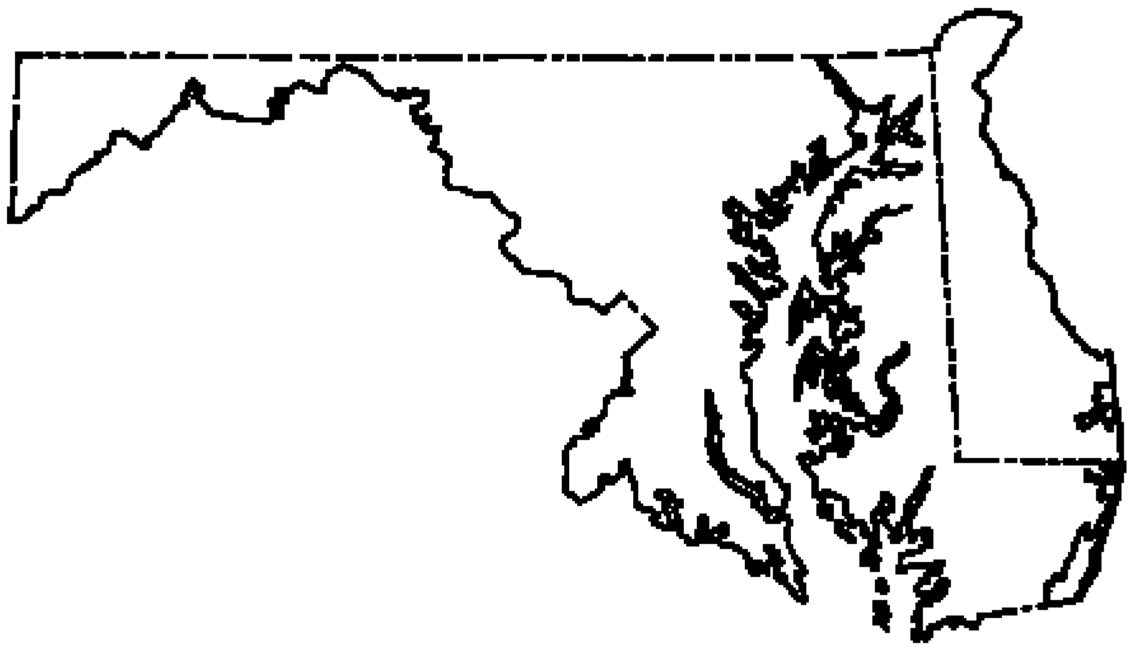
Water Resources Data
Maryland and Delaware
Water Year 1999

Volume 1. Surface-Water Data

Water-Data Report MD-DE-99-1



U.S. Department of the Interior
U.S. Geological Survey

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

CALENDAR FOR WATER YEAR 1999

1998

OCTOBER

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1999

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SEPTEMBER

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U.S. Department of the Interior
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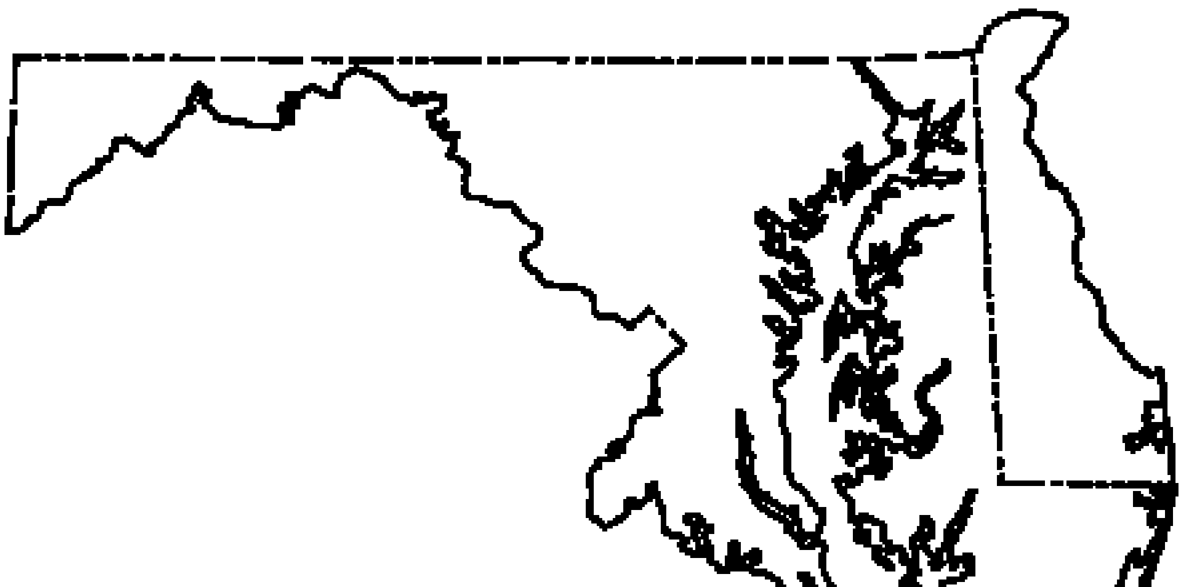
Water Resources Data Maryland and Delaware Water Year 1999

Volume 1. Surface-Water Data

By Robert W. James, Richard W. Saffer, Anthony J. Tallman

Water-Data Report MD-DE-99-1



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

UNITED STATES DEPARTMENT OF THE INTERIOR

BRUCE BABBITT, Secretary

U.S. GEOLOGICAL SURVEY

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Baltimore, Maryland 21237

2000

PREFACE

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

Volume 1. Surface-Water Data

Volume 2. Ground-Water Data

This report (Volume 1) is the culmination of a concerted effort by dedicated personnel of the U.S. Geological Survey, Maryland Geological Survey, and Delaware Geological Survey, who collected, compiled, analyzed, verified, and organized the data, and who typed, edited, and assembled the report. In addition to the authors, who had primary responsibility for assuring that the information contained herein is accurate, complete, and adheres to Geological Survey policy and established guidelines, the following individuals contributed significantly to the collection, processing, and tabulation of the data:

D. A. Bringman	J. R. Jeffries	R. W. Saffer
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F. A. Danner	B. F. Majedi	A. J. Tallman
J. M. Denis	J. J. Manning	
J. L. Griffith	R. H. Pentz	
D. C. Hudson	W. C. Lewis	

This report was prepared under the general supervision of J. M. Gerhart, District Chief, MD-DE-DC District, and W. J. Carswell, Jr., Regional Hydrologist, Northeastern Region, and in cooperation with the States of Maryland and Delaware and with other agencies.

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No restriction on distribution. This report may be purchased from the National Technical Information Service, Springfield, VA 22161

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13. ABSTRACT *(Maximum 200 words)*

Water resources data for the 1999 water year for Maryland and Delaware consist of records of stage, discharge, and water quality of streams; stage and contents of lakes and reservoirs. This volume (Volume 1. Surface-Water Data) contains records for water discharge at 111 gaging stations; stage and contents of 1 reservoir; and water quality at 17 gaging stations. Also included are stage and discharge for 3 crest-stage partial-record stations, discharge only for 27 low-flow partial-record stations, and stage only for 5 tidal crest-stage partial-record stations. Additional water data were collected at various sites not involved in the systematic data-collection program and are published as miscellaneous measurements. These data represent that part of the National Water Data System operated by the U.S. Geological Survey and cooperating State, local, and Federal agencies in Maryland and Delaware.

14. SUBJECT TERMS
*Maryland, *Delaware, *District of Columbia, * Hydrologic data, *Surface water, *Water quality, Flow rate, Gaging stations, Lakes, Reservoirs, Chemical analyses, Sediments, Water temperatures, Sampling sites, Water analyses.

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CONTENTS

ILLUSTRATIONS

[Letters after station name designate type of data collected: (d) discharge, (c) chemical, (b) biological, (m) microbiological, (t) water temperature, (s) sediment, (e) elevation and contents]

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[Letters after station name designate type of data collected: (d) discharge, (c) chemical, (b) biological, (m) microbiological, (t) water temperature, (s) sediment, (e) elevation and contents]

The following continuous-record surface-water discharge (gaging stations) in Maryland, Delaware, and the District of Columbia have been discontinued. Daily streamflow records (discharge) were collected and published for the period of record, expressed in water years, shown for each station.

NORTH ATLANTIC SLOPE BASINS	Station number	Drainage area (mi^2)	Period of record
DELAWARE RIVER BASIN			
Delaware River:			
Christina River near Bear, DE	01478040	40.6	1977-82
White Clay Creek above Newark, DE	01478500	66.7	1952-59 1962-80
Mill Creek at Mill Creek Road at Hockessin, DE	01479197	3.66	1990-95
Mill Creek at Stanton, DE	01479500	12.4	1931-33
Little Mill Creek near Newport, DE	01480095	5.24	1991-95 1997-98
Little Mill Creek at Elsmere, DE	01480100	6.70	1964-80
Army Creek at State Road, DE	01482200	2.42	1978-81
Red Lion Creek near Red Lion, DE	01482298	3.08	1978-81
Wiggins Millpond Outlet (head of Appoquinimink River):			
Noxontown Lake Outlet near Middletown, DE	01483153	8.85	1993-94
Drawyer Creek tributary near Odessa, MD	01483170	4.68	1978-80
LEIPSIC RIVER BASIN			
Leipsic River near Cheswold, DE	01483500	9.35	1931-33 1943-57
ST. JONES RIVER BASIN			
Fork Branch (head of St. Jones River)			
Mudstone Branch at Chestnut Grove, DE	01483670	8.96	1993-94
BROADKILL RIVER BASIN			
Broadkill River:			
Beaverdam Creek near Milton, DE	01484270	6.10	1971-80
Sowbridge Branch (head of Primehook Creek) near Milton, DE	01484300	7.08	1957-78
INDIAN RIVER BASIN			
Cow Bridge Branch (head of Indian River):			
Vines Creek at Omar, DE	01484548	13.6	1985-88
WICOMICO RIVER BASIN			
Andrews Branch (head of Wicomico River):			
Beaverdam Creek near Salisbury, MD	01486500	19.5	1930-32 1938-75
NANTICOKE RIVER BASIN			
Nanticoke River:			
James Branch (head of Broad Creek):			
Trap Pond Outlet (head of Hitch Pond Branch) near Laurel, DE	01487500	16.7	1951-71
Broad Creek:			
Holly Ditch near Laurel, DE	01488000	2.19	1951-56
Marshyhope Creek at Adamsville, DE	01488600	60.4	1969-71
Faulkner Branch at Federalsburg, MD	01489000	7.10	1950-92
Rewastico Creek near Hebron, MD	01489500	12.2	1950-56
TRANSQUAKING RIVER BASIN			
Transquaking River:			
Chicamacomico River near Salem, MD	01490000	15.0	1951-80
CHOPTANK RIVER BASIN			
Tappahanna Ditch (head of Choptank River):			
Tidy Island Creek (continuation of Tappahanna Ditch):			
Culbreth Marsh Ditch near Chapeltown, DE	01490500	11.6	1951-56
Choptank River:			
Tuckahoe Creek near Ruthsburg, MD	01491500	85.2	1951-56
Kings Creek:			
Beaverdam Branch at Matthews, MD	01492000	5.85	1950-81
WYE RIVER BASIN			
Wye River:			
Wye East River:			
Sallie Harris Creek near Carmichael, MD	01492500	8.09	1951-56
CHESTER RIVER BASIN			
Chester River:			
Southeast Creek at Church Hill, MD	01494000	12.5	1951-56
SASSAFRAS RIVER BASIN			
Sassafras River:			
Jacobs Creek near Sassafras, MD	01494500	5.39	1951-56
ELK RIVER BASIN			
Big Elk Creek (head of Elk River):			
Little Elk Creek at Childs, MD	01495500	26.8	1949-58
Long Creek near Chesapeake City, MD	01495800	4.36	1978-81

NORTH ATLANTIC SLOPE BASINS--Continued	Station number	Drainage area (mi^2)	Period of record
NORTHEAST RIVER BASIN			
Northeast Creek (head of Northeast River) at Leslie, MD	01496000	24.3	1949-84
PRINCIPIO CREEK BASIN			
Principio Creek near Principio Furnace, MD	01496200	9.03	1967-92
SUSQUEHANNA RIVER BASIN			
Susquehanna River:			
Broad Creek at Mill Creek, MD	01578000	16.4	1905-09
Octoraro Creek near Rising Sun, MD	01578500	193	1932-58 1969-77
Basin Run at Liberty Grove, MD	01579000	5.31	1949-58
Octoraro Creek at Rowlandsville, MD	01579500	210	1896-99
Deer Creek near Kalmia, MD	01580200	125	1967-77
Deer Creek near Churchville, MD	01580500	141	1905-09
BUSH RIVER BASIN			
Bynum Run (head of Bush River):			
Church Creek:			
Cranberry Run at Aberdeen, MD	01581657	4.16	1988-89
Cranberry Run at Perryman, MD	01581658	5.22	1987-89
GUNPOWDER RIVER BASIN			
Gunpowder Falls (head of Gunpowder River):			
Western Run:			
Delaware Run:			
Slade Run near Glyndon, MD	01583000	2.09	1947-81
Beaverdam Run:			
Baisman Run at Broadmoor, MD	01583580	1.47	1964-69
Gunpowder Falls near Carney, MD	01584000	314	1949-64
Little Gunpowder Falls near Bel Air, MD	01585000	43	1904-09
Bird River:			
Whitemarsh Run (head of Bird River):			
Honeygo Run at White Marsh, MD	01585105	2.65	1990-93
Windlass Run near White Marsh, MD	01585107	2.03	1992-93
BACK RIVER BASIN			
Herring Run (head of Back River):			
Stemmers Run (head of Northeast Creek) at Rossville, MD	01585300	4.46	1959-72 1974-89
Brien Run at Stemmers Run, MD	01585400	1.97	1958-87
PATAPSCO RIVER BASIN			
North Branch Patapsco River near Reistertown, MD	01586500	91.0	1927-54
North Branch Patapsco River near Marriottsville, MD	01587000	165	1930-60
South Branch Patapsco River at Henryton, MD	01587500	64.4	1948-80
Piney Run near Sykesville, MD	01588000	11.4	1931-58
Patapsco River at Woodstock, MD	01588500	251	1896-1909
Patapsco River at Hollofield, MD	01589000	285	1944-92 1994-95
Gwynns Falls near Owings Mills, MD	01589200	4.90	1958-75
Jones Falls at Maryland Avenue at Baltimore, MD	01589478	58.3	1981-82
Jones Falls near mouth at Baltimore, MD	01589480	60.4	1981-82
Curtis Creek:			
Furnace Creek:			
Sawmill Creek at Crain Highway at Glen Burnie, MD	01589512	8.24	1984-85 1990-94
Marley Creek at Harundale, MD	01589522	4.79	1984-85
SOUTH RIVER BASIN			
North River (head of South River) near Annapolis, MD	01590000	8.50	1932-74
Bacon Ridge Branch at Chesterfield, MD	01590500	6.92	1943-52 1975-90
RHODE RIVER BASIN			
Rhode River:			
Muddy Creek:			
North Fork Muddy Creek at South River, MD	01590700	0.88	1972-76

NORTH ATLANTIC SLOPE BASINS--Continued	Station number	Drainage area (mi^2)	Period of record
PATUXENT RIVER BASIN			
Patuxent River:			
Cattail Creek near Cookesville, MD	01591350	8.37	1977-81
Cattail Creek at Roxbury Mills, MD	01591500	27.7	1944-56
Patuxent River near Burtonsville, MD	01592000	127	1911-45
Little Patuxent River:			
Middle Patuxent River near Simpsonville, MD	01593710	48.4	1987-95
Dorsey Run near Jessup, MD	01594400	11.6	1948-58
Western Branch near Largo, MD	01594500	30.2	1950-75
Cocktown Creek near Huntingtown, MD	01594600	3.85	1957-76
Hunting Creek near Huntingtown, MD	01594670	9.38	1989-98
Killpeck Creek at Huntersville, MD	01594710	3.26	1986-98
St. Leonard Creek near St. Leonard, MD	01594800	6.73	1957-68
POTOMAC RIVER BASIN			
North Branch Potomac River:			
South Fork Sand Run near Wilson, MD	01594934	1.55	1980-86
North Branch Potomac River at Kitzmiller, MD	01595500*	225	1950-85
North Branch Potomac River at Barnum, WV	01595800*	266	1966-85
North Branch Potomac River at Bloomington, MD	01596000	287	1925-27 1929-50
Savage River:			
Crabtree Creek near Swanton, MD	01597000	16.7	1948-81
Savage River at Bloomington, MD	01598000	115	1906-07 1925-27 1929-50
North Branch Potomac River at Pinto, MD	01600000*	596	1939-85
Wills Creek below Hyndman, PA	01601000	146	1951-67
North Branch Potomac River at Cumberland, MD	01602500	873	1894-97
Evitts Creek near Centerville, PA	01603500	30.2	1932-82
Evitts Creek near Cumberland, MD	01604000	89.0	1929-32
Town Creek near Oldtown, MD	01609000	148	1928-35 1967-81
Sawpit Run near Oldtown, MD	01609500	5.08	1948-58
Little Tonoloway Creek near Hancock, MD	01612500	16.9	1947-63
Potomac River at Shepherdstown, WV	01618000	5,936	1928-53 **(a)**1954-63 1964-93
Antietam Creek near Waynesboro, PA	01619000	93.5	1948-51 1966-81
Beaver Creek:			
Albert Powell Fish Hatchery Spring at Beaver Creek, MD	01619320		1987-98
Catoctin Creek:			
Little Catoctin Creek at Harmony, MD	01637000	8.83	1947-59 1968
Catoctin Creek near Jefferson, MD	01638000	111	1928-31
Monocacy River:			
Toms Creek at Emmitsburg, MD	01639375	41.3	1986-90
Big Pipe Creek (head of Double Pipe Creek):			
Little Pipe Creek at Avondale, MD	01640000	8.10	1947-56
Owens Creek near Foxville, MD	01640456	1.01	1986-87
Owens Creek at Lantz, MD	01640500	5.93	1932-84
Hunting Creek near Foxville, MD	01640965	2.14	1982-94
Hunting Creek tributary near Foxville, MD	01640970	4.01	1982-91
Hunting Creek near Thurmont, MD	01640975	7.08	1982-86
Bear Branch near Thurmont, MD	01640980	0.38	1990-95
Hunting Creek at Jimtown, MD	01641000	18.4	1950-92
Fishing Creek near Lewistown, MD	01641500	7.29	1948-84
Fishing Creek Tributary near Lewistown, MD	01641510	0.40	1988-95
Monocacy River near Frederick, MD	01642000	665	1896-1930
Linganore Creek near Frederick, MD	01642500	82.3	1932 1934-82
Bennett Creek:			
Bennett Creek tributary at Park Mills, MD	01643495	0.15	1992-93
Broad Run at Elmer, MD	01643615	14	**(b)**1978-80
Seneca Creek:			
Great Seneca Creek near Gaithersburg, MD	01644500	41.0	1925-31
Watts Branch at Rockville, MD	01645200	3.70	1957-87
Little Falls Branch near Bethesda, MD	01646550	4.10	1944-59 1962-79
Rock Creek:			
North Branch Rock Creek:			
Williamsburg Run near Olney, MD	01647685	2.25	1967-74
North Branch Rock Creek near Norbeck, MD	01647720	9.73	1967-77
Manor Run near Norbeck, MD	01647725	1.01	1967-74
North Branch Rock Creek near Rockville, MD	01647740	12.5	1967-77
Rock Creek at Q Street, Washington, DC	01649000	75.8	1892-94 1929-33

***** Currently operated as a crest-stage partial-record station.
a Estimated daily discharges October 1953 to June 1964.
b Daily values data unpublished, available at Baltimore, MD office.

NORTH ATLANTIC SLOPE BASINS--Continued	Station number	Drainage area (mi^2)	Period of record
POTOMAC RIVER BASIN--Continued			
Potomac River--Continued			
Northeast Branch Anacostia River:			
Northwest Branch Anacostia River at Norwood, MD	01650050	2.45	1967-74
Browns Creek:			
Nursery Run at Cloverly, MD	01650085	0.35	1967-74
North Creek:			
Batchellors Run at Oakdale, MD	01650190	0.47	**(a)**1967-70
Bel Pre Creek at Lay Hill, MD	01650450	1.69	1967-74
Lutes Run at Lutes, MD	01650470	0.47	**(a)**1967-70
Anacostia River:			
Beaverdam Branch Anacostia River at Kenilworth Avenue, Washington, DC	01652000	14	1911-12
Henson Creek (head of Broad Creek) at Oxon Hill, MD	01653500	16.7	1948-78
Mattawoman Creek near Pomonkey, MD	01658000	54.8	1950-72
Wicomico River:			
Chaptico Creek at Chaptico, MD	01661000	10.4	1947-72
OHIO RIVER BASIN			
MONONGAHELA RIVER BASIN			
Monongahela River:			
Youghiogheny River:			
South Branch Casselman River near Bittenger, MD	03077940	3.22	1976-81
Casselman River:			
Big Piney Run near Salisbury, PA	03078500	24.5	1932-70

a Daily values data unpublished, available at Baltimore, MD office.

The following crest-stage partial-record stations in Maryland and Delaware have been discontinued. Annual maximum discharge and gage-height data were collected and published for the period of record, expressed in water years, shown for each station.

NORTH ATLANTIC SLOPE BASINS	Station number	Drainage area (mi^2)	Period of record
DELAWARE RIVER BASIN			
Delaware River:			
Christina River near Bear, DE	01478040	40.6	1983-91
White Clay Creek:			
Pike Creek near Newark, DE	01478950	6.04	1969-75
Mill Creek at Hockessin, DE	01479200	**a**4.19	1966-75
West Branch Red Clay Creek:			
Red Clay Creek tributary near Yorklyn, DE	01479950	0.38	1966-75
Brandywine Creek:			
Brandywine Creek tributary near Centerville, DE	01481200	0.97	1966-75
Husbands Run:			
Willow Run at Rockland, DE	01481450	0.37	1966-75
Red Lion Creek:			
Doll Run at Red Lion, DE	01482310	**b**1.2	1966-75
SMYRNA RIVER BASIN			
Providence Creek (head of Smyrna River):			
Paw Paw Branch:			
Paw Paw Branch tributary near Clayton, DE	01483290	**b**1.3	1966-75
Smyrna River:			
Sawmill Branch:			
Sawmill Branch tributary near Blackbird, DE	01483400	**b**0.6	1966-75
LEIPSIC RIVER BASIN			
Leipsic River near Cheswold, DE	01483500	9.35	1958-75
ST. JONES RIVER BASIN			
St. Jones River:			
Puncheon Branch at Dover, DE	01483720	**b**2.3	1966-75
MURDERKILL RIVER BASIN			
Murderkill River:			
Murderkill River tributary near Felton, DE	01484002	**b**1.0	1966-75
Hudson Branch (head of Spring Creek):			
Pratt Branch near Felton, DE	01484050	3.29	1966-75
BROADKILL RIVER BASIN			
Broadkill River:			
Beaverdam Creek near Milton, DE	01484270	6.10	1966-75
INDIAN RIVER BASIN			
Indian River:			
Whartons Branch near Millsboro, DE	01484531	5.8	1986-88
Pepper Creek at Dagsboro, DE	01484550	8.78	1960-75
Blackwater Creek near Clarksville, DE	01484600	3.5	1986-88
WICOMICO RIVER BASIN			
Andrews Branch (head of Wicomico River) near Delmar, MD	01486100	**b**4.1	1966-76
NANTICOKE RIVER BASIN			
Nanticoke River:			
Bridgeville Branch:			
Bridgeville Branch tributary at Bridgeville, DE	01486900	**b**0.8	1966-68
Gum Branch:			
Toms Dam Branch near Greenwood, DE	01486980	**b**6.4	1966-75
James Branch (head of Broad Creek):			
Trap Pond Outlet (head of Hitch Pond Branch) near Laurel, DE	01487500	16.7	1972-73 1975
Broad Creek:			
Little Creek:			
Meadow Branch near Delmar, DE	01487900	**b**3.9	1967-75
Holly Ditch near Laurel, DE	01488000	2.19	1959-75
CHOPTANK RIVER BASIN			
Tappahanna Ditch (head of Choptank River) near Hartly, DE	01490470	5.93	1961-73
Tidy Island Creek (continuation of Tappahanna Creek):			
Culbreth Marsh Ditch:			
Beachy Neidig Ditch near Willow Grove, DE	01490490	**b**2.3	1966-75
Culbreth Marsh Ditch (Shades Branch) near Chapeltown, DE	**c**01490500	11.6	1957-68
Cow Marsh:			
Meredith Branch near Sandtown, DE	01490600	**b**8.4	1966-75
Broadway Branch:			
Oldtown Branch at Goldsboro, MD	01490800	3.9	1967-76
Gravelly Branch:			
Sangston Prong near Whiteleysburg, DE	01491010	**b**1.9	1966-75
Spring Branch near Greensboro, MD	01491050	**b**3.8	1966-76
Hunting Creek:			
Gravel Run at Beulah, MD	01492050	8.4	1966-76

a 0.15 square miles is probably noncontributing.
b Approximately.
c Prior to 1956 published as "Shades Branch".

NORTH ATLANTIC SLOPE BASINS--Continued	Station number	Drainage area (mi^2)	Period of record
WYE RIVER BASIN			
Wye River:			
Wye East River:			
Sallie Harris Creek near Carmichael, MD	01492500	8.09	1957-81
Skipton Creek:			
Mill Creek near Skipton, MD	01492550	**b**4.6	1966-76
CHESTER RIVER BASIN			
Andover Branch (head of Chester River):			
Southeast Creek at Church Hill, MD	01494000	12.5	1957-65
Browns Branch:			
Browns Branch tributary near Church Hill, MD	01494020	**b**1.7	1971-78
NORTHEAST RIVER BASIN			
Northeast Creek (head of Northeast River):			
Northeast River tributary near Charlestown, MD	01496080	**b**1.7	1967-76
SUSQUEHANNA RIVER BASIN			
Susquehanna River:			
Broad Creek:			
Broad Creek tributary at Whiteford, MD	01577940	0.77	1971-86
Octoraro Creek:			
Basin Run at West Nottinhgam, MD	01578800	**b**1.3	1967-76
Basin Run at Liberty Grove, MD	01579000	5.31	1965-76
Bush River Basin			
Bynum Run (head of Bush River) at Bel Air, MD	01581500	8.52	1971-72
GUNPOWDER RIVER BASIN			
Gunpowder Falls (head of Gunpowder River):			
Piney Creek near Hereford, MD	01582510	**b**1.5	1966-79
Western Run:			
Western Run tributary at Western Run, MD	01583495	0.26	1966-76
Beaverdam Run:			
Baisman Run at Broadmoor, MD	01583580	1.47	1970-76
Little Gunpowder Falls at Laurel Brook, MD	01584500	36.1	1971-86
PATAPSCO RIVER BASIN			
North Branch Patapsco River:			
South Branch Patapsco River:			
Hay Meadow Branch:			
Hay Meadow Branch tributary at Poplar Springs, MD	01587050	0.54	1966-76
Piney Run near Sykesville, MD	01588000	11.4	1959-74
Patapsco River:			
Gwynns Falls at Owings Mills, MD	01589220	9.12	1958-65 1967-68
Gwynns Falls at McDonough, MD	01589240	19.3	1958-68 1971-84
Jones Falls at Brooklandville, MD	01589400	19.7	1958-65 1968
PATUXENT RIVER BASIN			
Patuxent River:			
Little Patuxent River:			
Little Patuxent River tributary at Guilford Downs, MD	01593350	0.95	1966-76
Dorsey Run near Jessup, MD	01594400	11.6	1959-68
Mill Branch near Mitchellville, MD	01594445	**b**1.1	1967-76
POTOMAC RIVER BASIN			
North Branch Potomac River:			
Savage River near Frostburg, MD	01596005	**b**1.5	1971-86
Wills Creek below Hyndman, PA	01601000	146	1968-86
Potomac River:			
Town Creek:			
Sawpit Run near Oldtown, MD	01609500	5.08	1963-76
Fifteen Mile Creek:			
Pratt Hollow:			
Pratt Hollow tributary at Pratt, MD	01610105	0.70	1971-86
Sideling Hill Creek:			
Bear Creek at Forest Park, MD	01610150	10.4	1965-69 1971-83
Little Tonoloway Creek near Hancock, MD	01612500	16.9	1964
Ditch Run near Hancock, MD	01613150	**b**4.8	1965-86
Potomac River tributary near Hancock, MD	01613160	**b**1.2	1965-76
Antietam Creek:			
Little Antietam Creek:			
Dog Creek:			
Dog Creek tributary near Locust Grove, MD	01619475	0.10	1966-76

b Approximately.

NORTH ATLANTIC SLOPE BASINS--Continued	Station number	Drainage area (mi^2)	Period of record
POTOMAC RIVER BASIN --Continued			
Catoctin Creek:			
Little Catoctin Creek at Harmony, MD	01637000	8.8	1961-67 1969-77
Hollow Road Creek (head of Cone Branch) near Middletown, MD	01637600	2.3	1965-74 1977
Monocacy River:			
Piney Creek:			
Piney Creek tributary at Taneytown, MD	01639095	0.62	1967-76
Big Pipe Creek:			
Little Pipe Creek at Avondale, MD	01640000	8.10	1959-65 1967-80
Owens Creek:			
Owens Creek tributary near Rocky Ridge, MD	01640700	**b**1.2	1967-77
Linganore Creek:			
Dollyhyde Creek at Libertytown, MD	01642400	**b**2.7	1969-76
Little Seneca Creek (head of Seneca Creek):			
Bucklodge Branch:			
Bucklodge Branch tributary near Barnesville, MD	01644420	0.27	1967-76
Little Falls Branch near Bethesda, MD	01646550	**b**4.1	1979-84
Northeast Branch Anacostia River:			
Northwest Branch Anacostia River at Norwood, MD	01650050	2.45	1975-76
Browns Creek:			
Nursery Run at Cloverly, MD	01650085	0.35	1975-76
North Creek:			
Batchellors Run at Oakdale, MD	01650190	0.47	1967-76
Mattawoman Creek near Pomonkey, MD	01658000	57.7	1973-86
Zekiah Swamp Run (head of Wicomico River):			
Wolf Den Branch near Cedarville, MD	01660900	**b**2.3	1966-80
Clark Run near Bel Alton, MD	01660930	10.4	1966-76
Herring Creek:			
Glebe Branch at Valley Lee, MD	01661430	**b**0.3	1968-78
OHIO RIVER BASIN			
MONONGAHELA RIVER BASIN			
Monongahela River:			
Youghiogheny River:			
Little Youghiogheny River:			
Little Youghiogheny River tributary near Deer Park, MD	03075450	0.57	1965-76
Toliver Run:			
Toliver Run tributary near Hoyes Run, MD	03075600	0.53	1965-86
Youghiogheny River tributary near Friendsville, MD	03076505	0.22	1965-76
North Branch Casselman River:			
North Branch Casselman River tributary at Foxtown, MD	03077700	**b**1.0	1965-77
Casselman River:			
Big Piney Run near Salisbury, PA	03078500	24.5	1974-86

b Approximately.

The following continuous-record surface-water-quality stations have been discontinued in Maryland and Delaware. Daily records of specific conductance (SC), water temperature (T), pH, dissolved oxygen (DO), and sediment (SED) were collected for the period (in water years) shown for each station.

NORTH ATLANTIC SLOPE BASINS	Station number	Drainage area (mi^2)	Type of record	Period of record
DELAWARE RIVER BASIN				
Delaware River:				
Christina River:				
White Clay Creek:				
Red Clay Creek at Wooddale, DE	01480000	47.0	T	1953-81
Brandywine Creek at Wilmington, DE	01481500	314	T	1957-61
				1971-73
				1975-80
			SED	1947-61
				1964-80
Delaware Bay near Lewes, DE	01484450		SC, T	1993-98
CHOPTANK RIVER BASIN				
Choptank River near Greensboro, MD	01491000	113	SC, T	1975-91
			SED	1981-91
ELK RIVER BASIN				
Elk River near Town Point, MD	01495900		SC, T	1982-98
SUSQUEHANNA RIVER BASIN				
Susquehanna River at Conowingo, MD	01578310	27,100	SC, T	1979-81
				1984-92
			SED	1980-81
				1984-92
RHODE RIVER BASIN				
Rhode River:				
Muddy Creek:				
North Fork Muddy Creek at South River, MD	01590710	0.89	T	1971-78
Rhode River near South River, MD	01590720	18.0	SC, pH, T, DO	1971-83
PATUXENT RIVER BASIN				
Patuxent River near Bowie, MD	01594440	348	SC, T	1978-80
				1986-91
			SED	1986-91
Patuxent River at Benedict, MD	01594700	742	T	1964-69
POTOMAC RIVER BASIN				
North Branch Potomac River:				
Laurel Run at Dobbin Road near Wilson, MD	01594930	8.23	SC, T	1981-88
			pH	1984-88
Sand Run:				
South Fork Sand Run near Wilson, MD	01594934	1.55	SC, pH, T	1981-86
North Fork Sand Run near Wilson, MD	01594936	1.91	SC, T	1981-88
			pH	1985-88
McMillan Fork near Fort Pendelton, MD	01594950	2.30	SC, pH, T	1987-97
North Branch Potomac River at Kitzmiller, MD	01595500	225	SC, pH, DO	1981-85
			T	1961-85
North Branch Potomac River at Barnum, WV	01595800	266	SC, pH, T, DO	1981-85
North Branch Potomac River at Luke, MD	01598500	404	T	1961-81
North Branch Potomac River at Pinto, MD	01600000	596	SC, pH, T, DO	1981-85
North Branch Potomac River near Cumberland, MD	01603000	875	T, SED	1965-79
Potomac River at Hancock, MD	01613000	4,073	T	1952-64
				1966-75
Conococheague Creek at Fairview, MD	01614500	495	T, SED	1967-80
Potomac River at Shepherdstown, WV	01618000	5,936	SC, T	1981
Antietam Creek near Sharpsburg, MD	01619500	281	T	1963-75
Shenandoah River at Millville, WV	01636500	3,040	SC, T	1980-83
Potomac River at Point of Rocks, MD	01638500	9,651	T, SED	1961-93
Monocacy River at Bridgeport, MD	01639000	173	T, SED	1990-93
Hunting Creek near Foxville, MD	01640965	2.14	SC, T	1988-91
Hunting Creek tributary near Foxville, MD	01640970	4.01	SC, T	1988-91
Fishing Creek:				
Fishing Creek tributary near Lewistown, MD	01641510	0.40	SC, T	1988-90
Monocacy River at Reich’s Ford Bridge near Frederick, MD	01643020		T, SED	1961-93
Watts Branch at Rockville, MD	01645200	3.70	T	1957-67
Potomac River at Great Falls, MD	01645500	11,430	SC, T	1973-78

NORTH ATLANTIC SLOPE BASINS	Station number	Drainage area (mi^2)	Type of record	Period of record
POTOMAC RIVER BASIN--Continued				
Potomac River at Chain Bridge at Washington, DC	01646580	11,570	SC, pH, T, DO	1978-81
			SED	1979-81
Rock Creek:				
North Branch Rock Creek:				
Williamsburg Run near Olney, MD	01647685	2.25	SED	1967-68
North Branch Rock Creek near Rockville, MD	01647740	12.5	SED	1967-77
Northeast Branch Anacostia River:				
Northwest Branch Anacostia River:				
Browns Creek:				
Nursery Run at Cloverly, MD	01650085	0.35	SED	1967-68
Northwest Branch Anacostia River near Colesville, MD	01650500	21.1	SED	1967-75
Potomac River at Indian Head, MD	01655480	12,160	SC, pH, T, DO	1978-81
Potomac River at Piney Point, MD	01661475	---	SC, pH, T, DO	1980-81
OHIO RIVER BASIN				
MONONGAHELA RIVER BASIN				
Monongahela River:				
Youghiogheny River at Friendsville, MD	03076500	295	T	1963-75

The following low-flow, partial-record stations have been operated in Maryland, Delaware, and the District of Columbia. Measurements at these sites were made during periods of base flow when streamflow was primarily from ground-water storage. The column headed "Period of record" shows the water years in which measurements were made.

