mean sea level, adjustment of 1912. Prior to Dec. 6, 1932, chain gage at highway bridge 0.7 mile downstream at datum 2.85 ft lower. Dec. 6, 1932, to Oct. 7, 1933, staff gage 150 ft downstream from former site at datum 4.84 ft lower than present datum. Oct. 8, 1933, to Dec. 20, 1963, graphic water-stage recorder at present site and datum.

Average discharge.--38 years, 548 cfs.

Extremes.--Maximum discharge during year, 12,000 cfs Feb. 14 (gage height, 12.69 ft); minimum, 21 cfs Aug. 8, Sept. 12.
1928-66: Maximum discharge, 17,100 cfs Nov. 22, 1952 (gage height, 15.16 ft, from high-water mark in well); minimum, that of 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 power plants near Mercersburg, Pa. Records of chemical analyses for the water year 1966 are published in Part 2 of this report.

Discharge, in cubic feet per second, water year October 1965 to September 1966

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	108	92	86	75	160	3,190	273	1,600	185	87	35	34
2	365	91	82	77	190	2,520	265	1,350	173	84	39	30
3	251	93	81	129	200	1,750	255	1,080	169	79	39	29
4	176	88	77	167	195	1,480	258	902	158	75	33	36
5	142	88	78	153	190	1,480	259	776	148	74	44	33
6	119	84	80	204	185	1,390	245	696	152	91	33	34
7	127	85	72	462	185	1,110	233	614	173	86	38	27
8	1,040	92	71	405	185	933	226	564	160	86	28	28
9	646	115	71	224	190	824	218	527	150	79	37	30
10	356	105	70	236	200	746	212	483	137	64	134	27
11	250	102	70	213	300	696	207	432	128	73	90	28
12	202	107	67	190	836	652	210	404	119	98	57	26
13	174	96	81	200	4,220	641	290	413	119	88	55	30
14	147	95	128	180	9,790	614	423	404	122	80	49	116
15	133	86	109	170	3,600	548	403	385	111	67	50	527
16	129	90	99	165	2,240	498	347	349	111	59	62	310
17	111	90	94	160	1,910	458	317	339	110	58	56	141
18	99	85	87	170	1,460	436	292	322	106	53	49	100
19	97	82	83	170	1,280	418	280	363	99	49	46	82
20	92	83	80	160	1,040	399	264	329	102	51	48	107
21	88	82	76	150	812	380	258	288	100	45	46	483
22	95	87	78	140	734	368	362	267	92	40	42	663
23	204	96	74	150	663	355	445	255	88	41	49	382
24	188	94	75	170	641	352	668	235	82	41	48	233
25	162	85	73	150	636	368	729	224	82	37	45	172
26	135	81	91	140	597	349	630	226	91	38	42	138
27	122	87	87	160	559	321	554	216	88	35	43	123
28	113	90	83	160	758	304	1,320	219	92	40	39	126
29	104	90	84	140	-	290	1,330	221	111	43	37	128
30	98	84	78	120	------	283	1,160	246	94	45	36	130
31	95	------	74	170	------	281	------	202	------	42	40	------
TOTAL	6,168	2,725	2,539	5,560	33,956	24,434	12,933	14,931	3,652	1,928	1,489	4,353
MEAN	199	90.8	81.9	179	1,213	788	431	482	122	62.2	48.0	145
CFSM	.403	.184	.166	.362	2.46	1.60	.873	.976	.247	.126	.097	.294
IN	.46	.21	.19	.42	2.56	1.84	.97	1.12	.27	.15	.11	.33

CALENDAR YEAR 1965	MAX 8,120	MIN 49	MEAN 386	CFSM .781	INCHES 10.61
WATER YEAR 1965-66	MAX 9,790	MIN 26	MEAN 314	CFSM .636	INCHES 8.63

Peak discharge (base, 4,300 cfs)

Date	Time	Gage height	Discharge
2-14	0615	12.69	12,000

1-6178. Marsh Run at Grimes, Md.

Location.--Lat 39°30'53", long 77°46'38", on right bank 220 ft upstream from bridge on Sprecher Road, 0.1 mile downstream from unnamed tributary, 0.5 mile southwest of Grimes, Washington County, 1.5 miles upstream from mouth, and 2.2 miles southwest of Fairplay.

Drainage area.--18.9 sq mi.

Records available.--October 1963 to September 1966.

Gage.--Water-stage recorder. Altitude of gage is 360 ft (from topographic map).

Extremes.--Maximum discharge during year, 59 cfs Aug. 11 (gage height, 1.93 ft); minimum daily, 0.4 cfs Jan. 31, result of freezeup.
1963-66: Maximum discharge, 105 cfs Jan. 9, 1964 (gage height, 2.42 ft); minimum, daily, that of Jan. 31, 1966.

Remarks.--Records good.

Discharge, in cubic feet per second, water year October 1965 to September 1966

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	3.6	3.2	3.2	2.8	0.6	21	7.1	14	7.1	4.6	3.2	3.0
2	3.0	3.2	3.2	3.4	1.2	15	6.8	12	7.1	4.6	3.2	3.0
3	3.0	3.4	3.4	4.0	1.8	13	7.4	12	6.8	4.3	3.0	3.0
4	2.8	3.2	3.4	3.6	3.0	12	7.1	11	6.5	4.1	3.0	3.0
5	2.8	3.2	3.4	3.6	3.5	12	6.8	10	6.5	4.3	3.2	2.8
6	3.0	3.2	3.4	6.1	3.2	11	6.8	9.7	6.5	4.6	3.0	2.6
7	4.9	3.4	3.2	5.3	3.2	10	6.8	9.3	6.5	4.8	3.0	2.6
8	4.2	3.6	3.4	4.2	3.3	10	6.5	9.3	6.5	4.6	3.2	2.6
9	3.4	3.4	3.4	3.4	3.5	9.7	6.5	9.3	6.2	4.1	3.2	2.6
10	3.2	3.4	3.4	3.0	3.7	9.3	6.5	9.3	5.9	4.1	3.4	2.4
11	3.2	3.4	3.4	3.2	14	9.3	6.5	9.0	5.6	4.1	7.4	2.4
12	3.0	3.4	3.4	3.0	20	9.3	7.4	9.0	5.6	4.1	3.8	2.4
13	3.0	3.4	3.8	3.1	31	9.3	11	9.3	5.6	4.1	3.4	2.6
14	3.0	3.4	3.6	2.9	22	9.0	9.7	9.3	5.6	4.1	3.4	8.5
15	3.0	3.2	3.4	2.7	15	9.0	8.6	9.0	5.4	4.1	3.4	7.7
16	3.0	3.2	3.4	2.6	13	8.2	8.2	8.6	5.4	3.8	3.4	4.6
17	3.4	3.2	3.4	2.6	12	8.2	7.8	8.6	5.6	3.8	3.2	4.1
18	3.4	3.4	3.2	2.8	9.7	8.2	7.4	8.2	5.4	3.8	3.2	3.8
19	3.4	3.4	3.2	2.8	9.3	8.2	7.4	8.2	5.4	3.8	3.0	3.8
20	3.4	3.4	3.2	2.7	9.0	7.8	7.4	7.8	5.1	3.6	3.0	5.4
21	3.4	3.4	3.2	2.6	7.8	7.8	7.4	7.2	4.8	3.6	3.0	7.1
22	4.5	3.8	2.8	2.5	7.4	7.8	9.7	6.8	4.6	3.6	3.4	7.1
23	4.5	3.6	2.8	2.8	7.4	7.4	8.6	6.5	4.6	3.4	3.0	5.6
24	3.8	3.4	3.2	2.7	7.4	8.6	9.0	6.5	4.6	3.4	3.0	5.1
25	3.6	3.2	3.4	2.6	7.8	8.2	10	6.5	4.6	3.4	3.0	4.8
26	3.4	3.4	3.2	2.4	7.4	7.8	9.0	6.5	5.1	3.4	3.0	4.8
27	3.4	3.6	3.2	2.7	7.8	7.4	9.7	6.2	5.6	3.4	2.8	5.1
28	3.6	3.2	3.2	2.6	13	7.4	14	14	5.1	3.4	2.8	5.1
29	3.4	3.2	2.8	2.4	—	7.1	12	19	5.4	3.4	2.8	5.9
30	3.4	3.2	2.4	2.0	------	7.4	13	8.6	4.6	3.2	3.0	5.6
31	3.4	------	2.4	.4	------	7.4	------	7.8	------	3.2	3.0	------
Total	106.1	100.6	100.0	93.50	248.00	293.8	252.1	288.5	169.3	120.8	101.4	129.1
Mean	3.42	3.35	3.23	3.02	8.86	9.48	8.40	9.31	5.64	3.90	3.27	4.30
Cfsm	0.181	0.177	0.171	0.160	0.469	0.502	0.444	0.493	0.298	0.206	0.173	0.228
In.	0.21	0.20	0.20	0.18	0.49	0.58	0.50	0.57	0.33	0.24	0.20	0.25

Calendar year 1965: Max 39 Min 2.4 Mean 6.94 Cfsm 0.367 In. 4.99
Water year 1965-66: Max 31 Min 0.4 Mean 5.49 Cfsm 0.290 In. 3.94

Peak discharge (base, 40 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
2-13	0900	1.75	45	8-11	1500	1.93	59
5-28	2230	1.84	52				

1-6180. Potomac River at Shepherdstown, W. Va.

Location.--Lat 39°26'04", long 77°48'07", on right bank 0.1 mile downstream from Rumsey Bridge at Shepherdstown, Jefferson County, 3.3 miles upstream from Antietam Creek, and 183.6 miles upstream from mouth.

Drainage area.--5,936 sq mi.

Records available.--August 1928 to September 1953, July 1964 to September 1966.

Gage.--Digital water-stage recorder. Datum of gage 281.00 ft above mean sea level, adjustment of 1912. Prior to Nov. 4, 1965, graphic water-stage recorder at same site and datum.

Average discharge.--27 years (1929-53, 1965-66), 5,678 cfs.

Extremes.--Maximum discharge during year, 60,100 cfs Feb. 14 (gage height 16.23 ft); minimum, 170 cfs Aug. 1; minimum daily, 185 cfs July 31.
1928-53, 1964-66: 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, that of Aug. 1, 1966; minimum daily, that of July 31, 1966.

Remarks.--Records fair. Some regulation at low flow by powerplants above station, Stony River Reservoir (see p. 68), and since December 1950 by Savage River Reservoir (see p. 71).

Discharge, in cubic feet per second, water year October 1965 to September 1966

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	715	665	607	686	620	9,100	2,050	25,200	2,580	665	282	335
2	665	629	511	697	700	24,500	2,030	34,100	2,390	690	401	328
3	740	607	596	698	700	25,000	2,000	25,900	2,170	690	367	305
4	832	563	652	766	700	18,000	1,990	19,900	2,000	665	392	195
5	765	563	629	892	700	14,800	2,020	15,600	1,890	652	367	268
6	690	563	618	1,890	700	15,700	2,020	11,800	1,770	665	392	342
7	678	552	618	2,070	720	14,800	2,230	9,440	1,730	678	335	410
8	792	596	596	2,480	760	11,100	2,250	7,840	1,710	665	392	305
9	1,830	585	596	3,680	800	8,680	2,180	6,770	1,660	690	342	249
10	1,660	629	596	3,440	860	7,000	2,110	6,000	1,610	752	401	290
11	1,490	640	596	2,900	940	5,860	2,020	5,350	1,540	778	482	256
12	1,050	640	607	2,360	1,460	5,290	2,000	4,810	1,470	715	574	312
13	1,160	665	640	1,900	13,500	4,870	2,280	4,390	1,380	640	511	358
14	1,070	640	690	1,490	53,300	4,850	3,180	4,240	1,190	640	435	806
15	806	629	728	1,540	45,000	4,970	10,600	4,520	1,130	618	520	2,240
16	860	618	960	1,280	26,800	4,770	17,900	4,890	1,100	574	629	2,310
17	806	607	915	1,350	19,600	4,440	14,900	4,780	1,010	541	765	2,180
18	752	585	900	1,200	16,400	4,100	11,800	4,320	933	502	665	2,910
19	740	530	886	1,050	12,900	3,780	9,820	4,200	873	444	585	2,090
20	715	530	846	860	9,980	3,500	8,260	4,180	858	492	563	1,760
21	596	541	792	800	7,960	3,230	6,950	4,740	767	502	541	2,030
22	574	574	752	740	6,310	3,030	6,380	4,540	791	511	502	8,540
23	607	596	717	780	5,200	2,900	7,680	4,080	802	482	473	8,130
24	702	652	715	720	4,650	2,760	11,200	3,650	777	426	464	7,340
25	765	618	716	537	4,360	2,620	18,000	3,320	753	392	435	5,060
26	752	596	716	590	4,100	2,500	17,100	3,050	672	384	410	3,800
27	752	618	715	660	3,910	2,440	15,300	2,850	622	464	401	2,950
28	728	629	678	600	3,850	2,360	14,700	2,700	651	426	392	2,410
29	690	678	671	560	-	2,260	22,000	2,760	729	367	392	2,200
30	678	886	625	560	------	2,170	23,900	2,490	715	328	384	2,390
31	665	------	667	600	------	2,090	------	2,680	------	185	367	------
TOTAL	26,325	18,424	21,551	40,376	247,480	223,470	246,850	245,090	38,273	17,223	14,161	63,099
MEAN	849	614	695	1,302	8,839	7,209	8,228	7,906	1,276	556	457	2,103
CFSM	.143	.103	.117	.219	1.49	1.21	1.39	1.33	.215	.094	.077	.354
IN	.16	.12	.14	.25	1.55	1.40	1.55	1.54	.24	.11	.09	.40

CALENDAR YEAR 1965 MAX 62,900 MIN 401 MEAN 4,595 CFSM .774 INCHES 10.51
WATER YEAR 1965-66 MAX 53,300 MIN 185 MEAN 3,294 CFSM .555 INCHES 7.53

Peak discharge (base, 23,000 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
2-14	1830	16.23	60,100	5- 2	1315	11.68	36,000
3- 3	0200	9.93	27,800				

1-6190. Antietam Creek near Waynesboro, Pa.

Location.--Lat 39°42'59", long 77°36'28", 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., 2½ miles southwest of Waynesboro, Franklin County, and 36.6 miles upstream from mouth.

Drainage area.--93.5 sq mi.

Records available.--May 1948 to September 1951, October 1965 to September 1966.

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, wire-weight gage 100 ft downstream at present datum.

Extremes.--Maximum discharge during year, 1,140 cfs Sept. 15 (gage height, 6.02 ft); minimum not determined, occurred during period of ice effect; minimum daily, 11 cfs Jan. 30.
1948-51, 1965-66: Maximum discharge, 1,490 cfs Nov. 25, 1950 (gage height, 8.55 ft) from rating curve extended above 400 cfs by logarithmic plotting; minimum daily, that of Jan. 30, 1966.

Remarks.--Records fair.

Discharge, in cubic feet per second, water year October 1965 to September 1966

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	40	24	21	19	14	288	51	224	49	32	22	15
2	32	22	21	20	17	193	49	174	46	30	22	15
3	27	21	21	22	18	160	48	160	46	29	22	15
4	23	20	22	21	18	168	51	145	43	28	21	16
5	21	21	20	20	18	187	49	129	43	30	21	17
6	21	20	21	31	18	154	46	124	44	37	21	17
7	35	20	19	31	18	129	48	112	43	42	20	17
8	60	21	20	25	19	108	46	108	43	32	19	16
9	40	23	20	20	20	96	46	103	39	31	19	17
10	29	23	20	17	21	92	45	96	38	30	20	16
11	25	22	21	19	80	90	45	88	36	30	40	15
12	25	23	21	19	120	86	51	86	36	29	30	16
13	23	24	24	18	477	85	92	92	36	29	26	17
14	22	22	23	18	328	79	83	90	34	30	23	414
15	22	21	22	18	162	74	86	83	34	31	23	388
16	22	21	22	17	137	70	81	77	36	29	23	60
17	21	22	22	16	122	69	69	77	37	27	20	41
18	21	21	19	18	103	65	68	70	34	26	17	34
19	22	20	19	18	92	64	66	70	33	26	17	32
20	23	20	18	17	81	60	64	64	33	27	17	97
21	23	19	19	17	75	59	62	60	33	25	17	324
22	37	21	19	16	69	58	130	59	31	25	18	137
23	35	21	19	18	60	58	110	56	31	24	17	81
24	31	20	19	16	62	69	140	56	30	23	16	58
25	25	20	19	17	67	70	174	55	29	23	15	49
26	23	20	19	15	60	58	132	54	32	24	16	45
27	23	21	18	17	56	55	145	55	46	21	15	43
28	22	22	18	18	98	54	224	56	37	25	14	54
29	21	20	19	16	-	52	168	58	38	24	15	56
30	20	20	19	11	------	54	187	51	34	23	14	51
31	21	------	18	17	------	54	------	49	------	24	15	-------
Total	835	635	622	582	2,430	2,958	2,656	2,781	1,124	866	615	2,173
Mean	26.9	21.2	20.1	18.8	86.8	95.4	88.5	89.7	37.5	27.9	19.8	72.4
Cfsm	0.288	0.227	0.215	0.201	0.928	1.02	0.947	0.959	0.401	0.298	0.212	0.774
In.	0.33	0.25	0.25	0.23	0.97	1.18	1.06	1.11	0.45	0.34	0.24	0.86

Calendar year 1965: Max - Min - Mean - Cfsm - In. -
Water year 1965-66: Max 477 Min 11 Mean 50.1 Cfsm 0.536 In. 7.27

Peak discharge (base, 850 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
2-13	1830	5.25	862	9-15	0215	6.02	1,140

1-6195. Antietam Creek near Sharpsburg, Md.

Location.--Lat 39°27'01", long 77°43'52", on left bank 400 ft downstream from Burnside Bridge, 1 mile southeast of Sharpsburg, Washington County, and 4 miles upstream from mouth.

Drainage area.--281 sq mi.

Records available.--June 1897 to September 1905. August 1928 to September 1966. Monthly discharge only for some periods, published in WSP 1302.

Gage.--Digital 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, staff 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, staff gage at Burnside Bridge at present datum. July 14, 1933 to Oct. 1, 1962, graphic water-stage recorder at present site and datum.

Average discharge.--43 years (1897-1903, 1904-5, 1930-66), 258 cfs (adjusted for inflow since 1930).

Extremes.--Maximum discharge during year, 1,480 cfs Sept. 15 (gage height, 5.31 ft); minimum, 26 cfs Jan. 27 (gage height, 1.96 ft) result of freezeup; minimum daily, 37 cfs Jan. 30.
1928-66: 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, 9.4 cfs Nov. 22, 1957, result of regulation caused by construction work above station; minimum daily, that of 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 1966 are published in Part 2 of this report.

Discharge, in cubic feet per second, water year October 1965 to September 1966

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	82	73	67	58	46	515	132	427	137	97	66	52
2	97	69	63	61	54	490	128	390	133	94	66	55
3	83	63	63	69	57	371	125	344	130	90	65	54
4	69	62	67	65	56	335	128	315	127	85	64	53
5	63	63	61	63	54	348	128	286	121	93	64	60
6	63	62	63	86	54	344	125	267	121	112	63	60
7	77	62	58	88	55	290	121	250	123	130	60	57
8	171	64	61	78	58	254	121	232	119	99	57	54
9	126	73	61	62	60	232	119	226	119	92	59	56
10	87	73	61	53	63	218	119	216	115	88	61	54
11	78	70	65	59	117	209	117	204	111	87	86	55
12	78	72	63	54	164	200	125	197	105	196	110	52
13	73	73	69	56	418	193	224	199	105	102	82	55
14	68	69	73	55	825	187	229	209	105	91	71	301
15	69	67	69	53	419	179	181	199	106	92	71	1,130
16	68	65	67	51	309	170	176	184	104	87	70	327
17	65	67	67	50	280	162	168	177	104	81	67	154
18	63	65	59	54	235	158	162	173	103	77	62	123
19	65	63	58	54	209	155	155	172	99	80	60	109
20	68	61	56	52	188	150	152	165	100	82	59	148
21	69	59	58	51	169	147	147	159	97	75	59	361
22	77	65	58	50	160	146	206	155	97	74	70	487
23	107	65	58	57	152	144	258	144	92	72	69	258
24	98	63	58	50	152	153	232	139	92	69	62	183
25	78	63	59	54	160	168	278	141	89	66	58	151
26	72	61	59	46	160	152	270	137	91	72	57	138
27	70	63	58	54	145	139	243	136	106	70	57	136
28	67	67	56	55	173	137	376	171	112	70	55	139
29	63	63	58	48	-	135	380	319	120	72	53	153
30	62	63	58	37	------	134	349	154	99	69	56	154
31	63	------	56	54	------	135	------	142	------	72	55	------
TOTAL	2,439	1,968	1,907	1,777	4,992	6,750	5,674	6,629	3,282	2,736	2,014	5,169
MEAN	78.7	65.6	61.5	57.3	178	218	189	214	109	88.3	65.0	172
†	-12.1	-11.3	-11.1	-11.1	-10.1	-8.1	-7.9	-8.6	-11.4	-13.2	-14.1	-12.0
MEAN‡	66.6	54.3	50.4	46.2	168	210	181	205	97.6	75.1	50.9	160
CFSM‡	0.237	0.193	0.179	0.164	0.598	0.747	0.644	0.730	0.347	0.267	0.181	0.569
IN. ‡	0.27	0.22	0.21	0.19	0.62	0.86	0.72	0.84	0.39	0.31	0.21	0.64

CALENDAR YEAR 1965	MAX	1,870	MIN	56	MEAN	154	MEAN‡	143	CFSM‡	0.509	IN.‡	6.92
WATER YEAR 1965-66	MAX	1,130	MIN	37	MEAN	124	MEAN‡	113	CFSM‡	0.402	IN.‡	5.47

Peak discharge (base, 1,500 cfs).—No peak above base.

† Pumpage, in cubic feet per second, from Potomac River for municipal supply of Hagerstown.
‡ Adjusted for pumpage.

1-6365. Shenandoah River at Millville, W. Va.

Location.--Lat 39°16'55", long 77°47'22", on left bank 0.4 mile downstream from Cattail Run, 1 mile upstream from Millville, Jefferson County, and 5 miles upstream from Harpers Ferry and mouth.

Drainage area.--3,040 sq mi.

Records available.--April 1895 to March 1909, August 1928 to September 1966.

Gage.--Digital water-stage recorder. Datum of gage is 293.00 ft above mean sea level, adjustment of 1912. Apr. 15, 1895, to Mar. 31, 1909, staff gage at site three-quarters of a mile downstream at datum 0.32 ft higher. Aug. 23, 1928, to Nov. 4, 1963, graphic water-stage recorder at present site and datum.

Average discharge.--51 years (1895-1908, 1928-66), 2,620 cfs.

Extremes.--Maximum discharge during year, 12,100 cfs Feb. 15 (gage height, 7.59 ft); minimum, 189 cfs Aug. 30 (gage height, 0.81 ft); minimum daily, 217 cfs Aug. 31, Sept. 10, 11.
1895-1909, 1928-66: 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 in 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., half a mile upstream from station.

Discharge, in cubic feet per second, water year October 1965 to September 1966

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	456	404	417	398	643	2,710	945	6,230	1,600	502	342	240
2	445	446	407	445	731	9,080	843	7,010	1,480	521	374	260
3	489	417	409	401	808	9,460	883	7,800	1,330	540	330	260
4	460	416	431	431	723	6,670	883	9,600	1,290	489	342	275
5	444	412	425	461	860	5,140	820	7,530	1,220	465	386	255
6	415	413	410	511	769	4,320	826	5,640	1,040	459	347	290
7	499	400	404	571	796	3,800	816	4,420	1,110	413	315	260
8	566	401	406	606	750	3,240	785	3,630	959	612	586	255
9	627	463	410	542	710	2,730	768	3,050	855	554	347	245
10	546	421	410	497	687	2,350	817	2,650	1,130	495	325	217
11	629	435	410	515	731	2,130	687	2,340	1,040	430	352	217
12	768	443	420	500	1,060	1,880	792	2,040	881	430	342	235
13	610	442	420	481	2,510	1,770	1,080	1,940	885	374	732	254
14	471	442	420	412	7,310	1,690	2,030	1,820	860	342	718	563
15	477	427	434	434	10,900	1,470	2,840	1,750	852	336	674	1,650
16	449	457	423	483	7,500	1,500	2,990	1,710	762	347	508	1,580
17	476	442	429	360	4,870	1,310	2,260	1,780	740	364	459	1,500
18	466	451	435	378	3,650	1,180	2,090	1,660	681	471	477	1,170
19	469	429	403	408	3,160	1,280	1,990	1,840	646	430	386	866
20	445	396	397	406	2,690	1,140	1,800	1,730	688	364	369	856
21	418	387	427	481	2,290	1,140	1,550	1,700	667	342	489	2,940
22	481	431	415	501	1,910	1,100	1,510	1,540	639	358	424	4,230
23	436	427	395	502	1,840	1,080	1,520	1,490	625	364	386	3,460
24	465	408	396	523	1,460	1,070	1,910	1,360	606	330	315	3,220
25	488	421	410	451	1,530	968	3,050	1,300	580	315	280	2,460
26	449	449	408	657	1,470	1,050	5,690	1,260	508	290	310	1,900
27	469	446	379	888	1,400	1,000	4,800	1,170	495	295	315	1,500
28	450	445	381	638	1,450	1,080	3,970	1,040	514	295	315	1,500
29	443	445	398	503	-	894	4,620	1,410	580	295	300	2,500
30	438	428	380	659	------	954	5,780	1,760	521	305	240	3,500
31	397	------	388	556	------	850	------	2,080	------	325	217	------
Total	15,141	12,844	12,697	15,599	65,208	76,036	61,345	92,280	25,784	12,452	12,302	38,658
Mean	488	428	410	503	2,329	2,453	2,045	2,977	859	402	397	1,289
Cfsm	.161	.141	.135	.166	.766	.807	.673	.979	.283	.132	.131	.424
In.	.19	.16	.16	.19	.80	.93	.75	1.13	.32	.15	.15	.47

Calendar year 1965: Max 19,700 Min 322 Mean 1,867 Cfsm .614 In. 8.34
Water year 1965-66: Max 10,900 Min 217 Mean 1,206 Cfsm .397 In. 5.39

Peak discharge (base, 15,000 cfs).--No peak above base.