NORTH ATLANTIC SLOPE BASINS	Station number	Drainage area (mi^2)	Period of record
DELAWARE RIVER BASIN			
Delaware River:			
Naaman Creek:			
South Branch Naaman Creek near Claymont, DE	01477400	3.83	1955-66 1968-71
Christina River near Newark, DE	01477850	3.76	1981-83
West Branch Christina River near Newark, DE	01477860	4.20	1981-83
Belltown Run near Glascow, DE	01478009	3.35	1978-81
Muddy Run at Glascow, DE	01478024	5.43	1978-81
Muddy Run near Cooches Bridge, DE	01478028	8.21	1978-80
White Clay Creek:			
White Clay Creek tributary near Ogletown, DE	01478878	3.68	1978-80
Brandywine Creek:			
Rocky Run at Talleyville, DE	01481350	1.76	1957-59 1966
Wilson Run at Guyencort, DE	01481400	1.62	1957-59
North Fork Wilson Run at Guyencort, DE	01481430	1.12	1957-59
Wilson Run at Rockland, DE	01481440	3.05	1957-63
Husbands Run at Rockland, DE	01481460	1.28	1957-59
Squirrel Run at Montchanin, DE	01481480	1.67	1957-59
Alapocas Run at Concord, DE	01481530	0.81	1957-59
Red Lion Creek at Red Lion, DE	01482300	3.20	1955-60 1962-71
Dragon Creek at Kirkwood, DE	01482400	1.93	1978-81
Dragon Creek tributary at Kirkwood, DE	01482405	0.16	1978-81
Joy Run near Summit Bridge, DE	01482670	1.26	1978-80
Scott Run near Boyds Corner, DE	01482690	2.18	1978-81
Appoquinimink River:			
Wiggins Millpond Outlet (head of Appoquinimink River) at Townsend, DE	01483150	3.82	1957-60 1962-66 1968-71 1978-80
Drawyer Creek near Mt. Pleasant, DE	01483160	1.54	1978-80
Drawyer Creek tributary near Armstrong, DE	01483165	4.68	1979-80
Drawyer Creek tributary near Odessa, DE	01483170	4.68	1978-80
SMYRNA RIVER BASIN			
Providence Creek (head of Smyrna River) at Clayton, DE	01483300	11.8	1955-60 1962-63 1966, 1968-69
Smyrna River:			
Mill Creek at Smyrna, DE	01483350	4.77	1955-57 1959-60 1962-63 1966, 1968-69
ST. JONES RIVER BASIN			
Fork Branch (head of St. Jones River) at Dupont, DE	01483650	7.50	1955-57 1959-60 1962-66 1968-71
Maidstone Branch at Dupont, DE	01483680	17.3	1955-57 1959-60 1962-66 1968-71
MURDERKILL RIVER BASIN			
Murderkill River:			
Browns Branch near Houston, DE	01484020	12.4	1955-71
Spring Creek:			
Hudson Branch (head of Spring Creek) near Canterbury, DE	01484040	8.40	1955-60
Pratt Branch near Felton, DE	01484050*	3.29	1955-57 1959-60 1962-71
Double Run near Magnolia, DE	01484060	5.68	1955-57 1959-60 1962-64 1966-71
MISSPILLION RIVER BASIN			
Beaverdam Branch (head of Misspillion River):			
Cedar Creek near Lincoln, DE	01484200	7.21	1955-60 1962-63 1966, 1968-69

* Also a crest-stage partial-record station.

NORTH ATLANTIC SLOPE BASINS--Continued	Station number	Drainage area (mi^2)	Period of record
BROADKILL RIVER BASIN			
Pemberton Branch (head of Broadkill River) near Milton, DE	01484240	6.68	1955-66 1968-71
Broadkill River:			
Beaverdam Creek near Milton, DE	01484270	6.10	1955-71
INDIAN RIVER BASIN			
Indian River:			
Sheep Pen Ditch near Shortly, DE	01484510	**a**5.4	1986-88 1997-98
Iron Branch at Millsboro, DE	01484530	**a**8.0	1985-88 1997-99
Whartons Branch near Millsboro, DE	01484531*	**a**5.8	1968-69 1971, 1985-88 1999
Swan Creek near Warwick, DE	01484535	**a**7.2	1985-88 1997-98
Pepper Creek at Dagsboro, DE	01484550*	8.78	1955-71 1985-88 1997-99
Blackwater Creek near Clarkesville, DE	01484600*	**a**3.5	1968-69 1971, 1985-88 1997-98
Love Creek at Robinsonville, DE	01484655	**a**12	1985-88 1997-99
Chapel Branch at Angola, DE	01484677	**a**8.0	1985-88 1997-99 1997-99
Unity Branch at Angola, DE	01484678	4.2	1999
MILLER CREEK BASIN			
Beaverdam Ditch near Millville, DE	01484695	2.2	1997-98
DIRICKSON CREEK BASIN			
Bearhole Ditch (head of Dirickson Creek) at Bunting, DE	01484700	**a**6.4	1968-71 1985-88 1997-98
WICOMICO RIVER BASIN			
Andrews Branch (head of Wicomico River):			
Leonard Pond Run near Delmar, MD	01486200	13.4	1950-51 1964, 1969-71
NANTICOKE RIVER BASIN			
Nanticoke River (Gravelly Fork):			
Deep Creek at Old Furnace, DE	01487100	33.0	1955-60 1962-63 1968
Tyndall Branch near Hardscrabble, De	01487120	12.7	1955-63 1966
Lewes Creek:			
Butler Mill Branch near Woodland, De	01487300	6.96	1955-63 1966, 1968-69
James Branch (head of Broad Creek):			
Elliott Pond Branch (Chipman Pond Branch) near Laurel, DE	01487700	8.55	1955-66 1968-71
Chicone Creek at Reids Grove, MD	01489395	4.69	1951-53 1969-71
Baron Creek at MD-DE State Corner	01489400	8.93	1950-52 1969-70
CHOPTANK RIVER BASIN			
Choptank River near Choptank Mills, DE	01490550	**a**58	1985-87
Forge Branch at Greensboro, MD	01491060	9.84	1952-53
Watts Creek near Denton, MD	01491180	**a**11	1964-75
Tuckahoe CreeK:			
Knott Millpond near Hillsboro, MD	01491800	8.45	1952-53 1968-71
Cabin Creek at Cabin Creek, MD	01492080	6.05	1952-53
WYE RIVER BASIN			
Wye River:			
Wye East River:			
Skipton Creek:			
Mill Creek near Wye Mills, MD	01492560	5.72	1952-53

a Approximately.
* Also a crest-stage partial-record station.

NORTH ATLANTIC SLOPE BASINS--Continued	Station number	Drainage area (mi^2)	Period of record
CHESTER RIVER BASIN			
Andover Branch (head of Chester River):			
Cypress Branch at Millington, MD	01492980	**a**38	1964-66 1968-75
Mills Branch near Millington, MD	01492990	9.98	1953-54 1968-71
Chester River:			
Foreman Branch at Ewingville, MD	01493480	5.27	1953-54
Langford Creek:			
East Fork Langford Creek:			
Mill Pond Outlet near Langford, MD	01494035	5.10	1953-54 1968-71
Old Mill Stream Branch (head of Corsica River) at Centerville, MD	01494100	11.2	1964-71
SASSAFRAS RIVER BASIN			
Sassafras River:			
Sassafras River tributary at Ginns Corner, MD	01494450	3.81	1982-83
Duffy Creek near Cecilton, MD	01494480	1.45	1968-71 1982
WORTON CREEK BASIN			
Mill Creek (head of Worton Creek) at Hanesville, MD	01494600	4.63	1953-54 1968-71
ELK RIVER BASIN			
Big Elk Creek (head of Elk River):			
Gramies Run at Elk Mills, MD	01494995	3.05	1981-83
Little Elk Creek at Rock Church, MD	01495480	17.8	1982-83
Laurel Run near Elkton, MD	01495520	3.87	1982-83
Dogwood Run at Elkton, MD	01495525	1.62	1982-83
Mill Creek near Elkton, MD	01495540	4.32	1968-70 1982
Elk River:			
Perch Creek near Elkton, MD	01495550	**a**6.0	1964-75 1978-80 1982-83
Back Creek near Mt. Pleasant, DE	01495700	4.40	1968-69
Bohemia River:			
Sandy Branch at Bohemia Creek, MD	01495925	2.58	1968-70 1982
Little Bohemia Creek near Warwick, MD	01495935	2.45	1953-54
Scotchman Creek:			
Scotchman Creek tributary near Cecilton, MD	01495950	1.40	1982-83
NORTHEAST RIVER BASIN			
Northeast Creek (head of Northeast River):			
Little Northeast Creek:			
West Branch Little Northeast Creek at Zion, MD	01496030	3.32	1981-83
Little Northeast Creek at Mechanic Valley, MD	01496050	**a**14	1964-75
Northeast River:			
Northeast River tributary at North East, MD	01496055	1.55	1982-83
Stony Run near North East, MD	01496060	8.23	1982-83
Northeast River tributary at Charlestown, MD	01496085*	1.03	1982-83
Hance Point Creek at Hance Point, MD	01496100	1.36	1983
PRINCIPIO CREEK BASIN			
Principio Creek:			
Principio Creek tributary at Belvedere, MD	01496225	2.08	1982-83
MILL CREEK BASIN			
Mill Creek at Jackson, MD	01496250	3.73	1982-83
SUSQUEHANNA RIVER BASIN			
Susquehanna River:			
Broad Creek at Pylesville, MD	01577950	11.3	1956-59 1962-63 1966
Conowingo Creek at Oakwood, MD	01578300	34.4	1982-83
Octoraro Creek:			
Stone Run near Rising Sun, MD	01578475	2.24	1982-83
Stone Run at Rising Sun, MD	01578480	6.71	1982-83
Love Run at Richardsmere, MD	01578490	3.55	1982-83
Octoraro Creek tributary at Richardsmere, MD	01578515	3.27	1982-83
Deer Creek at Gorsuch Mills, MD	01579875	**a**25	1975-79
Big Branch at Harkins, MD	01579900	6.39	1975-79
Little Deer Creek near Federal Hill, MD	01579925	14.0	1975-79
Stout Bottle Branch near Ady, MD	01580170	7.13	1980-82

a Approximately.

* Also a crest-stage partial-record station.

NORTH ATLANTIC SLOPE BASINS--Continued	Station number	Drainage area (mi^2)	Period of record
SWAN CREEK BASIN			
Swan Creek at Swan Creek, MD	01580700	13.2	1956-59 1962-63 1966
BUSH RIVER BASIN			
Bynum Run (head of Bush River) at Bush, MD	01581600	22.5	1956-59 1962-63 1966
James Run at Bush, MD	01581650	11.1	1956-59 1962-63 1966
Bush River:			
Grays Run at Stepney, MD	01581660	5.35	1956-59 1962-63 1966
Winters Run (head of Otter Point Creek) near Bel Air, MD	01581750	37.0	1954-59 1962-63 1966
GUNPOWDER RIVER BASIN			
Gunpowder Falls (head of Gunpowder River):			
Grave Run near Beckleysville, MD	01581830	7.68	1977-82
Georges Run at Armacost, MD	01581850	13.0	1956-59 1962, 1966
Georges Run near Beckleysville, MD	01581870	15.8	1977-82
Little Falls:			
Beetree Run at Bentley Springs, MD	01581960	9.72	1975-79
Third Mine Branch near Stablersville, MD	01581980	5.27	1975-79
Green Branch at Phoenix, MD	01582900	4.45	1973, 1975-79
Western Run:			
Piney Run at Dover, MD	01583100@	12.3	1975-79
Blackrock Run at Coopersville, MD	01583200	9.38	1956-59 1962-63 1966
Beaverdam Run at Cockeysville, MD	01583600@	20.9	1956-59 1962-63 1966
Little Gunpowder Falls at Hess, MD	01584200	16.5	1956-59 1962-63 1966
PATAPSCO RIVER BASIN			
North Branch Patapsco River:			
Deep Run at Lawndale, MD	01585700	6.70	1975-82
Beaver Run at Finksburg, MD	01586200	12.7	1957-59 1961-63 1966
Middle Run near Finksburg, MD	01586550	6.18	1973, 1975-79
Morgan Run near Gamber, MD	01586600	26.0	1957-59 1961-63 1966
Little Morgan Run near Eldersburg, MD	01586650	7.13	1973, 1975-79
South Branch Patapsco River at Woodbine, MD	01587070	11.4	1975-79 1988-90
Gillis Falls at Woodbine, MD	01587170	19.4	1957-59
Patapsco River:			
Rockburn Branch at Elkridge, MD	01589040	3.69	1988-90
Deep Run at Hanover, MD	01589080	18.0	1975-79 1988-90
Stony Run at Elkridge, MD	01589090	**a**9.4	1955, 1964-67
Gwynns Falls:			
Red Run near Owings Mills, MD	01589230	7.39	1975-79
Gwynns Falls at Baltimore, MD	01589345	50.7	1980-82
Jones Falls at Eccleston, MD	01589370	2.86	1976-79
SEVERN RIVER BASIN			
Severn Run (head of Severn River) at Benfield, MD	01589800	**a**24	1964-67

@ Currently a surface-water discharge station.
a Approximately.

NORTH ATLANTIC SLOPE BASINS--Continued	Station number	Drainage area (mi^2)	Period of record
PATUXENT RIVER BASIN			
Patuxent River at Mullinix, MD	01590800	10.7	1988-90
Cabin Branch near Florence, MD	01590900	8.36	1975-79 1988-90
Cattail Creek:			
Cattail Creek tributary at Carrs Mill, MD	01591200	3.93	1956-59 1961-63 1966, 1988-90
Cattail Creek tributary at Daisy, MD	01591375	3.12	1977-82 1988-90
Dorsey Branch near Knollwood, MD	01591475	3.78	1964, 1988-90
Hawlings River near Unity, MD	01591650	5.08	1977-82
Little Patuxent River at Pine Orchard, MD	01593200	7.03	1956-59 1961-64 1966, 1988-90
Red Hill Branch at Columbia, MD	01593300	5.98	1988-90
Middle Patuxent River near West Friendship, MD	01593600	11.4	1956-59 1961-64 1966, 1988-90
Middle Patuxent River tributary near Dayton, MD	01593650	4.25	1977-82
Middle Patuxent River tributary near Columbia, MD	01593675	9.12	1988-90
Middle Patuxent River tributary near Clarksville, MD	01593700	6.24	1977-82 1988-90
Hammond Branch at Scaggsville, MD	01594100	3.01	1956-59 1962-64 1966, 1988-90
Hammond Branch near Laurel, MD	01594200	6.83	1988-90
Towsers Branch at Conoways, MD	01594300	5.69	1975-80
Dorsey Run at Jessup, MD	01594395	6.59	1964, 1989-91
Stocketts Run near Hardesty, MD	01594455	6.68	1977-80
Rock Branch at Bayard, MD	01594465	6.73	1977-80
Western Branch:			
Northeast Branch at Kolbes, MD	01594490	7.74	1977-80
Collington Branch at Upper Marlboro, MD	01594525	22.9	1964-66 1975-79
Mataponi Creek near Naylor, MD	01594535	**a**14	1964-66 1982
Lyons Creek at Lyons Creek, MD	01594545	**a**15	1964-67
POTOMAC RIVER BASIN			
North Branch Potomac River:			
Glade Run at Steyer, MD	01594975	8.86	1977-82
Savage River:			
Little Savage River near Avilton, MD	01596200	1.95	1979-82
Big Run near Swanton, MD	01596600	13.4	1977-82
Crabtree Creek:			
Middle Fork near Swanton, MD	01597100	10.8	1977-82
Georges Creek near Midland, MD	01598770	13.1	1979-82
Woodland Creek at Ocean, MD	01598775	5.49	1979-82
Mill Run at Morrison, MD	01598980	7.35	1979-82
Mill Run at Rawlings, MD	01599800	2.84	1979-82
Wills Creek at Ellerslie, MD	01601100	185	1979-82
Jennings Run:			
North Branch Jennings Run at Barrelsville, MD	01601300	**a**12	1964-74
Jennings Run at Corriganville, MD	01601325	37.7	1975-79
Collier Run at Spring Gap, MD	01604150	**a**11	1964-74
Mill Run at Oldtown, MD	01605425	10.6	1975-79
Seven Springs Run at Oldtown, MD	01605475	9.16	1975-82
Town Creek:			
Murley Branch near Flintstone, MD	01608950	11.9	1977-78 1980-82
Maple Run near Town Creek, MD	01608975	7.10	1977-78 1980-82
Fifteen Mile Creek near Piney Grove, MD	01610060	20.2	1975-79
Deep Run near Little Orleans, MD	01610065	6.26	1975-79
Fifteen Mile Creek at Little Orleans, MD	01610075	61.6	1975-79
Sideling Hill Creek:			
Bear Creek at Forest Park, MD	01610150*	10.4	1975-79 1985-87
Potomac River tributary at Woodmont, MD	01610170	3.29	1985-87
Tonoloway Creek at Hancock, MD	01613100	113	1985-87
Ditch Run near Hancock, MD	01613150*	4.80	1975-79

a Approximately.
* Also a crest-stage partial-record station.

NORTH ATLANTIC SLOPE BASINS--Continued	Station number	Drainage area (mi^2)	Period of record
POTOMAC RIVER BASIN--Continued			
Potomac River--Continued			
Licking Creek:			
Lanes Run near Forsythe, MD	01613540	9.98	1980-82 1985-87
Licking Creek near Pectonville, MD	01613545	212	1985-87
Conococheague Creek:			
Little Conocoheague Creek near Charlton, MD	01614050	18.1	1985-87
Rockdale Run at Fairview, MD	01614525	9.67	1976-79 1981-82 1985-87
Rush Run near Huyett, MD	01614575	5.20	1976-79 1981-82 1985-87
Meadow Brook at Conococheague, MD	01614625	6.77	1976-79 1981-82 1985-87
Conococheague Creek tributary near Huyett, MD	01614675	7.94	1977-79 1981-82 1985-87
Conococheague Creek at Williamsport, MD	01614705	564	1985-87
Downey Branch near Downesville, MD	01617600	3.00	1976-79 1981-82
Marsh Run:			
St. James Run at Spielman, MD	01617780	7.14	1977-79 1981-82 1985-87
Antietam Creek:			
Little Antietam Creek at Leitersburg, MD	01619050	24.5	1976-79 1981-82 1985-87
West Branch at Paramount, MD	01619145	5.07	1977-79 1981-82
Marsh Run at Fiddlesburg, MD	01619150	**a**31	1965-74 1976-79 1985-87
Landis Spring Branch near Benevola, MD	01619275	6.60	1976-79 1981-82 1985-87
Beaver Creek at Benevola, MD	01619325	22.9	1975-79 1985-87
Little Beaver Creek at Benevola, MD	01619350	8.70	1975-79 1985-87
Little Antietam Creek at Keedysville, MD	01619480	**a**24	1964-67 1976-79 1985-87
Sharmans Branch near Antietam, MD	01619525	4.62	1977-79 1981-82
Isreal Creek at Weverton, MD	01636730	13.2	1975-79 1985-87
Catoctin Creek:			
Little Catoctin Creek near Brunswick, MD	01636850	8.64	1977-83
Middle Creek at Ellerton, MD	01636975	22.7	1977-82
Catoctin Creek at Olive, MD	01638050	112	1977-83
Potomac River tributary at Point of Rocks, MD	01638520	3.04	1982-83
Tuscarora Creek at Tuscarora, MD	01638600	20.3	1975-79 1982-83
Monocacy River:			
Piney Creek at Taneytown, MD	01639100	22.9	1956-59 1961-63 1966
Piney Creek near Keysville, MD	01639150	34.4	1982-83
Toms Creek:			
Friends Creek near Emmitsburg, MD	01639325	12.2	1977-83
Toms Creek near Keysville, MD	01639390	88.1	1982-83
Double Pipe Creek:			
Big Pipe Creek (head of Double Pipe Creek) at Bachman Mills, MD	01639400	9.39	1956-59 1961-63 1966
Deep Run at Union Mills, MD	01639420	5.46	1975-79
Silver Run near Silver Run, MD	01639440	8.77	1975-82
Big Pipe Creek near Mayberry, MD	01639450	51.6	1956-59 1962-63 1966
Bear Branch near Mayberry, MD	01639465	13.9	1975-82
Meadow Branch near Uniontown, MD	01639470	12.6	1956-59 1961-63 1966

a Approximately.

NORTH ATLANTIC SLOPE BASINS--Continued	Station number	Drainage area (mi^2)	Period of record
POTOMAC RIVER BASIN--Continued			
Monocacy River--Continued:			
Big Pipe Creek--Continued:			
Little Pipe Creek:			
Wolfpit Branch at Linwood, MD	01640100	2.01	1956-59 1961-63 1966
Little Pipe Creek at Union Bridge, MD	01640150	40.4	1956-59 1962-63 1966
Beaver Dam Creek near Union Bridge, MD	01640160	7.04	1977-82
Little Pipe Creek at Keymar, MD	01640200	80.0	1982-83
Owens Creek near Thurmont, MD	01640600	14.4	1975-79
Little Owens Creek near Thurmont, MD	01640650	6.16	1975-79
Beaver Branch at Rocky Ridge, MD	01640720	6.53	1977-82
Owens Creek near Rocky Ridge, MD	01640750	38.8	1982-83
Fishing Creek near Utica, MD	01641600	17.9	1982-83
Tuscarora Creek near Frederick, MD	01641900	16.5	1975-79 1982-83
Israel Creek near Walkersville, MD	01642050	**a**29	1964-66 1975-79 1982-83
Linganore Creek near New London, MD	01642430	45.2	1980-82
Bens Branch near New Market, MD	01642450	11.8	1975-82
Bush Creek at Ijamsville, MD	01643100	**a**17.5	1964-66
Bush Creek at Reels, MD	01643110	29.7	1982-83
Ballenger Creek near Lime Kiln, MD	01643125	20.2	1975-83
Bennett Creek:			
Little Bennett Creek at Hyattstown, MD	01643400	12.8	1968-69 1975-79
Broad Run at Elmer, MD	01643615	14.0	1975-82
Seneca Creek:			
Little Seneca Creek at Boyds, MD	01644400	**a**21	1964-67
Bucklodge Branch near Dawsonville, MD	01644425	8.47	1975-82
Great Seneca Creek:			
Goshen Branch at Goshen, MD	01644480	7.63	1975-77 1979
Dry Seneca Creek near Seneca, MD	01645050	19.2	1975-82
Rock Run near Cabin John, MD	01646220	**a**4.8	1964-67
Rock Creek at Redland, MD	01647620	7.45	1977-82
Northeast Branch Anacostia River:			
Paint Branch at College Park, MD	01649200	17.5	1980-82
Oxon Run (head of Oxon Creek) at Washington, DC	01652580	6.84	1980-82
Piscataway Creek:			
Tinkers Creek at Piscataway, MD	01653625	15.9	1975-82
Mattawoman Creek near Waldorf, MD	01657900	16.9	1980-82
Chicamuxen Creek:			
Reeder Run at Chicamuxen, MD	01658300	**a**5.6	1964-67
Nanjemoy Creek:			
Burgess Creek:			
Mill Run (head of Nanjemoy Creek) Welcome, MD	01660650	9.89	1980-82
Port Tobacco Creek (head of Port Tobacco River) near Marshalls Corner, MD	01660740	15.8	1977-82
Wicomico River:			
Zekiah Swamp Run (head of Wicomico River) near Malcolm, MD	01660905	12.1	1975-82
Clark Run near Bel Alton, MD	01660930	10.4	1975-79
Gilbert Swamp Run near Olivers Shop, MD	01660950	**a**32	1964-65
McIntosh Run:			
Brooks Run near Hollywood, MD	01661200	5.76	1980-82
Mcintosh Run at Tintop Hill, MD	01661300	12.1	1964-66 1982
Glebe Run at Leonardtown, MD	01661410	5.81	1980-82

a Approximately.

	Station number	Drainage area (mi^2)	Period of record
OHIO RIVER BASIN			
MONONGAHELA RIVER BASIN			
Monongahela River:			
Youghiogheny River:			
Cherry Creek near Crellin, MD	03075350	16.7	1977-82
Snowy Creek:			
Laurel Run at Crellin, MD	03075400	10.9	1964-74
Little Youghiogheny River at Loch Lynn Heights, MD	03075475	13.2	1975-79
Muddy Creek at Swallow Falls State Park, MD	03075700	17.8	1977-82
Cherry Creek near McHenry, MD	03075900	12.3	1973, 1975-79
Bear Creek:			
South Branch Bear Creek near Accident, MD	03076580	6.01	1964-74
South Branch Bear Creek near Friendsville, MD	03076590	16.8	1975-79
Casselman River:			
North Branch Casselman River near Grantsville, MD	03077925	24.4	1975-80
South Branch Casselman River near Grantsville, MD	03077950	20.8	1975-79

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WATER RESOURCES DATA - MARYLAND AND DELAWARE, 1999

VOLUME 1. SURFACE-WATER DATA

INTRODUCTION

The Water Resources Division of the U.S. Geological Survey, in cooperation with State agencies, obtains a large amount of data pertaining to the water resources of Maryland and Delaware each water year. These data, accumulated during many water years, constitute a valuable data base for developing an improved understanding of the water resources of the State. To make these data readily available to interested parties outside the Geological Survey, the data are published annually in this report series entitled **"Water Resources Data - Maryland and Delaware."**

This report series includes records of stage, discharge, and water quality of streams and stage, contents, and water quality of lakes and reservoirs. This volume contains records for water discharge at 111 gaging stations; stage and contents at 1 reservoir; and water quality at 17 gaging stations. Also included are stage and discharge for 3 crest-stage partial-record stations, discharge only for 27 low-flow partial-record stations, and stage only for 5 tidal crest-gage partial-record stations. Locations of these sites are shown on figure 3. Locations of discontinued gaging stations are shown on figure 4. Additional water data were collected at various sites not part of the systematic data-collection program. These data represent that part of the National Water-Data System collected by the U.S. Geological Survey and cooperating State and Federal agencies in Maryland and Delaware.

This series of annual reports for Maryland and Delaware began with a report for the 1961 water year that contained only data relating to the quantities of surface water. For the 1964 water year, a similar report was introduced that contained only data relating to water quality. Beginning with the l975 water year, the report format was changed to present, in one volume, data on quantities of surface water, quality of surface and ground water, and ground-water levels. In the 1989 water year, the report format was changed to two volumes. Both volumes contained data on quantities of surface water, quality of surface and ground water, and ground-water levels. Volume 1 contained data on the Atlantic Slope Basins (Delaware River through Patuxent River) and Volume 2 contained data on the Monongahela and Potomac River Basins. Beginning with the 1991 water year, Volume 1 contains all information on quantities of surface water and surface-water-quality data and Volume 2 contains ground-water levels and ground-water-quality data.

Prior to the introduction of this series and for several water years concurrent with it, water resources data for Maryland and Delaware were published in U.S. Geological Survey Water-Supply Papers. Data on stream discharge and stage, and on lake or reservoir contents and stage, through September 1960, were published annually under the title **"Surface-Water Supply of the United States, Parts 6A and 6B."** For the 1961 through 1970 water years, the data were published in two 5-year reports. Data on chemical quality, temperature, and suspended sediment for the 1941 through 1970 water years were published annually under the title **"Quality of Surface Waters of the United States,"** and water levels for the 1935 through 1974 water years were published under the title **"Ground-Water Levels in the United States."** The above mentioned Water-Supply Papers may be consulted in the libraries of the principal cities of the United States, and may be purchased from the U.S. Geological Survey, Branch of Information Services, Federal Center, Box 25286, Denver, CO 80225.

Publications similar to this report are published annually by the U.S. Geological Survey for all States. These official Survey reports have an identification number consisting of the two-letter State abbreviation, the last two digits of the water year, and the volume number. For example, this volume is identified as **"U.S. Geological Survey Water-Data Report MD-DE-99-1."** For archiving and general distribution, the reports for l971-74 water years also are identified as water-data reports. These water-data reports are for sale in paper copy or on microfiche by the National Technical Information Service, U.S. Department of Commerce, Springfield, VA 22161.

Additional information including current prices for ordering specific reports may be obtained from the District Chief at the address given on the back of the title page or by telephone at (410) 238-4200.

COOPERATION

The U.S. Geological Survey and agencies of the State of Maryland had cooperative agreements for the collection of water-resource records from 1896 to 1909 and since 1924. Similar cooperative agreements have existed between the Survey and agencies of the State of Delaware since 1943. Organizations that assisted in collecting the data in this report through cooperative agreements with the Survey are:

Maryland Geological Survey, Emery T. Cleaves, Director.

Delaware Geological Survey, Robert R. Jordan, State Geologist.

Maryland Department of the Environment, Chesapeake Bay and Special Projects Program, Robert M. Summers, Division Chief.

District of Columbia Department of Public Works, Larry King, Director.

Maryland State Highway Administration, Parker F. Williams, Administrator.

Assistance with funds or services was given by the U.S. Army Corps of Engineers for collecting records at 12 gaging stations and 3 water-quality stations within Maryland.

The following organizations also aided in collecting records:

Delaware: Department of Natural Resources and Environmental Control, Water Resources Agency for New Castle County.

Maryland: Maryland Water Resources Administration, Washington Suburban Sanitary Commission, Upper Potomac River Commission, Baltimore County, Baltimore City, Anne Arundel County, Harford County, Montgomery County, Prince Georges County.

Organizations that provided data are acknowledged in station descriptions.

SUMMARY OF HYDROLOGIC CONDITIONS

Streamflow at the beginning of the 1999 water year was in the normal range throughout Maryland and Delaware except for central Maryland, where flows fell into the deficient range (lower 25 percent of the record) following below-normal precipitation (0.5 to 1.5 inches). During October 1998, streamflow remained unchanged except for the Eastern Shore, where flows fell into the deficient range following below-normal precipitation (0.5 to 1.0 inches). In November and December 1998, flows throughout Maryland and Delaware were in the deficient range following below-normal precipitation (42.0 to 3.0 inches each month). During January 1999, flows were in the normal range following above-normal precipitation (1.5 to 4.5 inches). In February 1999, flows returned to the deficient range throughout Maryland and Delaware, following below-normal precipitation (0.5 to 1.5 inches). During March 1999, flows returned to the normal range following above-normal precipitation (0.5 to 5.5 inches). Flows remained in the normal range during April except for central Maryland, where flows fell into the deficient range following below-normal precipitation (0.5 to 1.0 inches). Flows for May through July 1999 were in the deficient range throughout Maryland and Delaware following below-normal precipitation (1.0 to 3.5 inches each month). During August 1999, flows stayed in the deficient range, except for central Maryland, where flows rose into the normal range following above-normal precipitation (1.0 to 2.5 inches). During September 1999, flows throughout Maryland and Delaware increased into the excessive range (upper 25 percent of the record) following above-normal rainfall (1.0 to 12.5 inches) which occurred when Hurricane Floyd passed over the area.

During the 1999 water year, flows were in the deficient range at three of the four index stations: Potomac River at Paw Paw, WV, in western Maryland; Seneca Creek at Dawsonville, in central Maryland; and Potomac River near Washington, D.C., in central Maryland. At the fourth index station, Choptank River at Greensboro, on the Eastern Shore of Maryland, flows were in the normal range. A record monthly mean was set for Potomac River near Washington, D.C. during June 1999. The new record monthly mean was 14 percent lower than the record set in 1969. A new minimum daily mean was set at Choptank River at Greensboro during August 1999. The new record daily mean was 33 percent lower than the previous record set in 1966. During August 1999, a record monthly mean and a new maximum daily mean were set at Choptank River at Greensboro. The record monthly mean was 32 percent greater than the previous record set in 1960. The new maximum daily mean was 65 percent greater than the previous record set in 1960.

Monthly and annual-mean discharges for water year 1999 were compared to long-term averages (reference period 1961-90) for two representative streamflow-gaging stations in figure 1. Data for the station, Potomac River at Point of Rocks, in central Maryland, reflect runoff conditions in the Potomac River Basin, excluding the Coastal Plain. Data for the station, Choptank River near Greensboro, on the Eastern Shore of Maryland, reflect runoff from a 113 mi^2(square mile) area, of which 21.6 mi^2 is located in Delaware in the central part of the Delmarva Peninsula.

Average freshwater inflow to the Chesapeake Bay was estimated to be 45,200 ft^3/s (cubic feet per second), on the basis of flows for the James, Potomac, and Susquehanna Rivers. This is 58 percent of the long-term average during the reference period 1951-99. Flows for October averaged 115 percent above normal. During November, flows averaged 43 percent below normal. For December, flows averaged 19 percent below normal. For January, flows averaged 10 percent below normal. Flows in February averaged 34 percent below normal. Flows in March and April were 29 and 32 percent below normal, respectively. Flows for May were 54 percent below normal. June flows were 72 percent below normal. During July, flows were 63 percent below normal. August was 56 percent below normal. September was 149 percent above normal (Hurricane Floyd). Inflow during May set a new record minimum monthly mean. The new record was 3 percent lower than the record set in 1955. A new record minimum monthly mean was also set in June. The new record was 26 percent lower than the record set in 1964.

The combined storage in the three major water-supply reservoirs in the Baltimore City Municipal System (combined usable capacity of 85,340 million gallons) decreased from 87 percent of capacity from September 1998, to 68 percent of capacity at the end of September 1999.

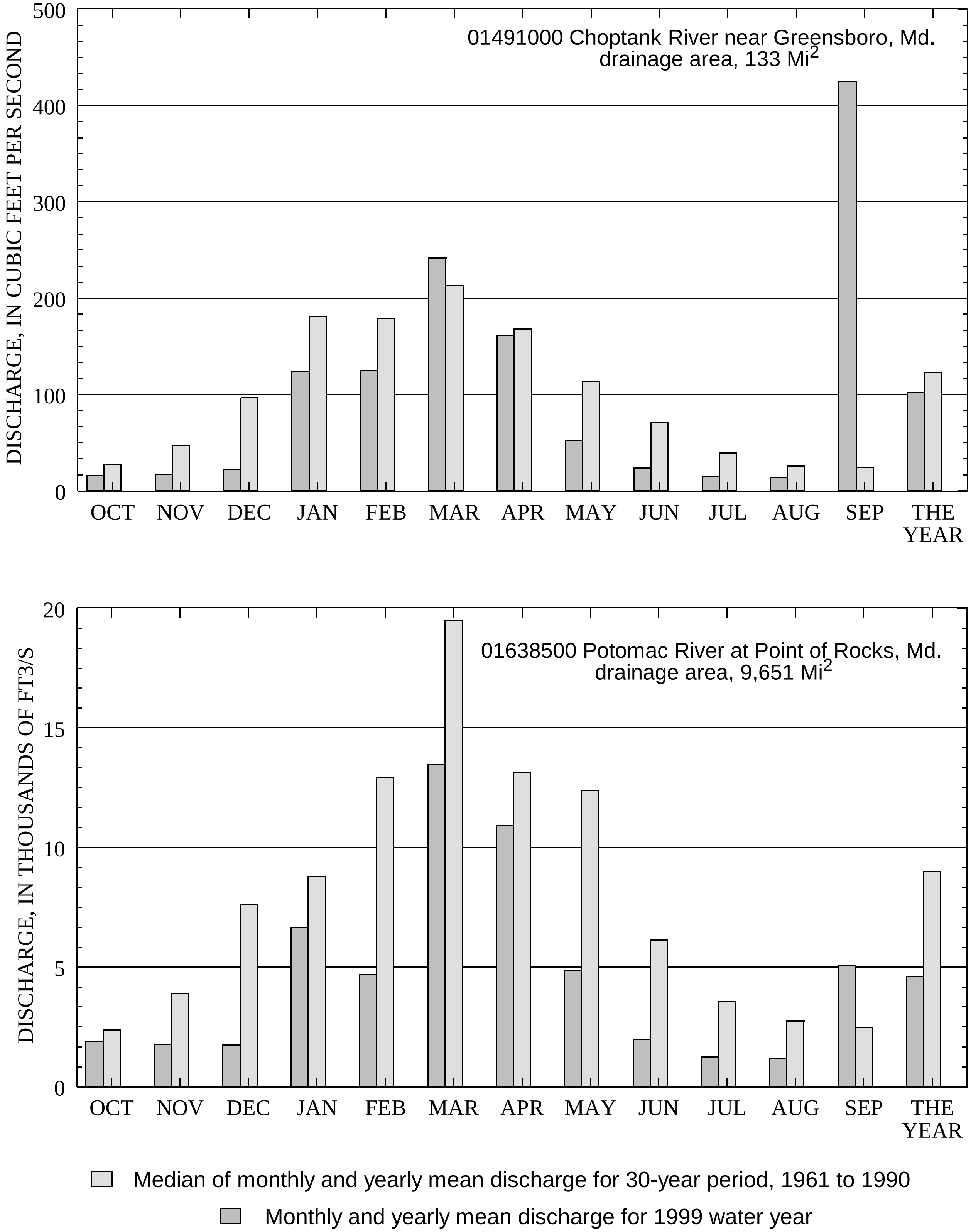

FIGURE 1. COMPARISON OF DISCHARGE AT TWO LONG-TERM REPRESENTATIVE GAGING STATIONS DURING THE 1999 WATER YEAR WITH MEDIAN DISCHARGE FOR INDICATED PERIOD.

SPECIAL NETWORKS AND PROGRAMS

National Stream-Quality Accounting Network (NASQAN) monitors the water quality of large rivers within four of the Nation’s largest river basins--the Mississippi, Columbia, Colorado and Rio Grande. The network consists of 39 stations. Samples are collected with sufficient frequency so that the flux of a wide range of constituents can be estimated. The objective of NASQAN is to characterize the water quality of these large rivers by measuring concentration and mass transport of a wide range of dissolved and suspended constituents, including nutrients, major ions, dissolved and sediment-bound heavy metals, common pesticides, and inorganic and organic forms of carbon. This information will be used to: (1) describe the long-term trends and changes in concentration and transport of these constituents; (2) test findings of the National Water-Quality Assessment (NAWQA) Program; (3) characterize processes unique to large river systems such as storage and re-mobilization of sediments and associated contaminants; and (4) refine existing estimates of off-continent transport of water, sediment, and chemicals for assessing human effects on the world’s oceans, and to determine global cycles of carbon, nutrients, and other chemicals.

National Water-Quality Assessment (NAWQA) Program of the U.S. Geological Survey is a long-term program with goals to describe the status and trends of water-quality conditions for a large, representative part of the Nation's ground- and surface-water resources; provide an improved understanding of the primary natural and human factors affecting these observed conditions and trends; and provide information that supports development and evaluation of management, regulatory, and monitoring decisions by other agencies.

Assessment activities are being conducted in 53 study units (major watersheds and aquifer systems) that represent a wide range of environmental settings nationwide, and account for a large percentage of the Nation's water use. A wide array of chemical constituents will be measured in ground water, surface water, streambed sediments, and fish tissues. The coordinated application of comparative hydrologic studies at a wide range of spatial and temporal scales will provide information for decision making by water-resources managers and a foundation for aggregation and comparison of findings to address water-quality issues of regional and national interest.

Communication and coordination between USGS personnel and other local, State, and Federal interests are critical components of the NAWQA program. Each study unit has a local liaison committee consisting of representatives from key Federal, State, and local water-resources agencies, Indian Nations, and Universities in the study unit. Liaison committees typically meet semiannually to discuss their information needs, monitoring plans and progress, desired information products, and opportunities to coordinate efforts among agencies.

Additional information about the NAWQA program is available on the world wide web at:

http://wwwrvares.er.usgs.gov/nawqa/NAWQA.OFR94-70.html

EXPLANATION OF THE RECORDS

The surface-water records published in this report are for the 1999 water year that began October 1, 1998, and ended September 30, 1999. A calendar of the water year is provided on the inside of the front cover. The records contain streamflow data, stage and content data for lakes and reservoirs, and water-quality data for surface water. The locations of the stations where the data were collected are shown in figure 3. The following sections of introductory text are presented to provide users with a more detailed explanation of how the hydrologic data published in this report were collected, analyzed, computed, and arranged for presentation.

Station Identification Numbers

Each data station in this report is assigned a unique identification number. This number is unique in that it applies specifically to a given station and to no other. The number usually is assigned when a station is first established and is retained for that station indefinitely. The systems used by the U.S. Geological Survey to assign identification numbers for surface-water stations are based on geographic location. The **"downstream order"** system is used for regular surface-water stations and the **"latitude-longitude"** system is used for surface-water stations where only miscellaneous measurements are made.

Downstream Order System

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

The station-identification number is assigned according to downstream order. In assigning station numbers, no distinction is made between partial-record stations and other stations; therefore, the station number for a partial-record station indicates downstream-order position in a list made up of both types of stations. Gaps are left in the series of numbers to allow for new stations that may be established; hence, the numbers are not consecutive. The complete eight-digit number for each station, such as 01477800, which appears just to the left of the station name, includes the two-digit part number **"01"** plus the six-digit downstream-order number **"477800."** The part number designates the major river basin; for example, part **"01"** is the North Atlantic Slope Basin.

Latitude-Longitude System

The identification numbers for miscellaneous surface-water sites are assigned according to the grid system of latitude and longitude. The number consists of 15 digits. The first six digits denote the degrees, minutes, and seconds of latitude, the next seven digits denote degrees, minutes, and seconds of longitude, and the last two digits (assigned sequentially) identify the sites within a 1-second grid. This site-identification number, once assigned, is a pure number and has no locational significance. In the rare instance where the initial determination of latitude and longitude are found to be in error, the station will retain its initial identification number; however, its true latitude and longitude will be listed in the **LOCATION** paragraph of the station description(See figure 2 below).

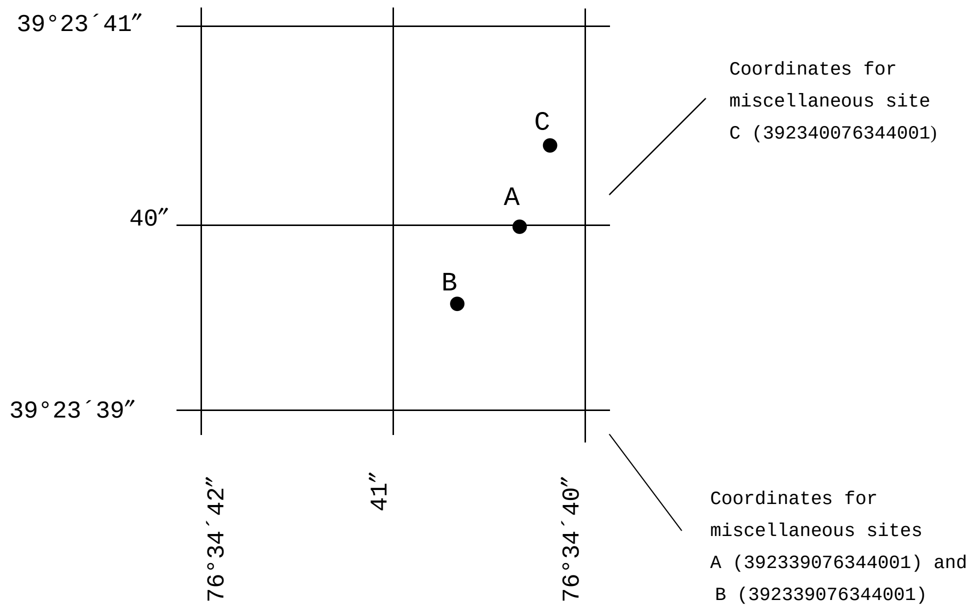

Figure 2. --System for numbering miscellaneous sites (latitude and longitude)

Records of Stage and Water Discharge

Records of stage and water discharge may be complete or partial. Complete records of discharge are those obtained using a continuous stage-recording device through which either instantaneous or mean-daily discharges may be computed for any time, or any period of time, during the period of record. Complete records of lake or reservoir content, similarly, are those for which stage or content may be computed or estimated with reasonable accuracy for any time, or period of time. They may be obtained using a continuous stage-recording device, but need not be. Because mean-daily discharges and end-of-day contents commonly are published for such stations, they are referred to as **"daily stations."**

By contrast, partial records are obtained through discrete measurements without using a continuous stage-recording device and pertain only to a few flow characteristics, or perhaps only one. The nature of the partial record is indicated by table titles such as **"Crest-stage partial records,"** or **"Low-flow partial records."** Records of miscellaneous discharge measurements or of measurements from special studies, such as low-flow seepage studies, may be considered partial records, but they are presented separately in this report. Locations of all complete-record and crest-stage partial-record stations for which data are given in this report are shown in figure 3.

Data Collection and Computation

The data obtained at a complete-record gaging station on a stream or canal consist of a continuous record of stage, individual measurements of discharge throughout a range of stages, and notations regarding factors that may affect the relation between stage and discharge. These data, together with supplemental information such as weather records are used to compute daily discharges. The data obtained at a complete-record gaging station on a lake or reservoir consist of a record of stage and of notations regarding factors that may affect the relationship between stage and lake content. These data are used with stage-area and stage-capacity curves or tables to compute water-surface areas and lake storage.

Continuous records of stage are obtained with analog recorders that trace continuous graphs of stage or with digital recorders that punch stage values on paper tapes at selected time intervals. Measurements of discharge are made with current meters using methods adopted by the U.S. Geological Survey as a result of experience accumulated since 1880. These methods are described in standard textbooks, in Water-Supply Paper 2175, and in U.S. Geological Survey Techniques of Water-Resources Investigations (**TWRI**'s), Book 3, Chapters A1 through A19 and Book 8, Chapters A2 and B2. The methods are consistent with the American Society for Testing and Materials (**ASTM**)standards and generally follow the standards of the International Organization for Standards (**ISO**).

In computing discharge records, results of individual measurements are plotted against the corresponding stages, and stage-discharge relation curves are then constructed. From these curves, rating tables indicating the approximate discharge for any stage within the range of the measurements are prepared. If it is necessary to define extremes of discharge outside the range of the current-meter measurements, the curves are extended using: (1) logarithmic plotting; (2) velocity-area studies; (3) results of indirect measurements of peak discharge, such as slope-area or contracted-opening measurements, and computations of flow over dams or weirs; or (4) step-backwater techniques.

Daily-mean discharges are computed by applying the daily mean stages (gage heights) to the stage-discharge curves or tables. 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 the individual discharge measurements and notes of the personnel making the measurements are applied to the gage heights before the discharges are determined from the curves or tables. This shifting-control method also is used if the stage-discharge relation is changed temporarily because of aquatic growth or debris on the control. For some stations, formation of ice in the winter may so obscure the stage-discharge relations that daily mean discharges must be estimated from other information such as temperature and precipitation records, notes of observations, and records for other stations in the same or nearby basins for comparable periods.

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

In computing records of lake or reservoir contents, it is necessary to have available curves or tables defining the relation of stage and content based on bathymetric surveys. The application of stage to the stage-content curves or tables gives the contents from which daily, monthly, or yearly changes are then determined. If the stage-content relation changes because of deposition of sediment in a lake or reservoir, periodic re-surveys may be necessary to redefine the relationship. Even when this is done, the contents computed may become increasingly inaccurate as the time lapsed since the last survey increases. Discharges over lake or reservoir spillways are computed from stage-discharge relations, similar to the methods by which other stream discharges are computed.

For some gaging stations, there are periods when no gage-height record is obtained, or the recorded gage height is so faulty that it cannot be used to compute daily discharge or contents. This happens when the recorder stops or otherwise fails to operate properly, intakes are plugged, the float is frozen in the well, or for various other reasons. For such periods, the daily discharges are estimated from the recorded range in stage, previous or following record, discharge measurements, weather records, and comparison with other station records from the same or nearby basins. Likewise, daily contents may be estimated from operator's logs, previous or following record, inflow-outflow studies, and other information. Information explaining how estimated daily-discharge values are identified in station records is included in the next two sections, **"Data Presentation"** (**REMARKS** paragraph) and **"Identifying Estimated Daily Discharge."**

Data Presentation

Streamflow data in this report are presented in a new format that is considerably different from the format in data reports prior to the 1991 water year. The major changes are that statistical characteristics of discharge now appear in tabular summaries following the water-year data table, and less information is provided in the text or station manuscript above the table. These changes represent the results of a pilot program to reformat the annual water-data report to meet current user needs and data preferences.

The records published for each continuous-record surface-water discharge station (gaging station) now consist of four parts, the manuscript or station description; the data table of daily-mean values of discharge for the current water year with summary data; a tabular statistical summary of monthly-mean flow data for a designated period, by water years; and a summary statistics table that includes statistical data of annual, daily, and instantaneous flows as well as data pertaining to annual runoff, 7-day low-flow minimums, and flow duration.

Station manuscript

The manuscript provides descriptive information under various headings such as station location, period of record, historical extremes outside the period of record, record accuracy, and other remarks pertinent to station operation and regulation. The following information, as appropriate, is provided with each continuous record of discharge or lake content. Comments which follow clarify information presented under the various headings of the station description.

LOCATION.--Information on locations is obtained from the most accurate maps available. The location of the gaging station in relation to the cultural and physical features in the vicinity and to the reference place mentioned in the station name is given. River mileages, given for only a few stations, were determined by methods given in **"River Mileage Measurement,"** Bulletin 14, Revision of October 1968, prepared by the Water Resources Council or were provided by the U.S. Army Corps of Engineers.

DRAINAGE AREA.--Drainage areas are measured using the most accurate maps available. Because the maps available vary from one drainage basin to another, the accuracy of drainage areas also varies. Drainage areas are updated as better maps become available.

PERIOD OF RECORD.--This indicates the period for which records have been published for the station or for an equivalent station. An equivalent station is one that was in operation at a time that the present station was not, and whose location was such that flow could reasonably be considered equivalent to flow at the present station.

REVISED RECORDS.--Because of new information, published records occasionally are found to be incorrect, and revisions are printed in later reports. Listed under this heading are all the reports in which revisions have been published for the station and the water years to which the revisions apply. If a revision did not include daily, monthly, or annual figures of discharge, that fact is noted after the year dates as follows: **"(M)"** means that only the instantaneous maximum discharge was revised; **"(m)"** that only the instantaneous minimum was revised; and **"(P)"** that only peak discharges were revised. If the drainage area has been revised, the report in which the most recently revised figure was first published is given.

GAGE.--The type of gage in current use, the datum of the current gage referred to National Geodetic Vertical Datum of 1929 (see Glossary), and a condensed history of the types, locations, and datums of previous gages are given under this heading.

REMARKS.--All periods of estimated daily-discharge record will either be identified by date in this paragraph of the station description for water-discharge stations or flagged in the daily-discharge table. (See next section, **"Identifying Estimated Daily Discharge"**). If a **REMARKS** paragraph is used to identify estimated record, the paragraph will begin with this information presented as the first entry. The paragraph is also used to present information relative to the accuracy of the records, to special methods of computation, and to conditions that affect natural flow at the station. In addition, information may be presented pertaining to average discharge data for the period of record, to extreme data for the period of record and the current year, and, possibly, to other pertinent items. For reservoir stations, information is given on the dam forming the reservoir, the capacity, outlet works and spillway, and purpose and use of the reservoir.

COOPERATION.--Records provided by a cooperating organization or obtained for the U.S. Geological Survey by a cooperating organization are identified here.

EXTREMES OUTSIDE PERIOD OF RECORD.--Included in this section is information concerning major floods or unusually low flows that occurred outside the stated period of record. The information may or may not have been obtained by the U.S. Geological Survey.

PEAK DISCHARGE(S) FOR CURRENT YEAR.--The maximum instantaneous discharge and any secondary peaks occurring during the current year are given. For stations meeting certain criteria, all peak discharges and stages occurring during the water year and greater than a selected base discharge are presented under this heading. The peaks greater than the base discharge, excluding the highest one, are referred to as secondary peaks. Peak discharges are not published for canals, ditches, drains, or streams for which the peaks are subject to substantial control by man. The time of occurrence for peaks is expressed in 24-hour local standard time. For example, 12:30 a.m. is 0030, and 1:30 p.m. is 1330.

REVISIONS.--If a critical error in published records is discovered, a revision is included in the first report published following discovery of the error.

Although rare, the records of a discontinued gaging station may occasionally need revision. Because there would be no current or, possibly, future station manuscript published for these stations to document the revision in a **"Revised Records"** entry, users of data for these stations who obtained the record from previously published data reports may wish to contact the District Office (address given on the back of the title page of this report) to determine if the published records were ever revised after the station was discontinued. If the data for a discontinued station were obtained by computer retrieval, however, the data would be current and there would be no need to check because any published revision of data is always accompanied by a revision of the corresponding data in computer storage.

Manuscript information for lake or reservoir stations differs from that for stream stations in the nature of the **"REMARKS"** and in the inclusion of a skeleton stage-capacity table when daily contents are given.

Headings for **AVERAGE DISCHARGE** and **EXTREMES FOR THE PERIOD OF RECORD** have been deleted and the information contained in these paragraphs is now presented in the tabular summaries following the discharge table or in the **REMARKS** paragraph, as appropriate. No changes have been made to the data presentation of lake contents.

Data table of daily-mean values

The daily table of discharge records for stream-gaging stations gives mean discharge for each day of the water year. In the monthly summary for the table, the line headed **"TOTAL"** gives the sum of the daily figures for each month, the line headed **"MEAN"** gives the average flow in cubic feet per second for the month, and the lines headed **"MAX"** and **"MIN"** give the maximum and minimum daily discharges, respectively, for each month. Discharge for the month also is usually expressed in cubic feet per second per square mile (line headed **"CFSM"**), or in inches (line headed **"IN."**), or in acre-feet (line headed **"AC-FT"**). Figures for cubic feet per second per square mile and runoff in inches or in acre-feet may be omitted if there is extensive regulation or diversion, or if the drainage area includes large non-contributing areas. At some stations, monthly and (or) yearly observed discharges are adjusted for reservoir storage or diversion, or diversion data or reservoir contents are given. These figures are identified by a symbol and corresponding footnote.

Statistics of monthly-mean data

A tabular summary of the mean (line headed **"MEAN"**), maximum (line headed **"MAX"**), and minimum (line headed **"MIN"**) of monthly-mean flows for each month for a designated period is provided below the mean values table. The water years of the first occurrence of the maximum and minimum monthly flows are provided immediately below those figures. The designated period is expressed as **"FOR WATER YEARS ____-____, BY WATER YEAR (WY),"** and lists the first and last water years of the range of years selected from the **PERIOD OF RECORD** paragraph in the station manuscript. It consists of all of the station record within the specified water years, inclusive, including complete months of record for partial water years, if any, and may coincide with the period of record for the station. The water years for which the statistics are computed are consecutive, unless a break in the station record is indicated in the manuscript.

Summary statistics

A table titled **"SUMMARY STATISTICS"** follows the statistics of monthly-mean data tabulation. This table consists of four columns, with the first column containing the line headings of the statistics being reported. The table provides a statistical summary of yearly, daily, and instantaneous flows, not only for the current water year but also for the previous calendar year and for a designated period, as appropriate. The designated period selected, **"WATER YEARS ____-____,"** will consist of all of the station record within the specified water years, inclusive, including complete months of record for partial water years, if any, and may coincide with the period of record for the station. The water years for which the statistics are computed are consecutive, unless a break in the station record is indicated in the manuscript. All of the calculations for the statistical characteristics designated **ANNUAL** (see line headings below), except for the **"ANNUAL 7-DAY MINIMUM"** statistic, are calculated for the designated period using complete water years. The other statistical characteristics may be calculated using partial water years.

The date or water year, as appropriate, of the first occurrence of each statistic reporting extreme values of discharge is provided adjacent to the statistic. Repeated occurrences may be noted in the **REMARKS** paragraph of the manuscript or in footnotes. Because the designated period may not be the same as in the station period of record published in the manuscript, occasionally the dates of occurrence listed for the daily and instantaneous extremes in the designated-period column may not be within the selected water years listed in the heading. When this occurs, it will be noted in the **REMARKS** paragraph or in footnotes. Selected streamflow-duration curve statistics and runoff data are also given. Runoff data may be omitted if there is extensive regulation or diversion of flow in the drainage area.

The following summary statistics data, as appropriate, are provided with each continuous record of discharge. Comments below clarify information presented under the various line headings of the summary statistics table.

ANNUAL TOTAL.--The sum of the daily-mean values of discharge for the year. At some stations, the annual total discharge is adjusted for reservoir storage or diversion. The adjusted figures are identified by a symbol and corresponding footnotes.

ANNUAL MEAN.--The arithmetic mean of the individual daily-mean discharges for the year noted or for the designated period. At some stations the yearly mean is adjusted for reservoir storage or diversion. The adjusted figures are identified by a symbol and corresponding footnotes.

HIGHEST ANNUAL MEAN.--The maximum annual-mean discharge occurring for the designated period.

LOWEST ANNUAL MEAN.--The minimum annual-mean discharge occurring for the designated period.

HIGHEST DAILY MEAN.--The maximum daily-mean discharge for the year or for the designated period.

LOWEST DAILY MEAN.--The minimum daily-mean discharge for the year or for the designated period.

ANNUAL 7-DAY MINIMUM.-- The lowest mean discharge for 7 consecutive days for a calendar year or a water year. (Note that most low-flow frequency analyses of annual 7-day minimum flows use a climatic year, April 1 to March 31). The date shown in the summary statistics table is the initial date of the 7-day period. (This value should not be confused with the 7-day 10-year low-flow statistic.)

INSTANTANEOUS PEAK FLOW.--The maximum instantaneous discharge occurring for the water year or for the designated period.

INSTANTANEOUS PEAK STAGE.--The maximum instantaneous stage occurring for the water year or for the designated period. If the dates of occurrence for the instantaneous peak flow and instantaneous peak stage differ, the **REMARKS** paragraph in the manuscript or a footnote may be used to provide further information.

INSTANTANEOUS LOW FLOW.--The minimum instantaneous discharge occurring for the water year or for the designated period.

ANNUAL RUNOFF.--Indicates the total quantity of water in runoff for a drainage area for the year. Data reports may use any of the following units of measurement in presenting annual runoff data:

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

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 the runoff is distributed uniformly in time and area.

Inches (IN) indicates the depth to which the drainage area would be covered if all of the runoff for a given time period were uniformly distributed on it.

10 PERCENT EXCEEDS.--The discharge that has been exceeded 10 percent of the time for the designated period.

50 PERCENT EXCEEDS.--The discharge that has been exceeded 50 percent of the time for the designated period.

90 PERCENT EXCEEDS.--The discharge that has been exceeded 90 percent of the time for the designated period.

Data collected at partial-record stations follow the information for continuous-record sites. Data for partial-record discharge stations are presented in two tables. The first is a table of annual maximum stage and discharge at crest-stage stations, and the second is a table of discharge measurements at low-flow partial-record stations. The tables of partial-record stations are followed by a listing of discharge measurements made at sites other than continuous-record or partial-record stations. These measurements are generally made during times of drought or flood to give better areal coverage of those events. These measurements and others collected for some special reasons are called measurements at miscellaneous sites.

Identifying Estimated Daily Discharge

Estimated daily-discharge values published in the water-discharge tables of annual State data reports are identified either by flagging individual daily values with the letter symbol **"e"** and printing a table footnote, **"e Estimated,"** or by listing the dates of the estimated record in the **REMARKS** paragraph of the station description.

Accuracy of the Records

The accuracy of streamflow records 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 measurements of stage, measurements of discharge, and interpretation of records.

The accuracy attributed to the records is indicated under **"REMARKS."** **"Excellent"** means that about 95 percent of the daily discharges are within 5 percent of their true values; **"good,"** within 10 percent; and **"fair,"** within 15 percent. Records that do not meet the criteria mentioned are rated **"poor."** Different accuracies may be attributed to different parts of a given record.

Daily mean discharges in this report are given to the nearest hundredth of a cubic foot per second (ft^3/s) for values less than 1 ft^3/s; to the nearest tenth between 1.0 and 10 ft^3/s; to whole numbers between 10 and 1,000 ft^3/s; and to 3 significant figures for more than 1,000 ft^3/s. The number of significant figures used is based solely on the magnitude of the discharge value. The same rounding rules apply to discharges listed for partial-record stations and miscellaneous sites.

Discharge at many stations, as indicated by the monthly mean, may not reflect natural runoff due to the effects of diversion, 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 affected by use and control. Evaporation from a reservoir is not included in the adjustments for changes in reservoir contents, unless it is so stated. Even at those stations where adjustments are made, large errors in computed runoff may occur if adjustments or losses are large when compared to the observed discharge.

Other Records Available

Information used in the preparation of the records in this publication, such as discharge-measurement notes, gage-height records, temperature measurements, and rating tables is on file in the Maryland and Delaware offices of the MD-DE-DC District. In addition, most of the daily-mean discharges are in computer-readable form and have been analyzed statistically. Information on the availability of the unpublished information or on the results of statistical analyses of the published records may be obtained from the offices whose addresses are given on the back of the title page of this report.

Records of Surface-Water Quality

Records of surface-water quality ordinarily are obtained at or near stream-gaging stations because interpretation of records of surface-water quality nearly always requires corresponding discharge data. Records of surface-water quality in this report may involve a variety of types of data and measurement frequencies.

Classification of records

Water-quality data for surface-water sites are grouped into one of three classifications. A **continuing-record station** is a site where data are collected on a regularly scheduled basis. Frequency may be once or more times daily, weekly, monthly, or quarterly. A **partial-record station** is a site where limited water-quality data are collected systematically over a period of years. Frequency of sampling is usually less than quarterly. A **miscellaneous** sampling site is a location other than a continuing or partial-record station where random samples are collected to give better areal coverage to define water-quality conditions in the river basin.

A careful distinction needs to be made between **"continuing records,"** as used in this report, and **"continuous recordings,"** which refers to a continuous graph or a series of discrete values punched at short intervals on a paper tape. Some records of water quality, such as temperature and specific conductance, may be obtained through continuous recordings; however, because of costs, most data are obtained only monthly or less frequently. Locations of stations for which records on the quality of surface water appear in this report are shown in figure 3.

Arrangement of Records

Water-quality records collected at a surface-water daily record station are published immediately following that record, regardless of the frequency of sample collection. Station number and name are the same for both records. Where a surface-water daily record station is not available, or where the water quality differs significantly from that of the nearby surface-water station, the continuing water-quality record is published with its own station number and name in the regular downstream-order sequence. Water-quality data for partial-record stations and for miscellaneous sampling sites appear in separate tables following the table of discharge measurements at miscellaneous sites.

On-Site Measurements and Sample Collection

In obtaining water-quality data, a major concern is to insure that the data obtained represent the in situ quality of the water. For this reason, certain measurements, such as water temperature, pH, and dissolved oxygen, need to be made on-site when the samples are taken. To assure that measurements made in the laboratory also represent the in situ water, carefully prescribed procedures need to be followed in collecting the samples, in treating the samples to prevent changes in quality pending analysis, and in shipping the samples to the laboratory. Procedures for on-site measurements and for collecting, treating, and shipping samples are given in publications on **"Techniques of Water-Resources Investigations,"** Book 1, Chap. D2; Book 3, Chap. C2; Book 5, Chap. A1, A3, and A4. These references are listed under **"PUBLICATIONS ON TECHNIQUES OF WATER-RESOURCES INVESTIGATIONS"** (TWRI) section of this report. These methods are consistent with ASTM standards and generally follow ISO standards. Also, detailed information on collecting, treating, and shipping samples may be obtained from the U.S. Geological Survey Maryland and Delaware offices.

One sample can adequately define the water quality at a given time if the mixture of solutes throughout the stream cross section is homogeneous. However, the concentration of solutes at different locations in the cross section may vary widely with different rates of water discharge, depending on the source of material and the turbulence and mixing of the stream. Some streams must be sampled through several vertical sections to obtain a representative sample needed for an accurate mean concentration and for use in calculating load. All samples obtained for the National Stream-Quality Accounting Network (see definitions) are obtained from at least several verticals. Whether samples are obtained from the centroid of flow or from several verticals depends on flow conditions and other factors which must be evaluated by the collector.

Chemical-quality data published in this report are considered to be the most representative values available for the stations listed. The values reported represent water-quality conditions at the time of sampling as much as possible, consistent with available sampling techniques and methods of analysis. In the rare case where an apparent inconsistency exists between a reported pH value and the relative abundance of carbon dioxide species (carbonate and bicarbonate), the inconsistency is the result of a slight uptake of carbon dioxide from the air by the sample between measurement of pH in the field and determination of carbonate and bicarbonate in the laboratory.

For chemical-quality stations equipped with digital monitors, the records consist of daily maximum, minimum, and mean values for each constituent measured, and are based upon hourly punches beginning at 0100 hours and ending at 2400 hours for the day of record. More detailed records (hourly values) may be obtained from the U.S. Geological Survey Maryland office whose address is given on the back of the title page of this report.

Water temperature

Water temperatures are measured at most of the water-quality stations. In addition, water temperatures are taken at time of discharge measurements for water-discharge stations. For stations where water temperatures are taken manually once or twice daily, the water temperatures are taken at about the same time each day. Large streams have a small diurnal temperature change; shallow streams may have a daily range of several degrees and may closely follow the changes in air temperature. Some streams may be affected by waste-heat discharges.

At stations where recording instruments are used, either mean temperatures or maximum and minimum temperatures for each day are published. Water temperatures measured at the time of water-discharge measurements are on file in the Maryland and Delaware Offices of the U.S. Geological Survey.

Sediment

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

During periods of rapidly changing flow or rapidly changing concentration, samples may have been collected more frequently (twice daily, or in some instances, hourly). The published sediment discharges for days of rapidly changing flow or concentration were computed by the subdivided-day method (time-discharge weighted average). Therefore, for those days when the published sediment discharge value differs from the value computed as the product of discharge times mean concentration times 0.0027, the reader can assume that the sediment discharge for that day was computed by the subdivided-day method. For periods when no samples were collected, daily discharges of suspended sediment were estimated on the basis of water discharge, sediment concentrations observed immediately before and after these periods, and suspended-sediment loads for other periods of similar discharge. Methods used in the computation of sediment records are descibed in TWRI Book 3, Chapters C1 and C3. These methods are consistent with ASTM standards and generally follow ISO standards.

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

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

Laboratory Measurements

Sediment samples, samples for biochemical-oxygen demand (**BOD**), samples for indicator bacteria, and daily samples for specific conductance are analyzed locally. All other samples are analyzed in the U.S. Geological Survey laboratory in Arvada, Colorado. Methods used to analyze sediment samples and to compute sediment records are described in TWRI Book 5, Chapter C1. Methods used by the U.S. Geological Survey laboratories are given in TWRI Book 1, Chapter D2; Book 3, Chapter C2; and Book 5, Chapters A1, A3, A4, and A5. These methods are consistent with ASTM standards and generally follow ISO standards.

Data Presentation

For continuing-record stations, information pertinent to the history of station operation is provided in descriptive headings preceding the tabular data. These descriptive headings give details regarding location, drainage area, period of record, type of data available, instrumentation, general remarks, cooperation, and extremes for parameters that are currently measured daily. Tables of chemical, physical, biological, radiochemical data, and so forth, obtained at a frequency less than daily are presented first. Tables of **"daily values"** of specific conductance, pH, water temperature, dissolved oxygen, and suspended sediment then follow in sequence.

In the descriptive headings, if the location is identical to that of the discharge-gaging station, neither the **LOCATION** nor the **DRAINAGE AREA** statements are repeated. The following information, as appropriate, is provided with each continuous-record station. Comments below describe information presented under the various headings of the station description.

LOCATION.--See Data Presentation under **"Records of Stage and Water Discharge;"** same comments apply.

DRAINAGE AREA.--See Data Presentation under **"Records of Stage and Water Discharge;"** same comments apply.

PERIOD OF RECORD.--This indicates the periods for which there are published water-quality records for the station. The periods are shown separately for records of parameters measured daily or continuously and those measured less than daily. For those measured daily or continuously, periods of record are given for the parameters individually.

INSTRUMENTATION.--Information on instrumentation is given only if a water-quality monitor temperature record, sediment pumping sampler, or other sampling device is in operation at a station.

REMARKS.--Remarks provide added information pertinent to the collection, analysis, or computation of the records.

COOPERATION.--Records provided by a cooperating organization or obtained for the U.S. Geological Survey by a cooperating organization are identified here.

EXTREMES.--Maximums and minimums are given only for parameters measured daily or more frequently. None are given for parameters measured weekly or less frequently, because the true maximums or minimums may not have been sampled. Extremes, when given, are provided for both the period of record and for the current water year.

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

The surface-water-quality records for partial-record stations and miscellaneous sampling sites are published in separate tables following the table of discharge measurements at miscellaneous sites. No descriptive statements are given for these records. Each station is published with its own station number and name in the regular downstream-order sequence.

Remark Codes

The following remark codes may appear with the water-quality data in this report:

PRINTED OUTPUT	REMARK
E	Estimated value
>	Actual value is known to be greater than the value shown
<	Actual value is known to be less than the value shown
K	Results based on colony count outside the acceptance range (non-ideal colony count)
L	Biological organism count less than 0.5 percent (organism may be observed rather than counted)
D	Biological organism count equal to or greater than 15 percent (dominant)
&	Biological organism estimated as dominant
V	Analyte was detected in both the environmental sample and the associated blank.

WATER-QUALITY CONTROL DATA

Data generated from quality-control (QC) samples are a requisite for evaluating the quality of the sampling and processing techniques as well as data from the actual samples themselves. Without QC data, environmental sample data cannot be adequately interpreted because the errors associated with the sample data are unknown. The various types of QC samples collected by this District are described in the following section. Procedures have been established for the storage of water-quality-control data within the U.S. Geological Survey. These procedures allow for storage of all derived QC data and are identified so that they can be related to corresponding environmental samples.

Blank Samples

Blank samples are collected and analyzed to ensure that environmental samples have not been contaminated by the overall data-collection process. The blank solution used to develop specific types of blank samples is a solution that is free of the analytes of interest. Any measured value signal in a blank sample for an analyte (a specific component measured in a chemical analysis) that was absent in the blank solution is believed to be due to contamination. There are many types of blank samples possible, each designed to segregate a different part of the overall data-collection process. The types of blank samples collected in this District are:

Field Blank - a blank solution that is subjected to all aspects of sample collection, field-processing preservation, transportation, and laboratory handling as an environmental sample.

Trip blank - a blank solution that is processed through the same type of bottle used for an environmental sample and kept with the set of sample bottles before and after sample collection.

Equipment blank -a blank solution that is processed through all equipment used for collecting and processing an environmental sample (similar to a field blank, but normally done in the more controlled conditions of the office.)

Sampler blank - a blank solution that is poured or pumped through the same field sampler used for collecting an environmental sample.

Filter blank - a blank solution that is filtered in the same manner and through the same filter apparatus used for an environmental sample.

Splitter blank - a blank solution that is mixed and separated using a field splitter in the same manner and through the same apparatus used for an environmental sample.

Preservation blank - a blank solution that is treated with the sampler preservatives used for an environmental sample.