1-6375. Catoctin Creek near Middletown, Md.

Location.--Lat 39°25'35", long 77°33'25", on right bank 300 ft downstream from bridge on State Highway 17, 1.3 miles south of Middletown, Frederick County, 2¼ miles downstream from Little Catoctin Creek, and 14.8 miles upstream from mouth.

Drainage area.--66.9 sq mi.

Records available.--August 1947 to September 1966.

Gage.--Digital water-stage recorder and concrete control. Altitude of gage is 385 ft (from topographic map). Prior to Oct. 20, 1960, graphic water-stage recorder at same site and datum.

Average discharge.--19 years, 68.0 cfs.

Extremes.--Maximum discharge during year, 1,690 cfs Sept. 14 (gage height, 5.00 ft); minimum discharge, zero flow Aug. 27 to Sept. 12.
1947-66: 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; minimum, that of Aug. 27 to Sept. 12, 1966.

Remarks.--Records good.

Discharge, in cubic feet per second, water year October 1965 to September 1966

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	7.1	2.9	3.5	3.5	2.8	417	23	232	36	6.6	1.2	0
2	15	2.7	3.5	4.0	3.5	228	22	184	32	5.1	1.0	0
3	7.3	2.8	3.5	7.0	3.3	163	21	158	29	4.3	.90	0
4	4.0	2.9	3.5	5.0	3.1	169	22	134	26	3.9	.80	0
5	2.8	3.2	3.5	4.0	3.0	178	22	118	24	6.3	.80	0
6	2.4	3.3	3.5	12	2.8	132	20	106	23	9.1	1.0	0
7	15	3.5	3.0	9.0	3.3	101	21	91	25	11	.70	0
8	37	4.0	3.5	7.0	4.0	83	22	84	26	7.9	.70	0
9	13	4.0	3.5	5.0	5.0	73	22	78	25	4.8	.90	0
10	7.1	3.5	3.5	4.0	8.0	66	23	70	22	3.9	1.3	0
11	5.0	3.5	3.5	3.5	15	61	22	62	18	16	12	0
12	4.3	3.5	3.5	3.0	51	56	32	58	15	24	19	0
13	3.8	3.5	3.5	3.5	571	52	180	63	14	8.8	5.3	.10
14	3.3	3.5	4.0	3.5	404	47	119	61	15	5.2	3.3	690
15	3.2	3.3	3.5	3.5	170	43	98	56	15	4.7	3.2	450
16	2.8	3.5	3.5	3.5	133	38	84	47	14	4.1	2.7	55
17	2.6	4.0	3.5	3.0	112	35	74	43	14	3.4	2.6	29
18	3.4	3.5	3.5	3.0	84	32	62	41	14	2.8	1.7	21
19	3.2	3.5	3.5	3.5	75	31	55	45	12	2.4	1.1	17
20	3.1	3.5	3.5	3.5	66	29	50	37	11	2.2	.80	142
21	3.0	3.7	3.5	3.0	56	27	46	33	9.8	1.8	.60	363
22	3.8	4.5	4.0	3.0	52	26	90	42	8.5	1.4	.50	149
23	6.0	4.5	3.5	5.0	47	25	75	30	7.5	1.1	.40	99
24	7.8	4.0	3.5	4.5	41	34	86	26	6.9	1.0	.30	70
25	5.0	3.7	6.0	3.7	41	52	112	29	6.0	1.0	.20	57
26	4.4	3.7	7.0	3.2	37	31	93	27	6.0	.90	.10	48
27	4.1	4.0	5.0	3.5	34	27	87	25	15	.90	0	46
28	3.8	4.5	3.5	3.2	115	25	179	92	11	1.4	0	50
29	3.3	4.0	3.7	3.0	-	23	140	174	19	1.8	0	59
30	3.1	3.5	4.5	3.0	------	24	163	58	10	1.4	0	57
31	2.9	------	3.5	2.5	------	24	------	42	------	1.5	0	------
TOTAL	192.6	108.2	117.7	131.6	2,142.8	2,352	2,065	2,346	509.7	150.70	63.10	2,402.10
MEAN	6.21	3.61	3.80	4.25	76.5	75.9	68.8	75.7	17.0	4.86	2.04	80.1
CFSM	.093	.054	.057	.064	1.14	1.13	1.03	1.13	.254	.073	.031	1.20
IN	.11	.06	.07	.07	1.19	1.31	1.15	1.30	.28	.08	.04	1.34

CALENDAR YEAR 1965	MAX 1,260	MIN .30	MEAN 41.1	CFSM .614	INCHES 8.34			
WATER YEAR 1965-66	MAX 690	MIN 0	MEAN 34.5	CFSM .516	INCHES 6.99			

Peak discharge (base, 1,200 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
2-13	1445	4.29	1,340	9-14	1200	5.00	1,690

Note.--Where daily discharge is less than 1.0 cfs the zero in the hundredths column is not significant.

1-6385. Potomac River at Point of Rocks, Md.

Location.--Lat 39°16'25", long 77°32'35", on left bank at downstream side of bridge on U. S. Highway 15 at Point of Rocks, Frederick County, a third of a mile downstream from Catoctin Creek (Virginia), 6 miles upstream from Monocacy River, and 159.5 miles upstream from mouth.

Drainage area.--9,651 sq mi.

Records available.--February 1895 to September 1966.

Gage.--Digital water-stage recorder. Datum of gage is 200.54 ft above mean sea level, adjustment of 1912. Prior to Sept. 2, 1902, wire-weight gage on downstream side of bridge at datum about 0.45 ft higher. Sept. 2, 1902 to Oct. 28, 1929, chain gage at same site and present datum. Oct. 29, 1929 to Nov. 1, 1964, graphic water-stage recorder at same site and present datum.

Average discharge.--71 years, 9,112 cfs.

Extremes.--Maximum discharge during year, 71,300 cfs Feb. 15 (gage height, 14.04 ft); minimum, 530 cfs Sept. 11, 12 (gage height, 0.27 ft).

1895-1966: 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, that of Sept. 11, 12, 1966.

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 p. 68) and since December 1950 by Savage River Reservoir (see p. 71). 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 1966 are published in Part 2 of this report.

Discharge, in cubic feet per second, water year October 1965 to September 1966

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	1,400	1,150	1,370	1,160	1,100	10,300	3,140	31,200	4,960	1,390	652	675
2	1,370	1,210	1,290	1,240	1,200	29,500	3,200	39,900	4,430	1,300	629	657
3	1,300	1,200	1,130	1,280	1,200	37,400	3,060	37,600	3,960	1,300	675	640
4	1,330	1,180	1,140	1,220	1,300	28,800	3,130	31,900	3,690	1,290	717	646
5	1,360	1,140	1,220	1,310	1,300	22,500	3,000	26,400	3,450	1,280	745	625
6	1,320	1,110	1,210	1,660	1,200	21,100	3,040	20,200	3,200	1,280	773	554
7	1,410	1,080	1,160	2,640	1,300	20,700	3,110	15,800	2,980	1,240	759	608
8	1,800	1,070	1,190	3,030	1,400	16,800	3,250	13,300	2,940	1,230	731	643
9	1,700	1,100	1,180	3,930	1,500	13,300	3,150	11,400	2,870	1,480	1,040	646
10	2,430	1,160	1,170	4,450	1,600	11,100	3,130	10,000	2,770	1,280	773	602
11	2,390	1,170	1,140	3,860	1,800	9,350	2,990	8,980	2,890	1,300	787	547
12	2,410	1,200	1,140	3,310	2,500	8,340	2,930	8,000	2,510	1,280	1,000	548
13	2,050	1,210	1,200	2,850	11,400	7,640	4,010	7,380	2,490	1,310	1,020	560
14	1,900	1,240	1,220	2,380	44,800	7,300	5,340	6,900	2,390	1,170	1,570	4,330
15	1,760	1,240	1,230	2,000	63,800	7,350	10,200	6,930	2,280	1,110	1,280	6,850
16	1,620	1,210	1,310	1,900	40,900	7,080	21,600	7,310	2,080	1,040	1,240	5,850
17	1,520	1,230	1,420	1,900	28,100	6,620	19,400	7,510	2,030	908	1,220	4,060
18	1,480	1,150	1,490	1,400	22,600	5,980	15,800	7,220	1,920	963	1,300	4,470
19	1,400	1,170	1,460	1,300	18,600	5,810	13,500	6,860	1,860	1,060	1,280	3,760
20	1,380	1,100	1,400	1,900	14,700	5,360	11,600	6,730	1,740	908	1,120	3,230
21	1,290	1,040	1,400	1,600	12,000	4,910	9,870	6,980	1,690	819	982	4,120
22	1,190	1,050	1,390	1,500	9,820	4,660	8,860	7,150	1,610	834	1,160	12,700
23	1,230	1,130	1,320	1,350	8,120	4,430	9,530	6,430	1,530	870	1,000	14,200
24	1,140	1,130	1,260	1,400	7,130	4,390	12,500	5,850	1,500	834	920	12,800
25	1,290	1,150	1,290	1,450	6,830	4,220	20,100	5,460	1,480	787	828	9,930
26	1,340	1,200	1,220	1,300	6,390	3,850	24,000	4,980	1,420	745	799	7,280
27	1,350	1,220	1,230	1,100	6,070	3,780	21,800	4,650	1,300	731	790	5,810
28	1,340	1,210	1,190	1,050	6,280	3,740	19,800	4,610	1,320	773	772	4,700
29	1,280	1,220	1,170	1,100	-	3,540	24,600	5,390	1,260	773	772	4,450
30	1,270	1,260	1,190	1,200	------	3,320	30,800	4,830	1,510	745	766	4,950
31	1,260	------	1,100	1,000	------	3,330	------	5,110	------	717	697	------
TOTAL	47,310	34,930	38,830	58,770	324,940	326,500	320,440	372,960	72,060	32,743	28,797	121,445
MEAN	1,526	1,164	1,253	1,896	11,610	10,530	10,680	12,030	2,402	1,056	929	4,048
CFSM	.158	.121	.130	.197	1.20	1.09	1.11	1.25	.249	.109	.096	.419
IN	.18	.13	.15	.23	1.25	1.26	1.23	1.44	.28	.13	.11	.47

CALENDAR YEAR 1965 MAX 79,900 MIN 734 MEAN 7,087 CFSM .734 INCHES 9.97
WATER YEAR 1965-66 MAX 63,800 MIN 547 MEAN 4,876 CFSM .505 INCHES 6.86

Peak discharge (base, 35,000 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
2-15	0200	14.04	71,300	5-2	2100	9.76	43,100
3- 3	0900	9.08	39,000				

1-6390. Monocacy River at Bridgeport, Md.

Location.--Lat 39°40'43", long 77°14'06", on right bank 60 ft downstream from bridge on State Highway 97, at Bridgeport, Carroll County, 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 47.9 miles upstream from mouth.

Drainage area.--173 sq mi.

Records available.--May 1942 to September 1966.

Gage.--Digital 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, staff gage and crest-stage gages at site 0.3 mile downstream at datum 0.98 ft lower. May 3, 1946 to Sept. 30, 1961, graphic water-stage recorder at present site and datum.

Average discharge.--24 years, 188 cfs.

Extremes.--Maximum discharge during year, 10,300 cfs Sept. 15 (gage height, 15.20 ft); no flow July 24-29.
1942-66: 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 logarithmic plotting and velocity-area studies; minimum, that of July 24-29, 1966.
Maximum stage known, about 25 ft, present site and datum, Aug. 24, 1933, 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.

Discharge, in cubic feet per second, water year October 1965 to September 1966

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	18	6.5	14	13	8.6	4,200	51	1,030	27	4.0	0.20	0.20
2	14	5.9	12	17	10	1,140	47	359	24	3.8	.20	.30
3	12	5.9	12	52	13	526	43	246	22	3.4	.30	.30
4	10	6.8	11	61	14	432	43	191	20	3.3	.20	.30
5	6.8	7.4	11	36	15	917	48	156	19	4.1	.20	.30
6	6.2	7.1	11	93	15	517	42	136	17	4.6	.20	.10
7	7.4	7.1	11	215	16	265	38	108	15	6.5	.20	.10
8	6.8	6.5	10	94	16	203	38	95	15	8.1	.20	.10
9	6.5	28	9.6	37	16	174	38	89	15	7.5	.20	.10
10	6.5	26	9.2	40	17	159	35	80	14	6.7	10	.10
11	6.2	19	9.2	29	23	149	33	69	12	6.5	25	.10
12	49	15	9.2	21	58	135	33	65	8.6	6.5	32	.10
13	23	14	12	21	1,570	126	146	68	8.6	5.5	25	.10
14	17	13	27	19	4,500	115	541	67	8.6	4.4	17	2,700
15	13	12	29	17	1,310	102	266	70	8.9	3.5	6.3	4,630
16	10	12	21	17	800	87	160	56	8.8	2.4	5.0	242
17	7.4	12	18	15	770	74	117	51	7.8	.40	5.8	102
18	7.1	11	15	13	394	68	93	46	8.6	.30	5.1	60
19	6.8	13	15	12	364	65	83	45	9.0	.30	3.8	43
20	5.9	10	13	12	270	61	72	44	7.9	.40	3.1	240
21	5.6	10	12	13	125	55	66	36	6.6	.20	3.0	2,330
22	6.2	11	11	12	140	53	459	32	5.2	.10	1.6	668
23	30	12	10	14	119	52	410	29	4.1	.10	1.2	289
24	37	13	11	14	134	69	313	26	3.6	.10	.90	154
25	22	15	14	15	126	222	475	25	3.2	0	.80	99
26	16	14	16	15	140	103	250	25	3.1	0	.50	78
27	13	13	20	13	147	78	196	24	3.2	0	.40	66
28	11	13	16	12	649	63	1,220	70	3.2	0	.40	100
29	8.4	18	12	11	-	55	451	184	3.4	.10	.30	162
30	7.1	18	11	9.9	------	52	417	57	3.8	.20	.30	188
31	6.8	------	12	9.6	------	56	------	34	------	.20	.20	------
TOTAL	402.7	375.2	424.2	972.5	11,779.6	10,373	6,424	3,613	316.4	83.20	149.60	12,153.20
MEAN	13.0	12.5	13.7	31.4	421	335	214	117	10.5	2.68	4.83	405
CFSM	.075	.072	.079	.182	2.43	1.94	1.24	.676	.061	.016	.028	2.34
IN	.09	.08	.09	.21	2.53	2.23	1.38	.78	.07	.02	.03	2.61

CALENDAR YEAR 1965 MAX 5,410 MIN .50 MEAN 112 CFSM .647 INCHES 8.81
WATER YEAR 1965-66 MAX 4,630 MIN 0 MEAN 129 CFSM .746 INCHES 10.12

Peak discharge (base, 3,800 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
2-14	*0200	*13	*7,600	9-15	0315	15.20	10,300
3- 1	0415	11.12	5,670				

* About.

Note.--Where daily discharge is less than 1.0 cfs the zero in the hundredths column is not significant.

1-6395. Big Pipe Creek at Bruceville, Md.

Location.--Lat 39°36'45", long 77°14'10", on left bank 300 ft downstream from bridge on State Highway 194, 800 ft downstream from Bruceville, Carroll County, 3 miles upstream from Detour, confluence with Little Pipe Creek, and mouth.

Drainage area.--102 sq mi.

Records available.--October 1947 to September 1966. Prior to December 1947 monthly discharge only, published in WSP 1302.

Gage.--Digital water-stage recorder and concrete control. Altitude of gage is 340 ft (from topographic map). Prior to Dec. 14, 1960, graphic water-stage recorder at same site and datum.

Average discharge.--19 years, 98.4 cfs.

Extremes.--Maximum discharge during year, 3,420 cfs Sept. 14 (gage height, 7.96 ft); minimum daily, 1.0 cfs Sept. 12.
1947-66: 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, that of Sept. 12, 1966.

Remarks.--Records fair. Diurnal fluctuation caused by mills above station.

Discharge, in cubic feet per second, water year October 1965 to September 1966

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	12	13	17	20	12	1,060	44	244	35	13	6.0	1.3
2	41	15	16	23	15	322	41	152	31	12	3.0	1.6
3	16	13	17	47	20	196	38	124	26	18	3.8	1.8
4	12	14	17	36	25	181	41	106	23	19	4.8	1.9
5	9.0	15	16	26	22	258	40	92	21	20	4.9	1.8
6	8.5	14	16	51	20	144	36	85	20	22	6.6	1.7
7	19	15	16	65	19	108	35	73	20	10	6.3	1.7
8	120	16	15	40	20	90	34	70	21	16	4.9	1.8
9	25	17	15	15	19	81	33	67	30	16	5.7	1.5
10	20	17	14	32	25	76	33	64	21	14	6.6	1.2
11	20	14	15	22	99	73	32	56	18	13	12	1.1
12	17	16	16	16	341	68	35	55	17	16	9.5	1.0
13	16	17	18	22	1,330	65	163	59	17	10	8.5	1.3
14	15	16	26	21	850	61	146	55	18	10	3.2	1,250
15	14	16	20	20	252	58	86	54	28	9.0	6.0	311
16	13	16	17	18	206	52	72	48	22	8.0	6.0	63
17	13	18	17	16	181	48	62	47	21	9.5	5.4	38
18	13	20	16	17	115	48	56	47	22	8.0	4.3	29
19	12	17	15	17	108	47	52	102	18	7.5	2.8	25
20	13	17	14	18	80	44	48	67	17	7.5	3.0	46
21	13	17	15	17	70	42	47	49	17	6.0	2.8	181
22	14	17	19	12	73	42	85	46	14	5.6	3.0	108
23	17	21	17	20	65	41	75	42	13	5.2	2.4	65
24	16	19	17	18	59	73	73	38	15	5.0	2.0	40
25	14	16	19	17	64	100	152	48	12	3.5	2.2	32
26	14	17	51	13	61	58	99	43	12	4.5	1.9	30
27	14	19	24	13	58	49	93	46	14	5.0	1.8	30
28	14	21	20	12	224	46	255	64	18	5.4	1.7	35
29	14	20	25	11	-	43	152	122	16	6.4	2.0	54
30	13	17	24	11	------	43	184	48	18	11	1.9	63
31	14	------	22	10	------	49	------	40	------	5.2	1.9	------
TOTAL	585.5	500	586	696	4,433	3,666	2,342	2,253	595	321.3	136.1	2,419.7
MEAN	18.9	16.7	18.9	22.5	158	118	78.1	72.7	19.8	10.4	4.39	80.7
CFSM	.185	.164	.185	.221	1.55	1.16	.766	.713	.194	.102	.043	.791
IN	.21	.18	.21	.25	1.62	1.34	.85	.82	.22	.12	.05	.88

CALENDAR YEAR 1965 MAX 1,070 MIN 8.5 MEAN 50.2 CFSM .492 INCHES 6.69
WATER YEAR 1965-66 MAX 1,330 MIN 1.0 MEAN 50.8 CFSM .498 INCHES 6.76

Peak discharge (base, 1,600 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
2-13	1445	7.45	3,040	9-14	1500	7.96	3,420
3- 1	1545	5.22	1,630				

Note.--Shifting control method used Oct. 1 to Dec. 26, May 31 to Sept. 13, Sept. 23-29.

1-6405. Owens Creek at Lantz, Md.

Location.--Lat 39°40'36", long 77°27'50", on right bank half a mile west of Lantz Post Office (Deerfield station on Western Maryland Railway), Frederick County, 1½ miles south of Sabillasville, 4½ miles northwest of Thurmont, and 14.2 miles from mouth.

Drainage area.--5.93 sq mi.

Records available.--October 1931 to September 1966.

Gage.--Digital water-stage recorder and concrete control. Altitude of gage is 965 ft (from topographic map). Prior to Nov. 6, 1963, graphic water-stage recorder at same site and datum.

Average discharge.--35 years, 8.59 cfs (adjusted for diversion).

Extremes.--Maximum discharge during year, about 1,030 cfs Sept. 14 (gage height, about 5.32); no flow Sept. 2-11. 1931-66: 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; minimum that of Sept. 2-11, 1966.

Remarks.--Records good except those for periods of doubtful or no gage-height record, which are poor. A small diversion is occasionally made to Victor Cullen State School at Cullen, half a mile above station.

Discharge, in cubic feet per second, water year October 1965 to September 1966

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	1.6	0.40	0.70	0.60	0.30	41	3.5	24	3.0	0.60	0.20	0.10
2	.70	.40	.70	.70	.30	21	3.4	19	2.9	.50	.20	0
3	.20	.40	.70	1.2	.40	19	3.2	17	2.6	.50	.30	0
4	.20	.40	.70	.80	.40	26	3.7	15	2.5	.60	.20	0
5	.20	.40	.60	.70	.50	34	3.3	14	2.3	1.0	.30	0
6	.30	.40	.70	3.0	.50	20	3.1	12	2.2	1.3	.40	0
7	1.5	.40	.60	2.0	.60	15	3.1	11	2.3	.70	.30	0
8	9.0	.60	.60	1.2	1.5	12	3.1	11	2.2	.60	.20	0
9	1.1	.60	.60	.90	2.0	11	3.0	10	2.1	.50	.60	0
10	.70	.60	.60	.80	2.5	9.2	2.8	9.1	1.9	.50	.50	0
11	.50	.50	.60	.70	5.0	8.7	2.7	8.3	1.8	.80	.80	0
12	.50	.50	.70	.70	9.2	8.1	3.1	8.2	1.7	.50	1.0	.20
13	.50	.50	.90	.80	69	7.6	4.4	8.0	1.7	.50	.50	.30
14	.50	.50	1.0	.60	28	6.7	7.8	9.6	1.7	.40	.40	100
15	.40	.50	.70	.60	14	6.2	12	7.6	1.6	.50	.30	15
16	.40	.50	.60	.60	11	5.6	14	6.7	1.5	.40	.40	5.0
17	.40	.90	.60	.50	9.3	5.2	12	6.3	1.6	.40	.50	3.0
18	.40	.90	.50	.40	7.9	4.8	10	6.0	1.5	.30	.30	2.5
19	.40	.70	.50	.40	5.8	4.6	9.1	6.3	1.4	.30	.20	2.0
20	.40	.70	.50	.40	5.0	4.3	8.2	5.2	1.3	.30	.20	13
21	.40	.70	.50	.40	4.5	4.0	10	4.8	1.1	.20	.20	30
22	.70	.90	.60	.40	4.0	4.0	26	4.5	1.0	.30	.20	20
23	.70	.90	.50	.40	3.0	3.8	17	4.1	.90	.20	.20	10
24	.50	.70	.50	.50	3.1	7.2	18	3.9	.90	.20	.20	6.0
25	.40	.70	.90	.50	3.2	6.0	20	4.1	.80	.20	.20	4.5
26	.40	.70	1.5	.40	3.2	4.4	16	3.8	.80	.20	.10	4.0
27	.40	.90	.70	.50	4.0	4.0	20	3.8	.80	.30	.10	3.5
28	.40	1.0	.60	.40	16	3.7	28	3.9	.70	.40	.10	3.5
29	.40	.80	.70	.30	—	3.7	21	4.3	.80	.50	.10	7.0
30	.40	.70	.80	.30	------	3.7	24	3.3	.70	.40	.10	5.0
31	.40	------	.60	.20	------	3.7	------	3.1	------	.30	.10	------
TOTAL	25.00	18.80	21.00	21.90	214.20	318.2	315.5	257.9	48.30	14.40	9.40	234.60
MEAN	.81	.63	.68	.71	7.65	10.3	10.5	8.32	1.61	.47	.30	7.82
CFSM	.136	.106	.114	.119	1.29	1.74	1.77	1.40	.272	.078	.051	1.32
IN	.16	.12	.13	.14	1.34	2.00	1.98	1.62	.30	.09	.06	1.47

CALENDAR YEAR 1965 MAX 158 MIN .10 MEAN 5.93 CFSM 1.00 INCHES 13.56
WATER YEAR 1965-66 MAX 100 MIN 0 MEAN 4.11 CFSM .693 INCHES 9.40

Peak discharge (base, 120 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
2-13	1515	2.95	142	9-14	Unknown	*5.32	*1,030

* About.

Note.--Doubtful or no gage-height record Oct. 6 to Nov. 2, Dec. 13 to Feb. 11, July 27 to Sept. 30.

Where daily discharge is less than 1.0 cfs the zero in the hundredths column is not significant.

1-6410. Hunting Creek at Jimtown, Md.

Location.--Lat 39°35'40", long 77°23'50", on right bank just downstream from highway bridge, 0.4 mile southwest of Jimtown, Frederick County, about 2¼ miles southeast of Thurmont, 2¼ miles upstream from Little Hunting Creek, and 5.2 miles upstream from mouth.