Reference Samples

A Reference sample is a solution or material prepared by a laboratory whose composition is certified for one or more properties so that it can be used to assess a measurement method. Samples of reference material are submitted for analysis to insure that an analytical method is accurate for the known properties of the reference material. Generally, the selected reference material properties are similar to the environmental sample properties.

Replicate Samples

Replicate samples are a set of environmental samples collected in a manner so that the samples are considered to be essentially identical in composition. Replicate is the general case for which a duplicate is the special case consisting of two samples. Replicate samples are collected and analyzed to establish the amount of variability in the data contributed by some part of the collection and analytical process. There are many types of replicate samples possible, each of which may yield slightly different results in a dynamic hydrologic setting, such as a flowing stream. The types of replicate samples collected in this District are collected one after the other, typically over a short time.

Split sample - a type of replicate sample in which a sample is split into subsamples contemporaneous in time and space.

Spike Samples

Spike samples are samples to which known quanities of a solution with one or more well-established analyte concentrations have been added. These samples are analyzed to determine the extent of matrix interference or degradation on the analyte concentration during sample processing and analysis

ACCESS TO USGS DATA

The USGS provides near real-time stage and discharge data for many of the gaging stations equipped with the necessary telemetry and historic daily-mean and peak-flow discharge data for the most current or discontinued gaging stations on the world wide web (**WWW**). These data may be accessed at

http://water.usgs.gov/

Some water-quality and ground-water data also are available on the WWW. In addition, data can be provided in various machine-readable formats on magnetic tape or 3-1/2 inch floppy disk. Information about the availability of specific types of data or products, and user charges, can be obtained locally from each of the Water Resources Division District Offices (See address for MD-DE-DC District office on back of the title page).

DEFINITION OF TERMS

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

Acid neutralizing capacity **(ANC)** is the equivalent sum of all base-producing materials, solutes plus particulates, in an aqueous system that can be titrated with acid to an equivalence point.

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

Adenosine triphosphate **(ATP)** is an organic, phosphate-rich, compound important in the transfer of energy in organisms. Its central role in living cells makes it an excellent indicator of the presence of living material in water. A measure of **ATP** therefore provides a sensitive and rapid estimate of biomass. **ATP** is reported in micrograms per liter of the original water sample.

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

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

Alkalinity is the capacity of solutes in an aqueous system to neutralize acid.

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

Total coliform bacteria are a particular group of bacteria that are used as indicators of possible sewage pollution. This group includes coliforms that inhabit the intestine of warm-blooded animals and those that inhabit soils. They are characterized as aerobic or facultative anaerobic, gram-negative, nonspore-forming, rod-shaped bacteria which ferment lactose with gas formation within 48 hours at 35°C. In the laboratory, these bacteria are defined as all the organisms that produce colonies with a golden-green metallic sheen within 24 hours when incubated at 35°C plus or minus 1.0°C on M-Endo medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 milliliters (mL) of sample.

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

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

Enterococcus bacteria are commonly found in the feces of humans and other warm-blooded animals. Although some strains are ubiquitous and not related to fecal pollution, the presence of enterococci in water is an indication of fecal pollution and the possible presence of enteric pathogens. Enterococcus bacteria are those bacteria which produce pink to red colonies or reddish-brown precipitate after incubation at 41°C on mE agar and subsequent transfer to EIA medium. Enterococci include Streptoccus feacalis, Streptoccus feacium, Streptoccus avium, and their variants.

Bedload is the sediment which moves along in essentially continuous contact with the streambed by rolling, sliding, and making brief excursions into the flow a few diameters above the bed.

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

Benthic invertebrates are invertebrate animals inhabiting the bottoms of lakes, streams, and other water bodies. They are useful as indicators of water quality.

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

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

Ash mass is the mass or amount of residue present after the residue from the dry mass determination has been ashed in a muffle furnace at a temperature of 500°C for 1 hour. The ash mass values of zooplankton and phytoplankton are expressed in grams per cubic meter (g/m^3), and periphyton and benthic organisms in grams per square mile (g/mi^2).

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

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

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

Bottom material: See Bed material.

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

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

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

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

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

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

Continuing-record station is a specified site which meeets one or all conditions listed:

1. When chemical samples are collected daily or monthly for 10 or more months during the water year.

2. When water temperature records include observations taken one or more times daily.

3. When sediment discharge records include periods for which sediment loads are computed and are considered to be representative of the runoff for the water year.

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

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

Cubic foot per second (FT3/S, ft^3/s) is the rate of discharge representing a volume of 1 cubic foot passing a given point during 1 second and is equivalent to 7.48 gallons per second or 448.8 gallons per minute.

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

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

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

Annual 7-day minimum is the lowest mean discharge for 7 consecutive days for a calendar year or a water year. Note that most low-frequency analyses of annual 7-day minimum flows use a climatic year (April 1-March 31). The date shown in the summary statistics table is the initial date of the 7-day period. (This value should not be confused with the 7-day 10-year low-flow statistic.)

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

Dissolved-solids concentration of water is determined either analytically by the **"residue-on-evaporation"** method, or mathematically by totaling the concentrations of individual constituents reported in a comprehensive chemical analysis. During the analytical determination of dissolved solids, the bicarbonate (generally a major dissolved component of water) is converted to carbonate. Therefore, in the mathematical calculation of dissolved-solids concentration, the bicarbonate value, in milligrams per liter, is multiplied by 0.492 to reflect the change.

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

Drainage basin is a part of the surface of the earth that is occupied by a drainage system, which consists of a surface stream or a body of impounded surface water together with all tributary surface streams and bodies of impounded surface water.

Extractable organic halides (EOX) are organic compounds which contain halogen atoms such as chlorine. These organic compounds are semi-volatile and extractable by ethyl acetate from air-dried stream-bottom sediments. The ethyl acetate extract is combusted, and the concentration is determined by microcoulometric determination of the halides formed. The concentration is reported as micrograms of chlorine per gram of the dry weight of the stream-bottom sediments.

Hardness of water is a physical-chemical characteristic that is commonly recognized by the increased quantity of soap required to produce lather. It is computed as the sum of equivalents of polyvalent cations and is expressed as the equivalent concentration of calcium carbonate ($CaCO_3$).

High tide is the maximum height reached by each rising tide.

Hydrologic Bench-Mark Network is a network of 50 sites in small drainage basins around the country whose purpose is to provide consistent data on the hydrology, including water quality, and related factors in representative undeveloped watersheds nationwide, and to provide analyses on a continuing basis to compare and contrast conditions observed in basins more obviously affected by human activities.

Hydrologic unit is a geographic area representing part or all of a surface drainage basin or distinct hydrologic feature as delineated by the Office of USGS Water Data Coordination on the State Hydrologic Unit Maps; each hydrologic unit is identified by an 8-digit number.

Low tide is the minimum height reached by each falling tide.

Mean high tide is the average of all high tides over a specified period.

Mean low tide is the average of all low tides over a specified period.

Mean water level is the average of all tides over a specified period.

Membrane filter is a thin microporous material of specific pore size used to filter bacteria, algae, and other very small particles from water.

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

Methylene blue active substances (MBAS) are apparent detergents. The determination depends on the formation of a blue color when methylene blue dye reacts with synthetic anionic detergent compounds.

Micrograms per gram (μg/g) is a unit expressing the concentration of a chemical constituent as the mass (micrograms) of the element per unit mass (gram) of material analyzed.

Micrograms per liter (UG/L, μg/L) is a unit expressing the concentration of chemical constituents in solution as mass (micrograms) of solute per unit volume (liter) of water. One thousand micrograms per liter is equivalent to one milligram per liter.

Microsiemens per centimeter (**μS/cm, US/CM**) is a unit expressing the amount of electrical conductivity of a solution as measured between opposite faces of a centimeter cube of solution at a specified temperature. Siemens is the International System of units nomenclature. It is synonymous with mhos and is the reciprocal of resistance in ohms.

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

Most probable number (MPN) is an index of the number of coliform bacteria that, more probably than any other number, would give the results shown by the labratory examination; it is not an actual enumeration. It is determined from the distribution of gas-positive cultures among multiple inoculated tubes.

Multiple-plate samplers are artificial substrates of known surface area used for obtaining benthic-invertebrate samples. They consist of a series of spaced, hardboard plates on an eyebolt.

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

National Stream-Quality Accounting Network (NASQAN) monitors the water quality of large rivers within four of the Nation’s largest river basins--the Mississippi, Columbia, Colorado, and Rio Grande. The network consists of 39 stations. Samples are collected with sufficient frequency so that the flux of a wide range of constituents can be estimated. The objective of NASQAN is to characterize the water quality of these large rivers by measuring concentration and mass transport of a wide range of dissolved and suspended constituents, including nutrients, major ions, dissolved and sediment-bound heavy metals, common pesticides, and inorganic and organic forms of carbon. This information will be used (1) to describe the long-term trends and changes in concentration and transport of these constituents; (2) to test findings of the National Water-Quality (NAWQA) Program; (3) to characterize processes unique to large-river systems such as storage and re-mobilization of sediments and associated contaminants; and (4) to refine existing estimates of off-continent transport of water, sediment, and chemicals for assessing human effects on the world’s oceans and for determining global cycles of carbon, nutrients, and other chemicals.

The **National Atmospheric Deposition Program/National Trends Network (NAPD/NTN)** provides continuous measurement and assessment of the chemical climate of precipitation throughout the United States. As the lead Feredal agency, the USGS works together with over 100 organizations to accomplish the following objectives: (1) Provide a long-term, spatial and temporal record of atmospheric deposition generated from a network of 191 precipitation-chemistry monitoring sites; (2) Provide the mechanism to evaluate the effectiveness of the significant reduction in SO2 emmissions that began in 1995 as implementation of the Clean Air Act Admendments (CAAA) occurred; and (3) Provide the scientific basis and nationwide evaluation mechanism for implementation of the Phase II CAAA emission reductions for SO2 and NOx scheduled to begin in 2000.

The **National Water-Quality Assessment (NAWQA) Program** of the U.S. Geological Survey is a long-term program with goals to describe the status and trends of water-quality conditions for a large, diverse, and geographically distributed part of the Nation's ground- and surface-water resources; provide an improved understanding of the primary natural and human factors affecting these observed conditions and trends; and provide information that supports development and evaluation of management, regulatory, and monitoring decisions by other agencies.

Organism is any living entity.

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

Organism count/volume refers to the number of organisms collected and enumerated in a sample and adjusted to the number per sample volume, usually milliliter (mL) or liter (L). Numbers of planktonic organisms can be expressed in these terms.

Total organism count is the total number of organisms collected and enumerated in any particular sample.

Parameter Code is a 5-digit number used in the U.S. Geological Survey computerized data system, National Water Information Ststem **(**NWIS**)**, to uniquely identify a specific constituent. The codes used in **NWIS** are the same as those used in the U.S. Environmental Protection Agency data system, **STORET**. The Environmental Protection Agency assigns and approves all requests for new codes.

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

Particle size is the diameter, in millimeters (mm), of a particle determined by either sieve or sedimentation methods. Sedimentation methods (pipet, bottom-withdrawal tube, visual-accumulation tube) determine the fall diameter of particles in either distilled water (chemically dispersed) or in native water (the river water at the time and point of sampling).

Particle-size classification used in this report agrees with the recommendation made by the American Geophysical Union Subcommittee on Sediment Terminology. The classification is as follows:

Classification	Size (mm)	Method of analysis
Clay..........	0.00024 - 0.004	Sedimentation
Silt..........	.004 - .062	Sedimentation
Sand..........	.062 - 2.0	Sedimentation or sieve
Gravel........	2.0 - 64.0	Sieve

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

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

Periphyton is the assemblage of micro-organisms attached to and living upon submerged solid surfaces. While primarily consisting of algae, they also include bacteria, fungi, protozoa, rotifers, and other small organisms.

Pesticides are chemical compounds used to control undesirable organisms. Major categories of pesticides include insecticides, miticides, fungicides, herbicides, and rodenticides.

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

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

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

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

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

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

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

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

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

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

Milligrams of oxygen per area or volume per unit time [mg O_2/(m^2.time)] for periphyton and macrophytes and [mg O_2 /(m^3.time)] for phytoplankton are the units for expressing primary productivity. They define production and respiration rates as estimated from changes in the measured dissolved-oxygen concentration. The oxygen light- and dark- bottle method is preferred if the rate of primary production is sufficient for accurate measurements to be made within 24 hours. Unit time may be either the hour or day, depending on the incubation period.

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

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

Return period is the average time interval between occurrences of a hydrologic event of a given or greater magnitude, usually expressed in years. May also be called recurrence interval.

River mile as used herein, is the distance above the mouth of Chesapeake Bay, Potomac River, or confluence of the North and South Branches of the Potomac River, measured along the center line of the navigation channel or the main stem of the Potomac River, Shenandoah River, or North or South Branch of the Potomac River. River mile data were furnished by the U.S. Army Corps of Engineers.

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

Sea level: In this report **"sea level"** refers to the National Geodetic Datum of 1929 (NGVD of 1929)--a geodetic datum derived from a general adjustment of the first-order level nets of both the United States and Canada, formerly called Sea Level Datum of 1929.

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

Bed load is the sediment that is transported in a stream by rolling, sliding, or skipping along the bed and very close to it. In this report, bed load is considered to consist of particles in transit within 0.25 feet of the streambed.

Bed load discharge **(tons per day)** is the quantity of bed load measured by dry weight that moves past a section as bed load in a given time.

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

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

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

Suspended-sediment discharge **(tons/day)** is the rate at which dry mass of sediment passes a section of a stream or is the quantity of sediment, as measured by dry mass or volume, that passes a section in a given time. It is calculated in units of tons per day as follows: concentration (mg/L) x discharge (ft^3/s) x 0.0027.

Suspended-sediment load is a general term that refers to material in suspension. It is not synonymous with either discharge or concentration.

Suspended total residue at 105°C concentaration is the concentration of suspended sediment in the sampled zone expressed as milligrams of dry sediment per liter of water-sediment mixture (mg/L). A small aliquot of sample is used for the analysis.

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

Total sediment load or total load is a term which refers to the total sediment (bed load plus suspended-sediment load) that is in transport. It is not synonymous with total-sediment discharge.

Sodium-adsorption-ratio **(SAR)** is the expression of relative activity of sodium ions in exchange reactions within soil and is an index of sodium or alkali hazard to the soil. Waters range in respect to sodium hazard from those which can be used for irrigation on almost all soils to those which are generally unsatisfactory for irrigation.

Solute is any substance that is dissolved in water.

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

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

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

Substrate is the physical surface upon which an organism lives.

Natural substrate refers to any naturally occurring emersed or submersed solid surface, such as a rock or tree, upon which an organism lives.

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

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

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

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

Suspended, recoverable is the amount of a given constituent that is in solution after the part of a representative water-suspended sediment sample that is retained on a 0.45 µm membrane filter has been digested by a method (usually using a dilute acid solution) that results in dissolution of only readily soluble substances. Complete dissolution of all the particulate matter is not achieved by the digestion treatment and thus the determination represents something less than the **"total"** amount (that is, less than 95 percent) of the constituent present in the sample. To achieve comparability of analytical data, equivalent digestion procedures are required of all laboratories performing such analyses because different digestion procedures are likely to produce different analytical results.

Determinations of **"suspended, recoverable"** constituents are made either by analyzing portions of the material collected on the filter or, more commonly, by difference, based on determinations of (1) **dissolved** and (2) **total recoverable** concentrations of the constituent.

Suspended, total is the total amount of a given constituent in the part of a representative water-suspended sediment sample that is retained on a 0.45 µm membrane filter. This term is used only when the analytical procedure assures measurement of at least 95 percent of the constituent determined. A knowledge of the expected form of the constituent in the sample, as well as the analytical methodology used, is required to determine when the results should be reported as **"suspended, total."**

Determinations of **"suspended, total"** constituents are made either by analyzing portions of the material collected on the filter or, more commonly, by difference, based on determinations of (1) **dissolved** and (2) **total** concentrations of the constituent.

Synoptic Studies are short-term investigations of specific water-quality conditions during selected seasonal or hydrologic periods to provide improved spatial resolution of critical water-quality conditions. For the period and conditions sampled, they assess the spatial distribution of selected water-quality conditions in relation to causative factors, such as land use and contaminant sources.

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

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

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

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

Tons per day (T/DAY) is the quantity of a substance in solution or suspension that passes a stream section during a 24-hour period.

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

Total discharge is the total quantity of any individual constituent, as measured by dry mass or volume, that passes through a stream cross section per unit of time. This term needs to be qualified, such as **"total sediment discharge," "total chloride discharge,"** and so on.

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

Tritium Network is a network of stations which has been established to provide baseline information on the occurrence of tritium in the Nation's surface waters. In addition to the surface-water stations in the network, tritium data are also obtained at a number of precipitation stations. The purpose of the precipitation stations is to provide an estimate sufficient for hydrologic studies of the tritium input to the United States.

Volatile Organic Compounds (VOCs) are organic compounds that can be isolated from the water phase of a sample by purging the water sample with inert gas, such as helium, and subsequently analyzed by gas chromatography. Many VOCs are manmade chemicals that are used and produced in the manufacture of paints, adhesives, petroleum products, pharmaceuticals, and refrigerants. They are often components of fuels, solvents, hydraulic fluids, paint thinners, and dry cleaning agents commonly used in urban settings. VOC contamination of drinking-water supplies is a human health concern because many are toxic and are known or suspected human carcinogens (U.S. Enviromental Protection Agency, 1996).

Water year in U.S. Geological Survey reports dealing with surface-water supply is the 12-month period October 1 through September 30. The water year is designated by the calendar year in which it ends and which includes 9 of the 12 months. Thus, the year ending September 30, 1985, is called the "1985 water year."

WDR is used as an abbreviation for **"Water-Data Report"** in the **REVISED RECORDS** paragraph to refer to State annual hydrologic-data reports (WRD was used as an abbreviation for **"Water-Resources Data"** in reports published prior to 1976).

Weighted average is used in this report to indicate discharge-weighted average. It is computed by multiplying the discharge for a sampling period by the concentrations of individual constituents for the corresponding period and dividing the sum of the products by the sum of the discharges. A discharge-weighted average approximates the composition of water that would be found in a reservoir containing all the water passing a given location during the water year after thorough mixing in the reservoir.

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

TECHNIQUES OF WATER-RESOURCES INVESTIGATIONS OF THE U.S. GEOLOGICAL SURVEY

The U.S.G.S. publishes a series of manuals describing procedures for planning and conducting specialized work in water-resources investigations. The material is grouped under major subject headings called books and is further divided into sections and chapters. For example, Section A of Book 3 (Applications of Hydraulics) pertains to surface water. The chapter, the unit of publication, is limited to a narrow field of subject matter. This format permits flexibility in revision and publication as the need arises.

The reports listed below are for sale by the U.S.G.S., Information Services, Box 25286, Federal Center, Denver, Colorado 80225 (authorized agent of the Superintendent of Documents, Government Printing Office). Prepayment is required. Remittance should be sent by check or money order payable to the **"U.S. Geological Survey."** Prices are not included because they are subject to change. Current prices can be obtained by writing to the above address. When ordering or inquiring about prices for any of these publications, please give the title, book number, chapter number, and mention the **"U.S. Geological Survey Techniques of Water-Resources Investigations."**

Book 1. Collection of Water Data by Direct Measurement

Section D. Water Quality

1-D1. **Water temperature--influential factors, field measurements, and data presentation**, by H. H. Stevens, Jr., J. F. Ficke, and G. F. Smoot: USGS--TWRI Book 1, Chapter D1. 1975. 65 pages.

1-D2. **Guidelines for collection and field analysis of ground-water samples for selected unstable constituents**, by W. W. Wood: USGS--TWRI Book 1, Chapter D2. 1976. 24 pages.

Book 2. Collection of Environmental Data

Section D. Surface Geophysical Methods

2-D1. **Application of surface geophysics to ground-water investigations**, by A. A. R. Zohdy, G. P. Eaton, and D. R. Mabey: USGS--TWRI Book 2, Chapter D1. 1974. 116 pages.

2-D2. **Application of seismic-refraction techniques to hydrologic studies**, by F. P. Haeni: USGS--TWRI Book 2, Chapter D2. 1988. 86 pages.

Section E. Subsurface Geophysical Methods

2-E1. **Application of borehole geophysics to water-resources investigations**, by W. S. Keys and L. M. MacCary: USGS--TWRI Book 2, Chapter E1. 1971. 126 pages.

2-E2. **Borehole geopphysics applied to ground-water investigations**, by W. S. Keys: USGS--TWRI Book 2, Chapter E2. 1990. 150 pages.

Section F. Drilling and Sample Methods

2-F1. **Application of drilling, coring, and sampling techniques to test holes and wells**, by Eugene Shuter and W. E. Teasdale: USGS-TWRI Book 2, Chapter F1. 1989. 97 pages.

Book 3. Application of Hydraulics

Section A. Surface-Water Techniques

3-A1. **General field and office procedures for indirect discharge measurements**, by M. A. Benson and Tate Dalrymple: USGS--TWRI Book 3, Chapter A1. 1967. 30 pages.

3-A2. **Measurement of peak discharge by the slope-area method**, by Tate Dalrymple and M. A. Benson: USGS--TWRI Book 3, Chapter A2. 1967. 12 pages.

3-A3. **Measurement of peak discharge at culverts by indirect methods**, by G. L. Bodhaine: USGS--TWRI Book 3, Chapter A3. 1968. 60 pages.

3-A4. **Measurement of peak discharge at width contractions by indirect methods**, by H. F. Matthai: USGS--TWRI Book 3, Chapter A4. 1967. 44 pages.

3-A5. **Measurement of peak discharge at dams by indirect methods**, by Harry Hulsing: USGS--TWRI Book 3, Chapter A5. 1967. 29 pages.

3-A6. **General procedure for gaging streams**, by R. W. Carter and Jacob Dividian: USGS--TWRI Book 3, Chapter A6. 1968. 13 pages.

3-A7. **Stage measurements at gaging stations**, T. J. Buchanan and W. P. Somers: USGS--TWRI Book 3, Chapter A7. 1968. 28 pages.

3-A8. **Discharge measurements at gaging stations**, by T. J. Buchanan and W. P. Somers: USGS--TWRI Book 3, Chapter A8. 1969. 65 pages.

3-A9. **Measurement of time of travel and dispersion in streams by dye tracing**, by F. A. Kilpatrick, and J. F. Wilson, Jr.: USGS--TWRI Book 3, Chapter A9. 1989. 27 pages.

3-A10. **Discharge ratings at gaging stations**, E. J. Kennedy: USGS--TWRI Book 3, Chapter A10. 1984. 59 pages.

3-A11. **Measurement of discharge by moving-boat method**, by G. F. Smoot and C. E. Novak: USGS--TWRI Book 3, Chapter A11. 1969. 22 pages.

TECHNIQUES OF WATER-RESOURCES INVESTIGATIONS OF THE U.S. GEOLOGICAL SURVEY

Book 3. Application of Hydraulics--Continued

Section A. Surface-Water Techniques--*Continued*

3-A12. **Flurometric procedures for dye tracing**, by J. F. Wilson, Jr., E. D. Cobb, and F. A. Kilpatrick: USGS--TWRI Book 3, Chapter A12. 1986. 34 pages.

3-A13. **Computation of continuous records of streamflow**, by E. J. Kennedy: USGS--TWRI Book 3, Chapter A13. 1983. 53 pages.

3-A14. **Use of flumes in measuring discharge**, by F. A. Kilpatrick and V. R. Schneider: USGS--TWRI Book 3, Chapter A14. 1983. 46 pages.

3-A15. **Computation of water-surface profiles in open channels**, by Jacob Davidian: USGS--TWRI Book 3, Chapter A15. 1984. 48 pages.

3-A16. **Measurement of discharge using tracers**, by F. A. Kilpatrick and E. D. Cobb: USGS--TWRI Book 3, Chapter A16. 1985. 52 pages.

3-A17. **Acoustic velocity meter systems**, by Antonius Laenen: USGS--TWRI Book 3, Chapter A17. 1985. 38 pages.

3-A18. **Determination of stream reaeration coefficients by use of tracers**, by F. A. Kilpatrick, R. E. Rathbun, Nobuhiro Yotsukura, G. W. Parker, and L. L. Delong: USGS-TWRI Book 3, Chapter 18. 1989. 52 pages.

3-A19. **Levels of streamflow gaging stations**, by E. J. Kennedy: USGS--TWRI Book 3, Chapter A19. 1990. 31 pages.

3-A20. **Simulation of soluable waste transport and buildup in surface waters using tracers**, by F. A. Kilpratrick: USGS--TWRI Book 3, Chapter A20. 1993. 38 pages.

3-A21. **Stream-gaging cableways**, by C. Russell Wagner: USGS--TWRI Book 3, Chapter A21. 1995. 56 pages.

Section B. Ground-Water Techniques

3-B1. **Aquifer-test design, observation, and data analysis**, by R. W. Stallman: USGS--TWRI Book 3, Chapter B1. 1971. 26 pges.

3-B2. **Introduction to ground-water hydraulics, a programmed text for self-instruction**, by G. D. Bennett: USGS--TWRI Book 3, Chapter B2. 1976. 172 pages.

3-B3. **Type curves for selected problems of flow to wells in confined aquifers**, by J. E. Reed: USGS--TWRI Book 3, Chapter B3. 1980. 106 pages.

3-B4. **Regression modeling of ground-water flow**, by R. L. Cooley and Richard L. Naff: USGS--TWRI Book 3, Chapter B4. 1990. 232 pages.

3-B4. **Supplement 1. Regression modeling of ground-water flow - Modifications to the computer code for nonlinear regression solution of steady-state ground-water flow problems**, by R. L. Cooley: USGS--TWRI Book 3, Chapter B4. 1993. 8 pages.

3-B5. **Definition of boundary and initial conditions in the analysis of saturated ground-water flow systems--An introduction**, by O. L. Franke, T. E. Reilly, and G. D. Bennett: USGS--TWRI Book 3, Chapter B5. 1987. 15 pages.

3-B6. **The principle of superposition and its application in ground-water hydraulics**, by T. E. Reilly, O. L. Franke, and G. D. Bennett: USGS--TWRI Book 3, Chapter B6. 1987. 28 pages.

3-B7. **Analytical solutions for one-, two-, and three dimensional solute transport in ground-water systems with uniform flow**, by E¥ J. Wexler: USGS--TWRI Book 3, Chapter B7. 1992. 190 pages.

Section C. Sedimentation and Erosion Techniques

3-C1. **Fluvial sediment concepts**, by H. P. Guy: USGS--TWRI Book 3, Chapter C1. 1970. 55 pages.

3-C2. **Field methods of measurement of fluvial sediment**, by H. P. Guy and V. W. Norman: USGS--TWRI Book 3, Chapter C2. 1970. 59 pages.

3-C3. **Computation of fluvial-sediment discharge**, by George Porterfield: USGS--TWRI Book 3, Chapter C3. 1972. 66 pages.

Book 4. Htdrologic Analysis and Interpretation

Section A. Statistical Analysis

4-A1. **Some statistical tools in hydrology**, by H. C. Riggs: USGS--TWRI Book 4, Chapter A1. 1968. 39 pages.

4-A2. **Frequency curves**, by H. C. Riggs: USGS--TWRI Book 4, Chapter A2. 1968. 15 pages.

TECHNIQUES OF WATER-RESOURCES INVESTIGATIONS OF THE U.S. GEOLOGICAL SURVEY

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Section B. Surface Water

4-B1. **Low-flow investigations**, by H. C. Riggs: USGS--TWRI Book 4, Chapter B1. 1972. 18 pages.

4-B2. **Storage analyses for water supply**, by H. C. Riggs and C. H. Hardison: USGS--TWRI Book 4, Chapter B2. 1973. 20 pages.

4-B3. **Regional analyses of streamflow characteristics**, by H. C. Riggs: USGS--TWRI Book 4, Chapter B3. 1973. 15 pages.

Section D. Interrelated Phases of the Hydrologic Cycle

4-D1. **Computation of rate and volume of stream depletion by wells**, by C. T. Jenkins: USGS--TWRI Book 4, Chapter D1. 1970. 17 pages.

Book 5. Laboratory Analysis

Section A. Water Analysis

5-A1. **Methods for determination of inorganic substances in water and fluvial sediments**, by M. J. Fishman and L. C. Friedman: USGS--TWRI Book 5, Chapter A1. 1989. 545 pages.

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5-A4. **Methods for collection and analysis of aquatic biological and microbiological samples**, by L. J. Britton and P. E. Greeson, editors: USGS--TWRI Book 5, Chapter A4. 1989. 363 pages.

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Section C. Sediment Analysis

5-C1. **Laboratory theory and methods for sediment analysis**, by H. P. Guy: USGS--TWRI Book 5, Chapter C1. 1969. 58 pages.

Book 6. Modeling Techniques

Section A. Ground Water

6-A1. **A modular three-dimensional finite-difference ground-water flow model**, by M. G. McDonald and A. W. Harbaugh: USGS--TWRI Book 6, Chapter A1. 1988. 586 pages.

6-A2. **Documentation of a computer program to simulate aquifer-system compaction using the modular finite-difference ground-water flow model**, by S. A. Leake and D. E. Prudic: USGS--TWRI Book 6, Chapter A2. 1991. 68 pages.

6-A3. **A modular finite-element model (MODFE) for areal and axisymetric ground-water-flow problems, Part 1: Model Description and User's Manual**, by L. J. Torak: USGS--TWRI Book 6, Chapter A3. 1993. 136 pages.

6-A4. **A modular finite-element model (MODFE) for areal and axisymetric ground-water-flow problems, Part 2: Derivation of finite-element equations and comparisons with analytical solutions**, by R. L. Cooley: USGS-TWRI Book 6, Chapter A4. 1992. 108 pages.

6-A5. **A modular finite-element model (MODFE) for areal and axisymetric ground-water-flow problems, Part 3: Design philosophy and programming details**, by L. J. Torak: USGS--TWRI Book 6, Chapter A5. 1993. 243 pages.

6-A6. **A coupled surface-water and ground-water flow model (MODBRANCH) for simulation of stream-aquifer interaction**, by E.D. Swain and E.J. Wexler: USGS--TWRI Book 6, Chapter A6. 1995. 125 pages.

Book 7. Automated Data Processing and Computations

Section C. Computer Programs

7-C1. **Finite difference model for aquifer simulation in two dimensions with results of numerical experiments**, by P. C. Trescott, G. F. Pinder, and S. P. Larson: USGS--TWRI Book 7, Chapter C1. 1976. 116 pages.

7-C2. **Computer model of two-dimensional solute transport and dispersion in ground water**, by L. F. Konikow and J. D. Bredehoeft: USGS--TWRI Book 7, Chapter C2. 1978. 90 pages.

7-C3. **A model for simulation of flow in singular and interconnected channels**, by R. W. Schaffrannek, R. A. Baltzer, and D. E. Goldberg: USGS--TWRI Book 7, Chapter C3. 1981. 110 pages.

TECHNIQUES OF WATER-RESOURCES INVESTIGATIONS OF THE U.S. GEOLOGICAL SURVEY

Book 8. Instrumentation

Section A. Instruments for Measurement of Water Level

8-A1. **Methods of measuring water levels in deep wells**, by M. S. Garber and F. C. Koopman: USGS--TWRI Book 8, Chapter A1. 1968. 23 pages.

8-A2. **Installation and service manual for U. S. Geological Survey manometers**, by J. D. Craig: USGS--TWRI Book 8, Chapter A2. 1983. 57 pages.

Section B. Instruments for Measurement of Discharge

8-B2. **Calibration and maintenance of vertical-axis type current meters**, by G. F. Smoot and C. E. Novak: USGS--TWRI Book 8, Chapter B2. 1968. 15 pages.

Book 9. Handbooks for Water-Resources Investigations

Section A. National Field Manual for the Collection of Water-Quality Data

9-A1. **National Field Manual for the Collection of Water-Quality Data: Preparations for Water Sampling**, by F.D. Wilde, D.B. Radtke, Jacob Gibs, and R.T. Iwatsubo: USGS--TWRI Book 9, Chapter A1. 1998. 47 pages.

9-A2. **National Field Manual for the Collection of Water-Quality Data: Selection of Equipment for Water Sampling**, edited by F.D. Wilde, D.B. Radtke, Jacob Gibs, and R.T. Iwatsubo: USGS--TWRI Book 9, Chapter A2. 1998. 94 pages.

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9-A5. **National Field Manual for the Collection of Water-Quality Data: Processing of Water Samples**, edited by F.D. Wilde, D.B. Radtke, Jacob Gibs, and R.T. Iwatsubo: USGS--TWRI Book 9, Chapter A5. 1999. 149 pages.

9-A6. **National Field Manual for the Collection of Water-Quality Data: Field Measurements**, edited by F.D. Wilde and D.B. Radtke: USGS--TWRI Book 9, Chapter A6. 1998. 48 pages.

9-A7. **National Field Manual for the Collection of Water-Quality Data: Biological Indicators**, edited by D.N. Myers and F.D. Wilde: USGS--TWRI Book 9, Chapter A7. 1997. 49 pages.

9-A8. **National Field Manual for the Collection of Water-Quality Data: Bottom-material samples**, edited by D.B. Radtke: USGS--TWRI Book 9, Chapter A8. 1998. 48 pages.

9-A9. **National Field Manual for the Collection of Water-Quality Data: Safety in Field Activities**, edited by S.L. Lane and R.G. Fay: USGS--TWRI Book 9, Chapter A9. 1998. 60 pages.

SELECTED U.S. GEOLOGICAL SURVEY REPORTS ON SURFACE-WATER RESOURCES IN DELAWARE

Listed below is a selection of reports on surface-water resources in Delaware which are available through the U.S. Geological Survey, Book and Open-File Reports, Federal Center, Building 41, Box 25425, Denver, Colorado 80225. **An asterick (*) indicates that the publication is out of print and is not purchasable from any official source.**

PROFESSIONAL PAPERS

P-822 Cushing, E.M., Kantrowitz, I.H., and Taylor K.R., 1973, **Water resources of the Delmarva Peninsula**, 58 p.

P-750-D Johnston, R. H., 1971, **Base flow as an indicator of aquifer characteristics in the Coastal Plain of Delaware**: Geological Survey Research, p. D212-D215.

P-600-B Williams, O.O., 1968, **Reservoir effects on downstream water temperatures in the upper Delaware River basin**: Geological Survey Research, p. B195-B199.

P-485-A* Sigafoos, R.S., 1964, **Botanical evidence of floods and flood-plain deposition**, p. A1-A35.

P-450-E Giustic, E.V., and Schneider. W.J., 1962, **Comparison of drainage on topographic maps of the Piedmont province in Short papers in geology, hydrology, and topography**: Geological Survey Research, article 212, p. E1-E189.

P-424-B Carter, R.W., 1961, **Magnitude and frequency of floods in suburban areas in Short papers in the geologic and hydrologic sciences**: Geological Survey Research, article 5, p. B9-B11.

P-417-B* Hely, A.G., and Olmsted, F.H., 1963, **Some relations between streamflow characteristics and the environment in the Delaware River region**, p. B1-B25.

P-381* Parker, G.G., Hely, A.G., Keighton, W.B., Olmsted, F.H., and others, 1965, **Water resources of the Delaware River basin**, 200 p.

WATER-SUPPLY PAPERS

W-2425 Hayes, M.A., 1997, **Delaware wetland resources, National Water Summary--Wetland Resources**, p. 147-152.

W-2300 Simmons, R.H., **Delaware surface-water resources *in* U.S. Geological Survey, 1986, National Water Summary 1985--Hydrologic events**, p. 181-186.

W-1871 Schneider, W.J., 1968, **Water data for metropolitan areas-A summary of data from 222 areas in the United States**, 397 p.