Drainage area.--18.4 sq mi.

Records available.--October 1949 to September 1966.

Gage.--Digital water-stage recorder and concrete control. Altitude of gage is 355 ft (from topographic map). Prior to Oct. 1, 1961, graphic water-stage recorder at same site and datum.

Average discharge.--17 years, 22.6 cfs.

Extremes.--Maximum discharge during year, 1,040 cfs Sept. 14 (gage height, 4.67 ft); minimum, 0.4 cfs Sept. 9 (gage height, 1.41 ft).
1949-66: Maximum discharge, 1,170 cfs Sept. 1, 1952 (gage height, 4.94 ft), from rating curve extended above 500 cfs by logarithmic plotting; minimum, that of Sept. 9, 1966.

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

Discharge, in cubic feet per second, water year October 1965 to September 1966

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	10	1.8	2.0	2.5	2.0	136	10	69	8.8	2.1	0.80	0.80
2	3.0	1.7	2.0	6.0	2.0	67	10	53	8.1	2.0	.80	.80
3	2.0	1.7	2.0	7.5	2.5	53	9.6	44	7.4	1.8	.80	.80
4	1.6	1.7	2.2	3.5	2.2	58	10	38	6.8	1.6	.80	.90
5	1.5	1.7	2.2	3.0	2.2	74	10	35	6.2	2.0	1.2	1.5
6	1.6	1.7	2.2	9.4	2.5	53	8.8	32	5.6	2.7	1.1	1.0
7	20	1.7	2.0	7.0	2.8	40	8.8	29	5.6	2.4	.80	10
8	30	2.4	1.9	3.9	3.2	32	8.8	26	5.6	2.1	.80	.70
9	6.0	2.3	2.0	3.2	3.2	28	8.8	25	5.6	1.8	2.1	.60
10	3.5	2.0	2.0	3.1	3.2	25	8.1	23	5.1	1.6	1.9	.70
11	2.5	1.9	2.0	2.5	14	22	8.1	21	4.7	2.1	4.5	.80
12	2.2	1.9	2.2	2.5	32	21	9.6	21	4.4	2.0	2.9	1.2
13	2.2	1.9	4.0	2.5	317	20	32	21	4.5	1.8	1.8	2.1
14	2.1	1.9	4.9	2.5	104	18	29	21	4.5	1.6	1.7	451
15	1.9	1.8	3.0	2.8	53	17	30	19	4.4	1.7	1.9	203
16	1.9	2.0	2.5	2.8	44	15	34	17	4.3	1.5	1.7	22
17	2.0	2.2	2.2	2.2	38	14	28	16	4.4	1.2	1.5	11
18	1.8	1.8	2.2	2.2	25	14	24	15	3.9	1.3	1.3	7.6
19	2.0	1.8	2.2	1.9	22	14	20	16	3.5	1.3	1.2	6.3
20	2.0	1.8	2.2	2.2	17	13	19	13	3.4	1.2	1.1	116
21	1.8	2.0	2.6	2.5	15	12	20	12	3.1	1.0	1.0	193
22	2.4	2.2	2.3	2.5	14	12	41	12	3.0	.90	1.2	73
23	2.6	2.2	2.3	3.6	12	12	32	11	2.7	.90	1.3	41
24	2.3	2.1	2.3	2.8	12	20	34	10	2.7	1.0	1.0	25
25	2.0	1.9	3.0	2.8	14	21	41	10	2.4	.90	1.1	20
26	1.8	1.9	6.0	2.5	12	17	32	10	2.4	.90	1.0	18
27	1.8	2.1	3.4	2.3	14	13	39	10	2.5	1.0	1.0	19
28	1.8	2.3	2.5	2.0	79	11	73	13	2.5	1.2	1.0	21
29	1.8	2.0	2.5	2.0	—	10	53	18	2.5	1.3	1.0	26
30	1.8	2.0	2.5	2.0	------	11	65	10	2.4	1.1	.80	21
31	1.8	------	2.5	1.7	------	11	------	9.6	-----	.90	.90	------
TOTAL	121.7	58.4	79.8	99.9	863.8	884	756.6	679.6	133.0	46.90	42.00	1,295.80
MEAN	3.93	1.95	2.57	3.22	30.9	28.5	25.2	21.9	4.43	1.51	1.36	43.2
CFSM	.214	.106	.140	.175	1.68	1.55	1.37	1.19	.241	.082	.074	2.35
IN	.25	.12	.16	.20	1.75	1.79	1.53	1.37	.27	.09	.08	2.62

CALENDAR YEAR 1965 MAX 516 MIN 1.0 MEAN 16.0 CFSM .870 INCHES 11.78
WATER YEAR 1965-66 MAX 451 MIN .60 MEAN 13.9 CFSM .755 INCHES 10.23

Peak discharge (base, 350 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
2-13	1500	4.20	830	9-21	0730	3.23	442
9-14	1330	4.67	1,040				

Note.--No gage-height record October 1 to January 11.
Where daily discharge is less than 1.0 cfs the zero in the hundredths column is not significant.

1-6415. Fishing Creek near Lewistown, Md.

Location.--Lat 39°31'35", long 77°28'00", on left bank immediately upstream from Fishing Creek Reservoir, 50 ft downstream from Little Fishing Creek, 2.8 miles west of Lewistown, Frederick County, and 9.9 miles upstream from mouth.

Drainage area.--7.29 sq mi.

Records available.--October 1947 to September 1966.

Gage.--Digital water-stage recorder and concrete control. Altitude of gage is 735 ft (from topographic map). Prior to Nov. 6, 1963, graphic water-stage recorder at same site and datum.

Average discharge.--19 years, 10.3 cfs.

Extremes.--Maximum discharge during year, 110 cfs Sept. 14 (gage height, 2.37 ft); minimum, 0.6 cfs Sept. 10, 11, 12 (gage height 1.12 ft).
1947-66: 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, that of Sept. 10, 11, 12, 1966.

Remarks.--Records good.

Discharge, in cubic feet per second, water year October 1965 to September 1966

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	5.2	1.4	1.3	1.0	0.7	25	6.1	28	8.5	3.3	1.6	0.8
2	2.5	1.4	1.3	1.6	.9	20	5.9	27	8.2	3.2	1.6	.8
3	1.4	1.3	1.3	1.8	.9	18	5.5	25	7.8	3.0	1.7	.7
4	1.3	1.3	1.4	1.2	.9	20	5.8	22	7.7	3.0	1.6	.8
5	1.3	1.3	1.3	1.1	.9	23	5.5	21	7.5	3.3	1.8	.8
6	1.3	1.3	1.3	3.6	.9	20	5.2	20	7.3	3.4	1.6	.7
7	7.6	1.3	1.3	2.0	.9	17	5.1	18	7.4	3.6	1.5	.7
8	4.3	1.6	1.3	1.6	.9	15	4.9	17	7.1	2.9	1.5	.7
9	1.7	1.6	1.3	1.3	1.0	14	4.9	16	7.2	2.7	1.5	.7
10	1.6	1.3	1.3	1.1	1.1	13	4.9	15	6.9	2.6	1.7	.7
11	1.6	1.3	1.3	1.1	5.2	13	4.8	14	6.3	3.5	3.7	.7
12	1.4	1.4	1.3	1.0	3.7	12	5.2	13	6.1	3.1	2.4	.7
13	1.4	1.4	2.3	1.0	2.6	11	7.4	14	6.0	2.6	1.7	.9
14	1.3	1.3	1.7	1.0	1.7	10	8.9	12	5.9	2.6	1.8	42
15	1.4	1.3	1.4	1.0	10	9.9	9.3	12	5.8	2.6	1.7	19
16	1.7	1.3	1.3	1.0	8.8	9.1	10	11	5.6	2.4	1.6	4.6
17	1.4	1.7	1.3	.9	7.9	8.6	11	11	5.6	2.3	1.5	2.9
18	1.3	1.6	1.3	.9	6.6	8.4	11	10	5.1	2.2	1.4	2.3
19	1.4	1.3	1.3	.9	6.1	8.2	11	11	4.9	2.2	1.3	2.2
20	1.4	1.3	1.3	.9	5.5	7.8	11	9.5	4.7	2.1	1.2	21
21	1.4	1.3	1.3	.9	5.1	7.3	11	9.1	4.5	2.0	1.2	29
22	2.2	1.4	1.0	.9	4.5	7.2	15	9.6	4.3	1.9	1.2	18
23	2.5	1.3	1.0	.9	4.0	6.9	13	8.5	4.1	1.9	1.1	12
24	1.7	1.3	1.1	.9	5.0	9.0	16	8.2	4.1	1.8	1.1	9.5
25	1.6	1.3	1.4	.9	6.0	7.9	18	8.4	3.9	1.8	1.1	8.0
26	1.6	1.3	1.6	.9	4.5	6.9	18	7.9	4.2	1.8	1.0	7.0
27	1.6	1.7	1.0	.9	3.5	6.5	19	8.0	5.6	1.8	.9	7.0
28	1.4	1.7	1.0	.9	15	6.2	22	10	4.1	2.0	.9	7.0
29	1.4	1.4	1.0	.7	-	6.1	22	14	4.0	2.1	.9	8.5
30	1.4	1.3	1.0	.7	------	6.2	26	9.2	3.6	1.8	.9	7.0
31	1.4	------	1.0	.7	------	6.3	------	8.6	------	1.8	.9	------
Total	60.7	41.7	40.0	35.3	153.5	359.5	323.4	428.0	174.0	77.3	45.6	216.7
Mean	1.96	1.39	1.29	1.14	5.48	11.6	10.8	13.8	5.80	2.49	1.47	7.22
Cfsm	.269	.191	.177	1.56	.752	1.59	1.48	1.89	.796	.342	.202	.990
In.	.31	.21	.20	.18	.78	1.83	1.65	2.18	.89	.39	.23	1.11

Calendar year 1965: Max 150 Min .8 Mean 7.72 Cfsm 1.06 In. 14.37
Water year 1965-66: Max 42 Min .7 Mean 5.36 Cfsm .735 In. 9.98

Peak discharge (base, 100 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
9-14	1200	2.37	110				

1-6425. Linganore Creek near Frederick, Md.

Location.--Lat 39°24'55", long 72°20'00", on left bank 2½ miles upstream from mouth and 4 miles east of Frederick, Frederick County.

Drainage area.--82.3 sq mi.

Records available.--November 1931 to March 1932, September 1934 to September 1966.

Gage.--Digital water-stage recorder. Concrete control since Sept. 23, 1946. Altitude of gage is 270 ft (from topographic map). Prior to Mar. 27, 1932, staff gage at Frederick pumping station 1½ miles downstream at datum about 20 ft lower. Sept. 12, 1934 to Sept. 25, 1946, staff gage at present site and datum. Sept. 26, 1946 to Sept. 30, 1961, graphic water-stage recorder at present site and datum.

Average discharge.--32 years (1934-66), 79.5 cfs.

Extremes.--Maximum discharge during year, 3,940 Sept. 14 (gage height, 11.07 ft); minimum, 2.0 cfs Sept. 8 (gage height, 1.14 ft).
1931-32, 1934-66: 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, that of Sept. 8, 1966.
Flood of Aug. 23 or 24, 1933, reached a stage of 10.5 ft, from floodmarks (discharge 2,920 cfs).

Remarks.--Records good.

Discharge, in cubic feet per second, water year October 1965 to September 1966

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	24	13	13	14	12	618	34	195	47	14	6.6	2.8
2	35	12	14	17	20	215	32	140	43	13	5.8	2.8
3	15	13	14	27	40	136	30	108	40	12	6.8	2.6
4	12	13	14	18	38	131	33	88	38	12	6.3	2.5
5	11	13	13	16	36	133	31	77	35	18	8.1	2.7
6	11	13	13	47	33	99	29	71	33	33	10	3.1
7	39	13	13	38	34	76	28	62	33	23	7.2	2.4
8	105	15	12	23	35	65	28	60	34	16	6.7	2.1
9	25	16	13	18	35	59	27	57	42	13	6.8	2.3
10	19	14	13	18	37	56	27	54	31	12	6.8	2.4
11	18	14	13	15	162	54	26	49	27	12	18	2.3
12	16	14	13	14	220	51	32	48	25	12	22	2.3
13	16	14	18	15	1,090	49	164	50	25	11	7.9	2.6
14	15	14	19	15	321	47	125	49	26	9.9	7.3	1,780
15	14	13	15	15	142	46	73	46	33	10	9.0	569
16	14	14	14	14	120	41	60	42	26	10	10	95
17	14	16	14	13	105	40	51	41	27	8.8	10	65
18	13	13	13	13	70	39	46	41	24	8.4	7.1	53
19	14	13	13	14	65	39	43	115	28	7.8	6.0	48
20	14	13	13	14	52	37	41	57	26	7.4	5.6	79
21	13	14	13	13	46	35	40	47	20	6.5	5.0	196
22	15	16	15	13	45	35	47	65	20	6.4	4.9	110
23	17	16	14	19	40	35	45	43	20	6.3	5.0	88
24	15	15	14	16	41	56	54	40	18	5.9	4.8	63
25	14	14	19	16	46	61	98	57	17	6.0	4.0	55
26	13	14	30	14	43	42	65	44	17	5.8	3.9	53
27	13	15	15	14	42	39	65	52	18	5.7	3.9	53
28	13	18	14	13	140	36	185	99	16	6.5	3.5	56
29	13	15	15	12	—	35	117	179	18	9.5	3.3	85
30	13	13	17	12	------	35	161	66	15	7.8	3.2	71
31	13	------	14	11	------	36	------	52	------	7.3	3.0	------
TOTAL	596	423	457	531	3,110	2,476	1,837	2,194	822	337.0	218.5	3,551.9
MEAN	19.2	14.1	14.7	17.1	111	79.9	61.2	70.8	27.4	10.9	7.05	118
CFSM	.233	.171	.179	.208	1.35	.971	.744	.860	.333	.132	.086	1.43
IN	.27	.19	.21	.24	1.41	1.12	.83	.99	.37	.15	.10	1.61

CALENDAR YEAR 1965 MAX 1,070 MIN 8.4 MEAN 50.0 CFSM .608 INCHES 8.25
WATER YEAR 1965-66 MAX 1,780 MIN 2.1 MEAN 45.4 CFSM .552 INCHES 7.48

Peak discharge (base, 1,400 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
2-13	1530	7.17	1,940	9-14	1900	11.07	3,940

1-6430. Monocacy River at Jug Bridge near Frederick, Md.

Location.--Lat 39°24'13", long 77°21'58", on right bank a quarter of a mile upstream from Jug Bridge on U. S. Highway 40, 0.35 mile downstream from Linganore Creek, 2 miles east of Frederick, Frederick County, and 15.8 miles upstream from mouth.

Drainage area.--817 sq mi.

Records available.--October 1929 to September 1966. 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.--37 years, 863 cfs.

Extremes.--Maximum discharge during year, 22,400 cfs Sept. 15 (gage height, 18.34 ft); minimum daily, 19 cfs Sept. 7-13.
1929-66: Maximum discharge, 51,000 cfs Aug. 24, 1933 (gage height, 28.1 ft); minimum daily, that of Sept. 7-13, 1966. Maximum stage known, 30 ft in June 1889, from floodmarks (discharge, 56,000 cfs).

Remarks.--Records good except those for periods of ice effect or backwater from aquatic vegetation, which are fair. Records of chemical analyses, water temperatures, and suspended sediment loads for the water year 1966 are published in Part 2 of this report.

Discharge, in cubic feet per second, water year October 1965 to September 1966

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	125	78	90	115	70	8,280	328	3,200	274	110	34	25
2	168	78	92	130	100	6,390	302	2,040	250	105	35	25
3	186	84	90	158	150	2,470	274	1,470	223	95	35	24
4	171	84	90	216	160	2,040	270	1,170	206	92	33	24
5	120	84	90	242	150	2,550	274	958	189	109	35	23
6	92	86	90	266	140	2,700	266	844	183	112	38	23
7	152	88	88	472	140	2,000	246	738	180	102	34	19
8	926	95	88	535	150	1,500	238	655	180	108	32	19
9	894	100	88	279	140	1,200	230	620	202	86	34	19
10	303	92	88	150	170	1,000	226	575	186	76	37	19
11	186	125	90	190	255	800	220	520	165	76	61	19
12	148	118	92	110	629	700	238	470	150	75	43	19
13	130	108	112	140	3,260	600	701	475	150	68	46	19
14	108	102	125	130	13,400	500	1,580	470	169	63	56	5,260
15	98	100	135	120	5,120	450	1,300	455	196	63	56	20,100
16	92	98	145	110	2,620	400	870	420	157	62	46	3,180
17	88	100	132	105	2,570	380	710	375	148	50	43	752
18	84	90	118	100	1,710	360	595	351	140	48	37	505
19	80	88	110	95	1,320	340	530	440	135	47	33	390
20	76	88	105	90	1,110	320	475	488	132	42	33	646
21	80	88	102	90	710	300	430	358	125	41	33	4,440
22	90	95	98	85	635	300	607	365	115	40	33	3,710
23	98	98	98	120	605	300	1,460	310	108	40	33	1,680
24	102	98	98	110	580	385	1,140	274	108	37	32	958
25	146	95	115	100	595	734	1,550	311	100	34	32	670
26	118	90	140	95	615	620	1,320	297	108	32	29	565
27	105	98	158	90	610	450	886	274	120	35	29	500
28	92	100	132	85	966	385	2,600	408	110	34	28	530
29	88	100	120	80	-	342	2,230	838	120	40	26	690
30	84	95	112	75	------	324	1,790	542	115	41	26	880
31	82	------	112	70	------	324	------	338	------	38	25	------
Total	5,312	2,843	3,343	4,753	38,680	39,444	23,886	21,049	4,744	2,001	1,127	45,733
Mean	171	94.8	108	153	1,381	1,272	796	679	158	64.5	36.4	1,524
Cfsm	.209	.116	.132	.187	1.69	1.56	.974	.831	.193	.079	.045	1.87
In.	.24	.13	.15	.22	1.76	1.80	1.09	.96	.22	.09	.05	2.08

Calendar year 1965: Max 15,500 Min 58 Mean 508 Cfsm .622 In. 8.43
Water year 1965-66 Max 20,100 Min 19 Mean 529 Cfsm .647 In. 8.79

Peak discharge (base, 8,800 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
2-14	1300	15.63	16,600	9-15	1430	18.34	22,400
3- 1	1800	12.01	10,400				

Note.--Stage-discharge relation affected by ice Jan. 10 to Feb. 10 and by aquatic vegetation June 8 to July 17.

1-6435. Bennett Creek at Park Mills, Md.

Location.--Lat 39°17'40", long 77°24'30", on left bank 75 ft downstream from highway bridge, 0.2 mile south of Park Mills, Frederick County, 1.8 miles upstream from mouth, and 3.7 miles southwest of Urbana.

Drainage area.--62.8 sq mi.

Records available.--July 1948 to September 1958, water years 1960-65 (annual maximum), August to September 1966.

Gage.--Digital water-stage recorder and concrete control. Altitude of gage is 240 ft (from topographic map). Prior to Oct. 1, 1958 graphic water-stage recorder at same site and datum. Oct. 1, 1959 to July 31, 1966, crest-stage gage at same site and datum.

Average discharge.--10 years (1948-1958) 65.8 cfs.

Extremes.--Maximum discharge during year, 2,960 cfs Sept. 14 (gage height, 8.53 ft); minimum, 0.3 cfs Sept. 8 (gage height, 0.80 ft).
1948-58, 1960-66: Maximum discharge, 3,230 cfs Nov. 21, 1952 (gage height, 10.34 ft in gage well, 10.77 ft from outside gage), from rating curve extended above 1,500 cfs on basis of slope-area measurement at gage height, 8.12 ft; minimum, that of Sept. 8, 1966.

Remarks.--Records good.

Discharge, in cubic feet per second, August to September 1966

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1											4.6	1.6
2											3.8	1.3
3											4.0	1.1
4											3.8	1.0
5											4.9	1.2
6											6.4	1.0
7											4.9	.6
8											4.6	.4
9											4.2	1.1
10											4.8	2.0
11											5.8	1.8
12											9.5	1.7
13											5.2	2.4
14											4.9	1,360
15											6.2	340
16											8.0	67
17											42	40
18											6.5	28
19											5.1	22
20											4.7	52
21											3.5	161
22											3.3	77
23											4.7	46
24											4.1	33
25											3.2	28
26											3.1	27
27											2.8	35
28											2.4	42
29											2.1	122
30											1.9	79
31											1.6	
Total											176.6	2,576.2
Mean											5.70	85.9
Cfsm											.091	1.37
In.											.10	1.53

Calendar year 1965: Max - Min - Mean - Cfsm - In. -
Water year 1965-66: Max - Min - Mean - Cfsm - In. -

1-6450. Seneca Creek at Dawsonville, Md.

Location.--Lat 39°07'41", long 77°20'13", 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, Montgomery County, and 5.8 miles upstream from mouth.

Drainage area.--101 sq mi.

Records available.--September 1930 to September 1966.

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.--36 years, 90.4 cfs.

Extremes.--Maximum discharge during year, 3,270 cfs Sept. 14 (gage height, 8.12 ft); minimum, 1.8 cfs Sept. 12-13 (gage height, 1.54 ft).
1930-66: Maximum discharge, 15,000 cfs July 21, 1956 (gage height, 12.17 ft), from rating curve extended above 2,700 cfs on basis of contracted-opening and flow-over-road measurement at gage height 9.78 ft; minimum that of Sept. 12-13, 1966.

Remarks.--Records good. Small diversion at times for irrigation above station. Records of chemical analyses for the water year 1966 are published in Part 2 of this report.

Discharge, in cubic feet per second, water year October 1965 to September 1966

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	44	24	23	25	30	480	47	235	65	22	12	3.8
2	57	24	24	28	36	177	43	156	61	21	11	3.5
3	27	24	25	35	39	126	42	123	57	19	11	3.2
4	23	25	28	28	36	112	43	101	54	18	10	3.2
5	22	23	27	27	35	106	43	89	50	44	10	3.2
6	22	22	27	78	32	89	40	82	47	54	9.0	3.2
7	142	21	26	61	32	76	39	74	47	27	8.0	2.6
8	163	24	26	39	30	69	39	72	119	22	7.9	2.0
9	37	25	27	30	30	65	39	67	90	20	8.7	2.2
10	29	21	26	30	33	63	39	63	54	19	15	2.2
11	26	21	26	30	126	63	39	61	47	28	15	2.0
12	25	20	26	26	262	59	55	59	43	27	33	1.8
13	23	20	27	27	1,190	57	323	61	42	20	12	11
14	22	20	29	28	364	57	234	72	148	18	11	1,580
15	22	20	29	26	45	56	117	61	109	19	13	720
16	25	21	27	25	80	52	92	56	54	19	15	80
17	23	24	27	25	75	50	78	56	52	16	69	52
18	22	23	27	25	70	48	69	175	48	15	15	40
19	22	21	26	25	65	48	65	328	43	15	11	37
20	22	21	25	25	60	47	61	114	40	15	9.6	69
21	22	23	25	24	50	45	59	87	39	13	8.4	245
22	23	28	24	25	50	45	67	141	36	12	7.9	108
23	27	28	24	36	50	43	65	78	35	12	8.4	76
24	23	23	24	32	59	63	65	67	33	12	7.4	56
25	22	22	29	27	65	78	102	72	30	12	6.4	48
26	22	21	33	24	67	54	87	67	29	12	6.0	47
27	22	26	25	26	67	48	74	63	29	11	5.6	54
28	22	29	24	28	245	45	159	105	29	36	5.2	97
29	22	23	25	23	-	43	106	320	30	19	4.8	155
30	22	22	25	23	------	43	166	94	28	15	4.1	96
31	25	------	25	24	------	48	------	76	------	13	3.8	------
Total	1,050	689	811	935	3,323	2,455	2,497	3,275	1,588	625	374.2	3,603.9
Mean	33.9	23.0	26.2	30.2	119	79.2	83.2	106	52.9	20.2	12.1	120
Cfsm	.336	.228	.259	.299	1.18	.784	.824	1.05	.524	.200	.120	1.19
In.	.39	.25	.30	.34	1.22	.90	.92	1.21	.58	.23	.14	1.33

Calendar year 1965: Max 1,010 Min 12 Mean 64.2 Cfsm .636 In. 8.63
Water year 1965-66: Max 1,580 Min 1.8 Mean 58.2 Cfsm .576 In. 7.81

Peak discharge (base, 1,300 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
2-13	1900	7.35	2,360	9-14	2030	8.12	3,270

1-6452. Watts Branch at Rockville, Md.

Location.--Lat 39°05'03", long 77°10'38", on left bank 0.2 mile south of State Highway 28 and 1.3 miles west of post office in Rockville, Montgomery County, and 9.4 miles upstream from mouth.

Drainage area.--3.70 sq mi.

Records available.--June 1957 to September 1966.

Gage.--Digital water-stage recorder and concrete control. Altitude of gage is 330 ft (from topographic map). Prior to Oct. 1, 1960, graphic water-stage recorder at same site and datum.

Average discharge.--9 years, 3.13 cfs.

Extremes.--Maximum discharge during year, 740 cfs Sept. 14 (gage height, 5.13 ft); minimum, 0.1 cfs Sept. 2 (gage height, 1.10 ft).
1957-66: Maximum discharge, 932 cfs Aug. 26, 1965 (gage height, 5.32 ft), from rating curve extended above 660 cfs on basis of velocity-area studies; minimum, that of Sept. 2, 1966.
Note.--Some high-water records published prior to the 1965 water year have been found to be in error. Revisions of published data, based on better definition of the stage-discharge relation will be published in a subsequent annual report. Provisional data can be obtained from the District office.

Remarks.--Records good. Some regulation of low flow from unknown cause. Records of water temperatures for the water year 1966 are published in Part 2 of this report.

Discharge, in cubic feet per second, water year October 1965 to September 1966

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	2.8	0.80	0.80	0.90	0.70	8.3	1.8	6.0	1.3	0.60	0.40	0.10
2	1.1	.80	.90	1.8	.70	3.5	1.5	4.9	1.3	.60	.40	.10
3	.80	.90	.90	1.1	.80	2.8	1.5	3.1	1.2	.50	.30	.10
4	.70	1.1	.90	.80	.80	2.8	1.5	2.6	1.2	.60	.30	.10
5	.70	.80	.90	1.1	.80	2.8	1.5	2.3	1.2	15	.90	.20
6	.80	.80	.90	8.7	.90	3.4	1.5	2.3	1.1	2.2	.30	.10
7	29	.90	.90	1.6	1.0	4.3	1.5	2.1	1.2	.80	.30	.10
8	2.9	1.5	.90	1.2	1.1	2.2	1.5	2.2	11	.60	.30	.20
9	1.3	.80	.90	.90	1.2	2.2	1.5	2.0	1.9	.50	.30	.10
10	1.5	.80	.90	.90	1.6	2.2	1.5	1.9	1.4	.50	.40	.20
11	1.1	.90	.90	.90	14	2.1	1.5	1.8	1.2	.80	5.4	.50
12	1.2	.90	.90	.80	8.5	2.0	13	1.8	1.2	.60	.30	.50
13	.90	1.1	1.5	.80	86	1.8	22	1.7	1.1	.50	.20	.80
14	.90	.90	.70	.90	7.0	2.0	5.5	3.3	2.4	1.5	.30	160
15	1.3	.90	.70	.80	3.5	1.8	2.9	1.7	1.2	1.6	.30	4.4
16	1.1	1.3	.70	.80	5.4	1.6	2.5	1.6	1.7	.50	.30	1.1
17	.80	1.5	.70	.80	3.3	1.8	2.1	3.3	1.2	.50	.20	.80
18	.90	1.3	.70	.70	2.7	1.8	2.1	6.9	1.0	.50	.20	.70
19	.90	1.6	.70	.70	2.5	1.6	1.9	13	1.0	.40	.20	1.0
20	.70	1.8	.70	.70	2.2	1.6	1.8	2.3	.90	.40	.10	6.7
21	.70	1.8	.70	.70	2.1	1.6	1.7	1.8	.80	.40	.20	22
22	1.1	2.4	.70	.70	2.1	1.6	4.2	1.7	.80	.50	.20	2.8
23	.80	1.3	.80	2.0	2.1	1.6	2.1	1.6	.80	.40	.20	1.3
24	.70	1.2	.80	.80	2.8	5.7	2.1	1.5	.70	.40	.10	1.0
25	.80	1.2	1.8	.90	4.2	2.1	3.8	1.7	.70	.50	.20	1.0
26	.80	1.2	.80	.80	3.7	1.8	2.0	1.6	.70	.50	.20	.90
27	.80	1.8	.70	.90	3.1	1.8	5.4	1.6	.70	.40	.10	2.0
28	.80	.90	.70	.80	32	1.8	6.8	5.3	.80	.50	.10	3.2
29	.80	.90	.70	.70	-	1.8	3.2	3.9	.70	.50	.10	6.6
30	.80	.80	.70	.60	------	2.0	15	1.5	.60	.40	.10	2.0
31	.80	------	.80	.60	------	2.3	------	1.4	------	.40	.10	------
TOTAL	60.30	34.90	26.30	36.40	196.80	76.7	116.9	90.4	43.00	34.10	13.00	220.60
MEAN	1.95	1.16	.85	1.17	7.03	2.47	3.90	2.92	1.43	1.10	.42	7.35
CFSM	.527	.314	.229	.316	1.90	.668	1.05	.789	.387	.297	.113	1.99
IN	.61	.35	.26	.37	1.98	.77	1.18	.91	.43	.34	.13	2.22

CALENDAR YEAR 1965 MAX 90 MIN .30 MEAN 2.57 CFSM .695 INCHES 9.43
WATER YEAR 1965-66 MAX 160 MIN .10 MEAN 2.60 CFSM .703 INCHES 9.54

Peak discharge (base, 130 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
10- 7	1830	3.74	158	7- 5	2100	3.95	180
2-13	1345	4.32	240	9-14	1330	5.13	740
6- 8	1845	4.39	258	9-21	0615	3.65	150

Note.--Where daily discharge is less than 1.0 cfs the zero in the hundredths column is not significant.

1-6465. Potomac River near Washington, D. C.

Location.--Lat 38°56'58", long 77°07'40", on left bank just above Little Falls Dam, 1¾ miles east of Langley, Fairfax County, Va., 1 mile upstream from District of Columbia boundary line, 1¼ miles upstream from Chain Bridge, and 117.4 miles upstream from mouth.

Drainage area.--11,560 sq mi.

Records available.--March 1930 to September 1966.

Gage.--Digital water-stage recorder and concrete control. Datum of gage is 37.95 ft above mean sea level, datum of 1929. Prior to June 7, 1930, staff gage at site 1 mile upstream on right bank at same datum. June 7, 1930 to Jan. 22, 1965, graphic water-stage recorder at site 1 mile upstream on right bank at same datum.

Average discharge.--36 years, 10,790 cfs (adjusted for diversions).

Extremes.--Maximum discharge during year, 88,700 cfs Feb. 15 (gage height, 9.04 ft); minimum daily observed at gaging station, 121 cfs Sept. 9 (does not include diversion of 489 cfs for municipal use); minimum daily (adjusted) 601 cfs Sept. 10 (includes diversion of 449 cfs for municipal use).
1930-66: Maximum discharge, 484,000 cfs Mar. 19, 1936 (gage height, 28.1 ft, site then in use); minimum daily (observed), that of Sept. 9, 1966; minimum daily (adjusted), that of Sept. 10, 1966.
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; and since April 1964, at Violets Lock, to Chesapeake and Ohio Canal. Low flow affected slightly by Stony River Reservoir (see p. 68) and since December 1950, by Savage River Reservoir (see p. 71). Low flow affected extensively at times by run-of-the-river hydroelectric plants.

Discharge, in cubic feet per second, water year October 1965 to September 1966

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	1,150	1,110	1,160	940	763	15,800	3,700	37,600	5,440	1,000	351	290
2	1,380	1,090	1,120	977	977	31,700	3,480	43,200	5,090	1,070	313	260
3	1,330	1,000	1,200	1,050	999	49,700	3,540	45,500	4,580	948	288	246
4	1,200	1,100	1,050	1,120	1,050	37,100	3,400	37,400	4,180	834	255	197
5	1,150	1,090	977	1,120	1,050	28,500	3,390	32,100	3,910	886	281	251
6	1,240	1,060	977	1,590	998	25,100	3,350	25,100	3,500	1,240	379	218
7	1,920	1,130	977	1,790	1,080	24,300	3,350	19,400	3,410	1,130	420	153
8	2,330	1,070	977	2,400	1,200	21,100	3,360	15,800	3,120	996	403	205
9	2,440	979	977	3,020	1,240	16,500	3,430	13,400	3,360	788	409	121
10	2,470	1,040	977	3,640	1,320	13,400	3,350	11,600	3,060	855	365	152
11	2,560	1,180	977	3,850	1,680	11,300	3,360	10,300	2,940	986	591	180
12	2,520	1,210	977	3,390	2,420	9,820	3,400	9,190	3,010	860	589	245
13	2,470	1,200	940	2,980	6,200	8,820	5,890	8,350	2,590	823	585	214
14	2,280	1,210	977	2,640	52,300	8,140	8,580	7,850	2,500	853	701	5,200
15	1,930	1,180	977	2,320	77,500	7,770	9,050	7,390	2,750	926	930	27,700
16	1,830	1,240	1,010	1,690	53,100	7,620	18,400	7,290	2,500	798	1,170	22,600
17	1,650	1,010	1,010	1,870	35,800	7,190	23,300	7,630	2,260	711	958	7,560
18	1,520	1,040	1,090	1,930	27,800	6,670	19,100	8,510	2,170	597	899	4,610
19	1,480	954	1,120	1,140	22,500	6,040	15,700	8,800	2,080	493	821	4,400
20	1,390	1,050	1,160	1,170	18,000	5,650	13,700	8,190	1,950	461	890	4,180
21	1,280	1,100	1,120	1,850	14,200	5,410	11,800	7,250	1,760	527	742	5,810
22	1,290	1,100	1,120	1,600	11,500	5,030	10,400	7,510	1,660	498	598	12,500
23	1,180	1,020	1,120	1,380	9,500	4,770	10,100	7,200	1,480	416	531	15,900
24	1,130	1,050	1,090	1,130	8,350	5,080	12,100	6,430	1,310	380	597	13,500
25	1,060	1,060	1,050	1,260	7,360	4,890	17,400	5,940	1,210	374	486	11,700
26	1,040	1,170	1,050	1,280	6,910	4,820	26,400	5,650	1,110	375	476	8,840
27	1,240	1,120	1,050	940	6,780	4,410	25,600	5,130	1,130	359	412	6,850
28	1,260	1,130	1,010	502	7,320	4,140	23,900	4,930	1,040	309	379	5,910
29	1,220	1,110	1,010	1,230	------	4,020	26,000	6,740	1,060	310	343	5,580
30	1,130	1,100	977	842	------	3,890	35,100	6,810	980	318	259	5,790
31	1,090	------	940	434	------	3,710	------	5,500	------	411	260	------
TOTAL	49,160	32,903	32,167	53,075	379,897	386,390	353,630	433,690	77,140	21,532	16,681	171,362
MEAN	1,586	1,097	1,038	1,712	13,570	12,460	11,790	13,990	2,571	695	538	5,712
(†)	+336	+320	+383	+323	+390	+390	+372	+377	+421	+495	+469	+403
MEAN‡	1,922	1,417	1,421	2,035	13,960	12,850	12,160	14,370	2,992	1,190	1,007	6,115
CFSM‡	.166	.123	.123	.176	1.21	1.11	1.05	1.24	.259	.103	.087	.529
IN‡	.19	.14	.14	.20	1.26	1.28	1.17	1.43	.29	.12	.10	.59

CALENDAR YEAR 1965 MAX 92,600 MIN 598 MEAN 8,054 MEAN‡ 8,434 CFSM‡ .730 IN‡ 9.91
WATER YEAR 1965-66 MAX 77,500 MIN 121 MEAN 5,500 MEAN‡ 5,890 CFSM‡ .510 IN‡ 6.91

Peak discharge (base, 45,000 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
2-15	0600	9.04	88,700	5-3	0530	6.93	48,600
3- 3	1830	6.85	47,300				

† Diversion, in cubic feet per second, to Chesapeake and Ohio Canal and for municipal supply of Washington, D. C., Washington Suburban Sanitary District, and City of Rockville; records furnished by Corps of Engineers, Washington Suburban Sanitary Commission, and City of Rockville.
‡ Adjusted for diversion.

1-6465.5 Little Falls Branch near Bethesda, Md.

Location.--Lat 38°57'27", long 77°06'31", on left bank at downstream side of bridge on Massachusetts Avenue, 0.3 mile downstream from Willett Branch, 2.0 miles southwest of Bethesda, Montgomery County, and 1.7 miles upstream from mouth.

Drainage area.--4.1 sq mi, approximately.

Records available.--June 1944 to September 1959. Annual maximum, water years 1960-61. Occasional low-flow measurements water years 1960-62 (published in "Surface Water Records of Maryland and Delaware" - 1962). December 1961 to September 1966.

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.--19 years (1945-59, 1963-66), 3.17 cfs.

Extremes.--Maximum discharge during year, 2,680 cfs Sept. 14 (gage height, 6.82 ft); minimum, 0.2 cfs several days in December, January, August, September; minimum gage height, 1.29 ft Dec. 20.
1944-66: 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 except those for period of no gage-height record, which are poor. Occasional slight regulation at low flow from unknown source above station.

Discharge, in cubic feet per second, water year October 1965 to September 1966

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1.0	0.4	0.4	0.6	0.4	4.4	0.6	5.0	1.3	1.3	0.3	0.3
2	.6	.3	.4	4.7	.4	1.7	.6	6.8	1.0	.6	.3	.4
3	.4	.5	.4	.4	.4	1.4	.6	1.9	.9	.8	.3	.3
4	.3	.4	.4	.3	.4	1.5	.9	1.5	.8	1.0	.3	1.1
5	.3	.3	.3	3.0	.4	1.5	.6	1.4	.7	6.9	.8	.4
6	.3	.3	.4	100	.5	.9	.6	1.4	.7	7.9	.6	.4
7	50	.3	.4	.6	.6	.8	.6	1.2	.8	1.0	.4	.3
8	1.4	.7	.4	.4	.7	.8	.6	1.9	.9	.9	.3	.4
9	.6	.4	.4	.2	.9	.8	.6	1.4	4.0	.6	.5	.4
10	.5	.4	.4	.4	3.0	.8	.6	1.2	1.2	.6	.3	.2
11	.5	.4	.8	.3	14	.8	.6	1.1	.6	1.7	4.0	.2
12	.4	.4	.2	.2	6.0	.6	22	1.2	.6	.9	.8	.6
13	.4	.5	2.2	.3	150	.6	20	1.2	.8	.6	.5	.8
14	.3	.3	.3	.4	2.9	1.1	2.2	2.2	1.4	.8	.3	255
15	.3	.4	.2	.4	1.5	.8	1.2	1.0	.8	3.0	.4	64
16	.5	.7	.2	.2	5.0	.6	1.0	1.1	2.5	.5	.7	.8
17	.3	.3	.2	.4	1.2	.6	.8	1.2	1.0	.5	.4	.6
18	.3	.4	.2	.6	1.0	.6	.9	4.6	.6	.5	.3	.5
19	.3	.4	.2	.6	.9	.8	.8	11	.8	.4	.2	.9
20	.3	.4	.2	.5	.6	.6	.8	1.9	.8	.4	.2	16
21	.3	.4	.2	.3	.6	.6	1.0	1.0	.6	.4	.2	25
22	2.1	1.9	.2	.7	.8	.8	9.5	.9	.6	.4	.2	2.9
23	.4	.4	.2	10	.8	.6	1.5	.9	.6	.3	.3	.9
24	.3	.4	.2	.4	3.0	11	1.4	1.0	.8	.3	.2	.6
25	.4	.4	30	.4	8.8	1.0	5.1	1.1	.6	.3	.2	.9
26	.3	.4	.4	.2	2.6	.8	2.0	1.2	.6	.3	.2	.6
27	.4	2.1	.2	.2	1.2	.6	8.1	6.4	.8	.3	.2	3.2
28	.3	.3	.2	.2	27	.6	3.5	2.0	5.5	.5	.2	6.9
29	.4	.3	.2	.2	-	.6	1.9	2.7	1.1	.4	.2	9.9
30	.3	.4	.2	.2	------	.9	15	1.2	1.1	.3	.2	1.0
31	.3	------	.2	.3	------	1.4	------	1.5	------	.3	.3	------
Total	64.5	15.2	13.8	127.6	235.6	40.6	105.6	70.1	34.5	34.7	14.4	337.9
Mean	2.08	.51	.45	4.12	8.41	1.31	3.52	2.26	1.15	1.12	.46	11.3
Cfsm	.507	.124	.110	1.00	2.05	.320	.859	.551	.280	.273	.112	2.76
In.	.59	.14	.13	1.16	2.14	.37	.96	.64	.31	.31	.13	3.07

Calendar year 1965: Max 59 Min .2 Mean 1.99 Cfsm .485 In. 6.60
Water year 1965-66: Max 255 Min .2 Mean 3.00 Cfsm .732 In. 9.95

Peak discharge (base, 450 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
10-7	1715	4.37	1,080	9-14	1330	6.82	2,680

Note.--No gage-height record July 18 to Sept. 1.

1-6480. Rock Creek at Sherrill Drive, Washington, D. C.

Location.--Lat 38°58'21", long 77°02'25", 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.

Records available.--October 1929 to September 1966.

Gage.--Digital water-stage recorder and concrete control. Datum of gage is 148.87 ft above mean sea level, datum of 1929. Prior to Mar. 18, 1964, graphic water-stage recorder at same site and datum.

Average discharge.--37 years, 55.3 cfs.

Extremes.--Maximum discharge during year, 5,060 cfs Sept. 14 (gage height, 11.92 ft); minimum, 1.5 cfs Sept. 12 (gage height, 1.08 ft).
1929-66: 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 construction of reservoirs upstream; Needwood Lake on Rock Creek and Lake Frank on North Branch Rock Creek. Water channeled through 42-inch pipe at Needwood site beginning Dec. 17, 1964. Gate closed on completed structure Sept. 1, 1966. No flow past site until the storm of Sept. 14, 1966. Water channeled through 42-inch pipe at Lake Frank site on Aug. 1, 1966. Buildup occurred during period Sept. 12-14, 1966, behind partially completed structure.

Discharge, in cubic feet per second, water year October 1965 to September 1966

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	33	11	11	12	13	339	26	127	33	12	4.2	2.1
2	26	11	11	41	15	89	25	102	30	11	4.2	2.1
3	13	12	11	26	15	69	24	63	28	11	3.7	1.8
4	9.8	12	12	14	15	63	26	52	26	11	3.7	2.4
5	8.1	12	12	14	15	61	25	46	24	117	14	3.2
6	8.1	11	12	210	17	46	24	43	22	132	7.0	3.2
7	577	9.8	11	41	21	35	24	38	22	21	4.2	2.1
8	459	12	11	25	24	32	33	36	54	13	4.2	2.1
9	54	12	11	15	26	30	30	35	56	11	11	2.1
10	32	8.9	11	18	48	30	26	32	50	10	4.5	3.2
11	20	8.9	12	18	191	30	24	30	46	8.9	103	2.1
12	20	8.9	12	13	166	30	110	30	41	12	33	35
13	16	9.8	25	16	802	29	438	32	36	7.8	5.9	36
14	14	11	14	16	384	32	140	48	43	7.7	4.2	1,990
15	13	8.1	12	15	105	32	67	33	36	60	8.1	380
16	19	9.8	12	9.8	110	29	56	29	43	8.9	12	107
17	13	14	13	9.0	89	26	46	29	38	6.5	8.9	83
18	12	11	13	9.0	69	26	39	112	20	6.0	3.7	69
19	12	8.9	12	13	63	28	36	162	19	6.0	3.2	60
20	12	8.9	12	13	56	26	33	54	18	5.7	2.8	164
21	12	8.9	12	12	52	24	32	44	16	4.7	2.6	327
22	19	16	12	12	44	25	89	50	16	4.5	2.8	84
23	18	14	12	74	39	25	41	43	14	4.2	3.7	65
24	12	8.9	12	34	50	147	39	38	14	4.2	2.4	51
25	12	8.9	41	20	82	59	67	36	13	4.6	2.4	37
26	12	8.9	29	9.8	61	30	41	36	13	4.7	2.4	26
27	12	22	13	9.0	48	28	50	110	13	6.0	2.4	46
28	11	16	12	9.0	301	25	120	89	33	6.2	2.0	59
29	11	11	13	9.0	-	25	56	179	44	6.1	2.0	118
30	12	11	12	9.0	------	25	165	44	12	5.3	2.2	62
31	12	------	12	11	------	32	------	39	------	4.6	2.2	------
TOTAL	1,514.0	336.6	430	756.6	2,921	1,527	1,952	1,841	873	533.6	272.8	3,825.4
MEAN	48.8	11.2	13.9	24.4	104	49.3	65.1	59.4	29.1	17.2	8.80	128
CFSM	.785	.180	.224	.392	1.67	.793	1.05	.955	.468	.277	.142	2.06
IN	.91	.20	.26	.45	1.75	.91	1.17	1.10	.52	.32	.16	2.29

CALENDAR YEAR 1965 MAX 1,200 MIN 5.3 MEAN 43.3 CFSM .696 INCHES 9.46
WATER YEAR 1965-66 MAX 1,990 MIN 1.8 MEAN 46.0 CFSM .740 INCHES 10.03

Peak discharge (base, 800 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
10- 7	2300	7.50	1,870	9-14	1630	11.92	5,060
2-13	2315	6.45	1,460	9-21	0930	4.43	845
2-28	2245	4.81	952				

1-6495. Northeast Branch Anacostia River at Riverdale, Md.

Location.--Lat 38°57'37", long 76°55'34", on right bank at downstream side of bridge on Riverdale Road in Riverdale, Prince Georges County, 1¾ miles downstream from Indian Creek, and 1¾ miles upstream from confluence with Northwest Branch and mouth.

Drainage area.--72.8 sq mi.

Records available.--August 1938 to September 1966.

Gage.--Water-stage recorder at bridge Oct. 1 to Mar. 22 at datum 14.00 ft above mean sea level. Staff gage 600 ft downstream from bridge at datum 9.25 ft above mean sea level. Prior to June 12, 1942, wire-weight gage; June 12, 1942 to Sept. 30, 1961, graphic water-stage recorder; Oct. 1, 1961 to Sept. 30, 1964, digital water-stage recorder; Oct. 1, 1964 to Mar. 22, 1966, graphic water-stage recorder at downstream side of bridge at datum 14.00 ft above mean sea level (Washington Suburban Sanitary Commission bench mark).

Average discharge.--28 years, 75.9 cfs.

Extremes.--Maximum discharge during year about 3,300 cfs Sept. 14 (gage height, about 7.6 ft, from high-water mark, staff gage datum); minimum daily, 1.4 cfs Sept. 12.

1938-66: Maximum discharge, 5,060 cfs Aug. 20, 1963 (gage height, 6.98 ft), from rating curve extended above 2,100 cfs by logarithmic plotting; maximum gage height, 12.93 ft Oct. 16, 1942; minimum discharge that of 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 fair. Some regulation at low flow by sand and gravel plants above station.

Discharge, in cubic feet per second, water year October 1965 to September 1966

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	23	15	15	20	24	410	25	222	41	13	4.8	4.0
2	25	14	15	47	27	136	24	198	36	9.4	2.9	4.0
3	15	14	16	33	23	77	24	106	31	11	2.9	2.9
4	11	14	17	21	22	64	25	70	26	11	4.0	5.0
5	9.0	14	16	22	24	70	23	56	24	22	9.2	3.3
6	9.5	14	15	167	24	57	22	49	23	27	3.3	2.9
7	300	15	14	65	22	45	20	48	21	15	2.9	2.2
8	100	18	15	42	25	38	19	47	50	12	2.9	2.0
9	30	16	17	26	35	35	20	46	37	11	10	1.6
10	25	15	17	23	60	36	18	36	31	8.0	8.8	1.6
11	21	15	18	21	190	35	17	33	25	13	60	1.6
12	25	15	19	21	170	33	132	34	21	11	24	1.4
13	20	17	39	22	864	32	570	33	16	10	12	1.6
14	18	17	24	21	433	32	285	54	28	9.6	9.4	1,600
15	17	15	22	21	117	32	135	35	24	16	9.8	750
16	21	16	21	20	106	30	76	32	28	11	11	36
17	16	21	19	20	86	26	51	35	36	10	8.4	32
18	15	17	17	20	60	29	44	140	20	8.4	7.2	31
19	17	15	19	20	49	30	41	299	18	4.0	5.4	26
20	15	16	17	18	42	30	40	75	16	3.8	5.0	50
21	15	17	17	17	37	27	36	43	12	3.8	5.0	500
22	20	20	17	20	35	27	100	40	11	3.8	6.2	165
23	25	28	17	110	33	26	91	34	11	3.8	6.8	78
24	17	19	17	35	49	120	72	30	11	3.8	5.0	42
25	15	16	39	25	91	110	100	29	11	3.8	4.0	36
26	14	16	41	20	84	64	67	28	10	36	4.0	27
27	15	35	22	25	74	52	64	109	8.8	3.6	4.0	40
28	15	25	19	25	340	30	146	179	33	4.0	3.8	55
29	14	19	17	22	-	27	83	223	56	4.8	2.9	162
30	14	17	18	18	------	26	234	82	18	6.2	2.2	78
31	14	------	18	22	------	25	------	52	------	5.8	3.3	------
Total	910.5	525	614	1,009	3,146	1,811	2,604	2,497	733.8	283.2	251.1	3,742.1
Mean	29.4	17.5	19.8	32.5	112	58.4	86.8	80.5	24.5	9.14	8.10	125
Cfsm	.404	.240	.272	.446	1.54	.802	1.19	1.11	.337	.126	.111	1.72
In.	.47	.27	.31	.52	1.61	.93	1.33	1.28	.37	.14	.13	1.91

Calendar year 1965: Max 1,520 Min 7.5 Mean 50.7 Cfsm .696 In. 9.46
Water year 1965-66: Max 1,600 Min 1.4 Mean 49.7 Cfsm .683 In. 9.27

Peak discharge (base, 1,250 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
2-13	1700	*4.85	*1,560	9-14	2000	*7.6 staff gage datum	*3,300

* About.

1-6505. Northwest Branch Anacostia River near Colesville, Md.

Location.--Lat 39°03'55", long 77°01'48", on right bank 400 ft upstream from bridge on State Highway 183, 1½ miles southwest of Colesville, Montgomery County, 3 miles upstream from Burnt Mills, 10 miles upstream from Sligo Branch, and 12½ miles upstream from mouth.