W-1849 Barnes, H.H., Jr., 1967, **Roughness characteristics of natural channels**, 213 p.

W-1838 Martin, R.O.R., and Hanson, R.L., 1966, **Reservoirs in the United States**, 115 p.

W-1813 Dalrymple, Tate, 1965, **Flood peak runoff and associated precipitation in selected drainage basins in the United States**, 406 p.

W-1812 Durfor, C.N., and Becker, Edith, 1964, **Public water supplies of the 100 largest cities in the United States, 1962**, 364 p.

W-1809-O Keighton, W.B., 1965, **Delaware River water quality, Bristol to Marcus Hook, Pennsylvania, August 1949 to December 1963**, 57 p.

W-1767* Rasmussen, W.C., Odell, J.W., and Beamer, N.H., 1966, **Delaware water**, 106 p.

W-1699-N Hardison, C.H., and Martin, R.O.R., 1963, **Water-supply characteristics of streams in the Delaware River basin and in southern New Jersey**, p. N1-N45.

W-1619-T Slaughter, T.H., 1962, **Beach-area water supplies between Ocean City, Maryland, and Rehoboth Beach, Delaware**, p. T1-T10.

W-1594-B Boggess, D.H., and Rima, D.H., 1962, **Experiments in water spreading at Newark, Delaware**, p. B1-B15.

W-1586-B* Cohen, Bernard, and McCarthy, L.T., Jr., 1962, **Salinity of the Delaware estuary**, p. B1-B57.

W-1586-C Miller, E.G., 1962, **Observations of tidal flow in the Delaware River**, p. C1-C26.

W-1586-E Lendo, A.C., 1966, **Record low tide of December 31, 1962, on the Delaware River**, p. E1-E20.

W-1586-G Keighton, W.B., 1966, **Fresh-water discharge-salinity relations in the tidal Delaware River**, p. G1-G16.

W-1473 Hem, J.D., 1959, **Study and interpretation of the chemical characteristics of natural water**, p. 269.

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W-1262 Durfor, C.N., and Keighton, W.B., 1954, **Chemical characteristics of Delaware River water, Trenton, New Jersey, to Marcus Hook, Pennsylvania**, 173 p.

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W-340***** Wood, B.D., 1916, **Stream-gaging stations and publications relating to water resources, 1885-1913**, 195 p.

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C-381***** Knox, C.F., 1956, **Index to surface-water records to September 30, 1955 *in* Part 1, North Atlantic slope basins**, 30 p.

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HA-335 Keighton, W.B., 1969, **Water quality in the Delaware estuary for two years of drought: 1965 and 1966 from Trenton, N.J., to Reedy Island, Del.**, scale 1:1,000,000.

HA-243 Barksdale, H.C., O'Bryan, Deric, Schneider, W.J., 1966, **Effect of drought on water resources in the Northeast**.

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HA-11 Hely, A.G., Nordenson, T.J., and others, 1961, **Precipitation, water loss, and runoff in the Delaware River basin and New Jersey**, 11 p.

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FACT SHEETS

FS 97-126 Preston, S.D., **Evaluation of the stream-gaging network in Maryland, Delaware, and Washington, D.C.**, 4 p.

FS 96-140 Zynjuk, L.D., and Majedi, B.S., **January 1996 floods deliver large loads of nutrients and sediments to the Chesapeake Bay**, 2 p.

FS 96-008 **U.S. Geological Survey programs in Delaware**, 4p.

WATER-RESOURCES INVESTIGATIONS REPORTS

WRIR 97-4280 Ferrari, M.J., Ator, S.W., Blomquist, J.D., Dysart, J., **Pesticides in surface water of the Mid-Atlantic region**, 12 p.

WRIR 97-4139 Ator, S.W., and Ferrari, M.J., **Nitrate and selected pesticides in ground water of the Mid-Atlantic region**, 8 p.

WRIR 97-4051, Zappia, H., Fisher, G.T., **Water-quality assessment of the Potomac River basin: Analysis of available pesticide data, 1972-90**, 80 p.

SELECTED U.S. GEOLOGICAL SURVEY REPORTS ON SURFACE-WATER RESOURCES IN DELAWARE--Continued

WATER-RESOURCES INVESTIGATIONS REPORTS--Continued

WRIR 95-4153 Dillow, J.J.A., **Technique for estimating magnitude and frequency of peak flows in Delaware**, 26 p, 3 plates.

WRIR 94-4188 Paulachok, G.N., Simmons, R.H., and Tallmon, A.J., **Storm and flood of July 5, 1989 in Northern New Castle County, Delaware**, 29 p.

WRIR 94-4020 Carpenter, D.H., and Hayes, D.C., **Low flow characteristic of streams in Maryland and Delaware**, 113 p, 10 plates.

WRIR 90-4094 Phelan, D.J., **Water use in the St. Jones River basin, Kent County, Delaware 1983-86**, 30 p.

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WRIR 78-93 Simmons, R.H., and Carpenter, D.H., **Technique for estimating magnitude and frequency of floods in Delaware**, 69 p.

OPEN-FILE REPORTS

OFR 96-554 Doheny, E.J., **A modified index for assessment of potential scour at bridges over waterways**, 16 p.

OFR 91-505 McFarland, J.A., Weiss, L.S., and others, **Water resources activities of the U.S. Geological Survey**, 130 p.

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1973 **Water resources of the Delmarva Peninsula, a summary report (White House document 93-68) to the Congress**, 59 p.

1972 **Sediment yields of urban construction sources, Montgomery County, Maryland, a progress report, Rock Creek Anacostia River basins**, 39 p.

1972 Taylor, K.R., **A summary of peak stages and discharges in Maryland, Delaware, and District of Columbia for flood of June 1972,** 13 p.

1969 Simmons, R.H., **Floods of August 1967 in Maryland and Delaware**, 98 p.

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Listed below is a selection of reports on surface-water resources in Maryland which are available through the Maryland Geological Survey, 2300 St. Paul Street, Baltimore, Maryland 21218.

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MGS B 36 Duigon, M.T., and Dine, J.R., 1991, **Water resources of Washington County, Maryland**, 109 p.

MGS B 35 Werkheiser, W.H., 1990, **Hydrogeology and ground-water resources of Somerset County, Maryland**, 156 p.

MGS B 34 Otton, E.G., Wiley, R.E., McGregor, R.A., Achmad, G.J., Hiortdahl, S.N., and Gerhart, J.M., 1989, **Water resources and estimated effects of ground-water development, Duigon M.TCecil County, Maryland**, 133 p.

MGS B 33 Duigon, M.T., and Dine, J.R., 1987, **Water resources of Frederick County, Maryland**, 106 p.

MGS B 25 Darling, J.M., 1961, **Maryland streamflow characteristics**, 136 p.

MGS B 24 Slaughter, T.H., and Darling, J.M., 1961, **Water resources of Allegany and Washington Counties**, 408 p.

MGS B 22 Meyer, Gerald, and Beall, R.M., 1958, **Water resources of Carroll and Frederick Counties**, 355 p.

MGS B 21 Overbeck, R.M., Slaughter, T.H., and Hulme, A.E., 1958, **Water resources of Cecil, Kent, and Queen Annes Counties**, 478 p.

MGS B 18 Rasmussen, W.C., Slaughter, T.H., Hulme, A.E., and Murphy, J.J., 1956, **Water resources of Caroline, Dorchester, and Talbot Counties**, 465 p.

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MGS B 16 Rasmussen, W.C., Slaughter, T.H., Bennett, R.R., Meyer, R.R., and Hulme, G.E., 1955, **Water resources of Somerset, Wicomico, and Worchester Counties**, 535 p.

MGS B 14 Dingman, R.J., Meyer, Gerald, and Martin, R.O.R., 1954, **Water resources of Howard and Montgomery Counties**, 260 p.

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MGS B 10 Cooke, C., Wythe, Martin, R.O.R., and Meyer, Gerald, 1952, **Geology and water resources of Prince Georges's County**, 270 p.

MGS B 8 Bennion, V.R., Dougherty, D.F., and Overbeck, R.M., 1951, **Water resources of Calvert County**, 100 p.

MGS B 5 Bennion, V.R., and Brookhart, J.W., 1949, **Water resources of Anne Arundel County**, 14 p.

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MGS RI 48 Kerhin, R.T., and others, 1988, **The surficial sediments of Chesapeake Bay, Maryland: Physical characteristics and sediment budget**, 82 p.

MGS RI 45 Wiley, R.E., and Achmad, G.J., 1986, **Simulation of ground-water flow and base flow in weathered crystalline rock, Upper Cattail Creek, Howard County, Maryland**, 68 p.

MGS RI 42 Otton, E.G., and Hilleary, J.T., 1985, **Maryland springs--their physical, thermal, and chemical characteristics**, 151 p.

MGS RI 41-A Hiortdahl, S.N., 1988, **Hydrologic and mining data from an area of underground coal mining in Garrett County, Maryland**, 81 p.

MGS RI 41 Duigon, M.T., and Smigaj, M.J., 1985, **First report on the hydrologic effects of underground coal mining in southern Garrett County, Maryland**, 99 p.

MGS RI 40 **The Columbia aquifer of the Eastern Shore of Maryland**, 1984, Part 1, Bachman, L.J., and Wilson, J.M., Hydrogeology, Part 2, Wilson, J.M., and Bachman, L.J., **Selected water-well records, chemical analyses, water-level measurements, lithologic logs and geophysical logs**, 144 p.

MGS RI 35 Carpenter, D.H., 1983, **Characteristics of streamflow in Maryland**, 237 p.

MGS RI 17 Mack, F.K., Webb, W.E., and Gardner, R.A., 1971, **Water resources of Dorchester and Talbot Counties, Maryland, with special emphasis on the ground-water potential of the Cambridge and Easton areas**, 107 p.

MGS RI 16 Walker, P.N., 1971, **Flow characteristics of Maryland streams**, 160 p.

MGS RI 13 Webb, W.E., and Heddle, S.G., 1970, **Extent of brackish water in the tidal rivers of Maryland**, 46 p.

MGS RI 9 Thomas, J.D., and Heidel, S.G., 1969, **Chemical and physical character of municipal water supplies in Maryland**, 52 p.

MGS RI 5 Thomas, J.D., 1966, **Chemical quality reconnaissance of water of Maryland streams**, 61 p.

MGS RI 3 Boggess, D.H., and Heidel, S.G., 1968, **Water resources of the Salisbury area, Maryland**, 69 p.

MGS RI 1 Heidel, S.G., and Fernier, W.W., 1965, **Chemical quality of water and trace elements in the Patuxent River basin**, 40 p.

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MGS BDR 18 Duigon, M.T., Dine, J.R., and Tompkins, M.D., 1989, **Ground-water and surface-water data for Washington County, Maryland**, 273 p.

MGS BDR 16 Wiley, R.E., McGregor, R.A., deGrouchy, Joanne, and Tompkins, M.D., 1987, **Hydrologic data for Cecil County, Maryland**, 150 p.

MGS BDR 15 Dine, J.R., Tompkins, M.D., and Duigon, M.T., 1985, **Ground-water and surface-water data for Frederick County, Maryland**, 240 p.

MGS BDR 12 Hilleary, J.T., and Weigle, J.W., 1981, **Carroll County ground-water information: well records, spring records, and chemical-quality data**, 252 p.

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MGS BDR 2 Slaughter, T.H., and Laughlin, C.P., 1966, **Records of wells and springs in Charles County, Maryland**, 93 p.

MGS BDR 1 Laughlin, C.P., 1966, **Records of wells and springs in Baltimore County, Maryland**, 406 p.

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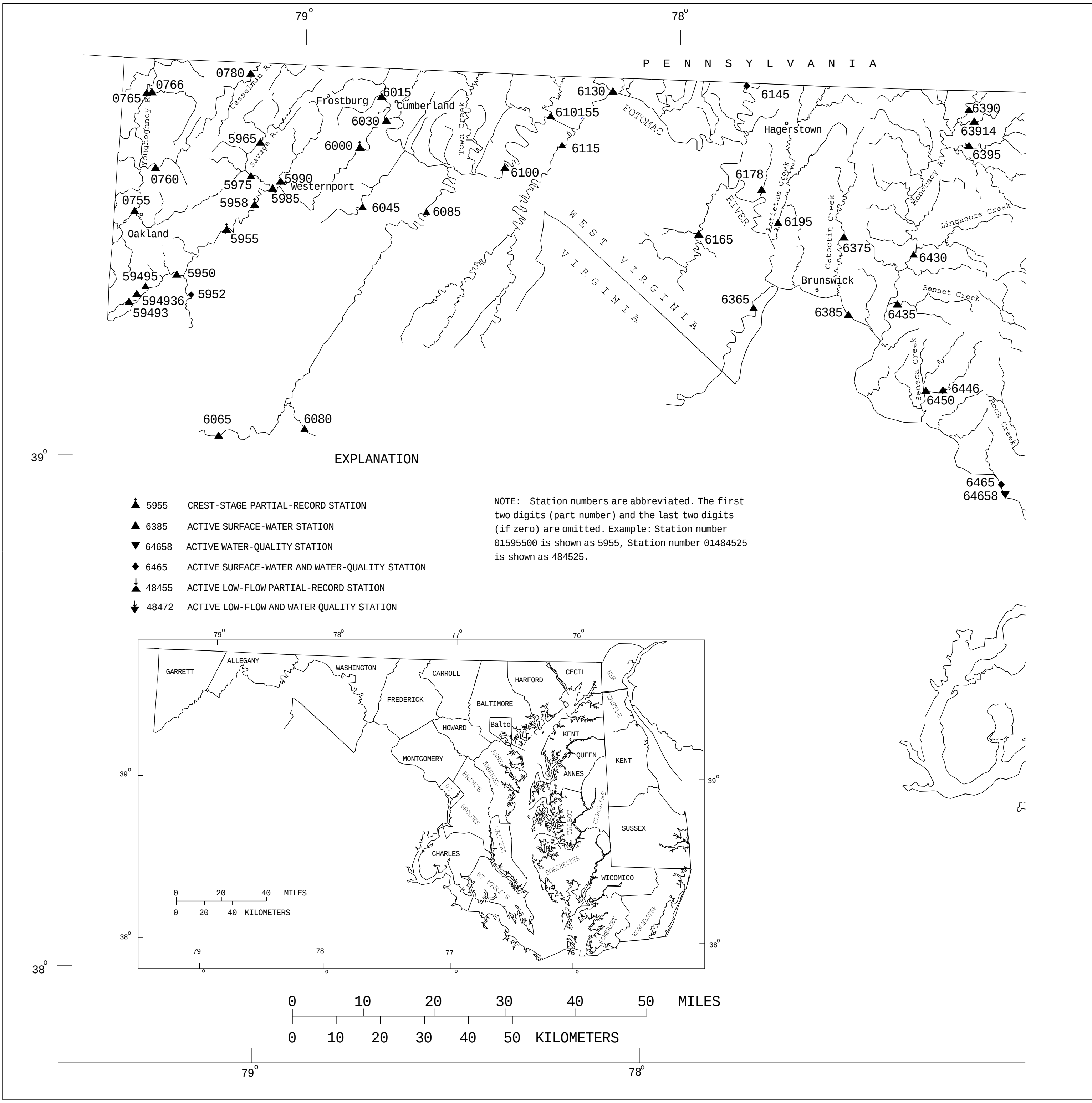
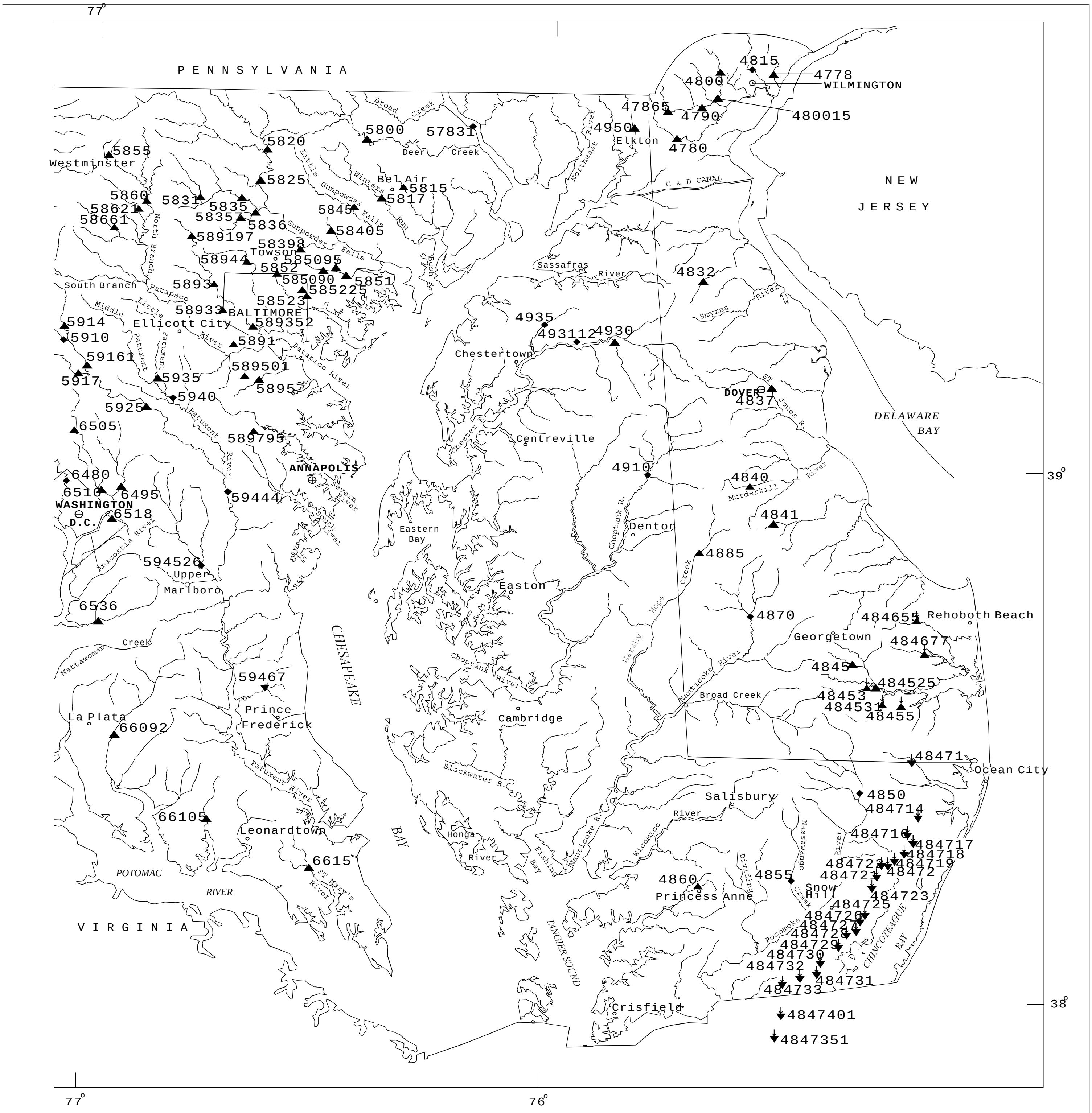
MGS IC 12 Taylor, K.R., and Solley, W.B., 1972, **Traveltime and concentration attenuation of a soluble dye in Antietam and Conococheague Creeks, Maryland**, 25 p.

MGS IC 9 Taylor, K.R., 1970, **Traveltime and concentration attenuation of a soluble dye in the Monocacy River, Maryland**, 23 p.



Base map modified from U.S. Geological Survey 1:100 000 DLG

Figure 3. Map of Maryland and Delaware showing location of surface-water, water-quality, low-flow and crest-stage partial-record stations.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PENNSYLVANIA
NEW JERSEY
DELAWARE BAY
VIRGINIA
POTOMAC RIVER
CHESAPEAKE BAY
TANGIER SOUND
CHINCOTEAGUE BAY
WILMINGTON
Elkton
Westminster
Bel Air
Towson
BALTIMORE
Ellicott City
Chestertown
Centreville
DOVER
ANNAPOLIS
WASHINGTON D.C.
Upper Marlboro
Denton
Eastern Bay
Easton
Georgetown
Rehoboth Beach
La Plata
Prince Frederick
Cambridge
Salisbury
Ocean City
Leonardtown
Honga River
Fishing Bay
Princess Anne
Snow Hill
Crisfield
Broad Creek
Deer Creek
Little Gunpowder Falls
Winters Run
Bush R.
Gunpowder Falls
North Branch
South Branch
Patapsco
Little Patuxent
Middle Patuxent
Patapsco River
Patuxent River
Severn River
South River
Anacostia River
Mattawoman Creek
St Mary's River
Northeast River
C & D CANAL
Sassafras River
Smyrna River
St Jones R.
Murderkill River
Chester R.
Choptank R.
Choptank River
Marshy Hope Creek
Nanticoke River
Nanticoke R.
Broad Creek
Blackwater R.
Wicomico River
Dividing Creek
Nassawango Creek
Pocomoke River
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4778
4800
47865
4790
480015
4950
4780
5855
5820
5800
57831
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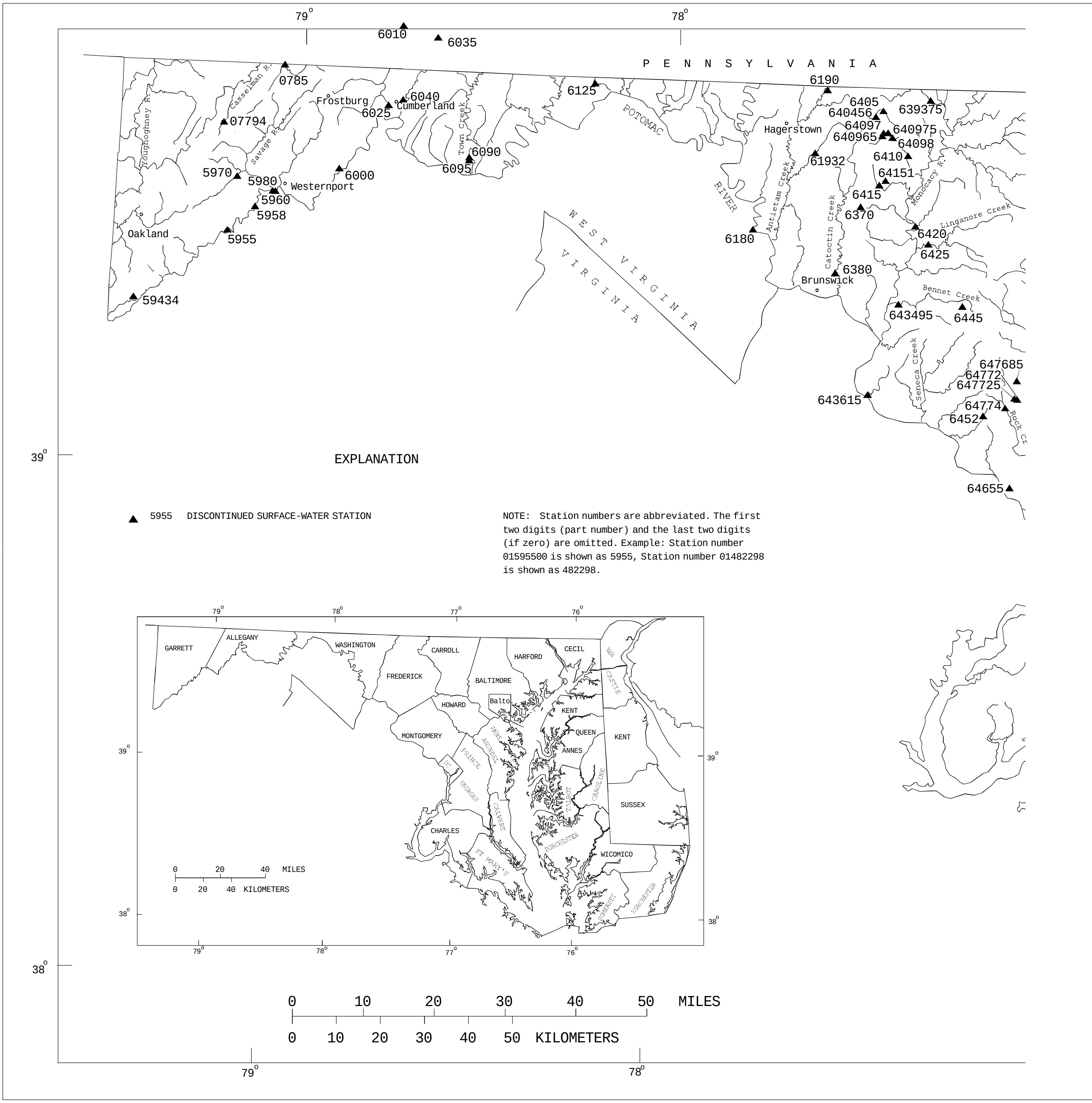
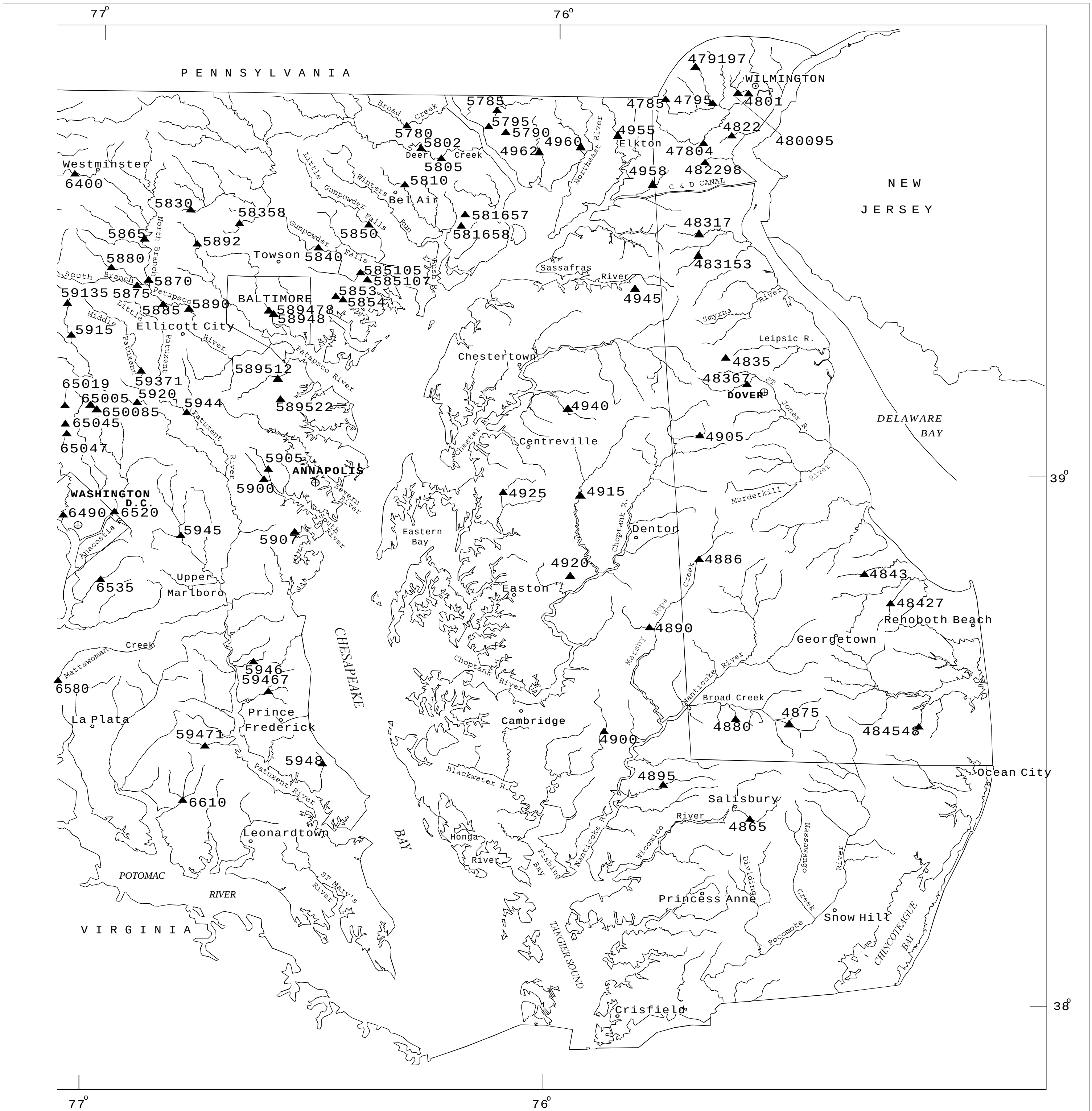


Base map modified from U.S. Geological Survey 1:100 000 DLG

Figure 4. Map of Maryland and Delaware showing location of discontinued surface-water stations.



PENNSYLVANIA
NEW JERSEY
DELAWARE BAY
VIRGINIA
WILMINGTON
DOVER
BALTIMORE
ANNAPOLIS
WASHINGTON D.C.
CHESAPEAKE BAY
TANGIER SOUND
CHINCOTEAGUE BAY
POTOMAC RIVER
Westminster
Towson
Bel Air
Elkton
Ellicott City
Chestertown
Centreville
Denton
Easton
Cambridge
Upper Marlboro
La Plata
Prince Frederick
Leonardtown
Salisbury
Princess Anne
Snow Hill
Crisfield
Ocean City
Rehoboth Beach
Georgetown
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76°
39°
38°

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SURFACE-WATER-DISCHARGE AND SURFACE-WATER-QUALITY RECORDS

Remarks Codes

The following remark codes may appear with the water-quality data in this section:

PRINT OUTPUT	REMARK
E	Estimated value.
>	Actual value is known to be greater than the value shown.
<	Actual value is known to be less than the value shown.
K	Results based on colony count outside the acceptance range (non-ideal colony count).
L	Biological organism count less than 0.5 percent (organism may be observed rather than counted).
D	Biological organism count equal to or greater than 15 percent (dominant).
V	Analyte was detected in both the environmental sample and the associated blanks
&	Biological organism estimated as dominant.

Dissolved Trace-Element Concentrations

***NOTE.-- Traditionally, dissolved trace-element concentrations have been reported at the microgram per liter (ug/L) level. Recent evidence, mostly from large rivers, indicates that actual dissolved-phase concentrations for a number of trace elements are within the range of 10's to 100's of nanograms per liter (ng/L). Data above the ug/L level should be viewed with caution. Such data may actually represent elevated environmental concentrations from natural or human causes; however, these data could reflect contamination introduced during sampling, processing, or analysis. To confidently produce dissolved trace-element data with insignificant contamination, the U.S. Geological Survey began using new trace-element protocols at some stations in water year 1994.**

Change in National Trends Network Procedures

***NOTE.-- Sample handling procedures at all National Trends Network stations were changed substantially on January 11, 1994, in order to reduce contamination from the sample shipping container. The data for samples before and after that date are different and not directly comparable. A tabular summary of the differences based on a special intercomparison study, is available from the NADP/NTN Coordination Office, Colorado State University, Fort Collins, CO 80523 (Telephone: 303-491-5643).**

NORTH ATLANTIC SLOPE BASINS

DELAWARE RIVER BASIN

01477800 SHELLPOT CREEK AT WILMINGTON, DE

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

DRAINAGE AREA.--7.46 mi^2.