Drainage area.--21.1 sq mi (revised).

Records available.--October 1923 to September 1966. Monthly discharge only for some periods, published in WSP 1302.

Gage.--Digital water-stage recorder and concrete control. Datum of gage is 264.85 ft above mean sea level, adjustment of 1912. Prior to April 22, 1932, staff gages in same general vicinity at different datums. April 22, 1932, to April 11, 1934, staff gage and April 11, 1934, to October 3, 1962, graphic water-stage recorder, at same site and datum.

Average discharge.--43 years, 21.6 cfs (unadjusted).

Extremes.--Maximum discharge during year, 2,100 cfs Sept. 14 (gage height, 9.57 ft); minimum, no flow on several days during August and September.
1924-1966: 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 1966 are published in Part 2 of this report.

Discharge, in cubic feet per second, water year October 1965 to September 1966

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	7.0	5.0	4.9	5.3	6.0	129	9.6	44	9.6	3.0	0.90	0
2	4.9	4.7	4.7	7.2	5.8	26	9.2	33	8.7	2.9	.50	.10
3	3.4	4.7	5.0	7.6	5.4	19	8.8	22	8.2	2.7	.20	0
4	2.8	4.9	5.1	6.0	5.4	17	9.7	17	8.0	2.4	.30	.10
5	2.7	4.9	5.0	5.7	5.4	17	8.9	15	7.4	7.8	.90	0
6	2.7	4.9	5.0	34	5.6	15	8.6	14	6.7	11	.90	0
7	292	5.0	4.7	15	5.6	13	8.6	12	6.9	3.9	.90	0
8	75	5.4	4.9	8.6	6.0	12	8.4	12	8.1	2.9	.60	0
9	12	5.0	4.7	7.0	6.0	12	8.6	12	10	2.2	.70	0
10	8.4	4.7	4.8	6.9	8.0	11	8.3	12	6.8	2.1	.90	0
11	7.1	4.7	4.9	6.5	107	11	8.2	11	6.0	2.3	7.8	0
12	6.8	5.0	5.0	5.9	66	11	30	11	5.7	2.7	3.2	.20
13	5.7	5.4	6.1	5.6	456	11	139	10	5.4	1.9	1.1	.30
14	5.4	5.4	5.7	5.4	76	11	51	12	6.3	1.8	1.2	637
15	5.7	4.9	5.2	5.2	28	11	23	10	6.6	5.1	1.7	35
16	6.8	5.5	5.1	5.0	30	10	18	9.5	7.0	2.1	1.9	8.9
17	5.7	6.8	5.0	4.9	23	9.7	15	9.0	7.2	1.9	1.4	5.4
18	5.7	5.1	4.9	4.9	16	9.8	14	26	6.1	1.5	.90	4.2
19	5.7	5.3	5.0	4.9	14	9.9	13	38	5.8	1.2	.60	4.0
20	5.4	5.2	4.7	4.9	12	9.4	12	14	5.1	1.3	.40	23
21	5.4	5.4	4.9	4.8	10	9.1	12	11	4.5	1.2	.60	106
22	5.4	6.6	4.8	5.3	9.5	9.5	20	14	4.5	.90	.50	17
23	5.4	6.2	4.8	11	9.0	9.3	14	9.6	4.0	.90	.70	11
24	5.4	5.3	4.9	8.2	11	23	13	8.8	4.0	.80	.30	6.8
25	5.0	5.4	6.4	6.4	15	17	24	8.9	4.1	.60	1.2	6.1
26	5.0	5.5	7.4	5.1	16	12	16	8.5	3.4	.90	.20	5.9
27	5.0	6.8	5.1	6.5	18	11	15	21	3.7	.60	.40	8.3
28	5.0	6.3	5.0	5.5	178	10	39	31	7.5	.90	.20	12
29	4.7	5.4	4.8	5.4	—	9.7	20	50	4.2	1.4	.10	31
30	4.7	5.0	4.8	5.5	------	10	66	13	3.3	1.1	0	14
31	5.0	------	5.1	6.0	------	10	------	11	------	1.3	0	------
TOTAL	526.9	160.4	158.4	226.2	1,153.7	505.4	650.9	530.3	184.8	73.30	31.20	936.30
MEAN	17.0	5.35	5.11	7.30	41.2	16.3	21.7	17.1	6.16	2.37	1.01	31.2
CFSM	.806	.254	.242	.346	1.95	.773	1.03	.810	.292	.112	.048	1.48
IN	.93	.28	.28	.40	2.03	.89	1.15	.93	.33	.13	.05	1.65

CALENDAR YEAR 1965 MAX 533 MIN 1.3 MEAN 13.9 CFSM .659 INCHES 8.94
WATER YEAR 1965-66 MAX 637 MIN 0 MEAN 14.1 CFSM .668 INCHES 9.06

Peak discharge (base, 600 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
10- 7	2030	7.53	1,010	2-28	2215	5.65	600
2-13	1715	7.59	1,030	9-14	1515	9.57	2,100

Note.--Where daily discharge is less than 1.0 cfs the zero in the hundredths column is not significant.

1-6510. Northwest Branch Anacostia River near Hyattsville, Md.

Location.--Lat 38°57'09", long 76°58'00", 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, Prince Georges County, and 1.6 miles upstream from mouth.

Drainage area.--49.4 sq mi.

Records available.--July 1938 to September 1966. Monthly discharge only for July 1938 published in WSP 1302.

Gage.--Digital water-stage recorder. Datum of gage is 17.30 ft above mean sea level, adjustment of 1912. Prior to Oct. 22, 1938, wire-weight gage; Oct. 22, 1938, to Sept. 17, 1951, graphic water-stage recorder; Sept. 17, 1951, to Aug. 29, 1952, staff gage and crest-stage gage; Aug. 30, 1952 to Sept. 30, 1961, graphic water-stage recorder; at same site and datum.

Average discharge.--28 years, 39.3 cfs (unadjusted).

Extremes.--Maximum discharge during year, 7,000 cfs Sept. 14 (gage height, 13.50 ft); minimum, 0.2 cfs Sept. 11 (gage height, 2.66 ft).
1938-66: Maximum discharge, that of Sept. 14, 1966; minimum, that of 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 1965 to September 1966

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	33	7.9	8.6	9.6	12	238	16	80	24	7.2	3.1	1.2
2	13	7.6	8.3	40	12	55	15	78	22	6.4	2.8	2.0
3	5.8	7.6	8.6	20	11	40	14	47	20	6.0	2.0	1.0
4	4.6	7.6	9.0	12	10	40	17	37	19	5.8	2.2	3.4
5	4.2	7.6	8.6	11	11	49	15	33	18	63	15	1.6
6	40	7.6	8.3	100	11	31	15	34	16	49	4.2	1.8
7	458	8.6	8.3	35	11	26	14	27	16	12	3.1	.8
8	232	11	8.3	18	13	24	14	30	62	7.2	2.8	.4
9	28	10	8.6	13	17	22	14	25	28	6.0	32	.6
10	17	8.6	8.6	11	30	22	13	23	16	5.2	6.4	.6
11	13	8.3	10	10	80	21	13	22	15	15	78	.4
12	16	8.6	9.0	10	150	21	122	22	13	9.6	21	.6
13	10	9.8	34	10	815	20	310	22	13	5.4	5.4	.8
14	9.0	10	13	10	270	25	92	41	35	4.8	3.6	1,970
15	8.6	8.3	11	9.0	160	17	42	22	17	41	11	396
16	16	9.8	10	9.0	96	18	31	20	26	6.4	8.4	35
17	8.6	11	10	9.0	76	17	26	21	34	4.8	7.6	22
18	8.3	9.8	10	9.0	52	17	24	66	14	4.8	3.4	16
19	8.6	7.9	10	9.0	38	20	23	126	15	4.2	2.6	15
20	7.9	8.6	9.5	9.0	32	18	22	29	12	3.4	2.2	123
21	7.9	9.0	9.0	8.6	26	16	20	22	10	3.6	2.0	368
22	19	24	9.0	10	23	16	80	23	9.2	4.2	2.2	50
23	14	14	9.0	89	21	16	32	19	9.2	3.1	3.1	27
24	8.6	9.8	9.0	22	23	23	29	17	8.8	2.8	2.0	20
25	7.6	8.6	25	13	54	28	55	18	8.4	2.6	1.8	17
26	7.6	8.6	32	10	43	22	30	17	7.6	2.6	2.2	16
27	7.9	27	12	12	36	19	41	190	8.0	2.8	1.6	26
28	7.9	14	10.0	11	332	17	85	91	22	2.8	1.2	43
29	7.6	9.8	9.0	10	-	16	37	128	24	3.4	1.4	107
30	7.6	8.6	9.5	9.0	------	16	140	31	7.6	4.0	1.4	47
31	7.6	------	9.5	11	------	21	------	31	------	3.4	1.2	------
Total	1,008.9	309.6	354.7	569.2	2,465	951	1,401	1,392	549.8	302.5	236.9	3,213.2
Mean	32.5	10.3	11.4	18.4	88.0	30.7	46.7	44.9	18.3	9.76	7.64	107
Cfsm	.658	.208	.231	.372	1.78	.621	.945	.909	.370	.198	.155	2.17
In.	.76	.23	.27	.43	1.86	.72	1.05	1.05	.41	.23	.18	2.42

Calendar year 1965: Max 1,150 Min 2.8 Mean 31.7 Cfsm .642 In. 8.72
Water year 1965-66: Max 1,970 Min 0.4 Mean 34.9 Cfsm .706 In. 9.61

Peak discharge (base, 1,250 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
10- 7	1945	8.18	1,520	9-14	1600	13.50	7,000
2-13	1630	8.55	1,680				

1-6535. Henson Creek at Oxon Hill, Md.

Location.--Lat 38°47'05", long 76°58'50", on left bank 100 ft downstream from bridge on Tucker Road, 1.0 mile south of Oxon Hill, Prince Georges County, 1.4 miles upstream from Carey Branch, and 1.4 miles upstream from mouth.

Drainage area.--16.7 sq mi.

Records available.--June 1948 to September 1966.

Gage.--Digital water-stage recorder and concrete control. Altitude of gage is 62 ft (from topographic map). Prior to Oct. 1, 1961, graphic water-stage recorder at same site and datum.

Average discharge.--18 years, 18.4 cfs.

Extremes.--Maximum discharge during year, 625 cfs Sept. 14 (gage height, 3.64 ft); no flow July 22 and Sept. 4. 1948-66: Maximum discharge, 3,000 cfs Aug. 13, 1955 (gage height, 7.33 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, 1963, 1964, and 1966.

Remarks.--Records good. Some diversion above station for irrigation of truck farm. Some regulation at low flow by sand and gravel plant above station.

Discharge, in cubic feet per second, water year October 1965 to September 1966

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	9.1	2.3	2.0	4.4	5.3	73	14	31	14	4.4	0.50	0.10
2	6.5	1.8	2.3	15	5.7	26	13	40	9.6	3.7	.20	.10
3	2.4	1.4	2.3	5.8	5.8	21	12	26	8.1	2.7	.10	.10
4	1.6	1.6	3.0	4.0	6.3	21	11	17	7.2	3.7	.10	0
5	1.3	1.5	2.8	4.4	6.8	22	10	12	5.8	4.8	1.2	.40
6	1.0	1.9	3.1	51	6.2	20	9.1	11	5.8	5.4	.70	.30
7	1.6	2.7	3.4	11	6.5	16	8.6	10	5.4	1.9	.30	.10
8	14	2.4	2.8	7.2	7.2	13	8.1	15	5.8	3.0	.30	.10
9	8.6	1.8	2.4	5.8	10	12	8.0	17	6.8	4.0	6.4	.10
10	4.8	1.5	2.4	5.1	38	11	7.6	11	57	1.0	3.8	.40
11	3.4	1.8	3.7	4.4	125	11	7.2	9.1	15	1.2	12	.20
12	3.7	1.9	3.4	3.7	44	10	7.6	9.2	6.2	1.4	5.6	.10
13	3.0	2.6	12	4.0	234	10	70	9.6	4.4	.90	.90	.10
14	2.9	3.4	4.8	4.4	44	10	52	17	9.6	.50	1.0	199
15	3.0	2.4	4.0	4.0	21	11	33	9.6	7.2	1.2	1.7	28
16	4.0	2.1	3.4	3.7	33	10	21	8.1	8.1	1.0	.80	7.1
17	3.4	2.6	3.0	3.6	22	9.6	13	7.6	9.6	.70	.40	4.8
18	3.7	1.9	3.4	2.8	15	8.1	11	10	6.2	.60	.20	4.0
19	2.6	2.0	3.1	2.7	13	7.6	10	89	5.1	.40	.10	3.6
20	2.7	2.4	2.7	3.4	11	7.6	10	14	4.0	.20	.20	52
21	3.0	3.0	2.4	3.0	9.1	7.5	9.1	11	2.4	.10	.10	186
22	5.1	5.4	2.7	4.3	8.1	7.2	71	8.1	2.7	0	.30	21
23	5.8	6.5	3.0	49	7.9	7.1	21	6.8	2.7	.20	.20	12
24	3.7	2.6	3.0	12	13	41	17	6.2	2.3	.10	.10	7.9
25	2.7	2.4	4.4	6.8	50	60	33	6.2	2.1	.20	.30	6.8
26	1.8	2.4	4.0	4.8	40	37	16	24	2.2	.30	.30	5.7
27	1.9	2.6	2.7	6.2	21	29	19	16	1.9	.20	.20	9.5
28	1.8	3.7	2.7	6.2	120	24	33	19	10	1.9	.40	11
29	3.0	2.4	2.4	5.1	-	20	17	40	23	1.1	.50	26
30	4.4	1.8	2.1	3.7	------	17	40	19	5.4	.90	.20	12
31	2.4	------	2.8	5.4	------	16	------	15	-----	1.0	.20	------
TOTAL	118.9	74.8	102.2	256.9	928.9	595.7	612.3	544.5	255.6	48.70	39.30	598.50
MEAN	3.84	2.49	3.30	8.29	33.2	19.2	20.4	17.6	8.52	1.57	1.27	20.0
CFSM	.230	.149	.198	.496	1.99	1.15	1.22	1.05	.510	.094	.076	1.20
IN	.26	.17	.23	.57	2.07	1.33	1.36	1.21	.57	.11	.09	1.33

CALENDAR YEAR 1965	MAX 355	MIN 1.0	MEAN 10.6	CFSM .635	INCHES 8.65
WATER YEAR 1965-66	MAX 234	MIN 0	MEAN 11.4	CFSM .683	INCHES 9.30

Peak discharge (base, 400 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
2-13	1800	3.18	501	9-14	1600	3.64	625
5-19	0830	2.81	410				

Note.--Where daily discharge is less than 1.0 cfs the zero in the hundredths column is not significant.

1-6536. Piscataway Creek at Piscataway, Md.

Location.--Lat 38°42'20", long 76°58'00", on left bank 70 ft upstream from bridge on State Highway 223, at Piscataway, Prince Georges County, 0.4 mile upstream from Tinker Creek, and 4.8 miles upstream from mouth.

Drainage area.--39.5 sq mi.

Records available.--October 1965 to September 1966.

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

Extremes.--Maximum discharge during year, 582 cfs Feb. 13, 1966 (gage height, 5.55 ft); maximum gage height, 5.73 ft. Feb. 12, 1966 (ice jam); no flow during parts of July, August and September.

Remarks.--Records good.

Discharge, in cubic feet per second, water year October 1965 to September 1966

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	4.8	2.7	4.5	5.2	13	272	26	82	18	1.5	0	0
2	16	2.4	4.5	12	13	78	23	80	16	1.0	0	0
3	4.7	2.4	4.8	11	12	59	20	65	12	.6	0	0
4	1.9	2.6	5.2	7.4	12	57	21	48	10	.3	0	0
5	1.1	2.6	5.2	6.8	11	53	20	42	9.1	.2	0	0
6	1.1	2.6	5.2	59	10	47	19	38	7.4	.2	0	0
7	10	2.6	5.8	33	10	40	18	32	6.8	.5	0	0
8	39	2.7	5.2	15	11	36	17	46	9.8	.1	0	0
9	14	2.8	5.0	9.5	15	33	17	84	22	0	0	0
10	6.5	2.8	5.5	8.0	20	33	16	43	9.9	0	0	0
11	3.9	2.8	5.8	7.0	100	32	15	36	22	0	0	0
12	3.6	2.9	6.4	6.0	170	31	21	32	8.0	0	.1	0
13	3.1	3.2	9.3	6.0	328	30	137	30	6.8	0	.1	0
14	2.5	3.2	8.3	6.0	297	30	105	36	7.4	0	0	22
15	2.3	2.9	5.0	5.4	80	30	52	31	11	0	0	57
16	2.9	2.9	4.3	5.0	80	28	41	25	6.1	0	0	4.9
17	2.5	4.1	3.9	5.0	84	26	34	22	10	0	0	2.1
18	2.3	3.9	3.4	4.5	48	25	31	19	8.7	0	0	1.5
19	2.9	3.9	3.2	4.5	42	25	28	76	7.7	0	0	1.4
20	2.6	4.1	3.0	4.5	35	23	27	46	5.8	0	0	52
21	2.0	4.3	3.0	4.0	30	21	26	28	4.1	0	0	173
22	2.4	6.1	2.9	4.5	30	21	69	21	3.0	0	0	41
23	2.8	8.3	2.9	62	28	20	55	16	2.6	0	0	15
24	2.7	6.1	3.7	32	31	49	39	14	2.3	0	0	7.1
25	2.3	5.2	5.9	17	83	79	65	14	2.0	0	0	5.3
26	2.2	5.2	17	9.0	95	37	50	27	1.6	0	0	5.1
27	2.5	5.5	6.8	8.0	55	30	41	24	1.8	0	0	6.1
28	2.6	5.5	4.8	7.0	104	27	62	26	1.3	0	0	22
29	2.5	5.0	4.0	6.5	-	26	47	68	9.3	0	0	77
30	2.4	4.8	4.0	5.0	------	25	58	26	2.7	0	0	28
31	2.7	------	4.5	7.0	------	27	------	20	------	0	0	------
Total	154.8	116.1	163.0	382.8	1,847	1,350	1,200	1,197	245.2	4.4	0.2	520.5
Mean	4.99	3.87	5.26	12.3	66.0	43.5	40.0	38.6	8.17	0.14	0.006	17.4
Cfsm	.126	.098	.133	.311	1.67	1.10	1.01	.977	.207	.0035	.00015	.441
In.	.15	.11	.15	.36	1.74	1.27	1.13	1.13	.23	.004	.0002	.49

Calendar year 1965: Max - Min - Mean - Cfsm - In. -
Water year 1965-66: Max 328 Min 0 Mean 19.7 Cfsm .499 In. 6.76

Peak discharge (base, 250 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
2-13	2130	5.55	582	3-1	0530	4.87	412

1-6580. Mattawoman Creek near Pomonkey, Md.

Location.--Lat 38°35'45", long 77°03'25", 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, Charles County, and 12.6 miles upstream from mouth.

Drainage area.--57.7 sq mi.

Records available.--November 1949 to September 1966.

Gage.--Digital water-stage recorder and concrete control. Altitude of gage is 40 ft (from topographic map). Prior to Oct. 30, 1963, graphic water-stage recorder at same site and datum.

Average discharge.--16 years (1950-66), 53.2.

Extremes.--Maximum discharge during year, 370 cfs Feb. 13 (gage height, 4.25 ft); no flow many days in October, July, August, and September.
1949-66: Maximum discharge, 9,300 cfs Aug. 13, 1955 (gage height, 7.52 ft), from rating curve extended above 6,000 cfs; no flow at times each year.

Remarks.--Records good except those below 2 cfs, which are poor.

Discharge, in cubic feet per second, water year October 1965 to September 1966

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	0	0.50	2.4	3.8	9.0	268	32	128	20	0.70		0
2	.30	.50	2.3	5.6	9.0	311	28	145	15	.60		0
3	.10	.50	2.4	9.0	10	172	25	137	13	.60		0
4	0	.60	2.6	8.4	10	97	25	99	10	.60		0
5	0	.60	2.6	6.7	10	83	24	70	7.2	.40		0
6	0	.60	2.7	27	9.0	69	22	56	5.0	.40		0
7	1.9	.80	2.7	37	10	52	21	42	3.6	.30		0
8	6.0	.80	2.6	22	13	41	21	39	3.8	.30		0
9	10	1.0	2.6	15	17	35	20	80	29	.10		0
10	6.2	.80	2.6	11	24	33	20	63	17	0		0
11	4.1	1.1	2.7	9.7	103	31	19	42	12	0		0
12	2.6	1.6	3.1	7.2	174	29	21	34	5.8	0		0
13	1.9	1.5	3.8	6.7	297	29	80	30	3.6	0		0
14	1.1	1.5	4.4	6.7	335	29	123	32	2.7	0		0
15	.80	1.6	4.7	6.2	272	30	103	31	3.8	0		0
16	.80	1.9	4.4	6.2	133	28	72	26	2.7	0		0
17	.50	1.8	4.1	5.0	112	25	52	23	3.6	0		0
18	.30	1.6	3.6	5.0	83	24	39	21	4.1	0		0
19	.30	2.0	3.6	4.4	63	24	34	48	14	0		0
20	.30	2.0	3.4	4.4	47	24	30	56	12	0		.10
21	.30	2.0	3.1	4.4	34	22	28	30	5.0	0		24
22	.30	2.6	2.9	4.4	30	22	56	23	2.1	0		43
23	.60	3.8	2.9	26	27	22	89	18	1.5	0		22
24	.60	4.0	2.9	39	28	44	73	15	.90	0		8.8
25	.30	3.8	3.4	24	70	112	86	14	.80	0		3.0
26	.30	3.6	3.8	16	118	79	121	19	.70	0		1.3
27	.50	3.6	4.4	11	109	52	91	23	.70	0		1.7
28	.50	3.1	4.1	10	125	38	95	22	.60	0		5.2
29	.30	2.9	3.6	9.0	-	31	99	35	.80	0		23
30	.30	2.7	3.6	8.0	------	29	95	27	.70	0		50
31	.50	------	3.6	9.0	------	32	------	21	------	0		------
TOTAL	41.70	55.40	101.6	368.0	2,281.0	1,917	1,644	1,449	195.70	4.00	0	182.10
MEAN	1.35	1.85	3.28	11.9	81.5	61.8	54.8	46.7	6.52	.13	0	6.07
CFSM	.023	.032	.057	.206	1.41	1.07	.950	.809	.113	.0022	0	.105
IN	.03	.04	.07	.24	1.47	1.24	1.06	.93	.13	0	0	.12

CALENDAR YEAR 1965	MAX 684	MIN 0	MEAN 36.7	CFSM .636	INCHES 8.63
WATER YEAR 1965-66	MAX 335	MIN 0	MEAN 22.6	CFSM .392	INCHES 5.31

Peak discharge (base, 400 cfs).--No peak above base.

Note.-- Where daily discharge is less than 1.0 cfs the zero in the hundredths column is not significant.

1-6610. Chaptico Creek at Chaptico, Md.

Location.--Lat 38°22'45", long 76°46'56", on right bank at downstream side of highway culvert, 0.8 mile north of Chaptico, St. Marys County, and 0.8 mile upstream from Chaptico Bay.

Drainage area.--10.7 sq mi.

Records available.--June 1947 to September 1966.

Gage.--Digital water-stage recorder. Concrete control prior to Oct. 25, 1961. Altitude of gage is 15 ft (from topographic map). Prior to Mar. 12, 1964, graphic water-stage recorder at same site and datum.

Average discharge.--19 years, 10.0 cfs.

Extremes.--Maximum discharge during year, 406 cfs Sept. 21 (gage height, 5.06 ft); no flow many days in July, August, and September.
1947-66: 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, 1955, 1957, 1962, 1963, 1964, and 1966.

Remarks.--Records fair. Occasional small diversion above station for irrigation. Records of chemical analyses for the water year 1966 are published in Part 2 of this report.