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

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

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

REMARKS.--Records good below 100 ft^3/s and above 4,000 ft^3/s except those between 100 and 4,000 ft^3/s and those for estimated daily discharges (backwater), which are fair. Occasional regulation at low flow from unknown source upstream from station. Several measurements of water temperature were made during the year. Water-quality records for some prior periods have been collected at this location.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known since at least 1940, that of July 5, 1989. Flood of Aug. 1, 1945, reached a stage of about 8.5 ft, from floodmarks.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar 21	2245	1,740	5.64	Aug 14	1705	1,030	4.39
May 24	1015	2,100	6.14	Sep 16	1410	*4,460	*8.95
Jul 2	2050	1,000	4.35				

Minimum discharge, 0.61 ft^3/s, Sep 3, 4.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.8	e1.4	1.1	1.6	3.0	18	4.9	2.8	2.2	5.2	2.1	.82
2	1.6	e1.3	1.1	1.4	52	5.2	4.1	2.8	2.2	74	1.8	.67
3	1.3	e1.2	1.1	117	8.8	4.5	3.1	3.2	2.2	9.6	1.7	.61
4	7.0	e1.4	1.1	4.7	4.8	9.3	5.3	3.3	2.0	3.7	1.6	.72
5	2.4	e1.5	1.4	2.3	3.8	3.9	6.2	2.9	1.9	3.0	1.6	34
6	1.1	e1.6	1.8	1.8	3.3	13	3.2	2.6	1.8	2.6	2.0	4.8
7	.90	e1.6	1.2	1.7	6.0	15	3.3	2.5	2.0	2.4	1.8	4.8
8	21	e1.5	2.3	1.7	15	4.6	3.3	2.5	2.1	2.2	2.1	4.3
9	24	e1.4	6.6	14	4.7	3.9	28	2.3	1.9	2.3	2.0	8.9
10	7.6	e1.3	1.5	6.5	3.7	4.0	21	2.1	2.1	2.3	1.7	16
11	1.6	15	1.2	3.6	3.2	3.6	42	2.0	2.4	2.2	1.6	1.7
12	1.2	2.6	1.1	4.2	20	3.3	21	22	2.3	2.2	1.2	.98
13	1.1	1.7	1.3	5.6	15	3.1	6.6	19	12	2.3	5.9	.82
14	14	1.5	1.2	4.1	4.6	6.6	4.7	2.7	9.4	2.2	86	.73
15	1.6	1.8	1.1	116	3.6	41	4.8	2.2	5.7	2.2	8.6	4.5
16	1.2	1.5	1.1	11	3.3	27	8.5	2.1	2.6	2.1	1.4	1480
17	1.3	.99	1.1	5.6	3.4	17	5.2	2.0	2.5	2.0	.94	17
18	1.3	1.1	1.1	113	65	9.0	3.7	2.1	2.6	2.0	.77	4.7
19	1.3	1.1	.94	11	8.7	5.4	3.5	5.3	1.9	2.3	.68	2.8
20	1.3	1.5	1.0	4.7	5.0	4.3	3.5	2.8	6.4	4.5	30	2.1
21	1.4	2.3	1.1	4.0	4.0	204	3.4	2.0	8.6	2.7	8.5	49
22	1.4	1.3	1.5	4.3	3.4	131	9.4	2.1	2.9	4.7	1.5	19
23	1.4	1.1	1.7	5.2	4.0	11	12	6.3	2.0	2.8	1.1	4.4
24	1.5	1.1	1.6	100	3.2	7.9	6.2	211	1.8	2.2	1.1	3.0
25	1.4	1.1	1.4	9.7	3.1	6.4	3.8	9.6	1.7	2.1	1.6	2.4
26	1.3	21	1.3	4.9	3.0	5.1	3.5	4.2	1.6	1.8	169	2.2
27	1.4	2.3	1.2	3.7	3.4	4.5	3.2	3.2	1.6	1.9	18	1.7
28	1.4	1.4	1.4	3.6	29	5.3	3.0	2.8	1.6	1.8	2.2	1.7
29	e1.3	1.2	2.9	3.3	---	3.7	2.9	2.4	1.9	1.8	1.5	1.6
30	e1.3	1.1	3.5	3.1	---	3.3	2.9	2.3	1.5	1.9	.95	23
31	e1.2	---	1.5	3.0	---	3.1	---	2.2	---	1.8	.82	---
TOTAL	109.60	76.89	49.44	576.3	290.0	587.0	236.2	337.3	93.4	156.8	361.76	1698.95
MEAN	3.54	2.56	1.59	18.6	10.4	18.9	7.87	10.9	3.11	5.06	11.7	56.6
MAX	24	21	6.6	117	65	204	42	211	12	74	169	1480
MIN	.90	.99	.94	1.4	3.0	3.1	2.9	2.0	1.5	1.8	.68	.61
CFSM	.47	.34	.21	2.49	1.39	2.54	1.06	1.46	.42	.68	1.56	7.59
IN.	.55	.38	.25	2.87	1.45	2.93	1.18	1.68	.47	.78	1.80	8.47

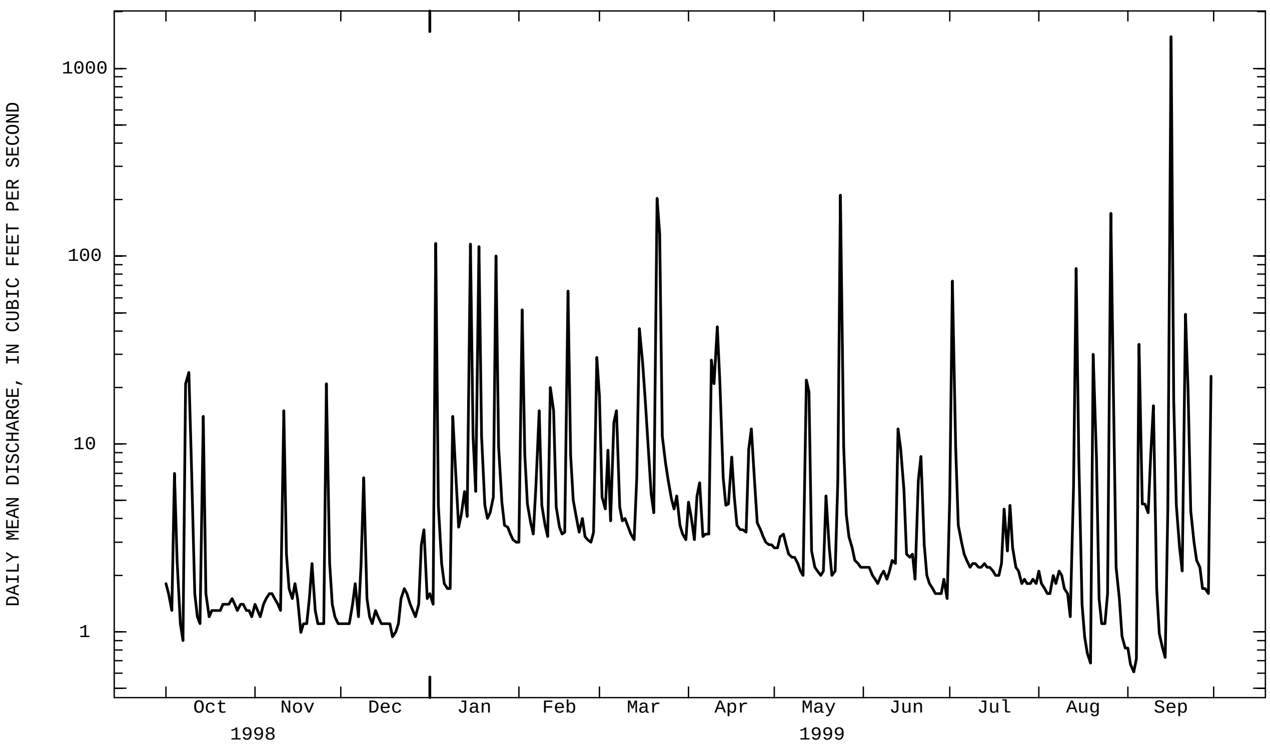
e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1946 - 1999, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	5.09	8.54	11.7	12.9	13.0	15.9	13.0	10.8	7.03	8.50	7.06	7.52
MAX	22.5	27.7	48.7	37.9	34.1	41.4	32.7	31.6	34.8	69.5	62.8	58.3
(WY)	1996	1973	1997	1979	1979	1993	1983	1947	1975	1989	1967	1971
MIN	.62	1.35	1.03	1.18	2.95	2.93	2.55	1.76	1.09	.65	.32	.90
(WY)	1964	1966	1956	1981	1980	1985	1985	1955	1966	1957	1966	1951

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1946 - 1999	
ANNUAL TOTAL	2989.29		4573.64			
ANNUAL MEAN	8.19		12.5		10.1	
HIGHEST ANNUAL MEAN					16.2	1989
LOWEST ANNUAL MEAN					5.52	1963
HIGHEST DAILY MEAN	356	Jan 23	1480	Sep 16	1480	Sep 16 1999
LOWEST DAILY MEAN	.72	Sep 10	.61	Sep 3	.09	(a)
ANNUAL SEVEN-DAY MINIMUM	.99	Aug 20	.87	Aug 29	.10	Aug 27 1966
INSTANTANEOUS PEAK FLOW			4460	Sep 16	(b)8040	Jul 5 1989
INSTANTANEOUS PEAK STAGE			8.95	Sep 16	13.76	Jul 5 1989
INSTANTANEOUS LOW FLOW			.61	(c)	.09	Oct 2 1968
ANNUAL RUNOFF (CFSM)	1.10		1.68		1.35	
ANNUAL RUNOFF (INCHES)	14.91		22.81		18.31	
10 PERCENT EXCEEDS	15		15		18	
50 PERCENT EXCEEDS	2.6		2.6		2.9	
90 PERCENT EXCEEDS	1.1		1.2		.80	

a Oct. 2, 4, 1968.
b From rating curve extended above 200 ft^3/s on basis of culvert and flow-over-road measurements at gage heights 9.10 and 11.91 ft.
c Sept. 3, 4.



DAILY MEAN DISCHARGE - 1999 WATER YEAR

01478000 CHRISTINA RIVER AT COOCHS BRIDGE, DE

LOCATION.--Lat 39°38'14", long 75°43'42", New Castle County, Hydrologic Unit 02040205, on right bank 60 ft down- stream from highway bridge, 0.5 mi southeast of Coochs Bridge, 3.3 mi south of Newark, 3.6 mi upstream from Belltown Run, and 22.6 mi upstream from mouth.

DRAINAGE AREA.--20.5 mi^2.

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

REVISED RECORDS.--WDR MD-DE-79-1: 1943-70(P). WDR MD-DE-87-1: 1980-82(P).

GAGE.--Water-stage recorder. Datum of gage is 25.54 ft above sea level. Prior to Sept. 14, 1944, nonrecording gage on upstream side of bridge at same datum. Sept. 14, 1944, to May 13, 1969, recording gage at site on left bank at downstream side of highway bridge at same datum. May 26, 1969, to Dec. 5, 1973, recording gage on left bank 82 ft downstream from highway bridge at same datum.

REMARKS.--Records good except those for estimated daily discharges (ice effect), which are fair. Low and medium flow regulated by mill upstream from station. National Weather Service gage-height telemeter at station. Several measurements of water temperature were made during the year. Water-quality records for some prior periods have been collected at this location.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar 22	0030	1,530	11.29	Sep 16	1445	*7,050	*13.73
Aug 26	2345	1,030	10.26				

Minimum discharge, 1.1 ft^3/s, Aug 6, 11, 12, 20.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.6	3.7	3.8	4.2	10	62	20	11	7.6	7.3	1.8	3.3
2	2.6	3.5	3.6	3.9	87	20	23	10	7.6	5.9	1.6	3.1
3	2.4	3.9	3.5	199	40	15	15	10	7.6	5.8	1.4	3.0
4	8.4	3.8	3.6	21	21	35	15	10	7.3	4.9	1.3	2.8
5	5.2	3.5	5.8	e8.0	17	17	17	10	7.0	4.2	1.3	16
6	3.9	3.7	4.8	e6.8	15	31	14	9.7	6.8	3.6	1.2	7.5
7	3.3	3.9	4.3	e6.4	20	58	13	9.4	6.8	3.5	1.2	7.2
8	21	4.1	6.6	6.2	38	18	13	10	10	3.1	1.2	4.1
9	40	4.1	13	23	22	16	48	9.6	6.4	2.7	1.2	31
10	25	4.1	5.2	18	15	15	75	8.7	6.1	2.8	1.2	20
11	5.8	16	3.7	11	13	14	90	8.3	6.3	2.8	1.1	6.7
12	4.1	5.3	3.7	8.7	24	13	91	11	6.0	2.6	1.8	4.7
13	3.9	3.7	4.4	14	61	12	31	31	11	2.6	1.7	3.9
14	19	2.9	4.2	17	20	18	21	9.3	14	2.6	1.7	3.6
15	5.2	3.3	3.8	203	12	101	19	8.3	9.0	2.7	1.6	5.6
16	3.9	3.4	3.8	31	11	57	22	8.1	6.6	2.7	1.7	2650
17	3.4	3.3	3.9	17	12	38	19	8.1	6.5	2.4	1.8	174
18	3.4	3.4	3.9	271	118	22	17	7.9	8.0	2.4	1.8	30
19	3.2	3.3	3.7	65	30	17	15	9.6	6.4	2.2	2.2	20
20	3.3	3.3	3.8	20	16	14	14	8.7	16	2.3	97	11
21	3.2	5.0	3.9	14	13	218	14	7.7	17	2.1	9.1	85
22	3.2	3.6	4.2	14	11	483	40	7.2	9.1	6.1	3.2	43
23	3.2	3.7	4.0	13	11	45	28	16	7.2	3.1	2.4	12
24	3.3	3.6	4.4	145	11	27	26	226	6.2	2.5	2.6	8.9
25	3.5	3.6	4.4	39	11	21	19	39	5.5	2.2	2.6	7.9
26	3.7	34	3.8	18	11	17	15	15	5.3	2.0	194	7.3
27	3.6	7.1	4.0	14	10	16	14	11	5.1	1.9	149	7.2
28	3.5	4.6	4.2	13	45	18	12	10	5.0	1.8	17	7.2
29	3.6	3.9	6.3	12	---	15	12	8.9	4.9	1.6	7.0	6.9
30	3.4	3.8	7.0	12	---	14	11	8.3	4.8	1.7	4.8	32
31	4.0	---	4.7	11	---	14	---	7.9	---	1.7	3.8	---
TOTAL	207.8	159.1	144.0	1259.2	725	1481	783	565.7	233.1	95.8	521.3	3224.9
MEAN	6.70	5.30	4.65	40.6	25.9	47.8	26.1	18.2	7.77	3.09	16.8	107
MAX	40	34	13	271	118	483	91	226	17	7.3	194	2650
MIN	2.4	2.9	3.5	3.9	10	12	11	7.2	4.8	1.6	1.1	2.8
CFSM	.33	.26	.23	1.98	1.26	2.33	1.27	.89	.38	.15	.82	5.24
IN.	.38	.29	.26	2.28	1.32	2.69	1.42	1.03	.42	.17	.95	5.85

e Estimated

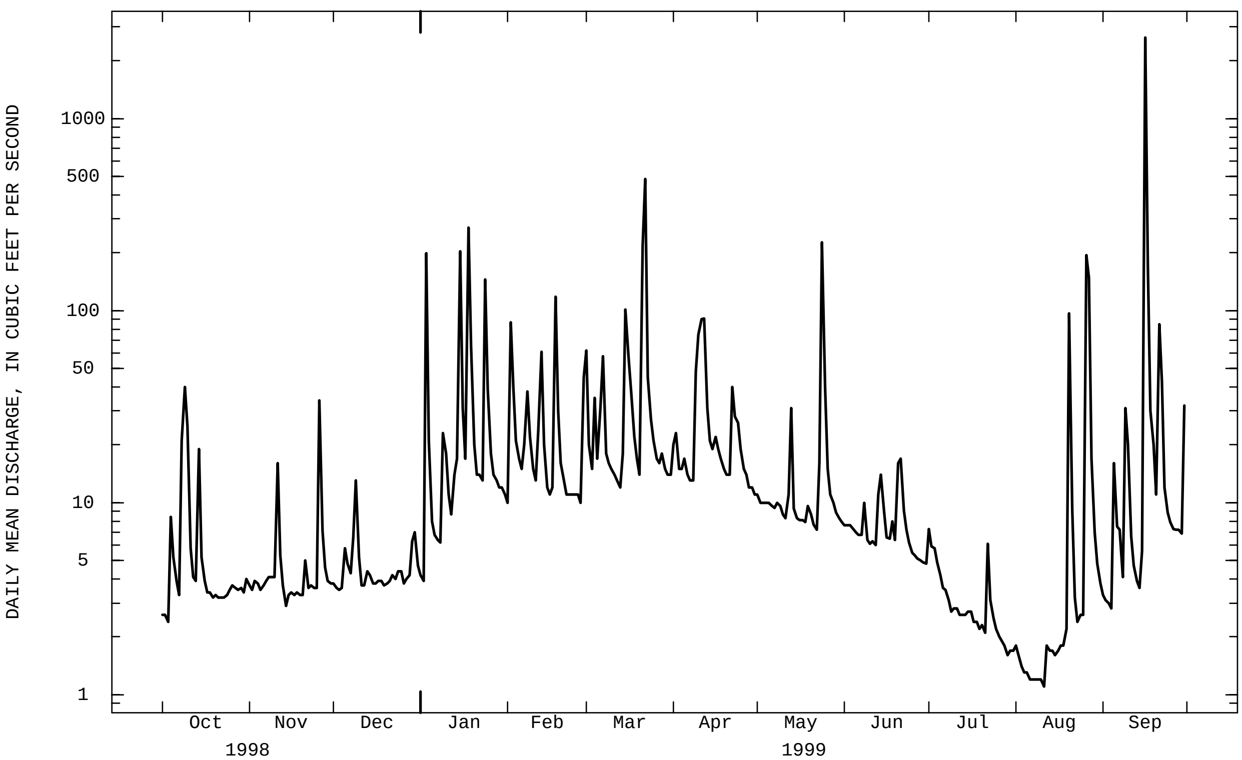
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1943 - 1999, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	14.9	24.3	34.4	40.5	42.2	47.7	36.9	31.3	20.9	21.8	17.4	16.5
MAX	62.9	82.8	122	165	154	121	107	77.6	76.5	165	117	107
(WY)	1972	1973	1997	1979	1979	1978	1983	1990	1972	1989	1967	1999
MIN	2.25	2.76	3.98	5.35	10.1	8.35	10.5	8.10	4.57	2.48	1.29	2.85
(WY)	1964	1966	1966	1981	1947	1981	1963	1965	1966	1963	1966	1965

01478000 CHRISTINA RIVER AT COOCHS BRIDGE, DE--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1943 - 1999	
ANNUAL TOTAL	8321.7		9399.9			
ANNUAL MEAN	22.8		25.8		29.0	
HIGHEST ANNUAL MEAN					53.4	1978
LOWEST ANNUAL MEAN					14.2	1981
HIGHEST DAILY MEAN	535	Jan 23	2650	Sep 16	2650	Sep 16 1999
LOWEST DAILY MEAN	2.4	Oct 3	1.1	Aug 11	.20	(a)
ANNUAL SEVEN-DAY MINIMUM	2.8	Sep 27	1.2	Aug 5	.50	Aug 25 1966
INSTANTANEOUS PEAK FLOW			7050	Sep 16	(b)7050	Sep 16 1999
INSTANTANEOUS PEAK STAGE			13.73	Sep 16	13.73	Sep 16 1999
INSTANTANEOUS LOW FLOW			1.1	(c)	.00	Sep 4 1993
ANNUAL RUNOFF (CFSM)	1.11		1.26		1.41	
ANNUAL RUNOFF (INCHES)	15.10		17.06		19.21	
10 PERCENT EXCEEDS	43		34		49	
50 PERCENT EXCEEDS	9.0		7.6		13	
90 PERCENT EXCEEDS	3.5		2.6		4.3	

a Aug. 7, 17, 18, 21, 27, 28, 1966.
b From rating curve extended above 1,500 ft^3/s.
c Aug. 6, 11, 12, 20.



DAILY MEAN DISCHARGE - 1999 WATER YEAR

01478650 WHITE CLAY CREEK AT NEWARK, DE

LOCATION.--Lat 39°41'20", long 75°44'58", New Castle County, Hydrologic Unit 02040205, on right bank 200 ft upstream from highway bridge on Paper Mill Road, at Newark, and 10.3 mi upstream from mouth.

DRAINAGE AREA.--69.0 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--March 1994 to current year.

GAGE.--Water-stage recorder. Datum of gage is 56.45 ft above sea level.

REMARKS.--Water-discharge records good except those for estimated daily discharges (backwater from leaves), which are fair. Flow affected by City of Newark municipal water plant upstream from station. Records do not include a negligible diversion upstream from station by MBNA America.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,600 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jan 18	1845	1,920	8.68	Sep 16	1915	*16,800	*17.13
Mar 22	0115	2,000	8.75				

Minimum discharge, 6.1 ft^3/s, Aug 4, 11, 14, 19, 20.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e18	24	28	26	44	137	67	51	39	30	10	22
2	e20	23	28	19	155	71	73	49	37	30	9.2	20
3	e16	22	28	448	109	59	62	50	40	123	7.7	18
4	e30	23	28	113	91	86	62	52	36	39	6.5	18
5	e26	25	30	44	58	64	63	50	33	30	7.1	25
6	e21	28	30	38	52	67	56	49	33	24	7.8	48
7	e18	27	30	41	52	87	56	50	32	21	8.0	27
8	e45	26	32	31	81	59	55	51	31	20	8.3	22
9	121	23	46	55	67	56	68	50	28	20	13	22
10	116	21	35	78	55	58	175	48	29	21	11	48
11	43	37	30	41	49	56	126	46	31	22	9.5	29
12	30	33	29	41	53	53	189	46	29	21	9.6	24
13	29	23	29	71	114	52	94	70	36	23	8.6	21
14	35	22	28	107	66	59	75	50	48	20	7.2	21
15	27	22	27	396	52	104	69	47	48	19	11	25
16	25	23	27	176	50	110	76	45	e35	19	9.5	5750
17	25	23	27	127	50	114	81	44	e32	16	8.0	795
18	23	22	26	703	189	107	67	44	e38	15	7.5	104
19	22	21	26	239	112	69	62	48	e32	14	6.5	69
20	23	22	26	88	72	60	62	46	e45	16	27	60
21	24	26	26	73	58	180	61	42	50	20	17	113
22	24	24	28	69	52	790	82	40	45	20	14	170
23	24	25	27	66	47	143	73	46	e32	20	13	72
24	23	26	27	267	48	106	86	143	e29	16	12	55
25	22	26	26	134	48	88	65	93	e26	15	e15	50
26	22	63	25	79	49	76	60	52	e28	13	103	48
27	23	47	29	64	48	70	57	48	e27	12	337	47
28	24	31	28	57	85	74	55	48	e28	11	44	49
29	24	28	31	53	---	67	53	43	e30	11	30	47
30	22	28	35	50	---	62	51	40	e27	11	23	188
31	23	---	27	48	---	59	---	40	---	12	22	---
TOTAL	968	814	899	3842	2006	3243	2281	1621	1034	704	823.0	8007
MEAN	31.2	27.1	29.0	124	71.6	105	76.0	52.3	34.5	22.7	26.5	267
MAX	121	63	46	703	189	790	189	143	50	123	337	5750
MIN	16	21	25	19	44	52	51	40	26	11	6.5	18
CFSM	.45	.39	.42	1.80	1.04	1.52	1.10	.76	.50	.33	.38	3.87
IN.	.52	.44	.48	2.07	1.08	1.75	1.23	.87	.56	.38	.44	4.32

e Estimated

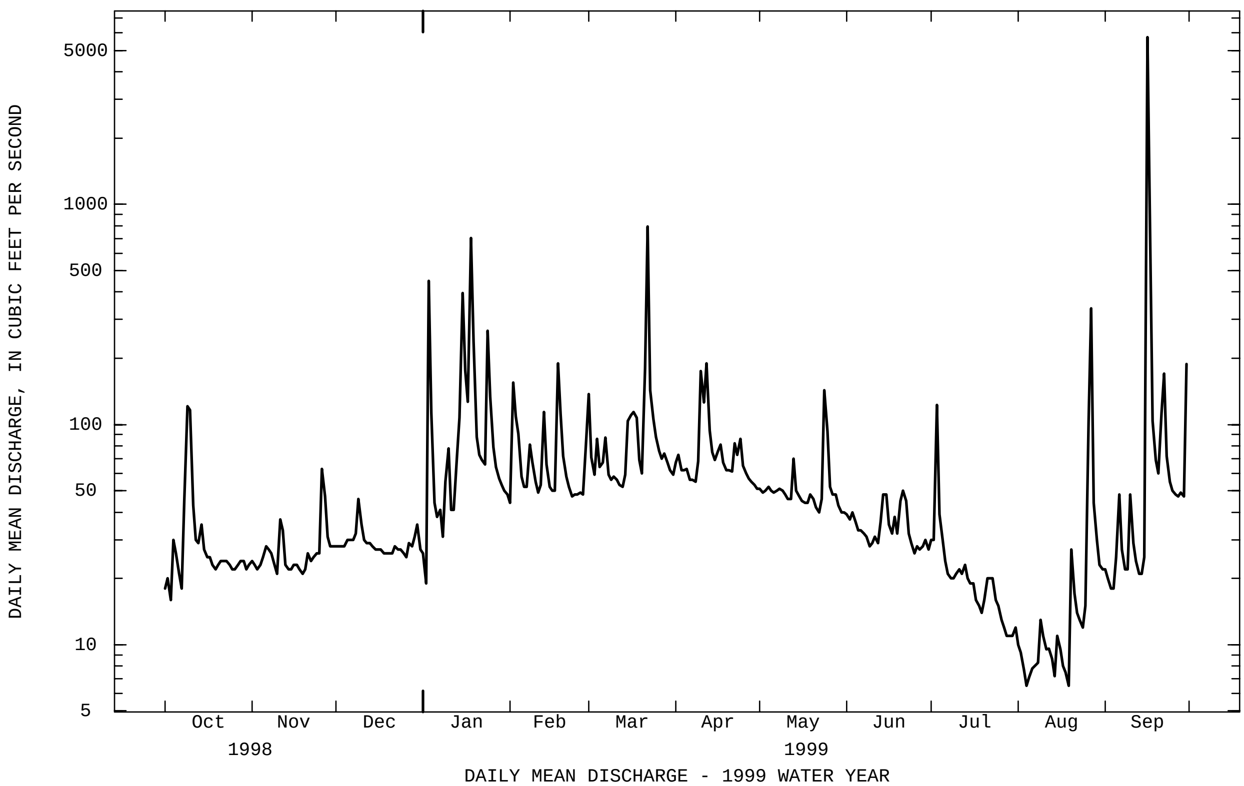
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1994 - 1999, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	66.8	66.6	98.8	144	96.7	167	112	89.5	56.9	45.0	43.0	74.0
MAX	185	144	326	256	159	345	171	145	115	104	119	267
(WY)	1997	1997	1997	1996	1997	1994	1996	1996	1996	1996	1996	1999
MIN	23.2	27.1	29.0	80.3	48.7	95.2	45.3	48.9	25.7	22.7	13.3	15.8
(WY)	1995	1999	1999	1995	1995	1995	1995	1995	1995	1999	1995	1995

01478650 WHITE CLAY CREEK AT NEWARK, DE--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1994 - 1999	
ANNUAL TOTAL	24542		26242.0			
ANNUAL MEAN	67.2		71.9		86.4	
HIGHEST ANNUAL MEAN					129	1997
LOWEST ANNUAL MEAN					42.0	1995
HIGHEST DAILY MEAN	567	Mar 21	5750	Sep 16	5750	Sep 16 1999
LOWEST DAILY MEAN	(e)16	Oct 3	6.5	(a)	4.5	Sep 12 1995
ANNUAL SEVEN-DAY MINIMUM	20	Sep 27	7.8	Aug 2	6.1	Sep 1 1995
INSTANTANEOUS PEAK FLOW			(b)16800	Sep 16	(b)16800	Sep 16 1999
INSTANTANEOUS PEAK STAGE			17.13	Sep 16	17.13	Sep 16 1999
INSTANTANEOUS LOW FLOW			6.1	(c)	2.6	Sep 13 1995
ANNUAL RUNOFF (CFSM)	.97		1.04		1.25	
ANNUAL RUNOFF (INCHES)	13.23		14.15		17.01	
10 PERCENT EXCEEDS	126		105		160	
50 PERCENT EXCEEDS	45		39		51	
90 PERCENT EXCEEDS	22		17		21	

e Estimated
a Aug. 4, 19.
b From rating curve above 2,500 ft^3/s on basis of runoff comparison with White Clay Creek above Newark, DE (014785000).
c Aug. 4, 11, 14, 19, 20.



01478650 WHITE CLAY CREEK AT NEWARK, DE--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1998 to September 1999.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)
MAY 1999												
11...	0820	49	289	7.7	17.0	15.7	766	9.6	96	110	26	10
SEP												
14...	0950	21	325	7.7	21.7	19.8	764	7.7	84	130	31	12

DATE	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	ALKA-LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	BICAR-BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	NITRO-GEN, TOTAL (MG/L AS N) (00600)	NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS N) (00618)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)
MAY 1999												
11...	10	3.4	65	79	24	21	<.10	9.0	173	3.6	3.15	.031
SEP												
14...	10	6.5	79	96	30	22	<.10	11	194	3.1	2.70	.010

DATE	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	CARBON, ORGANIC DIS-SOLVED (MG/L AS C) (00681)	CARBON, ORGANIC SUS-PENDED TOTAL (MG/L AS C) (00689)	ACETO-CHLOR, WATER FLTRD REC (UG/L) (49260)
MAY 1999												
11...	3.18	.078	.38	.28	.394	.264	.263	40	46	2.3	.20	<.0020
SEP												
14...	2.71	.025	.41	.36	.375	.388	.359	29	22	3.9	.90	<.0020

DATE	ALA-CHLOR, WATER, DISS, REC, (UG/L) (46342)	ATRA-ZINE, WATER, DISS, REC (UG/L) (39632)	BEN-FLUR-ALIN WAT FLD 0.7 U GF, REC (UG/L) (82673)	BUTYL-ATE, WATER, DISS, REC (UG/L) (04028)	CAR-BARYL WATER FLTRD 0.7 U GF, REC (UG/L) (82680)	CARBO-FURAN WATER FLTRD 0.7 U GF, REC (UG/L) (82674)	CHLOR-PYRIFOS DIS-SOLVED (UG/L) (38933)	CYANA-ZINE, WATER, DISS, REC (UG/L) (04041)	DCPA WATER FLTRD 0.7 U GF, REC (UG/L) (82682)	DEETHYL ATRA-ZINE, WATER, DISS, REC (UG/L) (04040)	DI-AZINON, DIS-SOLVED (UG/L) (39572)	DI-ELDRIN DIS-SOLVED (UG/L) (39381)
MAY 1999												
11...	<.002	.024	<.0020	<.0020	<.0030	<.0030	<.0040	<.0040	<.0020	E.0691	.007	<.001
SEP												
14...	<.002	.020	<.0020	<.0020	<.0030	<.0030	<.0040	<.0040	<.0020	E.0468	<.002	<.001

E Estimated

01478650 WHITE CLAY CREEK AT NEWARK, DE--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	2,6-DI-ETHYL ANILINE WAT FLT 0.7 U GF, REC (UG/L) (82660)	DISUL-FOTON WATER FLTRD 0.7 U GF, REC (UG/L) (82677)	EPTC WATER FLTRD 0.7 U GF, REC (UG/L) (82668)	ETHAL-FLUR-ALIN WAT FLT 0.7 U GF, REC (UG/L) (82663)	ETHO-PROP WATER FLTRD 0.7 U GF, REC (UG/L) (82672)	FONOFOS WATER DISS REC (UG/L) (04095)	LINDANE DIS-SOLVED (UG/L) (39341)	LIN-URON WATER FLTRD 0.7 U GF, REC (UG/L) (82666)	MALA-THION, DIS-SOLVED (UG/L) (39532)	METHYL AZIN-PHOS WAT FLT 0.7 U GF, REC (UG/L) (82686)	METHYL PARA-THION WAT FLT 0.7 U GF, REC (UG/L) (82667)	METO-LACHLOR WATER DISSOLV (UG/L) (39415)
MAY 1999												
11...	<.0030	<.0170	<.0020	<.0040	<.0030	<.0030	<.004	<.0020	<.005	<.0010	<.0060	.022
SEP												
14...	<.0030	<.0170	<.0020	<.0040	<.0030	<.0030	<.004	<.0020	<.005	<.0010	<.0060	.022

DATE	METRI-BUZIN SENCOR WATER DISSOLV (UG/L) (82630)	MOL-INATE WATER FLTRD 0.7 U GF, REC (UG/L) (82671)	NAPROP-AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82684)	PARA-THION, DIS-SOLVED (UG/L) (39542)	PEB-ULATE WATER FILTRD 0.7 U GF, REC (UG/L) (82669)	PENDI-METH-ALIN WAT FLT 0.7 U GF, REC (UG/L) (82683)	PER-METHRIN CIS WAT FLT 0.7 U GF, REC (UG/L) (82687)	PHORATE WATER FLTRD 0.7 U GF, REC (UG/L) (82664)	PRO-METON, WATER, DISS, REC (UG/L) (04037)	PRON-AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82676)	PROP-CHLOR, WATER, DISS, REC (UG/L) (04024)	PRO-PARGITE WATER FLTRD 0.7 U GF, REC (UG/L) (82685)
MAY 1999												
11...	<.004	<.0040	<.0030	<.004	<.0040	<.0040	<.0050	<.0020	<.0180	<.0030	<.0070	<.0130
SEP												
14...	<.004	<.0040	<.0030	<.004	<.0040	<.0040	<.0050	<.0020	<.0180	<.0030	<.0070	<.0130

DATE	PRO-PANIL WATER FLTRD 0.7 U GF, REC (UG/L) (82679)	SI-MAZINE, WATER, DISS, REC (UG/L) (04035)	TEBU-THIURON WATER FLTRD 0.7 U GF, REC (UG/L) (82670)	TER-BACIL WATER FLTRD 0.7 U GF, REC (UG/L) (82665)	TER-BUFOS WATER FLTRD 0.7 U GF, REC (UG/L) (82675)	THIO-BENCARB WATER FLTRD 0.7 U GF, REC (UG/L) (82681)	TRIAL-LATE WATER FLTRD 0.7 U GF, REC (UG/L) (82678)	TRI-FLUR-ALIN WAT FLT 0.7 U GF, REC (UG/L) (82661)	ALPHA BHC DIS-SOLVED (UG/L) (34253)	SEDI-MENT, SUS-PENDED (MG/L) (80154)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY) (80155)
MAY 1999											
11...	<.0040	.0161	<.0100	<.0070	<.0130	<.0020	<.0010	<.0020	<.0020	5	.64
SEP											
14...	<.0040	.0266	<.0100	<.0070	<.0130	<.0020	<.0010	<.0020	<.0020	4	.23

01479000 WHITE CLAY CREEK NEAR NEWARK, DE

LOCATION.--Lat 39°41'47", long 75°40'31", New Castle County, Hydrologic Unit 02040205, on left bank 35 ft downstream from bridge on private road at Delaware Park Race Track, 0.4 mi downstream from the Baltimore and Ohio Railroad bridge, 1.1 mi downstream from Pike Creek, 3.8 mi east of Newark, and 5.0 mi upstream from mouth.

DRAINAGE AREA.--89.1 mi^2.

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

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

REVISED RECORDS.--WSP 1051: 1933(M). WSP 1382: 1932, 1934. WDR MD-DE-83-1: 1978-82(P).

GAGE.--Water-stage recorder. Datum of gage is 9.00 ft above sea level. Nov. 17, 1931, to Sept. 30, 1936, June 4, 1943, to Sept. 30, 1957, and Oct. 1, 1959, to Apr. 7, 1976, at site 0.5 mi upstream at datum 2.6 ft higher.

REMARKS.--No estimaated daily discharges. Records good. Flow affected by City of Newark municipal water plant upstream from station. Slight diurnal fluctuation at low flow caused by mills upstream from station. Records do not include a negligible diversion upstream from station by MBNA America. National Weather Service gage-height telemeter at station. Several measurements of water temperature were made during the year. Water-quality records for some periods have been collected at this location.