Discharge, in cubic feet per second, water year October 1965 to September 1966

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	1.7	2.2	2.3	1.8	1.0	34	6.1	14	3.4	0.70	0	0
2	2.5	1.7	2.0	2.5	1.0	12	5.6	17	3.2	.70	0	0
3	1.7	2.0	2.5	2.4	1.3	9.9	5.0	11	2.5	.50	0	0
4	1.5	2.2	2.7	1.8	1.6	10	5.3	8.3	2.3	.30	0	0
5	1.4	1.8	2.1	1.6	1.4	9.9	4.8	7.4	1.9	1.2	0	0
6	1.4	1.8	2.0	18	1.6	9.9	4.5	6.7	1.4	2.1	.10	0
7	2.0	2.2	2.2	4.1	1.7	7.7	4.5	5.8	1.2	.80	.10	0
8	10	2.3	2.1	2.0	2.0	7.1	4.5	5.6	1.6	2.5	.10	0
9	3.5	2.2	2.0	1.3	4.0	6.7	4.5	5.6	3.4	.60	0	0
10	2.5	2.0	2.0	1.3	15	6.7	4.2	5.3	1.9	.30	0	0
11	2.0	2.4	2.1	1.3	48	6.4	4.2	5.0	1.4	.20	0	0
12	1.7	2.5	2.2	1.5	30	6.2	6.1	4.8	1.1	.20	1.2	0
13	1.6	2.6	2.3	1.4	110	6.1	18	4.8	1.2	.20	.50	0
14	1.6	2.4	6.0	1.6	35	6.1	9.9	5.6	1.1	.10	.20	1.0
15	2.0	2.0	2.5	2.5	14	6.1	7.1	5.0	1.0	3.0	.40	3.0
16	1.8	2.4	2.2	1.3	15	5.7	6.1	4.2	2.1	.90	.40	.40
17	1.7	3.7	2.1	1.8	12	5.6	5.6	3.9	11	.60	.10	.10
18	1.6	2.2	1.9	1.8	9.0	5.6	5.3	3.7	3.4	.30	0	0
19	1.5	2.2	2.1	1.5	8.3	5.6	5.0	7.1	3.9	.20	0	0
20	1.6	2.0	1.8	1.0	7.1	5.3	4.8	16	2.1	.10	0	10
21	1.6	2.2	2.0	1.5	7.2	5.0	4.8	5.3	1.2	.10	0	151
22	2.0	5.0	1.8	2.0	7.0	5.0	16	4.2	1.0	.10	0	10
23	2.5	4.8	1.9	14	6.1	5.0	15	3.7	.80	0	0	5.2
24	2.0	2.5	2.2	2.9	6.7	14	8.7	3.2	.70	0	0	2.3
25	1.5	2.0	2.9	2.4	16	12	11	3.9	.60	0	0	1.9
26	1.8	2.0	4.5	1.6	14	7.1	8.0	5.0	.50	0	0	1.9
27	1.7	2.5	1.8	2.0	9.6	6.1	7.1	6.4	.60	0	0	6.4
28	1.8	2.2	1.6	1.5	26	5.6	23	8.3	1.2	0	0	9.3
29	1.6	2.0	2.0	1.3	—	5.3	11	5.6	4.8	0	0	11
30	1.7	2.0	2.0	1.1	------	5.6	9.9	3.7	1.0	0	0	8.6
31	2.2	------	1.8	.90	------	8.7	------	3.7	------	0	0	------
TOTAL	65.7	72.0	71.6	83.70	411.6	252.0	235.6	199.8	63.50	15.70	3.10	222.10
MEAN	2.12	2.40	2.31	2.70	14.7	8.13	7.85	6.45	2.12	.51	.10	7.40
CFSM	.198	.224	.216	.252	1.37	.760	.734	.603	.198	.048	.0093	.692
IN	.23	.25	.25	.29	1.43	.88	.82	.69	.22	.05	.01	.77

CALENDAR YEAR 1965 MAX 93 MIN .50 MEAN 7.15 CFSM .668 INCHES 9.07
WATER YEAR 1965-66 MAX 151 MIN 0 MEAN 4.63 CFSM .433 INCHES 5.89

Peak discharge (base, 160 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
2-13	1945	4.40	210	9-21	1300	5.06	406

Note.--Where daily discharge is less than 1.0 cfs the zero in the hundredths column is not significant.

1-6615. St. Marys River at Great Mills, Md.

Location.--Lat 38°14'36", long 76°30'13", on left bank at downstream side of bridge on State Highway 471 in Great Mills, St. Marys County, 0.3 mile downstream from Western Branch, and 12.0 miles upstream from mouth.

Drainage area.--24.0 sq mi.

Records available.--June 1946 to September 1966.

Gage.--Digital water-stage recorder and concrete control. Altitude of gage is 10 ft (from topographic map). Prior to Oct. 1, 1963, graphic water-stage recorder at same site and datum.

Average discharge.--20 years, 23.6 cfs.

Extremes.--Maximum discharge during year, 413 cfs Sept. 21 (gage height, 5.64 ft); minimum, 0.2 cfs Sept. 7 (gage height, 1.13 ft).
1946-1966: Maximum discharge, 4,900 cfs July 30, 1960 (gage height 12.08 ft), from rating curve extended above 1,500 cfs on basis of contracted-opening measurement of peak flow; minimum, that of Sept. 7, 1966.

Remarks.--Records good.

Discharge, in cubic feet per second, water year October 1965 to September 1966

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	3.8	4.1	4.6	5.6	3.5	138	9.5	25	9.9	3.2	3.0	0.50
2	4.1	4.0	4.7	5.6	3.5	44	8.7	44	9.0	2.8	2.0	.50
3	3.8	4.1	5.0	5.6	4.0	25	7.9	42	7.5	2.3	1.6	.40
4	3.4	4.2	5.2	5.3	5.0	22	8.1	25	6.6	2.1	1.8	.40
5	3.2	4.1	4.9	5.1	5.2	20	7.7	18	5.9	3.0	3.2	.40
6	3.2	4.1	4.9	21	6.0	16	7.2	15	5.1	15	3.2	.40
7	7.6	4.3	4.8	14	7.9	13	7.1	12	4.6	5.8	2.5	.30
8	13	4.4	4.6	8.4	8.9	11	7.1	10	5.8	3.2	2.3	.40
9	7.8	4.4	4.7	6.1	11	10	6.9	9.3	19	2.3	2.0	.40
10	5.8	4.3	4.9	5.7	14	10	6.7	8.6	9.3	2.1	2.0	.40
11	5.0	4.4	5.0	5.7	55	9.9	6.7	7.8	6.9	1.8	1.8	.40
12	4.4	4.6	5.2	5.4	52	9.7	8.5	7.7	5.1	2.3	2.0	.50
13	4.1	4.9	5.7	4.9	162	9.7	43	7.5	4.6	2.1	1.8	.50
14	3.8	5.0	6.9	5.6	91	9.1	30	9.1	4.4	1.8	1.6	22
15	4.1	4.7	6.1	5.2	31	9.1	19	9.3	3.8	5.1	1.6	19
16	4.1	5.0	5.5	5.3	27	8.7	15	7.7	8.3	4.0	1.8	6.3
17	3.9	5.4	5.2	4.9	28	8.2	12	6.9	24	2.9	1.4	3.3
18	3.8	5.0	5.2	4.9	18	8.4	10	6.2	11	2.1	1.3	2.3
19	3.6	4.8	4.9	4.6	14	8.4	9.6	7.8	12	1.8	1.0	2.3
20	3.6	4.7	4.9	4.8	12	8.2	8.9	133	7.7	1.6	.90	25
21	3.6	4.9	4.9	4.8	10	7.6	8.6	48	5.1	1.3	.80	233
22	3.8	6.1	4.9	5.2	9.4	7.7	13	222	4.4	1.1	.80	49
23	4.1	6.7	4.9	16	8.9	7.8	19	49	3.6	1.0	.70	15
24	3.9	5.7	5.1	11	12	12	14	22	3.2	1.0	.60	7.4
25	3.7	5.0	6.4	5.7	30	20	14	17	3.0	.90	.60	4.5
26	3.8	4.9	7.7	3.8	27	13	12	15	2.8	.90	.60	4.1
27	4.1	5.2	5.8	6.6	17	10	11	14	2.8	.90	.50	6.1
28	4.1	5.1	5.2	4.5	46	8.7	91	22	2.5	1.1	.50	15
29	3.7	4.9	5.0	4.0	—	8.0	58	18	4.9	4.1	.50	20
30	3.8	4.6	5.2	3.5	------	8.5	29	12	4.2	3.9	.50	18
31	4.1	------	5.3	3.0	------	11	------	9.8	------	4.1	.50	------
TOTAL	138.8	143.6	163.3	201.8	719.3	512.7	509.2	860.7	207.0	87.60	45.40	457.80
MEAN	4.48	4.79	5.27	6.51	25.7	16.5	17.0	27.8	6.90	2.83	1.47	15.3
CFSM	.187	.200	.220	.271	1.07	.688	.708	1.16	.288	.118	.061	.638
IN	.22	.22	.25	.31	1.11	.79	.79	1.33	.32	.14	.07	.71

CALENDAR YEAR 1965	MAX 223	MIN 2.1	MEAN 15.9	CFSM .663	INCHES 9.00
WATER YEAR 1965-66	MAX 233	MIN .30	MEAN 11.1	CFSM .463	INCHES 6.27

Peak discharge (base, 400 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
9-21	1530	5.64	413				

Note.--Where daily discharge is less than 1.0 cfs the zero in the hundreths column is not significant.

3-0755. Youghiogheny River near Oakland, Md.

Location.--Lat 39°25'19", long 79°25'32", on left bank 200 ft downstream from Baltimore & Ohio Railroad bridge, 250 ft downstream from Little Youghiogheny River, 1¼ miles northwest of Oakland, Garrett County, and 1½ miles upstream from Dunkard Lick Run.

Drainage area.--134 sq mi.

Records available.--August 1941 to September 1966.

Gage.--Digital water-stage recorder and concrete control. Datum of gage is 2,353.11 ft above mean sea level, unadjusted. Prior to Aug. 1, 1946, wire-weight gage at bridge 200 ft upstream at same datum. Aug. 2, 1946, to Sept. 19, 1960, graphic water-stage recorder at present site and datum.

Average discharge.--25 years, 284 cfs.

Extremes.--Maximum discharge during year, 3,790 cfs Feb. 14 (gage height, 7.11 ft); minimum, 3.1 cfs Sept. 12, 13 (gage height, 1.75 ft).
1941-66: 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.

Discharge, in cubic feet per second, water year October 1965 to September 1966

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	13	18	71	72	61	1,780	143	2,680	72	16	11	3.4
2	21	16	64	538	66	1,190	250	1,430	68	13	10	3.7
3	20	14	57	1,040	57	870	241	870	63	14	12	4.8
4	14	14	56	616	53	974	610	610	55	17	14	4.0
5	11	13	52	405	51	1,160	568	452	50	16	12	4.4
6	9.7	13	51	682	51	838	457	355	46	36	10	5.2
7	11	12	47	824	48	586	390	286	53	24	7.8	7.1
8	22	24	43	574	48	435	345	245	61	20	7.2	6.0
9	21	74	40	400	72	350	308	216	92	16	12	5.7
10	32	52	43	317	216	322	290	186	66	12	26	4.1
11	42	37	340	245	2,370	308	294	157	53	17	17	3.7
12	53	30	474	200	2,040	322	410	150	42	24	37	3.4
13	56	27	308	174	2,320	526	1,130	345	37	17	37	3.5
14	33	29	250	178	2,950	520	1,110	330	39	16	22	59
15	25	26	193	140	1,390	420	1,160	286	44	35	51	98
16	28	25	164	114	1,160	340	883	237	39	37	32	39
17	22	102	143	89	1,500	290	701	208	44	21	23	21
18	17	83	121	89	935	250	550	204	39	15	27	14
19	14	60	102	81	668	233	440	430	31	13	16	12
20	12	50	89	76	490	204	355	330	28	17	17	59
21	11	50	84	68	360	171	299	263	26	18	50	77
22	16	76	74	66	290	153	290	220	23	13	26	51
23	45	90	68	66	215	143	317	186	21	10	17	88
24	47	80	66	70	216	140	550	153	20	8.4	12	60
25	61	65	72	70	200	147	1,100	136	18	7.5	11	42
26	59	57	86	63	178	124	994	118	17	7.7	7.4	38
27	47	135	61	66	147	124	824	102	17	6.7	5.4	44
28	39	171	61	61	340	111	1,130	94	16	7.6	4.4	234
29	33	113	53	61	-	97	1,040	140	15	21	4.0	177
30	24	87	57	70	------	99	1,190	99	22	30	3.7	106
31	23	------	68	72	------	124	------	79	------	16	3.7	------
TOTAL	881.7	1,643	3,458	7,587	18,492	13,351	18,369	11,597	1,217	541.9	545.6	1,277.2
MEAN	28.4	54.8	112	245	660	431	612	374	40.6	17.5	17.6	42.6
CFSM	.212	.409	.836	1.83	4.93	3.22	4.57	2.79	.303	.131	.131	.318
IN	.24	.46	.96	2.11	5.13	3.71	5.10	3.22	.34	.15	.15	.35

CALENDAR YEAR 1965 MAX 2,300 MIN 3.6 MEAN 208 CFSM 1.55 INCHES 21.08
WATER YEAR 1965-66 MAX 2,950 MIN 3.4 MEAN 216 CFSM 1.61 INCHES 21.91

Peak discharge (base, 2,000 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
2-11	2000	6.68	3,280	5- 1	1145	6.51	3,070
2-14	0345	7.11	3,790				

Reservoirs in Monongahela River Basin

3-0760.--Deep Creek Reservoir.--Lat 39°30'34", long 79°23'28", on Deep Creek at dam, 1.8 miles upstream from mouth and 7 miles north of Oakland, Garrett County, Md. Drainage area, 64.7 sq mi. Records available, July 1925 to September 1966 (prior to October 1950, month-end contents published in WSP 1305, and October 1950 to September 1955, month-end 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, 90,400 acre-ft May 23 (elevation, 2,461.30 ft); minimum, 53,200 acre-ft Dec. 31 (elevation, 2,450.50 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.

Month-end elevation and contents, water year October 1965 to September 1966

Date	Elevation (feet)†	Contents (acre-feet)	Change in contents (acre-feet)
Sept. 30	2,456.90	74,300	-
Oct. 31	2,454.90	67,400	- 6,900
Nov. 30	2,453.00	61,100	- 6,300
Dec. 31	2,450.50	53,200	- 7,900
Calendar year 1965			- 7,500
Jan. 31	2,451.20	55,300	+ 2,100
Feb. 28	2,454.80	67,000	+11,700
Mar. 31	2,457.50	76,400	+ 9,400
Apr. 30	2,460.40	87,000	+10,600
May 31	2,461.10	89,600	+ 2,600
June 30	2,459.90	85,200	- 4,400
July 31	2,458.20	78,900	- 6,300
Aug. 31	2,456.60	73,200	- 5,700
Sept. 30	2,455.40	69,100	- 4,100
Water year 1965-66	-	-	- 5,200

† Elevation at 2400.

3-0765. Youghiogheny River at Friendsville, Md.

Location.--Lat 39°39'13", long 79°24'31", on left bank 0.7 mile upstream from bridge on State Highway 42 at Friendsville, Garrett County, and 1½ miles upstream from Bear Creek.

Drainage area.--295 sq mi.

Records available.--August 1898 to December 1904 and October 1940 to September 1966 in reports of Geological Survey. 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.--Digital water-stage recorder. Datum of gage is 1,487.33 ft above mean sea level, datum of 1929. Aug. 17, 1898, to Dec. 31, 1904, and Sept. 1, 1922, to Sept. 30, 1926, wire-weight and chain gages at bridge 0.7 mile downstream at datum 16.24 and 16.29 ft lower, respectively. Dec. 4, 1940, to Sept. 19, 1960, graphic water-stage recorder at present site and datum.

Average discharge.--32 years (1898-1904, 1940-1966), 631 cfs (adjusted for storage since 1940).

Extremes.--Maximum discharge during year, 5,800 cfs Feb. 14 (gage height, 6.11 ft); minimum, 4.1 cfs Sept. 12 (gage height, 1.51 ft); minimum daily, 8.2 cfs Sept. 11.

1898-1904, 1940-66: 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, that of Sept. 11, 1966.

Maximum stage known, 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 on basis of slope-area measurement for peak of Oct. 16, 1954).

Remarks.--Records good. Low and medium flow regulated since 1925 by Deep Creek Reservoir (see preceding page). Records of water temperatures for the water year 1966 are published in Part 2 of this report.

Discharge, in cubic feet per second, water year October 1965 to September 1966

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	152	188	345	188	220	2,340	350	3,480	266	150	128	123
2	103	243	332	622	220	2,020	421	2,560	343	49	139	124
3	44	228	365	1,930	210	1,440	421	1,640	249	29	137	33
4	144	160	201	1,230	200	1,560	899	1,210	172	23	137	14
5	183	156	137	859	130	2,030	981	969	117	131	139	13
6	206	103	297	1,110	100	1,520	805	805	254	147	41	98
7	210	44	345	1,530	180	1,120	709	536	299	168	35	125
8	228	183	326	991	220	840	581	452	276	153	122	125
9	103	291	320	680	460	678	518	545	288	51	138	124
10	95	345	326	641	760	629	501	518	276	29	171	33
11	291	274	345	522	3,200	590	536	469	138	119	228	8.2
12	320	248	848	428	3,520	609	581	452	112	147	161	28
13	326	114	710	458	3,950	840	1,370	658	196	191	60	121
14	291	75	650	442	4,800	957	1,490	554	196	205	60	147
15	111	210	584	280	2,580	805	1,770	493	205	157	179	229
16	106	264	506	270	1,880	639	1,350	545	200	67	191	193
17	71	320	497	300	2,540	572	1,070	485	200	53	163	53
18	192	385	308	320	1,650	493	922	501	96	134	151	38
19	224	326	228	326	1,170	444	762	794	78	176	205	126
20	224	156	332	303	875	399	639	730	164	150	93	152
21	156	124	392	291	680	428	554	469	168	148	32	198
22	233	320	405	228	520	363	527	392	164	153	212	202
23	156	378	372	164	470	343	545	469	61	43	212	233
24	152	365	372	308	493	337	887	452	44	22	147	117
25	326	183	224	264	460	331	1,940	421	41	114	142	70
26	326	269	196	248	385	318	1,720	436	38	134	133	142
27	303	224	358	254	312	282	1,460	370	102	148	36	172
28	269	358	285	269	452	276	2,020	200	150	137	14	257
29	264	435	238	180	-	271	1,940	244	150	137	100	381
30	121	378	243	100	------	324	1,760	229	164	41	132	235
31	67	------	254	180	------	343	------	331	------	38	134	------
TOTAL	5,997	7,347	11,341	15,916	32,637	24,141	30,029	22,409	5,207	3,444	3,972	3,914.2
MEAN	193	245	366	513	1,166	779	1,001	723	174	111	128	130
†	-112	-106	-128	+34.2	+211	+153	+178	+42.3	-73.9	-102	-92.7	-68.9
MEAN‡	81	139	238	547	1,377	932	1,179	765	100	9.0	35.3	61.1
CFSM‡	0.275	0.471	0.807	1.85	4.67	3.16	4.00	2.59	0.339	0.031	0.120	0.207
IN. ‡	0.32	0.53	0.93	2.14	4.86	3.64	4.46	2.99	0.38	0.03	0.14	0.23

CALENDAR YEAR 1965	MAX	3,610	MIN	13	MEAN	464	MEAN‡	454	CFSM‡	1.54	IN.‡	20.87
WATER YEAR 1965-66	MAX	4,800	MIN	8.2	MEAN	456	MEAN‡	449	CFSM‡	1.52	IN.‡	20.64

† Change in contents, equivalent in cubic feet per second, in Deep Creek Reservoir, furnished by Pennsylvania Electric Co.

‡ Adjusted for change in contents.

3-0766. Bear Creek at Friendsville, Md.

Location.--Lat 39°39'22", long 79°23'41", 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, Garrett County, and 1.2 miles upstream from mouth.

Drainage area.--48.9 sq mi.

Records available.--October 1964 to September 1966.

Gage.--Graphic water-stage recorder. Altitude of gage is 1,555 ft (from topographic map).

Extremes.--1965: Maximum discharge during year, about 640 cfs Mar. 29 (gage height, about 3.9 ft); minimum, 2.1 cfs Aug. 18, 19, Sept. 10, 11 (gage height, 0.49 ft).
1966: Maximum discharge during year, 1,450 cfs Feb. 13 (gage height, 5.48 ft); minimum, 1.5 cfs Sept. 12 (gage height, 0.42 ft).
1965-66: Maximum, that of Feb. 13, 1966; minimum, that of Sept. 12, 1966.

Remarks.--Records poor.

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	14	4.3	16	105	74	106	197	99	17	6.8	9.5	3.8
2	11	4.4	16	235	64	108	231	84	18	5.8	9.5	9.0
3	10	3.8	21	340	60	111	200	74	46	15	5.8	5.5
4	8.0	3.8	124	215	58	102	182	65	22	11	4.2	3.8
5	6.4	3.8	119	160	60	174	160	61	18	7.4	3.7	3.3
6	4.8	3.7	92	135	70	162	152	59	17	7.2	3.4	2.9
7	4.8	3.7	67	125	192	135	150	55	16	6.6	3.3	2.8
8	4.3	36	54	155	255	124	144	50	14	6.4	3.3	2.5
9	4.6	36	43	150	208	120	156	46	14	5.5	6.2	2.5
10	4.3	3.6	34	155	187	115	146	42	13	7.0	10	2.3
11	4.1	36	32	150	150	113	144	40	12	19	6.4	2.2
12	4.0	36	97	135	131	102	160	36	12	12	4.4	48
13	4.0	36	106	110	115	94	156	34	11	7.4	3.7	24
14	3.8	36	95	94	102	91	146	31	10	6.0	3.4	18
15	4.2	36	80	84	91	87	141	28	8.7	5.8	3.2	11
16	4.0	4.0	64	76	80	83	146	27	9.8	5.8	2.8	7.8
17	4.9	13	56	70	73	86	137	28	10	5.3	2.5	6.2
18	5.6	9.0	48	66	67	119	131	26	11	5.3	2.2	5.3
19	5.1	15	45	60	68	166	129	24	13	5.8	2.2	4.8
20	4.9	60	42	56	63	130	120	23	10	5.1	2.8	4.2
21	4.6	30	40	55	63	110	113	22	8.5	4.4	2.8	4.0
22	4.4	14	40	59	67	100	104	22	8.3	3.4	6.2	3.4
23	4.4	12	40	151	74	130	101	22	10	4.0	6.8	3.4
24	4.0	10	46	325	63	250	99	20	12	4.6	3.8	22
25	4.2	13	70	365	70	350	104	44	10	4.6	3.0	18
26	4.2	120	110	243	63	350	137	38	8.3	3.7	13	11
27	4.0	60	160	191	71	350	146	28	7.2	3.7	13	7.4
28	3.8	35	180	148	75	250	139	24	6.8	3.4	11	6.0
29	4.6	25	155	119	—	450	124	22	6.4	3.2	6.2	9.7
30	5.6	20	140	96	----------	350	113	20	6.8	2.8	4.2	5.1
31	4.8	----------	125	70	----------	257	----------	18	----------	2.9	3.4	----------
Total	165.4	496.3	2,357	4,498	2,714	5,275	4,308	1,212	386.8	196.9	165.9	259.9
Mean	5.34	16.5	76.0	145	96.9	170	144	39.1	12.9	6.35	5.35	8.66
Cfsm	0.109	0.337	1.55	2.97	1.98	3.48	2.94	0.800	0.264	0.130	0.109	0.177
In.	0.13	0.38	1.79	3.42	2.06	4.01	3.28	0.92	0.29	0.15	0.13	0.20

Calendar year 1964: Max - Min - Mean - Cfsm - In. -
Water year 1964-65: Max 450 Min 2.2 Mean 60.4 Cfsm 1.24 In. 16.76

Peak discharge (base, 600 cfs)

Date	Time	Gage height	Discharge
3-29	1300	*3.90	*640

* About.

3-0766. Bear Creek at Friendsville, Md.

Discharge, in cubic feet per second, water year October 1965 to September 1966

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	13	9.5	22	20	17	240	70	328	30	7.2	3.0	1.7
2	14	8.5	21	67	18	200	83	278	27	6.4	3.0	1.7
3	8.7	8.1	20	129	18	170	86	200	25	6.4	4.0	1.7
4	7.2	7.8	20	106	16	220	137	152	23	6.4	3.6	2.5
5	6.0	7.2	19	84	16	240	139	120	22	11	3.4	5.6
6	5.3	6.8	19	111	15	180	128	111	22	17	3.2	3.4
7	7.5	70	16	124	15	130	120	99	23	8.5	3.2	2.6
8	18	8.3	17	111	15	110	108	91	22	7.2	3.2	2.3
9	14	15	16	97	25	90	101	81	20	6.2	2.6	2.0
10	15	11	17	77	60	86	95	74	18	5.6	9.0	1.8
11	17	9.2	29	62	520	90	94	63	18	5.3	4.2	1.8
12	23	8.7	45	56	340	100	104	60	16	4.8	6.4	1.6
13	21	9.2	44	52	960	170	128	61	14	4.6	5.8	1.6
14	17	10	39	50	560	135	146	63	15	7.0	5.3	24
15	15	8.5	34	40	245	131	193	54	16	12	13	15
16	14	10	32	36	190	120	189	48	15	9.0	6.6	6.8
17	12	21	30	33	220	110	164	46	18	7.0	4.6	4.0
18	9.8	19	27	31	160	99	142	48	14	6.0	3.7	3.4
19	8.7	17	24	27	120	94	129	150	13	5.4	3.2	3.3
20	8.1	17	24	23	100	86	117	100	12	6.2	3.0	16
21	7.6	19	22	20	90	78	102	80	12	5.0	6.4	11
22	13	24	22	18	80	71	95	66	11	4.2	6.8	8.3
23	17	31	20	21	70	66	106	56	9.8	3.2	4.9	12
24	16	27	18	23	60	73	144	50	9.5	3.5	3.7	8.1
25	18	24	19	23	54	66	477	43	9.2	4.5	3.2	60
26	16	22	20	19	52	61	334	38	9.5	4.2	3.0	70
27	15	35	17	17	60	61	278	36	90	3.5	2.8	7.4
28	13	34	16	15	90	57	296	35	8.5	4.0	2.6	7.8
29	12	30	15	15	-	56	316	36	9.8	7.0	2.5	7.2
30	10	26	16	16	---	60	288	32	8.7	6.0	2.2	6.4
31	10	---	18	16	---	66	---	31	---	4.5	1.9	---
Total	401.9	490.8	718	1,539	4,186	3,516	4,909	2,730	480.0	198.8	134.0	184.0
Mean	13.0	16.4	23.2	49.6	150	113	164	88.1	16.0	6.41	4.32	6.13
Cfsm	0.266	0.335	0.474	1.01	3.07	2.31	3.35	1.80	0.327	0.131	0.088	0.125
In.	0.31	0.37	0.55	1.17	3.18	2.67	3.73	2.08	0.37	0.15	0.10	0.14

Calendar year 1965 : Max 450 Min 2.2 Mean 56.5 Cfsm 1.16 In. 15.69
Water year 1965-66 Max 960 Min 1.6 Mean 53.4 Cfsm 1.09 In. 14.82

Peak discharge (base, 600 cfs)

Date	Time	Gage height	Discharge
2-13	1400	5.48	1,450

3-0780. Casselman River at Grantsville, Md.