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

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar 22	0230	2,390	12.22	Sep 16	2115	*19,500	*17.57

Minimum discharge, 8.8 ft^3/s, Aug 19, 20.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	23	33	30	39	57	149	93	61	44	34	13	22
2	25	33	28	37	198	79	98	59	43	34	12	20
3	22	33	28	664	118	69	83	58	43	120	11	19
4	45	33	28	148	78	93	83	61	40	42	10	19
5	34	33	32	86	70	73	86	59	37	33	10	48
6	26	32	31	101	63	88	76	58	36	27	10	62
7	24	33	29	86	70	104	74	59	34	24	9.9	50
8	55	33	35	65	94	70	72	61	34	23	10	32
9	158	34	56	128	77	65	133	59	31	22	12	30
10	122	33	39	142	67	66	229	53	31	22	12	59
11	50	54	34	75	61	64	182	52	33	23	11	35
12	38	43	31	81	76	61	257	52	31	21	10	25
13	34	30	33	86	119	59	116	94	48	23	11	23
14	58	29	31	129	76	68	94	60	66	22	10	21
15	33	29	29	581	65	148	89	52	50	21	11	31
16	30	29	29	191	62	118	92	50	37	20	12	8220
17	29	29	29	127	62	108	94	50	35	19	11	2350
18	29	28	29	821	263	103	82	49	41	17	10	239
19	29	28	27	357	120	74	76	68	36	17	9.3	119
20	32	29	28	104	80	68	76	58	53	23	170	78
21	31	36	29	89	70	325	74	48	60	24	35	178
22	31	31	33	83	64	1120	106	46	43	28	19	196
23	31	29	32	80	64	189	92	63	37	23	15	84
24	32	30	32	391	59	136	97	332	32	19	15	61
25	33	29	29	154	58	115	77	127	29	18	16	52
26	32	82	35	91	58	100	73	65	30	15	276	46
27	32	57	43	77	57	94	69	55	28	14	459	44
28	32	37	31	72	114	97	66	51	29	13	58	47
29	29	32	36	67	---	90	65	48	31	13	34	46
30	28	31	40	63	---	84	63	46	28	13	25	210
31	30	---	45	61	---	80	---	45	---	13	22	---
TOTAL	1237	1052	1021	5276	2420	4157	2967	2099	1150	780	1349.2	12466
MEAN	39.9	35.1	32.9	170	86.4	134	98.9	67.7	38.3	25.2	43.5	416
MAX	158	82	56	821	263	1120	257	332	66	120	459	8220
MIN	22	28	27	37	57	59	63	45	28	13	9.3	19
CFSM	.45	.39	.37	1.91	.97	1.51	1.11	.76	.43	.28	.49	4.66
IN.	.52	.44	.43	2.20	1.01	1.74	1.24	.88	.48	.33	.56	5.20

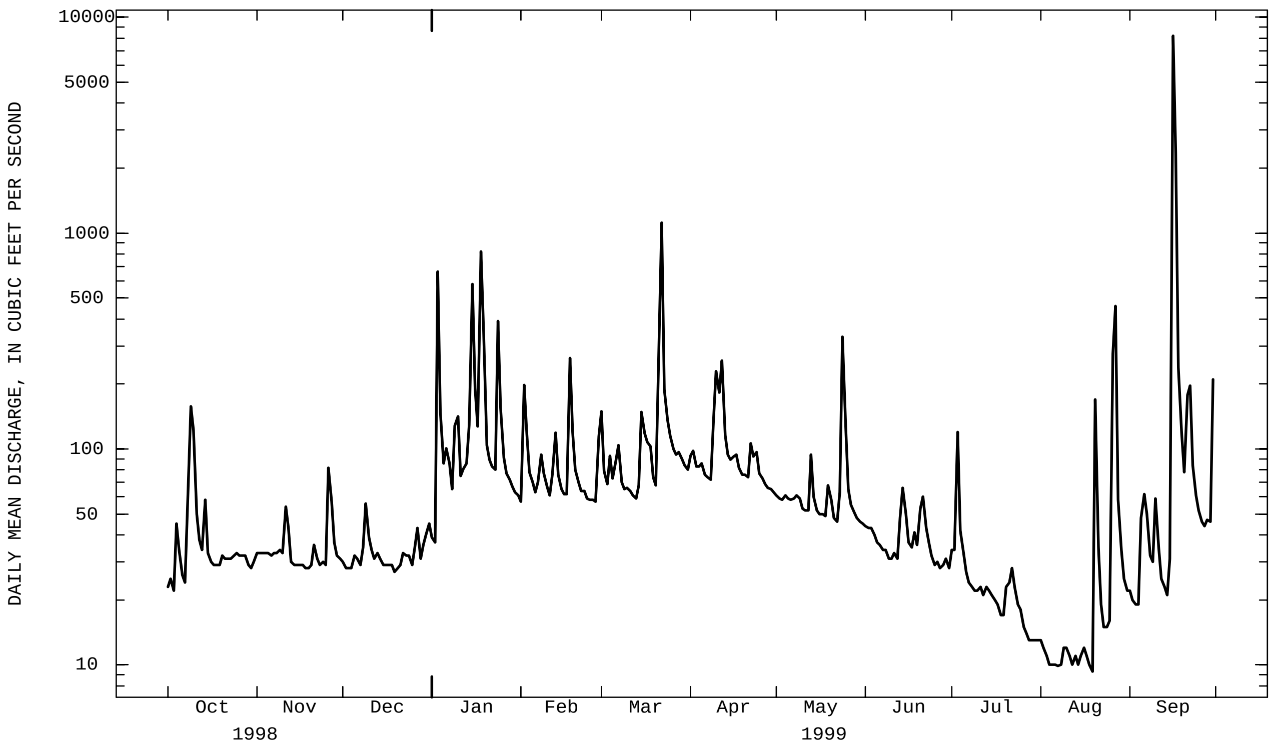
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1932 - 1936, 1943 - 1957, 1960 - 1999, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	65.7	92.0	115	149	161	174	151	128	97.4	95.1	78.6	77.2
MAX	234	221	405	493	542	402	342	265	311	540	301	416
(WY)	1997	1973	1997	1979	1979	1994	1983	1989	1972	1975	1967	1999
MIN	17.6	28.4	28.1	32.8	52.4	57.5	59.7	42.3	33.7	16.6	13.6	15.0
(WY)	1964	1966	1966	1966	1934	1981	1963	1955	1995	1963	1966	1932

01479000 WHITE CLAY CREEK NEAR NEWARK, DE--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1932 - 1936, 1943 - 1957, 1960 - 1999	
ANNUAL TOTAL	34359		35974.2			
ANNUAL MEAN	94.1		98.6		115	
HIGHEST ANNUAL MEAN					193	1975
LOWEST ANNUAL MEAN					55.9	1966
HIGHEST DAILY MEAN	868	Mar 9	8220	Sep 16	8220	Sep 16 1999
LOWEST DAILY MEAN	22	(a)	9.3	Aug 19	5.0	Sep 10 1966
ANNUAL SEVEN-DAY MINIMUM	24	Sep 27	10	Aug 2	5.7	Sep 7 1966
INSTANTANEOUS PEAK FLOW			(b)19500	Sep 16	(b)19500	Sep 16 1999
INSTANTANEOUS PEAK STAGE			17.57	Sep 16	(c)17.74	Jun 22 1972
INSTANTANEOUS LOW FLOW			8.8	(d)	4.7	Sep 11 1966
ANNUAL RUNOFF (CFSM)	1.06		1.11		1.29	
ANNUAL RUNOFF (INCHES)	14.35		15.02		17.58	
10 PERCENT EXCEEDS	165		124		192	
50 PERCENT EXCEEDS	66		46		76	
90 PERCENT EXCEEDS	28		20		32	

a Sept. 14, Oct. 3.
b From rating curve extended above 6,700 ft^3/s on basis of contracted-opening and flow-over-road measurement at a gage height of 15.9 ft and on basis of runoff comparisons with nearby stations.
c At previous site and datum.
d Aug. 19, 20.



DAILY MEAN DISCHARGE - 1999 WATER YEAR

01480000 RED CLAY CREEK AT WOODDALE, DE

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

DRAINAGE AREA.--47.0 mi^2.

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

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

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

REMARKS.--Records good. Low flows augmented at times by inflow from Hoopes Reservoir located 1.7 miles upstream from gage on unnamed tributary to Red Clay Creek, capacity 2,000,000,000 gal. Water from Brandywine Creek is pumped into Hoopes Reservoir and is released into Red Clay Creek during periods of low flow. Water from Red Clay Creek is used for municipal supply. National Weather Service gage-height telemeter at station. Several measurements of water temperature were made during the year. Water-quality records for some prior periods have been collected at this location.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,200 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jan 18	1915	1,410	4.93	Sep 16	1715	*7,650	(a)*13.93
Mar 22	0100	1,710	5.45	Sep 24	0945	2,040	5.99
Aug 27	0030	1,510	5.10				

a From high-water mark in well

Minimum discharge, 6.8 ft^3/s, Aug 24, 25.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	15	15	15	30	87	46	37	24	17	8.4	10
2	12	15	15	14	94	45	49	36	24	32	8.3	9.0
3	11	15	15	262	63	40	45	36	25	108	9.8	8.3
4	21	15	15	63	43	53	45	37	23	25	15	8.6
5	20	15	18	27	38	41	51	36	22	20	16	48
6	16	15	19	23	35	42	43	36	22	18	15	52
7	15	14	17	22	35	51	43	37	21	16	14	31
8	30	14	16	19	54	38	41	38	20	15	15	19
9	71	15	27	37	43	36	51	36	19	14	17	45
10	93	15	19	45	37	37	e140	34	19	15	15	59
11	27	22	17	25	35	36	e95	32	20	14	16	21
12	21	21	16	24	36	34	e138	32	19	14	14	16
13	20	16	16	43	72	33	e65	68	24	14	11	15
14	25	16	16	52	42	36	56	37	36	14	15	14
15	19	15	16	260	36	65	51	33	32	14	15	18
16	18	15	15	88	35	69	55	32	23	13	15	e3440
17	18	14	16	66	35	68	60	31	22	12	13	e1220
18	18	15	16	486	124	60	50	31	25	12	14	97
19	17	14	15	138	63	43	47	43	22	12	14	65
20	17	15	15	55	45	40	46	40	24	15	20	51
21	16	16	15	46	40	119	45	31	31	16	17	89
22	16	16	15	44	35	604	57	30	25	15	11	98
23	17	15	16	44	32	88	56	34	22	14	12	54
24	17	16	16	173	32	72	65	75	19	13	11	83
25	16	15	16	77	32	62	47	52	18	12	7.0	39
26	16	41	15	51	32	54	44	35	19	11	109	38
27	16	27	15	42	32	51	42	32	18	8.8	299	37
28	16	20	16	39	61	53	40	31	17	8.6	28	35
29	15	18	17	36	---	48	39	29	17	8.3	16	33
30	15	17	20	34	---	45	38	26	16	8.5	12	125
31	15	---	17	32	---	44	---	25	---	9.0	10	---
TOTAL	676	512	512	2382	1291	2194	1690	1142	668	538.2	812.5	5877.9
MEAN	21.8	17.1	16.5	76.8	46.1	70.8	56.3	36.8	22.3	17.4	26.2	196
MAX	93	41	27	486	124	604	140	75	36	108	299	3440
MIN	11	14	15	14	30	33	38	25	16	8.3	7.0	8.3
(†)	--	--	--	--	--	--	--	--	--	--	-4.5	--
MEAN≠	--	--	--	--	--	--	--	--	--	--	21.7	--
CFSM≠	--	--	--	--	--	--	--	--	--	--	.46	--
IN≠	--	--	--	--	--	--	--	--	--	--	.53	--

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1943 - 1999, BY WATER YEAR (WY)

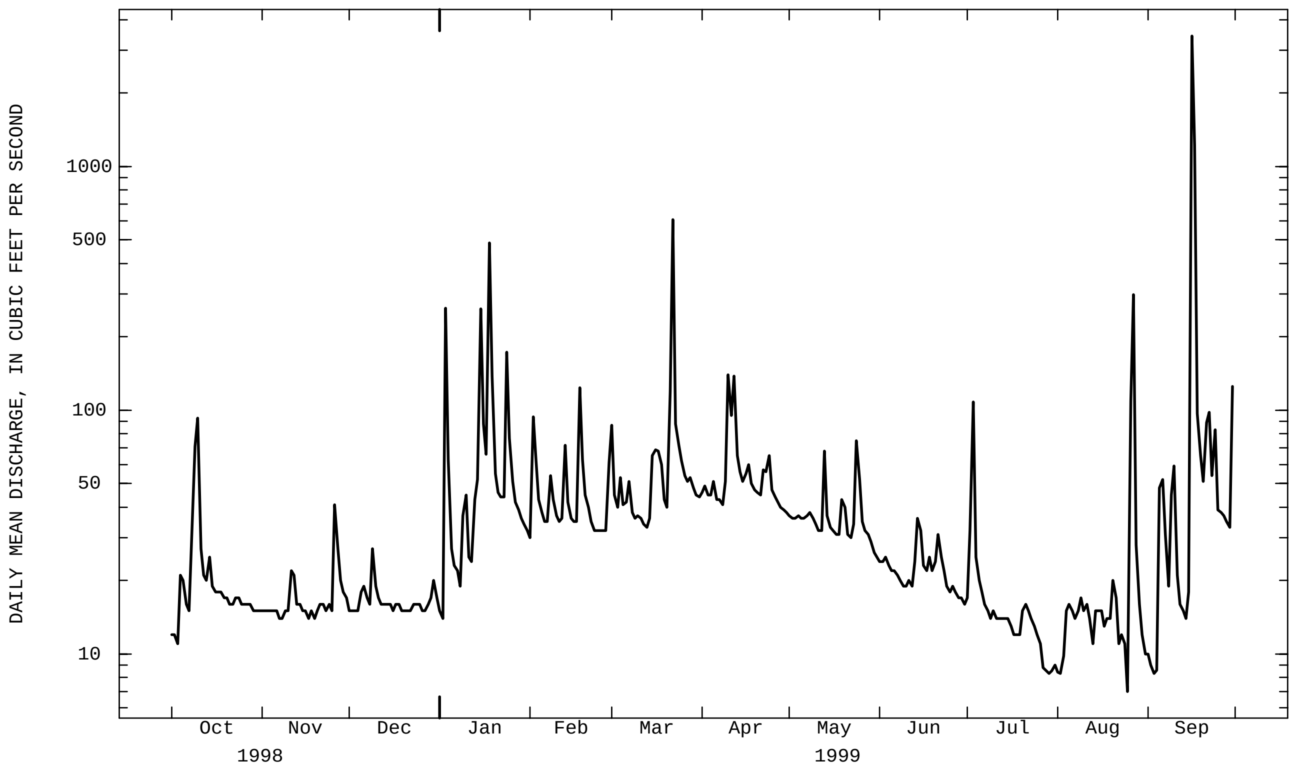
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	36.6	49.4	63.5	78.0	86.9	92.9	84.9	73.3	56.1	50.7	43.3	42.6
MAX	129	115	212	232	237	209	167	156	147	279	180	196
(WY)	1972	1973	1997	1979	1979	1994	1958	1958	1972	1975	1955	1999
MIN	11.1	17.1	16.5	16.8	33.3	27.3	33.8	24.2	21.7	12.7	9.79	13.7
(WY)	1964	1999	1999	1981	1969	1981	1995	1955	1966	1963	1966	1964

† Inflow in cubic feet per second, from Hoopes Reservoir for municipal supply.
≠ Adjusted for inflow.

01480000 RED CLAY CREEK AT WOODDALE, DE--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1943 - 1999	
ANNUAL TOTAL	15649		18295.6			
ANNUAL MEAN	42.9		50.1		63.1	
ANNUAL MEAN≠	42.9		49.7		63.0	
HIGHEST ANNUAL MEAN					104	1975
LOWEST ANNUAL MEAN					32.3	1995
HIGHEST DAILY MEAN	403	Mar 9	3440	Sep 16	3440	Sep 16 1999
LOWEST DAILY MEAN	11	Oct 3	7.0	Aug 25	4.5	Sep 4 1966
ANNUAL SEVEN-DAY MINIMUM	13	Sep 27	8.6	Jul 27	4.9	Sep 7 1966
INSTANTANEOUS PEAK FLOW			(a)7650	Sep 16	(a)7650	Sep 16 1999
INSTANTANEOUS PEAK STAGE			(b)13.93	Sep 16	(b)13.93	Sep 16 1999
INSTANTANEOUS LOW FLOW			6.8	(c)	2.9	Sep 4 1966
ANNUAL RUNOFF (CFSM)	.91		1.07		1.34	
ANNUAL RUNOFF (CFSM)≠	.91		1.07		1.34	
ANNUAL RUNOFF (INCHES)	12.39		14.48		18.23	
ANNUAL RUNOFF (INCHES)≠	12.39		14.39		18.23	
10 PERCENT EXCEEDS	76		65		107	
50 PERCENT EXCEEDS	29		25		43	
90 PERCENT EXCEEDS	15		14		19	

≠ Adjusted for inflow since June 1994.
a From rating curve extended above 3,900 ft^3/s on basis of contracted-opening measurement at gage height 9.93 ft.
b From high-water mark in well.
c Aug. 24, 25.



DAILY MEAN DISCHARGE - 1999 WATER YEAR

01480015 RED CLAY CREEK NEAR STANTON, DE

LOCATION.--Lat 39°42'55", long 75°38'28", New Castle County, Hydrologic Unit 02040205, on right bank at downstream side of westbound lane of bridge on State Highway 4, near Stanton, and 0.9 mi upstream from mouth.

DRAINAGE AREA.--52.4 mi^2.

PERIOD OF RECORD.--October 1988 to current year.

GAGE.--Water-stage recorder. Datum of gage is 0.00 ft above sea level.

REMARKS.--Records good except those for estimated daily discharges (ice effect, missing record, backwater affected), which are fair. Low flows augmented at times by inflow from Hoopes Reservoir located 5.7 miles upstream from gage on unnamed tributary to Red Clay Creek, capacity 2,000,000,000 gal. Water from Brandywine Creek is pumped into Hoopes Reservoir and is released into Red Clay Creek during periods of low flow. Water from Red Clay Creek is used for municipal supply. Several measurements of water temperature were made during the year.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,300 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jan 18	2030	1,470	14.18	Sep 16	1915	*8,260	(a)*23.54
Mar 22	0245	1,610	14.59				

a From floodmarks; gage height affected by backwater.

Minimum discharge, UNKNOWN.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e14	e15	19	e17	31	105	52	41	26	e20	e9.5	10
2	e13	e15	18	e16	113	53	56	40	24	e23	e9.3	9.5
3	e13	e15	19	359	76	47	50	40	26	125	e11	9.2
4	e12	e15	19	86	49	59	50	42	24	30	e15	10
5	23	e15	20	e30	44	48	55	40	22	23	e17	46
6	17	e15	25	e27	40	52	48	39	21	e20	e16	72
7	16	e14	20	e24	41	61	47	40	21	e19	e16	42
8	32	e14	20	e22	61	43	45	42	21	e17	e17	25
9	89	e15	33	e40	50	41	59	39	19	e16	e18	52
10	111	e15	23	e50	43	42	157	36	20	e17	e17	93
11	30	27	19	e28	40	41	108	34	19	e16	e17	28
12	22	28	18	e27	44	39	154	34	19	e16	e16	20
13	19	e18	18	46	81	37	78	72	26	e16	e13	17
14	31	e18	18	73	49	43	63	42	42	e15	e18	15
15	20	e17	17	310	42	83	58	35	36	e15	e17	24
16	18	e17	17	113	40	80	61	33	23	e15	e16	e4300
17	18	e16	17	82	39	79	67	32	21	e14	e15	e900
18	17	e17	17	545	141	69	55	31	25	e13	e15	e110
19	18	e16	17	205	76	50	52	46	22	e13	e16	e85
20	e17	e17	16	68	52	46	52	46	28	e15	e40	e60
21	e16	21	17	55	47	126	51	33	38	e18	e23	e95
22	e16	e18	17	52	41	e659	65	31	28	e17	e13	e110
23	e17	e17	17	52	37	e110	62	39	23	e16	e14	e80
24	e17	e17	18	206	36	80	76	109	21	e15	e11	e58
25	e16	e17	18	98	36	69	53	66	21	e13	e8.0	e45
26	e16	56	18	59	36	59	50	40	21	e12	112	e43
27	e16	39	19	48	36	56	48	35	e20	e11	241	e41
28	e16	25	18	45	73	58	46	32	e19	e9.5	36	e38
29	e15	23	19	41	---	54	45	31	e18	e9.3	e20	e38
30	e15	21	21	37	---	50	44	29	e18	e9.5	e14	101
31	e15	---	e19	36	---	49	---	26	---	e10	e11	---
TOTAL	725	593	591	2897	1494	2488	1907	1275	712	598.3	831.8	6576.7
MEAN	23.4	19.8	19.1	93.5	53.4	80.3	63.6	41.1	23.7	19.3	26.8	219
MAX	111	56	33	545	141	659	157	109	42	125	241	4300
MIN	12	14	16	16	31	37	44	26	18	9.3	8.0	9.2
(†)	--	--	--	--	--	--	--	--	--	--	-4.5	--
MEAN≠	--	--	--	--	--	--	--	--	--	--	22.3	--
CFSM≠	--	--	--	--	--	--	--	--	--	--	.43	--
IN≠	--	--	--	--	--	--	--	--	--	--	.50	--

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1989 - 1999, BY WATER YEAR (WY)

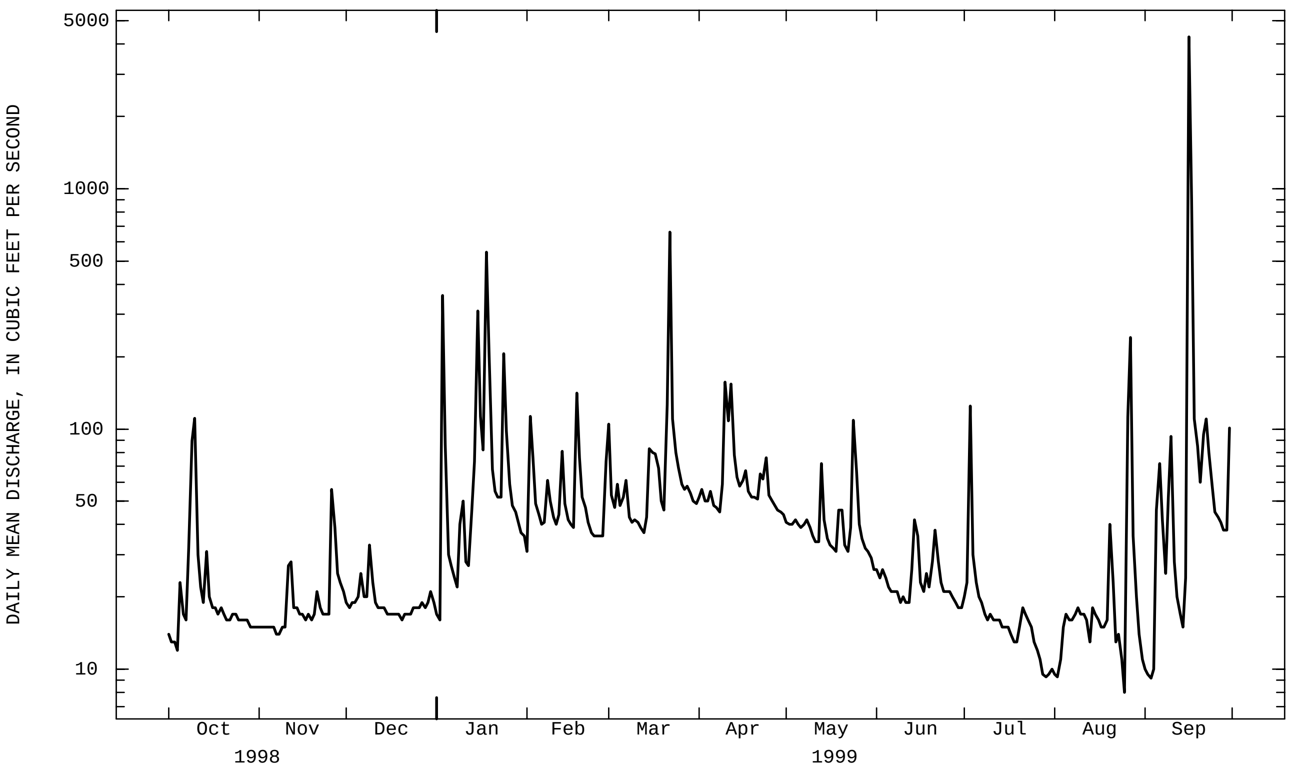
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	47.1	54.5	70.9	102	76.1	112	91.3	78.6	58.8	59.2	44.4	61.7
MAX	120	91.5	240	220	151	223	191	138	104	246	97.7	219
(WY)	1997	1997	1997	1996	1994	1994	1993	1989	1996	1989	1996	1999
MIN	23.0	19.8	19.1	37.9	40.8	65.0	38.6	39.7	23.7	19.3	25.2	18.2
(WY)	1995	1999	1999	1992	1992	1990	1995	1995	1999	1999	1998	1998

† Inflow in cubic feet per second, from Hoopes Reservoir for municipal supply.
≠ Adjusted for inflow.

01480015 RED CLAY CREEK NEAR STANTON, DE--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1989 - 1999	
ANNUAL TOTAL	18519		20688.8			
ANNUAL MEAN	50.7		56.7		71.3	
ANNUAL MEAN≠	50.7		56.3		70.9	
HIGHEST ANNUAL MEAN					98.2	1996
LOWEST ANNUAL MEAN					37.2	1995
HIGHEST DAILY MEAN	459	Mar 9	4300	Sep 16	4300	Sep 16 1999
LOWEST DAILY MEAN	(e)12	Oct 4	(e)8.0	Aug 25	(e)7.0	Sep 12 1995
ANNUAL SEVEN-DAY MINIMUM	14	Sep 28	9.7	Jul 27	9.7	Jul 27 1999
INSTANTANEOUS PEAK FLOW			(a)8260	Sep 16	(a)8260	Sep 16 1999
INSTANTANEOUS PEAK STAGE			(b)23.54	Sep 16	(b)23.54	Sep 16 1999
INSTANTANEOUS LOW FLOW			UNKNOWN		(c)	(d)
ANNUAL RUNOFF (CFSM)	.97		1.08		1.36	
ANNUAL RUNOFF (CFSM)≠	.97		1.07		1.35	
ANNUAL RUNOFF (INCHES)	13.15		14.69		18.50	
ANNUAL RUNOFF (INCHES)≠	13.15		14.52		18.32	
10 PERCENT EXCEEDS	91		80		118	
50 PERCENT EXCEEDS	36		28		48	
90 PERCENT EXCEEDS	16		15		22	

≠ Adjusted for inflow since June 1994.
e Estimated.
a From rating curve extended above 5,000 ft^3/s.
b From floodmarks; gage height affected by backwater.
c Minimum recordable flow was 10 ft^3/s, may have been less during periods of doubtful or no gage-height record.
d Aug. and Sept. of 1995 and 1999.



DAILY MEAN DISCHARGE - 1999 WATER YEAR

01481500 BRANDYWINE CREEK AT WILMINGTON, DE

LOCATION.--Lat 39°46'09", long 75°34'25", New Castle County, Hydrologic Unit 02040205, on right bank in Rockford Park, 0.2 mi downstream from Rising Sun Bridge, in Wilmington, and 4.2 mi upstream from mouth.

DRAINAGE AREA.--314 mi^2.

WATER-DISCHARGE RECORDS

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

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

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

REMARKS.--Water-discharge records good except those for estimated daily discharges (doubtful gage-height record), which are fair. Some diurnal fluctuation at low flow caused by mills upstream from station. Flow regulated since November 1973 by Marsh Creek Reservoir, capacity 7,230,000,000 gal, about 27 mi upstream. No diversion just upstream from station by plant of E. I. du Pont de Nemours & Co. since June l3, 1960. National Weather Service gage-height telemeter at station.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 4,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jan 19	0030	4,530	7.38	Sep 17	0330	*28,700	*15.43
Mar 22	0830	4,310	7.18				

Minimum discharge, Unknown.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	134	152	160	139	276	817	411	355	242	134	e59	88
2	122	151	164	151	572	475	445	345	235	188	e58	83
3	121	148	159	1810	740	345	412	326	253	279	e56	e86
4	161	149	152	1170	446	472	402	327	235	163	e55	e84
5	194	147	158	319	372	458	453	324	216	127	e54	136
6	165	147	161	268	345	365	406	319	203	116	e53	495
7	155	147	160	283	297	480	385	319	203	109	52	260
8	e214	147	164	223	368	351	374	323	191	101	54	247
9	701	147	219	309	365	320	412	327	172	94	57	163
10	821	147	192	625	317	318	1020	314	168	93	58	494
11	353	164	169	274	293	313	674	305	169	95	e57	257
12	240	177	162	227	298	298	880	301	168	90	e56	140
13	204	154	159	275	521	288	629	402	179	90	e55	110
14	225	147	160	394	367	298	532	339	237	93	e70	107
15	183	147	155	1010	308	427	493	312	262	89	128	131
16	167	146	154	946	295	492	465	296	195	86	88	7700
17	164	146	155	630	293	500	512	292	173	83	e75	14200
18	166	146	154	1910	768	624	431	285	187	80	e64	1230
19	165	142	148	2410	805	424	408	338	182	e76	58	719
20	160	145	152	648	417	352	423	347	176	109	86	665
21	157	147	149	483	346	687	421	296	199	98	88	702
22	153	147	156	465	311	3430	478	280	182	86	85	762
23	152	147	161	472	287	1070	510	310	165	88	75	628
24	156	147	160	1170	285	718	565	561	158	85	70	507
25	155	e140	157	1160	285	636	468	532	154	80	69	560
26	153	230	136	578	281	546	433	355	148	e76	377	512
27	151	300	141	448	279	497	408	317	141	e72	1120	479
28	156	199	164	395	362	488	385	276	136	e69	277	351
29	155	176	166	363	---	470	369	251	135	e66	150	331
30	e148	177	188	338	---	433	360	248	132	e63	e103	757
31	152	---	162	297	---	405	---	244	---	e61	e96	---
TOTAL	6503	4806	4997	20190	10899	17797	14564	10166	5596	3139	3803	32984
MEAN	210	160	161	651	389	574	485	328	187	101	123	1099
MAX	821	300	219	2410	805	3430	1020	561	262	279	1120	14200
MIN	121	140	136	139	276	288	360	244	132	61	52	83
(†)	3.4	-6.6	-5.5	-5.5	6.8	15.6	0.0	2.4	-3.2	-7.3	-5.5	16.0
MEAN≠	213	153	156	646	396	590	485	330	184	94	118	1115
CFSM≠	.68	.49	.50	2.06	1.26	1.88	1.54	1.05	.59	.30	.38	3.55
IN≠	.78	.55	.58	2.38	1.31	2.17	1.72	1.21	.66	.35	.44	3.96

e Estimated

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

≠ Adjusted for change in reservoir contents.

01481500 BRANDYWINE CREEK AT WILMINGTON, DE--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1947 - 1973, BY WATER YEAR (WY) [UNREGULATED]

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	223	356	434	498	681	734	696	559	435	330	315	284
MAX	860	794	979	1052	1454	1206	1406	1087	1343	749	1436	1403
(WY)	1972	1972	1973	1953	1971	1958	1958	1958	1972	1958	1955	1971
MIN	80.6	117	129	173	225	333	259	190	149	92.5	81.9	99.6
(WY)	1964	1966	1966	1955	1954	1969	1963	1963	1963	1963	1957	1964

SUMMARY STATISTICS	WATER YEARS 1947 - 1973	
ANNUAL MEAN	461	
HIGHEST ANNUAL MEAN	732	1972
LOWEST ANNUAL MEAN	252	1954
HIGHEST DAILY MEAN	14300	Jun 23 1972
LOWEST DAILY MEAN	56	Aug 23 1957
ANNUAL SEVEN-DAY MINIMUM	59	Aug 18 1957
INSTANTANEOUS PEAK FLOW	(a)29000	Jun 23 1972
INSTANTANEOUS PEAK STAGE	15.49	Jun 23 1972
INSTANTANEOUS LOW FLOW	(b)30	Dec 26 1948
ANNUAL RUNOFF (CFSM)	1.47	
ANNUAL RUNOFF (INCHES)	19.93	
10 PERCENT EXCEEDS	864	
50 PERCENT EXCEEDS	316	
90 PERCENT EXCEEDS	125	

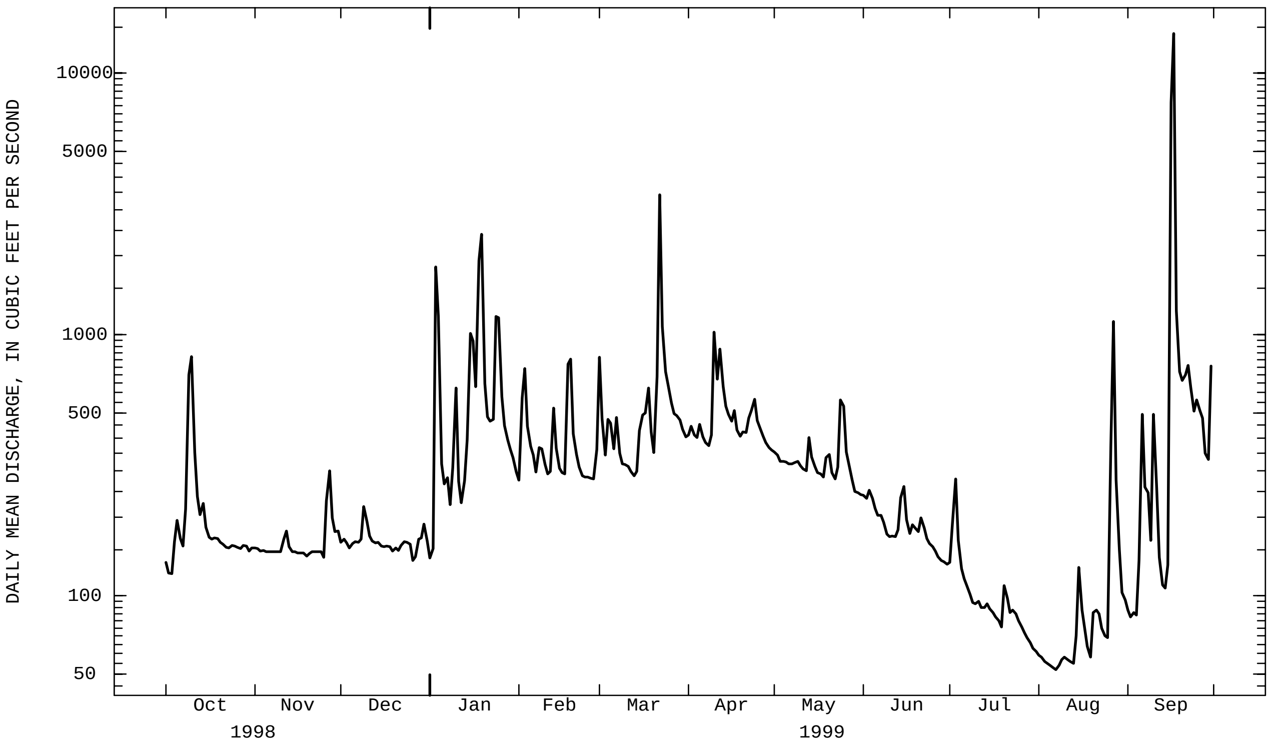
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1974 - 1999, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	302	367	532	642	632	750	725	600	440	391	263	321
MAX	1022	856	1927	1868	1610	1839	1773	1168	1079	1243	572	1099
(WY)	1997	1997	1997	1979	1979	1994	1983	1989	1975	1975	1996	1999
MIN	125	157	145	119	246	230	223	304	172	101	103	108
(WY)	1987	1982	1981	1981	1992	1981	1985	1977	1985	1999	1995	1980

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1974 - 1999	
ANNUAL TOTAL	150989		135444			
ANNUAL MEAN	414		371		496	
ANNUAL MEAN≠	414		370		497	
HIGHEST ANNUAL MEAN					835	1984
LOWEST ANNUAL MEAN					228	1981
HIGHEST DAILY MEAN	3940	Apr 2	14200	Sep 17	14200	Sep 17 1999
LOWEST DAILY MEAN	121	Oct 3	52	Aug 7	52	Sep 13 1995
ANNUAL SEVEN-DAY MINIMUM	136	Sep 27	54	Aug 3	54	Aug 3 1999
INSTANTANEOUS PEAK FLOW			(a)28700	Sep 17	(a)28700	Sep 17 1999
INSTANTANEOUS PEAK STAGE			15.43	Sep 17	15.43	Sep 17 1999
INSTANTANEOUS LOW FLOW			UNKNOWN		40	Aug 26 1995
ANNUAL RUNOFF (CFSM)	1.32		1.18		1.58	
ANNUAL RUNOFF (CFSM)≠	1.32		1.18		1.58	
ANNUAL RUNOFF (INCHES)	17.89		16.05		21.48	
ANNUAL RUNOFF (INCHES)≠	17.89		16.02		21.50	
10 PERCENT EXCEEDS	753		624		919	
50 PERCENT EXCEEDS	294		230		348	
90 PERCENT EXCEEDS	149		86		141	

a From rating curve extended above 18,000 ft^3/s.
b During period of ice effect.
≠ Adjusted for change in reservoir contents since November 1973.

01481500 BRANDYWINE CREEK AT WILMINGTON, DE--Continued



DAILY MEAN DISCHARGE - 1999 WATER YEAR

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1947 to September 1980, October 1998 to September 1999.