Location.--Lat 39°42'08", long 79°08'12", on left bank at downstream side of highway bridge, 0.3 mile upstream from Slaubough Run, 0.7 mile downstream from U. S. Highway 40, and 1.0 mile northeast of Grantsville, Garrett County.

Drainage area.--62.5 sq mi.

Records available.--July 1947 to September 1966.

Gage.--Digital water-stage recorder and concrete control. Altitude of gage is 2,090 ft (from topographic map). Prior to Oct. 24, 1960, graphic water-stage recorder at same site and datum.

Average discharge.--19 years, 113 cfs.

Extremes.--Maximum discharge during year, 2,030 cfs Feb. 13 (gage height, 5.03 ft); minimum, 0.80 cfs Aug. 8, 9 (gage height, 0.94 ft).
1947-66: 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 and logarithmic plotting; no flow Aug. 31, 1962, result of regulation from unknown source.

Remarks.--Records good. Records of chemical analyses for the water year 1966 are published in Part 2 of this report.

Discharge, in cubic feet per second, water year October 1965 to September 1966

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	11	10	30	31	24	572	91	499	40	5.2	1.9	1.6
2	18	9.6	32	138	25	375	130	336	36	3.6	1.9	1.5
3	13	9.1	25	269	25	340	115	255	33	2.9	2.3	1.4
4	8.6	8.4	27	139	23	490	217	201	29	2.6	2.1	5.0
5	6.8	8.0	25	95	22	627	174	166	26	16	1.7	3.0
6	5.7	7.6	26	259	21	405	150	141	25	67	1.4	2.3
7	11	7.6	23	261	20	276	138	119	29	20	1.1	2.0
8	54	8.6	22	160	20	220	127	111	29	12	.90	1.6
9	28	18	22	131	35	180	118	101	24	7.6	20	1.3
10	29	17	24	117	80	172	122	88	22	4.8	29	1.2
11	36	14	51	109	420	186	134	76	21	3.6	9.3	1.0
12	44	12	84	100	544	213	142	81	18	3.2	8.6	1.1
13	37	13	61	88	1,400	351	156	129	15	2.6	8.8	1.2
14	23	15	50	84	942	284	169	131	18	4.2	8.4	24
15	18	13	43	72	495	222	254	114	21	29	32	22
16	16	14	41	62	380	179	301	87	17	11	15	10
17	13	27	39	56	425	149	308	77	19	5.9	9.0	6.3
18	11	30	35	48	276	133	245	77	15	4.0	6.1	4.6
19	10	24	31	40	221	123	200	223	12	3.4	4.6	4.2
20	9.3	21	29	35	172	109	166	145	9.7	3.8	3.9	25
21	9.0	25	29	30	160	95	142	108	8.1	3.1	7.0	39
22	11	53	26	25	129	88	141	92	7.2	2.5	12	27
23	21	74	25	30	112	80	197	79	6.6	1.9	5.8	37
24	25	53	26	35	99	86	357	70	6.2	2.0	4.4	23
25	31	38	31	33	90	86	620	62	5.7	2.8	3.5	13
26	24	32	33	30	86	78	361	56	5.7	2.7	3.0	13
27	20	60	21	25	108	86	368	51	5.2	2.2	2.6	12
28	17	67	19	21	155	74	546	51	5.7	2.5	2.3	14
29	14	44	18	21	--	66	499	71	12	4.3	2.1	14
30	12	35	22	23	------	69	412	51	7.2	3.8	1.9	12
31	11	------	28	23	------	79	------	43	------	2.6	1.7	------
TOTAL	597.4	767.9	998	2,590	6,509	6,493	7,100	3,891	528.3	242.8	214.30	324.3
MEAN	19.3	25.6	32.2	83.5	232	209	237	126	17.6	7.83	6.91	10.8
CFSM	.309	.410	.515	1.34	3.71	3.34	3.79	2.02	.282	.125	.111	.173
IN	.36	.46	.59	1.54	3.87	3.86	4.22	2.32	.31	.14	.13	.19

CALENDAR YEAR 1965 MAX 903 MIN .80 MEAN 89.3 CFSM 1.43 INCHES 19.39
WATER YEAR 1965-66 MAX 1,400 MIN .90 MEAN 82.9 CFSM 1.33 INCHES 18.00

Peak discharge (base, 1,000 cfs)

Date	Time	Gage height	Discharge
2-13	1500	5.03	2,030

Note.--Where daily discharge is less than 1.0 cfs the zero in the hundredths column is not significant.

3-0785. Big Piney Run near Salisbury, Pa.

Location.--Lat 39°43'32", long 79°02'57", on left bank an eighth of a mile upstream from Little Piney Run, a quarter of a mile north of Maryland-Pennsylvania State line, and 2½ miles southeast of Salisbury, Somerset County.

Drainage area.--24.5 sq mi.

Records available.--June 1932 to September 1966.

Gage.--Digital water-stage recorder and concrete control. Altitude of gage is 2,240 ft (from topographic map). Prior to Oct. 25, 1961, graphic water-stage recorder at same site and datum.

Average discharge.--34 years 37.4 cfs (unadjusted).

Extremes.--Maximum discharge during year, 1,100 cfs Feb. 13 (gage height, 4.37 ft); maximum gage height, 4.97 ft Feb. 11 (ice jam); minimum, 0.04 cfs Sept. 10, 11 (gage height, 0.95 ft).
1932-66: Maximum discharge, 6,850 cfs Oct. 15, 1954 (gage height, 8.56 ft), from rating curve extended above 500 cfs on basis of slope-area measurements at gage heights 7.5 and 8.56 ft; maximum gage height, 8.87 ft Feb. 22, 1944 (ice jam); minimum, that of Sept. 10, 11, 1966.
Revisions.--The figures of maximum discharge for some water years have been revised, as shown in the following table. They supersede figures published in previous annual reports.

Water year	Date	Gage height (ft)	Discharge (cfs)
1961	Feb. 25, 1961	5.18	1,780
1962	Mar. 21, 1962	4.28	1,020
1963	Mar. 5, 1963	4.26	1,010
1964	Apr. 29, 1964	4.95	1,580

Remarks.--Records good. Infrequent regulation at low flow by Frostburg Reservoir. Records do not include an average of about 0.5 cfs diverted three miles above station through pumps to city of Frostburg, Maryland, and about 0.2 cfs from spring 700 ft above station by gravity to city of Salisbury, Pa.

Revisions.--Revised figures of discharge, in cubic feet per second, for the water years 1961 and 1964, superseding those published in previous annual reports, are given herewith:

Date	Discharge	Date	Discharge	Date	Discharge
1961		1961-Con.		1964-Con.	
Feb. 19	740	Feb. 26	602	Mar. 5	1,100
20	385			6	465
23	373	Apr. 16	773	10	637
24	477	1964			
25	884	Mar. 4	630	Apr. 29	798

Month	Cfs-days	Maximum	Minimum	Mean	Per square mile	Runoff in inches
Calendar year 1960....	13,267.33	1,200	0.35	36.2	1.48	20.14
February 1961.....	4,643.9	884	7.1	166		
April 1961.....	3,817	773	47	127		
Water year 1960-61....	16,496.98	884	.32	45.2	1.84	25.04
Calendar year 1961....	17,049.38	884	.3	46.7	1.91	25.88
March 1964.....	5,784	1,100	10	187		
April 1964.....	4,099	798	41	137		
Water year 1963-64....	13,647.0	1,100	.1	37.3	1.52	20.72
Calendar year 1964....	14,672.8	1,100	.1	40.1	1.64	22.27

Revised peak discharge

Date	Time	Gage height	Discharge	Date	Time	Gage height (ft)	Discharge (cfs)
Feb. 19, 1961	0630	(revised) 4.15	920	Mar. 13, 1963	1900	3.93	756
Feb. 25	2030	5.18	1,780	Mar. 17	1900	3.76	637
Mar. 4	2200	3.68	581	Mar. 20	0430	3.74	623
Apr. 16	1200	4.62	1,300	Mar. 5, 1964	1530	4.80	1,440
Feb. 28, 1962	0545	3.62	539	Mar. 10	1400	4.17	936
Mar. 21	1900	4.28	1,020	Apr. 29	0930	4.95	1,580
Mar. 5, 1963	0315	4.26	1,010				

3-0785. Big Piney Run near Salisbury, Pa.--Continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1965 TO SEPTEMBER 1966

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	2.5	1.5	5.8	5.2	3.0	159	19	150	10	1.3	0.20	0.10
2	3.6	1.6	5.4	18	3.2	132	20	119	9.8	.90	.20	.10
3	2.9	1.4	5.1	41	3.2	127	20	90	8.5	.70	.20	.10
4	1.9	1.2	5.3	31	3.1	185	31	66	7.2	.70	.20	.10
5	1.4	1.1	4.4	24	3.0	277	33	50	7.9	1.3	.20	.10
6	1.1	1.0	4.5	64	2.9	169	36	40	7.5	3.1	.20	.10
7	5.6	1.2	3.9	69	2.9	110	36	32	7.5	2.1	.10	.10
8	22	1.8	3.5	53	3.1	76	33	31	7.5	1.9	.10	.10
9	9.2	1.7	3.6	41	4.0	60	31	26	6.1	1.1	.10	.10
10	9.5	2.3	3.8	32	6.0	52	31	22	5.1	1.7	.10	.10
11	9.2	1.9	5.8	24	100	54	28	19	4.7	1.1	.10	.10
12	9.5	1.5	7.9	16	168	59	29	19	3.3	.60	.20	.10
13	7.5	1.4	7.9	15	679	99	31	28	2.6	.50	.10	.20
14	5.6	1.8	8.2	13	432	95	36	30	5.6	.60	.30	1.7
15	4.5	1.8	7.5	11	191	78	54	26	7.9	1.7	.70	2.8
16	3.9	1.6	7.5	9.0	134	63	87	24	3.7	1.5	.60	1.0
17	3.0	2.2	7.2	7.0	121	51	124	36	2.8	1.3	.40	.60
18	2.6	2.5	6.4	6.0	88	44	111	25	2.2	1.1	.30	.40
19	2.3	2.1	5.2	5.0	72	41	93	52	1.8	.50	.20	.50
20	1.9	2.0	5.1	4.5	54	36	71	43	1.5	.40	.20	6.7
21	1.6	2.4	5.3	4.0	46	29	56	33	1.4	.40	.40	26
22	2.3	7.5	4.8	3.5	36	26	49	34	1.3	.30	1.9	14
23	7.9	9.5	4.3	4.5	30	24	61	30	1.2	.20	.80	11
24	5.0	7.9	4.7	5.0	26	24	89	18	1.0	.20	.40	6.4
25	3.8	6.4	5.4	4.5	25	22	148	12	1.0	.30	.30	4.1
26	3.4	5.6	5.1	4.0	22	19	124	10	1.5	.20	.20	4.3
27	2.9	9.8	4.0	4.0	18	18	130	9.8	1.6	.20	.20	3.2
28	2.5	10	3.3	3.5	34	16	176	11	1.9	.30	.20	3.3
29	2.1	8.2	2.8	3.2	-	14	188	12	3.5	.40	.10	2.9
30	1.8	6.9	3.2	3.5	------	16	159	10	2.0	.40	.10	2.3
31	1.6	------	4.5	3.2	------	18	------	11	------	.30	.10	------
TOTAL	144.6	107.8	161.4	531.6	2,310.4	2,193	2,134	1,118.8	129.6	27.30	9.40	92.60
MEAN	4.67	3.59	5.21	17.1	82.5	70.7	71.1	36.1	4.32	.88	.30	3.09

CALENDAR YEAR 1965 MAX 338 MIN .10 MEAN 28.5 CFSM 1.16 IN. 15.79
WATER YEAR 1965-66 MAX 679 MIN .10 MEAN 24.5 CFSM 1.00 IN. 13.60

Peak discharge (base, 450 cfs)

Date	Time	Gage height	Discharge
2-13	1630	4.37	1,100

Note.--Where daily discharge is less than 1.0 cfs the zero in the hundredths column is not significant.

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 1966, in North Atlantic Slope basins

Station No.	Station name	Location	Drainage area (sq mi)	Period of record	Measurements	
					Date	Discharge (cfs)
		Delaware River basin				
1-4774	South Branch Naaman Creek near Claymont, Del.	Lat 39°49'00", long 75°29'40", at dam 800 ft above bridge on Marsh Road, 2.2 miles west of Claymont, New Castle County.	3.83	1955-66	10- 5-65 7-27-66	0.30 .15
1-4795	Mill Creek at Stanton, Del.	Lat 39°42'50", long 75°40'00", at highway bridge 1.2 miles west of Stanton, New Castle County.	12.4	1931-34‡ 1955-66	7-21-66	2.20
1-4813.5	Rocky Run at Talleyville, Del.	Lat 39°48'43", long 75°33'58", at bridge on State Highway 230A, 0.9 mile west of Talleyville, New Castle County.	1.76	1957-59, 1966	7-27-66	.08
1-4823	Red Lion Creek at Red Lion, Del.	Lat 39°36'20", long 75°39'55", at bridge on State Highway 7, 0.2 mile south of Red Lion, New Castle County.	3.20	1955-60 1962-66	10- 5-65 7-21-66 9-13-66	.11 .08 .03
1-4831.5	Wiggins Millpond Outlet at Townsend, Del.	Lat 39°24'12", long 75°42'16", at bridge on State Highway 446, 0.8 mile northwest of Townsend, New Castle County.	3.82	1957-60 1962-66	10- 5-65 7-21-66	1.49 .31
		Smyrna River basin				
1-4833	Providence Creek at Clayton, Del.	Lat 39°18'05", long 75°38'28", at highway bridge in New Castle County, 0.8 mile north of Clayton, Kent County.	11.8	1955-60 1962-63 1966	7-25-66	2.09
1-4833.5	Mill Creek at Smyrna, Del.	Lat 39°17'09", long 75°36'45", at old dam 500 ft above highway bridge and 1 mile south of Smyrna, Kent County.	4.77	1955-57 1959-60 1962-63 1966	7-25-66	.78
		St. Jones River basin				
1-4836.5	Fork Branch at Dupont, Del.	Lat 39°11'56", long 75°34'40", at highway bridge, 0.8 mile northwest of Dupont, Kent County.	7.50	1955-57 1959-60 1962-66	10- 6-65 7-25-66	.02 0
1-4836.8	Maidstone Branch at Dupont, Del.	Lat 39°11'18", long 75°34'04", at highway bridge, 0.4 mile southwest of Dupont, Kent County.	17.3	1955-57 1959-60 1962-66	10- 6-65 7-25-66	**1.7 0
		Murderkill River basin				
1-4840.2	Browns Branch near Houston, Del.	Lat 38°57'31", long 75°30'33", at highway bridge, 2.9 miles north of Houston, Kent County.	12.4	1955-66	10- 4-65 7-21-66 9-13-66	5.60 4.19 3.49
*1-4840.5	Pratt Branch near Felton, Del.	Lat 39°00'37", long 75°31'46", at highway bridge, 2.6 miles east of Felton, Kent County.	3.29	1955-57 1959-60 1962-66	10- 4-65 7-21-66 9-13-66	.75 .43 .37
1-4840.6	Double Run near Magnolia, Del.	Lat 39°03'16", long 75°29'43", at highway bridge, 1.5 miles southwest of Magnolia, Kent County.	5.68	1955-57 1959-60 1962-64 1966	10- 4-65 7-26-66 9-13-66	1.41 .31 .85
		Cedar Creek basin				
1-4842	Cedar Creek near Lincoln, Del.	Lat 38°51'03", long 75°25'05", at highway bridge, 1.2 miles south of Lincoln, Sussex County.	7.21	1955-60 1962-63 1966	9-14-66	8.29

* Also a crest-stage partial-record station.
** Field Estimate.
‡ Operated as a continuous-record gaging station.

Discharge measurements made at low-flow partial-record stations during water year 1966, 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				
1-4842.4	Pemberton Branch near Milton, Del.	Lat 38°46'26", long 75°20'29", at highway bridge, 1.5 miles west of Milton, Sussex County.	6.68	1955-66	10- 4-65	2.96
					7-20-66	5.98
					9-14-66	2.89
*1-4842.7	Beaverdam Creek near Milton, Del.	Lat 38°45'41", long 75°16'03", at highway bridge, 2.5 miles east of Milton, Sussex County.	6.10	1955-66	10- 4-65	6.99
					7-20-66	8.94
					9-14-66	7.36
		Indian River basin				
*1-4845.5	Pepper Creek at Dagsboro, Del.	Lat 38°32'50", long 75°14'40", at bridge on State Highway 26, at Dagsboro, Sussex County.	8.78	1955-66	10- 4-65	1.56
					7-20-66	1.46
					9-14-66	.91
		Nanticoke River basin				
1-4871.2	Tyndall Branch near Hardscrabble, Del.	Lat 38°37'54", long 75°29'30", at highway bridge, 1.4 miles northeast of Hardscrabble and 6.5 miles east of Seaford, Sussex County.	12.7	1955-63	7-20-66	**4.2
				1966	9-14-66	2.10
1-4873	Butler Mill Branch near Woodland, Del.	Lat 38°37'56", long 75°39'35", at highway bridge, 2.2 miles north of Woodland, Sussex County.	6.96	1955-63	9-14-66	1.87
				1966		
†1-4877	Elliott Pond Branch near Laurel, Del.	Lat 38°34'39", long 75°31'42", at highway bridge, 2.9 miles northeast of Laurel, Sussex County.	8.55	1955-66	10- 4-65	3.92
					7-20-66	**2.5
		Choptank River basin				
1-4911.8	Watts Creek near Denton, Md.	Lat 38°52'29", long 75°47'38", at bridge on State Highway 474, 1.6 miles southeast of Denton, Caroline County.	a11	1964-66	7-21-66	.75
					9-13-66	.32
		Chester River basin				
1-4929.8	Cypress Branch at Millington, Md.	Lat 39°15'28", long 75°50'01", at bridge on State Highway 291, 0.04 mile east of Millington, Kent County.	a38	1964-66	7-18-66	.62
					9-13-66	.80
1-4941	Old Mill Stream Branch at Centreville, Md.	Lat 39°02'23", long 76°04'22", at bridge on U. S. Highway 213, at Centreville, Queen Annes County.	11.2	b1953-54	7-22-66	2.30
				1964-66	9-13-66	1.70
		Elk River basin				
1-4955.5	Perch Creek near Elkton, Md.	Lat 39°34'16", long 75°48'53", at bridge on U. S. Highway 213, 2.5 miles south of Elkton, Cecil County.	a6.0	1964-66	7-18-66	.37
					9-13-66	.27
		Northeast River basin				
1-4960.5	Little Northeast Creek at Mechanic Valley, Md.	Lat 39°38'26", long 75°55'49", at highway bridge, 0.8 mile northwest of Mechanic Valley, Cecil County.	a14	1964-66	7-19-66	1.43
		Susquehanna River basin				
1-5779.5	Broad Creek at Pylesville, Md.	Lat 39°41'16", long 76°22'24", 400 ft below bridge on Old State Highway 165, at Pylesville, Harford County.	11.3	1956-59	7-20-66	.93
				1962-63	9-13-66	.72
				1966		
		Swan Creek basin				
1-5807	Swan Creek at Swan Creek, Md.	Lat 39°31'21", long 76°08'33", at bridge on U. S. Highway 40, at Swan Creek, Harford County.	13.2	1956-59	7-20-66	.79
				1962-63	9-13-66	.26
				1966		
		Bush River basin				
1-5816	Bynum Run at Bush, Md.	Lat 39°28'19", long 76°16'01", at bridge on State Highway 7, 0.2 mile southwest of Bush, Harford County.	22.5	1956-59	7-20-66	3.70
				1962-63	9-13-66	1.50
				1966		
1-5816.5	James Run at Bush, Md.	Lat 39°28'35", long 76°15'38", at bridge on State Highway 7, 0.2 mile northeast of Bush, Harford County.	11.1	1956-59	7-20-66	.59
				1962-63	9-13-66	.23
				1966		
1-5816.6 (revised)	Grays Run at Stepney, Md.	Lat 39°29'18", long 76°12'52", at bridge on State Highway 7, 0.9 mile west of Stepney, Harford County.	5.35	1956-59	7-20-66	.01
				1962-63	9-13-66	0
				1966		
1-5817.5	Winters Run near Bel Air, Md.	Lat 39°30'55", long 76°22'10", at bridge on U. S. Highway 1, 1½ miles southwest of Bel Air, Harford County.	37.0	1954-59	7-21-66	c4,41
				1962-63		
				1966		

* Also a crest-stage partial-record station.
** Field estimate.
† From 1958 to 1965 published as "Chipman Pond Branch".
a Approximately.
b Miscellaneous measurements made during this period
c Includes diversion for municipal supply of Bel Air.

Discharge measurements made at low-flow partial-record stations during water year 1966, in North Atlantic Slope basins--Continued

Station No.	Station name	Location	Drainage area (sq mi)	Period of record	Measurements	
					Date	Discharge (cfs)
		Gunpowder River basin				
1-5818.5 (revised)	Georges Run at Armacost, Md.	Lat 39°36'55", long 76°47'26", at bridge on State Highway 25, below Beckleysville Rd., 0.7 mile northeast of Armacost, Baltimore County.	13.0	1956-59 1962 1966	7-21-66	1.12
1-5832	Blackrock Run at Coopersville, Md.	Lat 39°32'36", long 76°44'00", at bridge on State Highway 401, 1/2 mile southeast of Coopersville, Baltimore County.	9.38	1956-59 1962-63 1966	7-21-66	1.26
1-5836	Beaverdam Run at Cockeysville, Md.	Lat 39°29'08", long 76°38'45", at bridge on U. S. Highway 111, at Cockeysville, Baltimore County.	20.8	1955-59 1962-63 1966	7-21-66	4.68
1-5842	Little Gunpowder Falls at Hess, Md.	Lat 39°32"37", long 76°31'53", at bridge on State Highway 146, $\frac{3}{4}$ mile south of Hess, Baltimore County.	16.5	1956-59 1962-63 1966	7-21-66	1.85
		Patapsco River basin				
1-5862	Beaver Run at Finksburg, Md.	Lat 39°29'44", long 76°54'09", at highway bridge, 0.7 mile northwest of Finksburg, Carroll County.	12.7	1957-59 1961-63 1966	7-22-66 9-13-66	1.32 1.18
1-5866	Morgan Run near Gamber, Md.	Lat 39°27'58", long 76°58'16", at bridge on Klees Mill Road, 1.9 miles west of Gamber, Carroll County.	26.0	1957-59 1961-63 1966	7-22-66 9-13-66	3.52 2.19
1-5890.9	Stony Run at Elkridge, Md.	Lat 39°12'43", long 76°41'46", at highway bridge on Elkridge-Patapsco Road, 0.9 mile east of Elkridge, Howard County.	a9.4	b1935,55 1964-66	6-23-66 7-20-66 9-13-66	3.35 2.29 1.78
		Severn River basin				
1-5898	Severn Run at Benfield, Md.	Lat 39°04'51", long 76°37'36", at bridge on Maryland State Highway 3, 0.5 mile south of Benfield, Anne Arundel County.	a24	b1955, b1961-62 1964-66	6-22-66 7-20-66	11.8 8.70
		Patuxent River basin				
1-5912	Cattail Creek tributary at Carrs Mill, Md.	Lat 39°18'57", long 77°03'41", at bridge on State Highway 96, 0.5 mile west of Carrs Mill, Howard County.	3.93	1956-59 1961-63 1966	7-20-66 9-13-66	.49 .15
1-5932	Little Patuxent River at Pine Orchard, Md.	Lat 39°16'42", long 76°51'11", at bridge on U. S. Highway 40, 0.4 mile east of Pine Orchard, Howard County.	7.03	1956-59 1961-64 1966	7-20-66 9-13-66	1.14 .83
1-5936	Middle Patuxent River near West Friendship, Md.	Lat 39°17'14", long 76°57'33", at bridge on State Highway 32, 1.1 miles south of West Friendship, Howard County.	11.4	1956-59 1961-64 1966	7-20-66 9-13-66	1.31 .64
1-5941	Hammond Branch at Scaggsville, Md.	Lat 39°09'13", long 76°53'35", at bridge on U.S. Highway 29, 0.7 mile northeast of Scaggsville, Howard County.	3.01	1956-59 1962-64 1966	7-20-66 9-13-66	.34 .27
1-5945.25	Collington Branch at Upper Marlboro, Md.	Lat 38°49'16", long 76°44'40", at railroad bridge, 0.1 mile above mouth at Upper Marlboro, Prince Georges County.	22.9	1964-66	6-21-66 7-20-66 9-13-66	4.47 2.22 .62
1-5945.35	Mataponi Creek near Naylor, Md.	Lat 38°43'47", long 76°45'18", at bridge on State Highway 382, 1.3 miles northwest of Naylor, Prince Georges County.	a14	1964-66	6-21-66 9-13-66	2.88 0
1-5945.45	Lyons Creek at Lyons Creek, Md.	Lat 38°45'53", long 76°39'27", at bridge on State Highway 4, 0.1 mile east of Lyons Creek, Anne Arundel County.	a15	1964-66	6-22-66 7-20-66 9-13-66	3.18 .24 0
		Potomac River basin				
1-6013	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	1964-66	7-13-66	2.81
1-6041.5	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	1964-66	7-12-66 7-20-66 9-13-66	.01 .02 .02
1-6191.5	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	1965-66	6-15-66 7-21-66 9- 8-66 9-13-66	5.24 3.23 .92 .74
1-6194.8	Little Antietam Creek at Keedysville, Md.	Lat 39°29'10", long 77°42'05", at bridge on Koffman Lane, at Keedysville, Washington County.	a24	c1956, 1964-66	6-14-66 7-21-66 9- 9-66 9-13-66	9.23 5.21 3.33 2.82
1-6391	Piney Creek at Taneytown, Md.	Lat 39°39'56", long 77°10'04", 50 ft northwest of culvert under State Highway 194, 0.6 mile northeast of Taneytown, Carroll County.	22.9	1956-59 1961-63 1966	7-21-66	0

a Approximately.
b Miscellaneous measurements during this period.
c Miscellaneous flood measurement during this period.

Discharge measurements made at low-flow partial-record stations during water year 1966, in North Atlantic Slope basins--Continued

Station No.	Station name	Location	Drainage area (sq mi)	Period of record	Measurements	
					Date	Discharge (cfs)
		Potomac River basin--Continued				
1-6394	Big Pipe Creek at Bachman Mills, Md.	Lat 39°39'39", long 76°56'54", at bridge on State Highway 496, at Bachman Mills, Carroll County.	9.39	1956-59 1961-63 1966	7-22-66 9-13-66	2.06 1.28
1-6394.5	Big Pipe Creek near Mayberry, Md.d/	Lat 39°40'01", long 77°06'23", below Silver Run, 1,000 ft west of Pipe Creek Mill, 1.8 miles north of Mayberry, Carroll County.	51.6	1956-59 1962-63 1966	7-21-66	2.48
1-6394.7	Meadow Branch near Uniontown, Md.	Lat 39°36'32", long 77°06'52", at bridge on State Highway 84, 1.1 miles north of Uniontown, Carroll County.	12.6	1956-59 1961-63 1966	7-21-66	.04
1-6401	Wolfpit Branch at Linwood, Md.	Lat 39°33'57", long 77°08'44", at bridge on State Highway 75, ¼ mile northwest of Linwood, Carroll County.	2.01	1956-59 1961-63 1966	7-21-66	.44
1-6401.5	Little Pipe Creek at Union Bridge, Md.	Lat 39°34'20", long 77°10'35", at bridge on State Highway 75, 0.1 mile north of Union Bridge, Carroll County	40.4	1956-59 1962-63 1966	7-21-66	5.79
1-6420.5	Israel Creek near Walkersville, Md.	Lat 39°28'27", long 77°20'26", at bridge on Crum Road, 1.1 miles southeast of Walkersville, Frederick County.	a29	1964-66	6-24-66 7-21-66 9-13-66	3.18 .29 0
1-6431	Bush Creek at Ijamsville, Md.	Lat 39°21'32", long 77°19'27", at bridge on Mussetter Road, at Ijamsville, Frederick County.	a17.5	1964-66	6-24-66 7-20-66 9-13-66	5.31 2.17 1.30
1-6444	Little Seneca Creek at Boyds, Md.	Lat 39°10'29", long 77°18'01", at bridge on State Highway 117, 0.9 mile southeast of Boyds, Montgomery County.	a 21	1964 1966	10-21-65 6-24-66 7-19-66	4.20 5.06 2.48
1-6463.5	Rock Run near Cabin John, Md.	Lat 38°58'30", long 77°10'58", at bridge on east access road from MacArthur Blvd. to David Taylor Model Basin, 1.1 miles west of Cabin John, Montgomery County.	a 4.8	1964 1966	10-21-65 6-24-66 7-19-66 9-13-66	.40 .58 .34 .02
1-6583	Reeder Run at Chicamuxen, Md.	Lat 38°31'58", long 77°13'39", at bridge on State Highway 224, 0.8 mile west of Chicamuxen, Charles County.	a5.6	1964-66	6-21-66 7-22-66 9-13-66	.56 .04 0
1-6613	McIntosh Run at Tintop Hill, Md.	Lat 38°20'02", long 76°37'57", at bridge on McIntosh Road, 1.0 mile northwest of Tintop Hill, St. Marys County.	12.1	1964-66	6-21-66 7-22-66 9-13-66	.48 .002 0

a Approximately.
d Published as "at Pipe Creek" prior to 1963 water year.

Discharge measurements made at low-flow partial-record stations during water year 1966, in Ohio River basin

Station No.	Station name	Location	Drainage area (sq mi)	Period of record	Measurements	
					Date	Discharge (cfs)
		Monongahela River basin				
3-754	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	1964-66	5-11-66 7-14-66 9-12-66	17.5 1.53 .60
3-765.8	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.	a6.0	1964-66	7-11-66 9-12-66	.27 .18

a Approximately.

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 1966, 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							
1-4792	Mill Creek at Hockessin, Del.	Lat 39°46'31", long 75°41'26", 20 ft above bridge on Brackenville Road, 0.9 mile southeast of Hockessin, New Castle County.	a4.0	1966	2-13-66	5.22	504
1-4799.5	Red Clay Creek tributary near Yorklyn, Del.	Lat 39°47'50", long 75°39'33", 8 ft above culvert, 1.1 miles southeast of Yorklyn, New Castle County.	a0.5	1966	2-13-66	4.12	22
1-4812	Brandywine Creek tributary near Centerville, Del.	Lat 39°50'08", long 75°35'57", 30 ft above bridge on State Highway 100, 1.4 miles northeast of Centerville, New Castle County.	a0.9	1966	2-13-66	3.99	43
1-4814.5	Willow Run at Rockland, Del.	Lat 39°47'32", long 75°33'16", 15 ft above culvert on Country Club Drive, 1.0 mile east of Rockland, New Castle County.	a0.5	1966	4-24-66	6.08	144
1-4823.1	Doll Run at Red Lion, Del.	Lat 39°35'53", long 75°39'43", 10 ft above culvert on secondary road, 0.7 mile south of Red Lion, New Castle County.	a1.2	1966	2-28-66	3.36	28
Smyrna River basin							
1-4832.9	Paw Paw Branch tributary near Clayton, Del.	Lat 39°18'41", long 75°40'08", 6 ft above culverts on road No. 483, 2.4 miles northwest of Clayton, Kent County.	a1.4	1966	9-21-66	5.65	92
1-4834	Sawmill Branch tributary near Blackbird, Del.	Lat 39°20'57", long 75°38'31", 10 ft above culvert on U. S. Highway 13, 1.8 miles southeast of Blackbird, New Castle County.	a0.7	1966	9-21-66	4.08	about 32
Leipsic River basin							
1-4835	Leipsic River near Cheswold, Del.	Lat 39°13'58", long 75°37'57", 75 ft below highway bridge, 1.9 miles east of Kenton and 2.6 miles northwest of Cheswold, Kent County.	9.35	1931-33‡ 1943-57‡ 1958-66	9-21-66	2.59	88
St. Jones River basin							
1-4837.2	Puncheon Branch at Dover, Del.	Lat 37°08'25", long 75°32'20", 10 ft above bridge on New Burton Road, at Dover, Kent County.	a2.4	1966	7- 5-66	3.94	129
Murderkill River basin							
1-4840.02	Murderkill River tributary near Felton, Del.	Lat 38°58'19", long 75°33'31", 6 ft above culvert on secondary road, 2.9 miles south of Felton, Kent County.	a1.2	1966	2-13-66	5.10	37
*1-4840.5	Pratt Branch near Felton, Del.	Lat 39°00'37", long 75°31'46", at highway bridge, 2.6 miles east of Felton, Kent County.	3.29	1966	1966	b<6.80	-
Broadkill River basin							
*1-4842.7	Beaverdam Creek near Milton, Del.	Lat 38°45'41", long 75°16'03", at highway bridge on secondary road, 2.5 miles east of Milton, Sussex County.	6.10	1966	6-16-66	4.29	21

* Also a low-flow partial-record station.
‡ Operated as a continuous-record gaging station.
a Approximately.
b Peak stage did not reach bottom of gage.

Annual maximum discharge at crest-stage partial-record stations during water year 1966, 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)
Indian River basin							
*1-4845.5	Pepper Creek at Dagsboro, Del.	Lat 38°32'50", long 75°14'40", at bridge on State Highway 26, at Dagsboro, Sussex County.	8.78	1960-66	2- 8-61 3- 6-62 3-12-63 4- 8-64 8- 2-65 5-29-66	4.62 5.25 4.06 5.16 4.32 2.79	c215 c292 c156 c280 c182 54
Nanticoke River basin							
1-4869	Bridgeville Branch tributary at Bridgeville, Del.	Lat 38°44'53", long 75°36'51", 10 ft above culvert on private road, at Bridgeville, Sussex County.	a0.8	1966	5-21-66	5.47	(†)
1-4869.8	Toms Dam Branch near Greenwood, Del.	Lat 38°48'04", long 75°33'28", 16 ft above bridge on State Highway 16, 1.5 miles east of Greenwood, Sussex County.	a6.2	1966	5-21-66	5.40	54
1-4880	Holly Ditch near Laurel, Del.	Lat 38°32'20", long 75°35'55", 10 ft above culvert, 1½ miles southwest of Laurel, Sussex County.	2.19	1951-56‡ 1959-66	1966	<1.56	(†)
Choptank River basin							
1-4904.7	Tappahanna Ditch near Hartly, Del.	Lat 39°08'07", long 75°41'30", 100 ft below bridge on State Highway 103, 2.7 miles southeast of Hartly, Kent County.	5.93	1952-66	4-13-66	4.59	about 32
1-4904.9	Beachy Neidig Ditch near Willow Grove, Del.	Lat 39°04'57", long 75°39'27", 10 ft above culvert on secondary road, 1.8 miles northwest of Willow Grove, Kent County.	a2.4	1966	2-13-66	4.18	13
1-4905	Culbreth Marsh Ditch near Chapeltown, Del. d/	Lat 39°04'45", long 75°41'05", 40 ft below bridge on State Highway 223, 1.6 miles south of Chapeltown, Kent County.	11.6	1951-56‡ 1957-66	2-13-66	2.87	(†)
1-4906	Meredith Branch near Sandtown, Del.	Lat 39°02'23", long 75°41'52", at bridge on State Highway 10, 1.2 miles east of Sandtown, Kent County.	a8.8	1966	2-13-66	e0.87	16
1-4910.1	Sangston Prong near Whiteleysburg, Del.	Lat 38°58'25", long 75°43'32", 10 ft above culvert on secondary road, 1.2 miles north of Whiteleysburg, Kent County.	a2.0	1966	9-21-66	3.84	35
Wye River basin							
1-4925	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‡ 1957-66	7-30-66	3.02	71
Susquehanna River basin							
1-5785	Octoraro Creek near Rising Sun, Md.	Lat 39°41'27", long 76°07'38", on right bank at downstream side of Porter Bridge, 3½ miles west of Rising Sun, Cecil County.	193	1932-58‡ 1963-66	3- 1-66	6.84	1,980
1-5790	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‡ 1965-66	2-13-66	3.64	480

* Also a low-flow partial-record station.
† Discharge not determined.
‡ Operated as a continuous-record gaging station.
a Approximately.
c Not previously published.
d Prior to 1956 published as "Shades Branch".
e Maximum observed.

Annual maximum discharge at crest-stage partial-record stations during water year 1966, 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)
		Patapsco River basin					
1-5880	Piney Run near Sykesville, Md.	Lat 39°22'55", long 76°58'00", 75 ft below bridge on State Highway 32, 1¼ miles north of Sykesville, Carroll County, and 5¼ miles above mouth.	11.4	1932-58‡ 1959-66	2-13-66	f4.7	f450
1-5892.4	Gwynns Falls at McDonogh, Md.	Lat 39°23'28", long 76°45'56", at bridge on McDonogh Road, at McDonogh, Baltimore County.	19.3	1958-65	2-13-66	6.28	(†)
1-5895	Sawmill Creek at Glen Burnie, Md.	Lat 39°10'12", long 76°37'51", on left bank 300 ft upstream from bridge on State Highway 648, 1/4 mile southeast of Maryland Highway 3, and ½ mile northwest of Glen Burnie, Anne Arundel County.	4.97	1944-52‡ 1965-66	9-14-66	2.88	60
		South River basin					
1-5905	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‡ 1965-66	2-13-66	3.03	170
		Patuxent River basin					
1-5940	Little Patuxent River at Savage, Md.	Lat 39°08'00", long 76°48'58", 200 ft below northbound lane of bridge on U. S. Highway 1, ½ mile southeast of Savage, Howard County, and 1 mile below Middle Patuxent River	98.4	1940-58‡ 1959-66	9-14-66	9.5	(†)
1-5944	Dorsey Run near Jessup, Md.	Lat 39°07'15", long 76°47'00", at bridge on State Highway 32, 0.6 mile southeast of Fort George G. Meade Junction, 1.0 mile above mouth, and 2 miles south of Jessup, Anne Arundel County.	11.6	1948-58‡ 1959-66	9-14-66	6.5	430
		Potomac River basin					
1-6095	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‡ 1963-66	2-13-66	2.79	130
1-6370	Little Catoctin Creek at Harmony, Md.	Lat 39°28'54", long 77°32'17", at county highway bridge, 0.9 mile southwest of Harmony, Frederick County, and 2.8 miles above mouth.	8.83	1947-58‡ 1959-66	9-14-66	3.97	410

† Discharge not determined.
‡ Operated as a continuous-record gaging station.
f About.

Measurements at miscellaneous sites

Measurements of streamflow at points other than gaging stations or partial-record stations are given in the following table. All measurements in this table were made during periods of base flow, except as otherwise noted.

Discharge measurements made at miscellaneous sites during water year 1966, in North Atlantic Slope basins

Stream	Tributary to	Location	Drainage area (sq mi)	Measured previously (water years)	Measurements	
					Date	Discharge (cfs)
Nanticoke River basin						
*Nolly Ditch	Nanticoke River	Lat 38°32'20", long 75°35'55", 10 ft above culvert, 1½ miles southwest of Laurel, Sussex County, Del.	2.19	1951-56‡	7-20-66	0
Gales Creek	Nanticoke River	Lat 38°34'01", long 75°42'49", at outlet to Galestown Millpond on State Highway 531 at Galestown, Dorchester County, Md.	-	1964-65	4-19-66	4.15
Skinners Run	Marshy Hope Creek	Lat 38°39'46", long 75°48'38", at bridge on unimproved road, 0.6 mile upstream from mouth, 1.0 mile northeast of Williamsburg, Dorchester County, Md.	-	1964-65	4-19-66	3.55
Transquaking River basin						
Transquaking River	Fishing Bay	Lat 38°33'33", long 75°55'29", at culvert on Red Hill Road, 3.1 miles upstream from Higgins Millpond and 0.3 mile west of Hawkeye, Dorchester County, Md.	-	-	4-19-66	0.91
Choptank River basin						
*Culbreth Marsh Ditch	Choptank River	Lat 39°04'45", long 75°41'05", 40 ft below bridge on State Highway 223, 1.6 miles south of Chapeltown, Kent County, Del.	11.6	1951-56‡	7-22-66 9-13-66	1.05 .43
Tuckahoe Creek	Choptank River	Lat 38°58'00", long 75°56'35", at highway bridge, 2.6 miles downstream from confluence of German Branch and Mason Branch and 2.6 miles south of Ruthsburg, Queen Annes County, Md.	85.2	1951-56‡	7-22-66 9-13-66	14.0 9.20
Kings Creek	Choptank River	Lat 38°47'20", long 76°00'35", at bridge on county road 0.8 mile downstream from confluence of Wootenaux Creek and Galloway Run and 3.5 miles east of Easton, Talbot County, Md.	8.67	1951-53 1965	4-19-66	2.71
Miles Creek	Choptank River	Lat 38°40'15", long 76°01'45", at bridge on county road 3.5 miles upstream from mouth, and 1.8 miles northeast of Trappe, Talbot County, Md.	5.70	1951-53 1965	4-19-66	2.22
Gravel Run	Hunting Creek	Lat 38°40'56", long 75°53'57", at culvert on State Route 16, at Beulah, Dorchester County, Md.	a8.4	1964-65	4-19-66	5.48
Wye River basin						
*Sallie Harris Creek	Wye River	Lat 38°57'55", long 76°06'30", 50 ft above bridge on U. S. Highway 50, 2.0 miles northeast of Carmichael, 2.2 miles northwest of Wye Mills, Queen Annes County, Md.	8.09	1952-56‡	8- 2-66	1.31
Mill Creek	Skipton Creek	Lat 38°54'36", long 76°04'26", at bridge on State Route 662, 1.4 miles northwest of Skipton, Talbot County, Md.	-	1964-65	4-19-66	3.40
Sassafras River basin						
Jacobs Creek	Sassafras River	Lat 39°21'50", long 75°49'13", at bridge on State Highway 290, 1.2 miles southwest of Sassafras, Kent County, Md.	5.39	1951-56‡ 1963	9-13-66	1.29
Elk River basin						
Little Elk Creek	Big Elk Creek	Lat 39°38'30", long 75°52'00", at bridge on State Highway 545, 0.2 mile southeast of Childs, Cecil County, Md.	26.8	1949-58‡ 1963	7-27-66	2.30

* Also a crest-stage partial-record station.
‡ Operated as a continuous-record station.
a Approximately.

Discharge measurements made as miscellaneous sites during water year 1966, in North Atlantic Slope basins--Continued

Stream	Tributary to	Location	Drainage area (sq mi)	Measured previously (water years)	Measurements	
					Date	Discharge (cfs)
Susquehanna River basin						
Broad Creek	Susquehanna River	Lat 39°39'51", long 76°19'32", at highway bridge 200 ft south of intersection with State Highway 646, in Mill Green, Harford County, Md.	16.4	-	1- 5-66	5.32
*Octoraro Creek	Susquehanna River	Lat 39°41'27", long 76°07'38", at Porter Bridge, 3½ miles west of Rising Sun, Cecil County, Md.	193	1932-58‡	7-27-66	24.4
*Basin Run	Susquehanna River	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, Md., 1.0 mile southwest of Colora, and 3 miles upstream from mouth.	5.31	1948-58‡	7-27-66	0.62
Patapsco River basin						
Piney Run	South Branch Patapsco River	Lat 39°22'55", long 76°58'00", 75 ft below bridge on State Highway 32, 1¼ miles north of Sykesville, Carroll County, Md., and 5¼ miles above mouth.	11.4	1932-58‡ 1963	7-22-66 9-13-66	1.26 0.95
Sawmill Creek	Furnace Creek	Lat 39°10'12", long 76°37'51", on left bank 300 ft upstream from bridge on State Highway 301 and 0.5 mile northwest of Glen Burnie, Anne Arundel County, Md.	4.97	1944-52‡ 1963	7-20-66	1.11
Patuxent River basin						
Cattail Creek	Patuxent River	Lat 39°15'17", long 77°02'43", on left bank 0.2 mile downstream from unnamed tributary from left bank, and highway bridge, 0.5 mile southeast of Roxbury Mills, Howard County, Md., and 1.3 miles upstream from mouth.	27.7	1944-56‡	7-20-66 9-13-66	2.47 0.71
Potomac River basin						
Potomac Blue Spring	North Branch Potomac	Lat 39°34'26", long 78°43'50", 200 ft below abandoned C & O Canal Lock, 1.1 miles northwest of Spring Gap, Allegany County, Md.	-	1958-65	12- 7-65 7-12-66 7-20-66 9-13-66	7.11 7.90 6.78 4.43
Murley Branch Spring	Murley Branch	Lat 39°39'38", long 78°37'08", below dam at spring house of farm on Williams Road, 4.0 miles southwest of Flintstone, Allegany County, Md.	-	1958-65	7-12-66	0.75
Town Creek	Potomac River	Lat 39°33'12", long 79°33'19", at highway bridge 2.2 miles upstream from Sawpit Run, 4 miles upstream from mouth, and 3 miles northeast of Oldtown, Allegany County, Md.	148	1928-35‡	7-20-66	4.66
Sawpit Run	Town Creek	Lat 39°32'50", long 78°33'20", on left bank 900 ft upstream from bridge on State Highway 51, 1.0 mile upstream from mouth, and 3.0 miles east of Oldtown, Allegany County, Md.	5.08	1947-58‡ 1964	7-20-66	0.0004
Little Tonoloway Creek	Potomac River	Lat 39°42'45", long 78°13'55", 2.8 miles northwest of Hancock, Washington County, Md.	16.9	1947-64‡	9-13-66	0.0012
Little Catoctin Creek	Catoctin Creek	Lat 39°28'54", long 77°32'17", at county highway bridge, 2.8 miles above mouth, and 0.9 mile southwest of Harmony, Frederick County, Md.	8.83	1947-58‡ 1959, 1963, 1964	7-21-66 9-13-66	0.57 0.07
Great Seneca Creek	Potomac River	Lat 39°10'01", long 77°13'37", at highway bridge, 0.1 mile downstream from Whetstone Run and 2 miles northwest of Gaithersburg, Montgomery County, Md.	41.0	1925-34‡	7-19-66	6.10
Port Tobacco Creek	Potomac River	Lat 38°32'33", long 77°01'04", at bridge on State Highway 225, 2.1 miles north of Port Tobacco, Charles County, Md.	16.7	-	9-13-66	0

* Also a crest-stage partial-record station.
‡ Operated as a continuous-record station.

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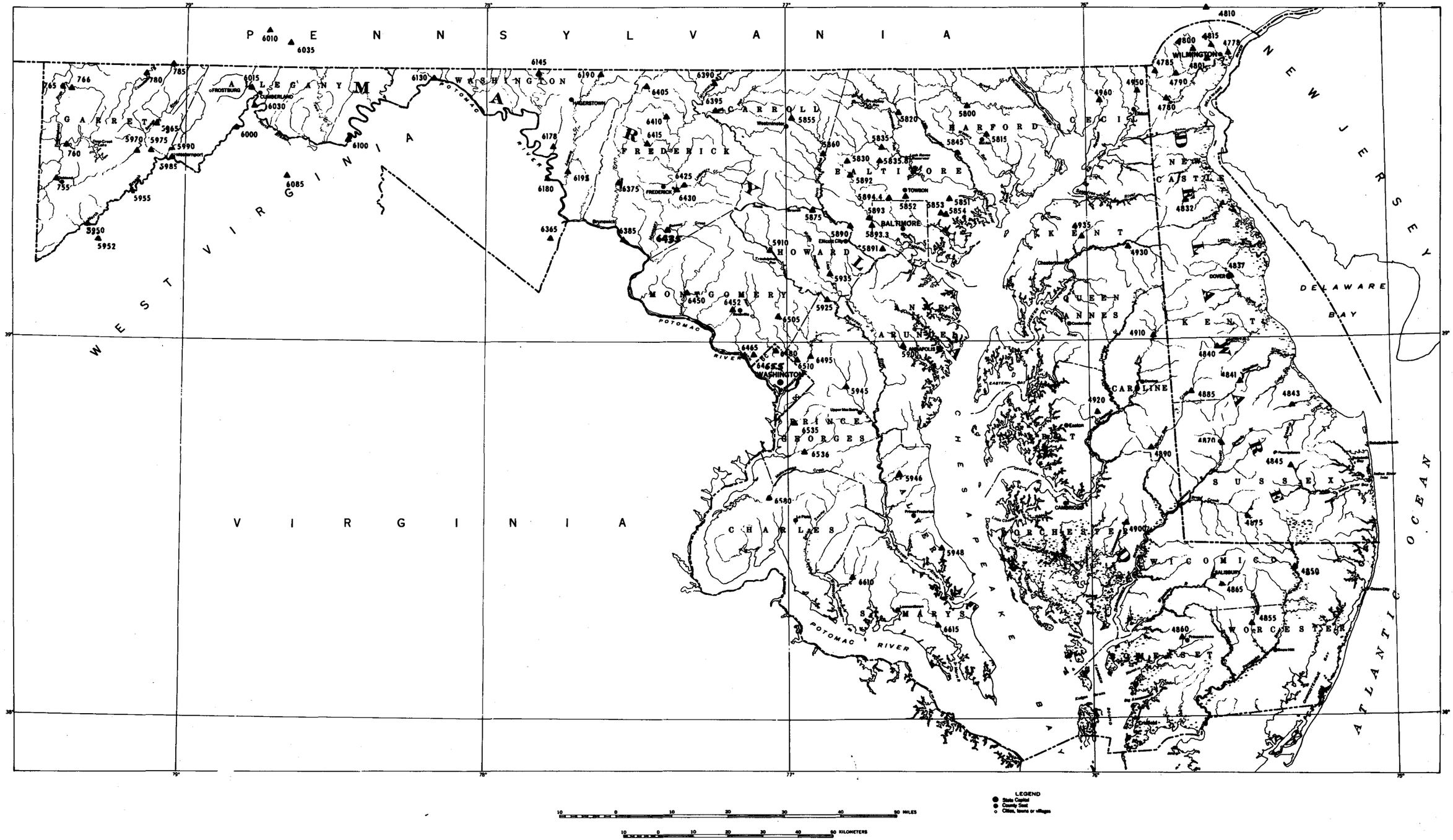

Plate 1.--Map showing location of gaging stations.