PERIOD OF DAILY RECORD.--
WATER TEMPERATURE: November 1956 to September 1961, February 1971 to September 1973, October 1974 to September 1980.
SUSPENDED-SEDIMENT DISCHARGE: December 1946 to September 1961, July 1962 to September 1980.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURE (water years 1957-61, 1972-73, 1976-80): Maximum daily, 30.5°C, July 18, 19, 1977; minimum daily, 0.0°C, on many days during winter periods.
SEDIMENT CONCENTRATION: Maximun daily mean, 1,700 mg/L, Feb. 14, 1966; minimum daily mean, 1 mg/L, on many days.
SEDIMENT LOAD: Maximum daily, 35,700 tons, Feb. 14, 1971; minimum daily, less than 0.25 ton, Sept. 15-17, 1980.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)
MAY 1999												
11...	1340	308	267	7.8	23.0	18.4	766	10.0	106	88	21	8.7
SEP												
14...	1310	108	292	8.0	22.5	21.9	766	--	--	100	24	9.7

DATE	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	ALKA-LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	BICAR-BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	NITRO-GEN, TOTAL (MG/L AS N) (00600)	NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS N) (00618)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)
MAY 1999												
11...	14	2.7	56	69	18	25	<.10	8.6	159	3.3	2.89	.029
SEP												
14...	15	4.2	62	76	25	26	.18	10	161	2.5	2.13	.013

DATE	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	CARBON, ORGANIC DIS-SOLVED (MG/L AS C) (00681)	CARBON, ORGANIC SUS-PENDED TOTAL (MG/L AS C) (00689)	ACETO-CHLOR, WATER FLTRD REC (UG/L) (49260)
MAY 1999												
11...	2.92	.085	.39	.31	.078	.060	.062	97	40	2.3	<.20	<.0020
SEP												
14...	2.14	.020	.33	.34	<.102	.088	.074	99	30	4.0	<.20	<.0020

DATE	ALA-CHLOR, WATER, DISS, REC, (UG/L) (46342)	ATRA-ZINE, WATER, DISS, REC (UG/L) (39632)	BEN-FLUR-ALIN WAT FLD 0.7 U GF, REC (UG/L) (82673)	BUTYL-ATE, WATER, DISS, REC (UG/L) (04028)	CAR-BARYL WATER FLTRD 0.7 U GF, REC (UG/L) (82680)	CARBO-FURAN WATER FLTRD 0.7 U GF, REC (UG/L) (82674)	CHLOR-PYRIFOS DIS-SOLVED (UG/L) (38933)	CYANA-ZINE, WATER, DISS, REC (UG/L) (04041)	DCPA WATER FLTRD 0.7 U GF, REC (UG/L) (82682)	DEETHYL ATRA-ZINE, WATER, DISS, REC (UG/L) (04040)	DI-AZINON, DIS-SOLVED (UG/L) (39572)	DI-ELDRIN DIS-SOLVED (UG/L) (39381)
MAY 1999												
11...	<.002	.028	<.0020	<.0020	E.0046	<.0030	<.0040	<.0040	<.0020	E.0646	<.002	<.001
SEP												
14...	<.002	.026	<.0020	<.0020	<.0030	<.0030	<.0040	.140	<.0020	E.0397	<.002	<.001

E Estimated

01481500 BRANDYWINE CREEK AT WILMINGTON, DE--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	2,6-DI-ETHYL ANILINE WAT FLT 0.7 U GF, REC (UG/L) (82660)	DISUL-FOTON WATER FLTRD 0.7 U GF, REC (UG/L) (82677)	EPTC WATER FLTRD 0.7 U GF, REC (UG/L) (82668)	ETHAL-FLUR-ALIN WAT FLT 0.7 U GF, REC (UG/L) (82663)	ETHO-PROP WATER FLTRD 0.7 U GF, REC (UG/L) (82672)	FONOFOS WATER DISS REC (UG/L) (04095)	LINDANE DIS-SOLVED (UG/L) (39341)	LIN-URON WATER FLTRD 0.7 U GF, REC (UG/L) (82666)	MALA-THION, DIS-SOLVED (UG/L) (39532)	METHYL AZIN-PHOS WAT FLT 0.7 U GF, REC (UG/L) (82686)	METHYL PARA-THION WAT FLT 0.7 U GF, REC (UG/L) (82667)	METO-LACHLOR WATER DISSOLV (UG/L) (39415)
MAY 1999												
11...	<.0030	<.0170	<.0020	<.0040	<.0030	<.0030	<.004	<.0020	<.005	<.0010	<.0060	.015
SEP												
14...	<.0030	<.0170	<.0020	<.0040	<.0030	<.0030	<.004	<.0020	<.005	<.0010	<.0060	.022

DATE	METRI-BUZIN SENCOR WATER DISSOLV (UG/L) (82630)	MOL-INATE WATER FLTRD 0.7 U GF, REC (UG/L) (82671)	NAPROP-AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82684)	PARA-THION, DIS-SOLVED (UG/L) (39542)	PEB-ULATE WATER FILTRD 0.7 U GF, REC (UG/L) (82669)	PENDI-METH-ALIN WAT FLT 0.7 U GF, REC (UG/L) (82683)	PER-METHRIN CIS WAT FLT 0.7 U GF, REC (UG/L) (82687)	PHORATE WATER FLTRD 0.7 U GF, REC (UG/L) (82664)	PRO-METON, WATER, DISS, REC (UG/L) (04037)	PRON-AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82676)	PROP-CHLOR, WATER, DISS, REC (UG/L) (04024)	PRO-PARGITE WATER FLTRD 0.7 U GF, REC (UG/L) (82685)
MAY 1999												
11...	<.004	<.0040	<.0030	<.004	<.0040	<.0040	<.0050	<.0020	E.0062	<.0030	<.0070	<.0130
SEP												
14...	<.004	<.0040	<.0030	<.004	<.0040	<.0040	<.0050	<.0020	E.0166	<.0030	<.0070	<.0130

DATE	PRO-PANIL WATER FLTRD 0.7 U GF, REC (UG/L) (82679)	SI-MAZINE, WATER, DISS, REC (UG/L) (04035)	TEBU-THIURON WATER FLTRD 0.7 U GF, REC (UG/L) (82670)	TER-BACIL WATER FLTRD 0.7 U GF, REC (UG/L) (82665)	TER-BUFOS WATER FLTRD 0.7 U GF, REC (UG/L) (82675)	THIO-BENCARB WATER FLTRD 0.7 U GF, REC (UG/L) (82681)	TRIAL-LATE WATER FLTRD 0.7 U GF, REC (UG/L) (82678)	TRI-FLUR-ALIN WAT FLT 0.7 U GF, REC (UG/L) (82661)	ALPHA BHC DIS-SOLVED (UG/L) (34253)	SEDI-MENT, SUS-PENDED (MG/L) (80154)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY) (80155)
MAY 1999											
11...	<.0040	.0178	<.0100	<.0070	<.0130	<.0020	<.0010	<.0020	<.0020	4	3.2
SEP											
14...	<.0040	.0699	<.0100	<.0070	<.0130	<.0020	<.0010	<.0020	<.0020	3	.82

E Estimated

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01483200 BLACKBIRD CREEK AT BLACKBIRD, DE

LOCATION.--Lat 39°21'58", long 75°40'10", New Castle County, Hydrologic Unit 02040205, on left bank 15 ft down- stream from highway culverts, 0.5 mi upstream from Barlow Branch, 0.6 mi southwest of Blackbird, 5.6 mi northwest of Smyrna, and 13.8 mi upstream from mouth.

DRAINAGE AREA.--3.85 mi^2.

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

REVISED RECORDS.--WRD MD-DE-89-1: 1987-88(P).

GAGE.--Water-stage recorder. Concrete control since May 23, 1968. Datum of gage is 17.89 ft above sea level. Mar. 5, 1951, to Oct. 16, 1956, nonrecording gage and crest-stage gage at site 15 ft upstream at datum 1.0 ft higher. Oct. 17, 1956, to June 16, 1986, recording gage at same site on right bank at datum 1.0 ft higher.

REMARKS.--Records good except those for estimated daily discharges (missing record) which are poor. Occasional regulation at low and medium flow by Blackbird Lake Dam upstream from station. Several measurements of water temperature were made during the year. Water-quality records for some prior periods have been collected at this location.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 50 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar 22	0430	72	2.48	Sep 16	0815	199	3.94
Aug 25	2400	86	2.68	Sep 16	1615	*789	*6.47
Aug 26	0800	115	3.13				

Minimum discharge, 0.06 ft^3/s, Aug 19, 20.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.14	.77	e.84	.92	1.9	7.3	3.5	2.6	.94	4.1	.17	.80
2	.13	.50	e.82	.77	3.2	3.7	4.5	2.5	.76	8.1	.14	.76
3	.12	.43	e.85	7.2	3.8	2.5	3.4	2.6	.80	2.5	.13	.65
4	.27	.41	e.84	9.4	2.9	3.4	3.4	3.0	.72	2.0	.11	.56
5	.54	.39	e.90	2.5	2.0	2.9	3.9	2.7	.66	1.3	.12	.36
6	.60	.90	e.92	1.4	2.0	2.8	3.2	2.5	.59	.95	.12	.20
7	.44	.59	e.90	1.2	2.1	4.0	3.0	2.7	.68	.90	.11	.26
8	.41	.57	e.98	1.3	2.8	3.0	3.0	2.6	.72	.94	.10	.35
9	1.4	.59	e1.1	1.6	2.1	2.8	4.3	2.4	.81	.84	.08	.45
10	3.1	.61	e2.0	2.1	2.1	2.7	11	2.3	.93	.80	.07	.43
11	1.4	1.3	e1.3	1.5	1.8	2.8	8.4	2.0	.90	.70	.09	.43
12	.54	1.7	e1.4	1.4	2.2	2.5	11	1.7	.91	.58	.09	.43
13	.56	.84	1.5	2.2	4.2	2.4	6.4	1.6	.81	.52	.09	.41
14	.75	.65	2.1	2.0	3.2	2.9	4.5	1.6	.88	.48	.09	.29
15	.56	.63	1.3	17	2.2	13	4.3	1.6	1.5	.43	.09	.28
16	.39	.53	1.1	14	2.8	9.4	4.9	1.5	1.6	.39	.08	397
17	.33	e.64	.93	3.7	2.0	4.7	4.1	1.5	1.5	.43	.08	89
18	.33	e.60	.88	4.8	9.0	3.0	3.8	1.6	1.4	.46	.07	21
19	.27	e.60	.78	5.3	8.9	2.7	3.4	1.8	1.2	.47	.06	11
20	.26	e.70	.79	2.9	3.9	2.6	3.3	2.1	1.2	.43	.12	8.3
21	.28	e.70	.78	2.3	2.7	4.3	3.5	1.6	8.2	.32	.41	11
22	.28	e.70	.81	2.1	2.2	25	4.0	1.4	3.9	.43	.48	16
23	.26	e.71	.82	2.1	2.2	9.5	4.0	1.8	1.7	.43	.35	9.5
24	.29	e.74	.95	11	2.2	4.5	4.2	4.1	1.6	.45	.21	6.2
25	.33	e.70	.86	12	2.2	3.8	3.3	5.4	1.5	.44	2.1	5.0
26	.40	e1.0	.75	4.2	2.6	3.4	3.0	1.7	1.4	.36	62	4.1
27	.41	e2.2	.71	2.7	2.3	3.2	2.9	1.3	1.2	.36	11	3.7
28	.34	e1.6	.84	2.6	3.2	4.0	2.7	1.3	1.0	.31	2.9	3.8
29	.33	e1.1	1.4	2.0	---	3.6	2.6	1.2	1.0	.24	1.5	3.5
30	.31	e.83	1.8	1.9	---	3.1	2.7	1.2	1.2	.33	1.1	8.6
31	2.5	---	1.2	1.9	---	2.9	---	.99	---	.26	.85	---
TOTAL	18.27	24.23	33.15	127.99	84.7	148.4	130.2	64.89	42.21	31.25	84.91	604.36
MEAN	.59	.81	1.07	4.13	3.02	4.79	4.34	2.09	1.41	1.01	2.74	20.1
MAX	3.1	2.2	2.1	17	9.0	25	11	5.4	8.2	8.1	62	397
MIN	.12	.39	.71	.77	1.8	2.4	2.6	.99	.59	.24	.06	.20
CFSM	.15	.21	.28	1.07	.79	1.24	1.13	.54	.37	.26	.71	5.23
IN.	.18	.23	.32	1.24	.82	1.43	1.26	.63	.41	.30	.82	5.84

e Estimated

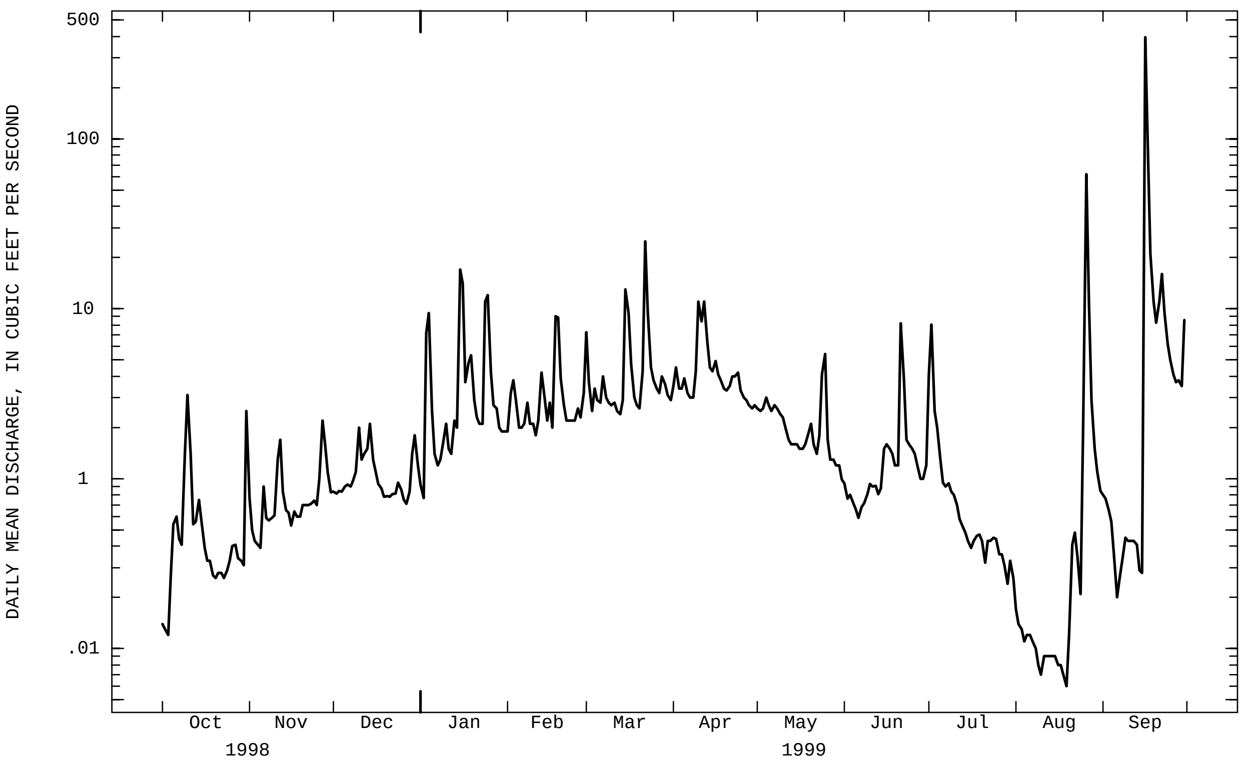
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1957 - 1999, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	2.40	3.41	5.07	6.28	7.17	8.69	7.47	5.40	3.64	2.89	2.05	2.48
MAX	8.83	10.4	23.5	18.1	19.2	20.3	21.0	13.9	24.4	17.0	6.80	20.1
(WY)	1972	1957	1997	1978	1979	1958	1983	1989	1972	1989	1971	1999
MIN	.30	.73	.71	1.51	2.44	1.98	2.16	1.26	.54	.077	.013	.21
(WY)	1969	1966	1966	1981	1992	1966	1966	1977	1966	1966	1966	1968

01483200 BLACKBIRD CREEK AT BLACKBIRD, DE--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1957 - 1999	
ANNUAL TOTAL	1548.73		1394.56			
ANNUAL MEAN	4.24		3.82		4.73	
HIGHEST ANNUAL MEAN					9.05	1972
LOWEST ANNUAL MEAN					1.40	1966
HIGHEST DAILY MEAN	50	Feb 24	397	Sep 16	397	Sep 16 1999
LOWEST DAILY MEAN	.12	Oct 3	.06	Aug 19	.00	(a)
ANNUAL SEVEN-DAY MINIMUM	.17	Sep 28	.08	Aug 13	.00	Jul 17 1966
INSTANTANEOUS PEAK FLOW			(b)789	Sep 16	(b)789	Sep 16 1999
INSTANTANEOUS PEAK STAGE			6.47	Sep 16	6.47	Sep 16 1999
INSTANTANEOUS LOW FLOW			.06	(c)	.00	(d)
ANNUAL RUNOFF (CFSM)	1.10		.99		1.23	
ANNUAL RUNOFF (INCHES)	14.96		13.47		16.70	
10 PERCENT EXCEEDS	9.7		4.7		9.7	
50 PERCENT EXCEEDS	1.8		1.4		2.7	
90 PERCENT EXCEEDS	.33		.29		.51	

a Sept. 11, 1965; July 12-15, 17-31, Aug. 1-12, 14, 15, 18-31, Sept. 1-20, 1966.
b From rating curve extended above 600 ft^3/s.
c Aug. 19, 20.
d No flow at times during 1964-66.



DAILY MEAN DISCHARGE - 1999 WATER YEAR

01483700 ST. JONES RIVER AT DOVER, DE

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

DRAINAGE AREA.--31.9 mi^2.

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

GAGE.--Water-stage recorder and concrete control. Datum of gage is 0.00 ft above sea level. Prior to June 1973, at datum 0.50 ft higher.

REMARKS.--Records good except those for estimated daily discharges (backwater from tides and from unknown sources), which are fair. Flow affected by Silver Lake. Flow occasionally affected by tide and wind effect. Several measurements of water temperature were made during the year. Water-quality data for some prior years have been collected at this location.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 756 ft^3/s, Sep 16, gage height, 6.60 ft; minimum discharge, 0.53 ft^3/s, Nov 12, 17, Aug 13, 14, 19.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.2	e2.5	6.4	7.7	17	48	38	e14	5.1	74	e1.1	e1.2
2	2.3	e6.2	4.8	7.1	29	46	47	e13	4.6	55	e1.0	e1.1
3	1.9	11	5.4	e97	37	32	47	e14	4.4	26	e.90	e1.0
4	6.7	10	5.9	98	34	34	42	e15	4.0	13	e.80	e1.0
5	6.1	9.2	5.7	57	26	26	46	15	3.4	8.1	e.67	e1.1
6	e4.1	8.7	6.3	23	22	28	45	15	3.4	5.3	e.60	e1.6
7	e3.7	8.0	6.4	14	21	43	37	16	3.2	3.9	e.60	e1.6
8	e6.0	7.6	12	12	22	34	32	17	3.2	2.8	e.60	e6.8
9	10	7.4	32	16	21	28	33	16	e2.0	e2.0	e.60	e4.4
10	8.9	5.7	22	19	20	27	53	14	e7.0	e2.0	e.60	e8.6
11	7.6	e.60	13	15	17	27	65	13	e7.8	e1.6	e.60	e5.0
12	e6.5	.59	8.7	12	22	27	77	13	e3.9	e1.4	e.60	e2.2
13	e7.1	1.2	21	12	34	21	70	e11	e3.7	e3.3	e.53	e1.6
14	21	6.3	21	15	31	36	49	e10	e4.0	e2.3	e.53	e1.4
15	12	10	13	e68	23	146	39	e9.7	e3.9	e2.2	e.80	21
16	8.0	5.5	9.9	90	20	e135	e37	e9.2	e3.7	e2.4	e.73	511
17	6.0	.64	9.0	66	19	90	37	e9.2	e3.5	e2.0	.67	554
18	5.3	e1.0	8.1	52	49	55	33	e9.8	e3.5	e1.7	.71	269
19	4.9	3.0	7.5	61	67	40	29	e16	3.9	1.5	e.60	95
20	4.4	e2.4	7.6	63	53	33	28	16	15	1.4	e4.4	38
21	3.5	3.3	7.4	39	34	47	28	11	46	1.3	20	25
22	4.0	3.4	11	26	26	129	30	9.7	33	2.7	e4.9	18
23	2.4	4.6	7.1	22	20	145	32	11	18	3.0	e2.2	12
24	2.5	6.1	8.6	54	20	98	31	15	8.3	2.4	e1.8	9.7
25	2.7	4.0	7.7	80	20	62	28	15	4.4	2.3	e3.4	7.9
26	2.6	12	7.4	70	21	49	25	13	4.4	e1.9	e10	e6.2
27	3.1	9.1	7.2	41	18	43	22	9.9	4.3	e1.6	13	e5.4
28	3.5	7.1	7.7	29	27	44	20	7.7	4.1	e1.5	7.0	e5.1
29	4.7	6.7	9.7	25	---	45	19	7.1	4.0	e1.2	5.0	e5.4
30	2.5	6.2	13	22	---	39	16	6.2	7.0	e1.1	e3.3	23
31	3.0	---	7.9	e17	---	33	---	5.6	---	e1.0	e2.0	---
TOTAL	171.2	170.03	320.4	1229.8	770	1690	1135	377.1	226.7	231.9	90.24	1644.3
MEAN	5.52	5.67	10.3	39.7	27.5	54.5	37.8	12.2	7.56	7.48	2.91	54.8
MAX	21	12	32	98	67	146	77	17	46	74	20	554
MIN	1.9	.59	4.8	7.1	17	21	16	5.6	2.0	1.0	.53	1.0
CFSM	.17	.18	.32	1.24	.86	1.71	1.19	.38	.24	.23	.09	1.72
IN.	.20	.20	.37	1.43	.90	1.97	1.32	.44	.26	.27	.11	1.92

e Estimated

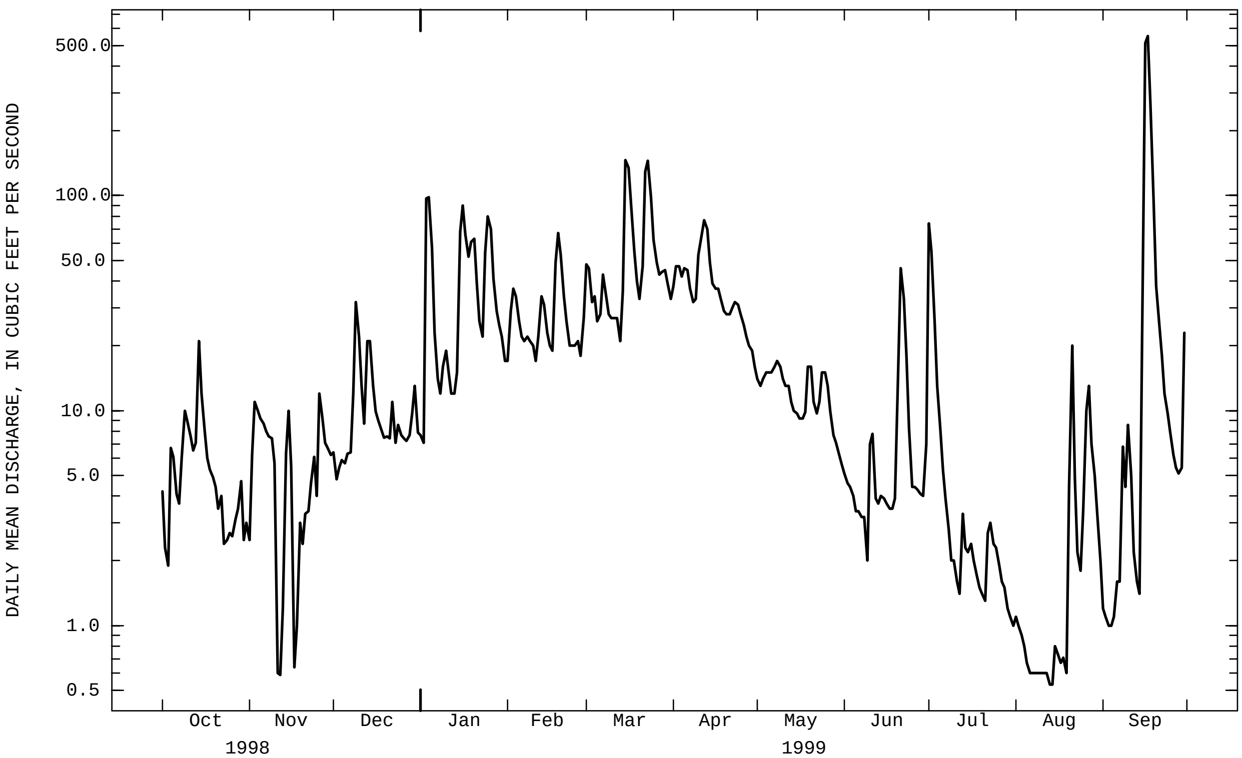
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1958 - 1999, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	19.0	24.1	37.2	51.0	60.2	75.3	57.9	37.5	28.9	18.1	24.2	20.1
MAX	93.5	103	145	156	143	187	180	117	138	88.6	144	128
(WY)	1972	1973	1997	1978	1998	1994	1983	1989	1996	1975	1958	1960
MIN	.40	1.91	1.35	1.64	11.0	10.7	13.5	9.86	4.36	2.10	.69	1.92
(WY)	1964	1962	1966	1966	1966	1966	1966	1963	1986	1966	1966	1970

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

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1958 - 1999	
ANNUAL TOTAL	16047.83		8056.67			
ANNUAL MEAN	44.0		22.1		36.9	
HIGHEST ANNUAL MEAN					69.3	1972
LOWEST ANNUAL MEAN					6.14	1966
HIGHEST DAILY MEAN	465	Feb 5	554	Sep 17	1460	Sep 13 1960
LOWEST DAILY MEAN	.59	Nov 12	.53	(a)	.00	(b)
ANNUAL SEVEN-DAY MINIMUM	1.7	Aug 3	.58	Aug 8	.40	Sep 30 1963
INSTANTANEOUS PEAK FLOW			756	Sep 16	1900	Sep 13 1960
INSTANTANEOUS PEAK STAGE			6.60	Sep 16	(c)9.45	Sep 13 1960
INSTANTANEOUS LOW FLOW			.53	(d)	.00	(f)
ANNUAL RUNOFF (CFSM)	1.38		.69		1.16	
ANNUAL RUNOFF (INCHES)	18.71		9.40		15.73	
10 PERCENT EXCEEDS	110		47		85	
50 PERCENT EXCEEDS	13		9.7		20	
90 PERCENT EXCEEDS	3.5		1.5		3.7	

a Aug. 13, 14.
b July 9, 1959, May 9, 10, 1961.
c From floodmark.
d Nov. 12, 17, Aug. 13, 14, 19.
f No flow at times in 1959, 1961, 1962.



DAILY MEAN DISCHARGE - 1999 WATER YEAR

01484000 MURDERKILL RIVER NEAR FELTON, DE

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

DRAINAGE AREA.--13.6 mi^2.

PERIOD OF RECORD.--July 1931 to October 1933. Monthly discharges 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 1985. October 1996 to September 1999 (Discontinued).

REVISED RECORDS.--WSP 1432: 1932.

GAGE.--Water-stage recorder. Datum of gage is 21.87 ft above sea level. July 1931 to October 1933, nonrecording gage at bridge 200 ft upstream at datum 2.00 ft higher. March 1951 to May 1960, nonrecording gage and crest-stage gage at bridge 200 ft upstream at datum 2.00 ft higher.

REMARKS.--Records good except those for estimated daily discharges (missing record), which are fair. Several measurements of water temperature were made during this year. Water-quality records for some prior periods have been collected at this location.

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

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 130 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Sep 16	2045	*379	*6.00	No other peak greater than base discharge.			

Minimum discharge, 1.1 ft^3/s, Aug 6, 7, 10-12.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.7	2.2	3.0	3.1	11	24	20	9.7	3.7	18	e1.7	2.2
2	1.4	2.0	2.4	2.8	16	18	25	9.5	3.7	11	1.6	2.1
3	1.6	2.2	2.4	54	16	15	21	10	3.6	14	1.4	2.3
4	3.3	2.4	2.4	37	15	16	22	10	3.5	5.5	1.4	2.5
5	3.7	2.1	2.5	11	15	13	34	9.4	3.2	4.2	1.4	3.1
6	2.6	2.3	2.4	7.8	13	13	26	9.3	3.1	3.6	1.4	e3.2
7	2.1	2.6	2.4	7.1	12	20	22	9.3	3.0	3.2	1.3	e8.0
8	4.0	4.9	3.9	6.2	13	16	19	8.8	2.7	2.8	1.3	e3.0
9	7.7	1.7	12	8.8	12	14	20	8.3	2.5	e2.8	1.4	e2.6
10	5.3	1.8	e5.0	8.0	11	15	42	e8.0	2.7	e2.8	1.3	e4.5
11	3.6	6.8	e3.0	5.9	10	e15	37	e7.7	3.0	e2.8	1.3	e2.7
12	2.8	5.0	e2.8	5.9	11	e14	54	e7.7	3.1	e4.0	1.3	e2.5
13	3.2	2.6	13	5.8	16	e14	36	e7.2	4.0	e9.0	1.7	e2.3
14	2.8	2.3	8.2	6.6	13	e22	27	e7.2	5.1	e5.4	4.7	e2.3
15	2.5	4.9	5.1	27	11	e130	24	e6.5	11	e4.5	7.3	e3.0
16	2.1	2.1	4.3	22	11	e50	25	e6.8	4.3	e3.0	2.9	e300
17	2.2	2.1	4.2	13	11	e30	22	6.4	4.0	e2.8	2.3	201
18	2.5	2.2	3.8	18	22	e22	18	6.1	4.0	e2.7	1.9	67
19	2.1	2.2	3.5	30	24	e20	16	7.0	3.8	e2.6	1.6	25
20	2.2	2.5	3.5	17	18	e19	15	7.0	7.0	e2.6	2.6	14
21	3.2	2.8	3.4	13	15	e23	15	5.9	10	e2.5	9.8	15
22	1.9	4.4	3.7	12	13	e70	16	5.3	6.1	e5.0	3.8	17
23	1.8	4.8	3.3	11	12	e37	15	7.2	4.4	e4.0	2.6	13
24	1.9	4.9	3.5	29	11	e33	15	6.3	3.6	e3.0	2.2	11
25	2.0	4.7	3.2	39	11	e30	13	5.4	3.5	e2.5	2.6	10
26	1.9	9.5	3.0	21	11	26	12	5.1	3.5	e2.4	3.8	9.6
27	2.0	7.4	3.1	17	11	23	11	4.8	3.2	e2.3	2.8	9.6
28	2.1	4.9	4.3	16	14	27	11	4.4	2.8	e2.1	2.3	9.5
29	1.9	4.1	5.8	14	---	24	10	4.2	3.0	e2.2	2.1	9.1
30	2.0	3.5	4.7	12	---	21	10	4.2	4.2	e1.8	2.0	13
31	2.0	---	3.5	11	---	18	---	3.8	---	e1.8	2.0	---
TOTAL	82.1	107.9	131.3	492.0	379	832	653	218.5	125.3	136.9	77.8	770.1
MEAN	2.65	3.60	4.24	15.9	13.5	26.8	21.8	7.05	4.18	4.42	2.51	25.7
MAX	7.7	9.5	13	54	24	130	54	10	11	18	9.8	300
MIN	1.4	1.7	2.4	2.8	10	13	10	3.8	2.5	1.8	1.3	2.1
CFSM	.19	.26	.31	1.17	1.00	1.97	1.60	.52	.31	.32	.18	1.89
IN.	.22	.30	.36	1.35	1.04	2.28	1.79	.60	.34	.37	.21	2.11

e Estimated

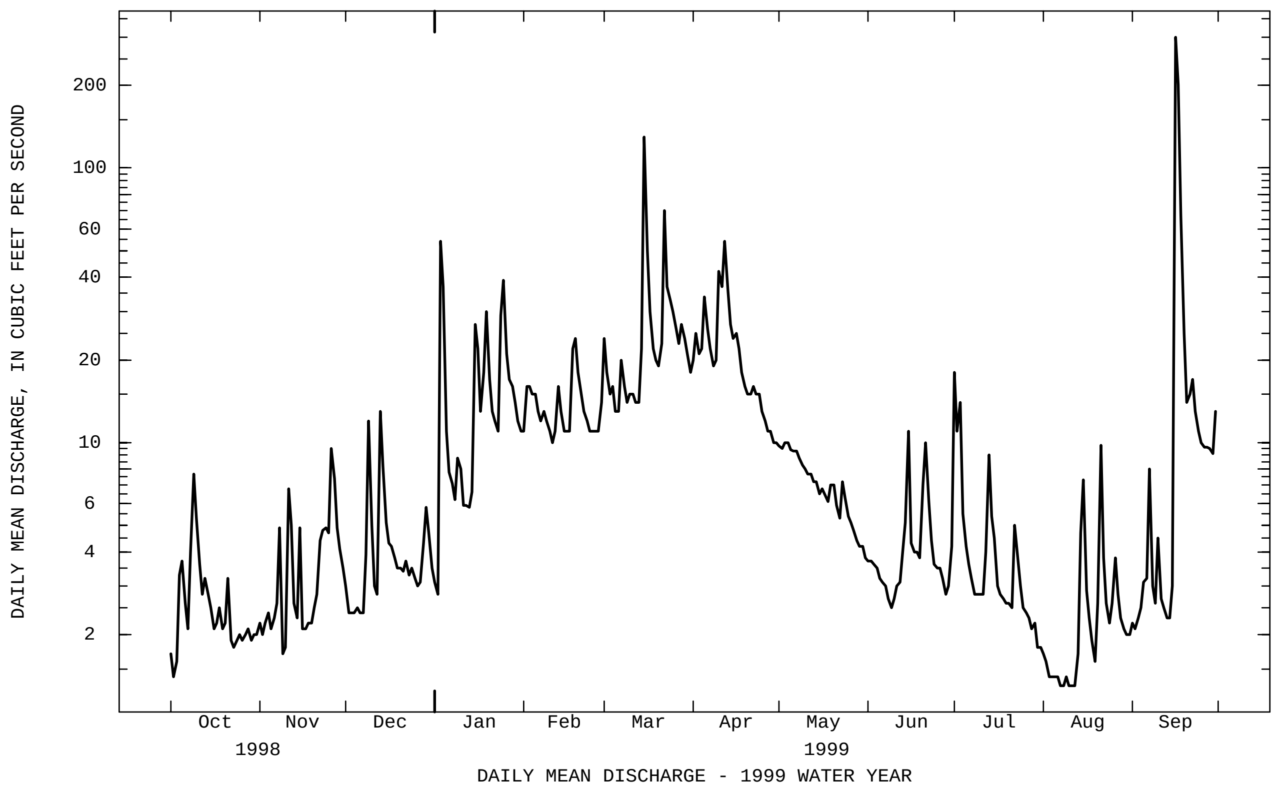
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1960 - 1999, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	8.71	12.6	21.3	25.7	30.9	33.3	26.8	17.1	12.3	10.7	12.6	9.20
MAX	34.9	43.4	59.4	72.7	75.6	76.6	66.4	45.6	30.7	71.4	138	39.9
(WY)	1972	1973	1997	1978	1979	1978	1983	1984	1979	1975	1967	1960
MIN	2.28	3.58	4.15	3.83	10.5	10.2	7.77	5.05	4.18	2.41	2.19	2.38
(WY)	1966	1966	1966	1966	1966	1966	1985	1977	1999	1977	1966	1982

01484000 MURDERKILL RIVER NEAR FELTON, DE--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1960 - 1999	
ANNUAL TOTAL	7318.3		4005.9			
ANNUAL MEAN	20.1		11.0		18.3	
HIGHEST ANNUAL MEAN					28.3	1972
LOWEST ANNUAL MEAN					6.24	1966
HIGHEST DAILY MEAN	306	Feb 5	(e)300	Sep 16	1270	Aug 4 1967
LOWEST DAILY MEAN	1.4	(a)	1.3	(b)	1.1	Aug 28 1966
ANNUAL SEVEN-DAY MINIMUM	1.6	Sep 27	1.3	Aug 6	1.3	Aug 6 1999
INSTANTANEOUS PEAK FLOW			379	Sep 16	2090	Aug 4 1967
INSTANTANEOUS PEAK STAGE			6.00	Sep 16	8.83	Aug 4 1967
INSTANTANEOUS LOW FLOW			1.1	(c)	.80	(d)
ANNUAL RUNOFF (CFSM)	1.47		.81		1.35	
ANNUAL RUNOFF (INCHES)	20.02		10.96		18.31	
10 PERCENT EXCEEDS	45		22		35	
50 PERCENT EXCEEDS	6.9		5.1		10	
90 PERCENT EXCEEDS	2.0		2.1		3.2	

e Estimated.
a Sep. 29, Oct. 2.
b Aug. 7, 8, 10-12.
c Aug. 6, 7, 10-12.
d Aug. 28, Sept. 11, 1966.



01484100 BEAVERDAM BRANCH AT HOUSTON, DE

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

DRAINAGE AREA.--2.83 mi^2.

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

REVISED RECORDS.--WDR MD-DE-84-1: 1981, 1983 (M).

GAGE.--Water-stage recorder and concrete control; timber control prior to Nov. 8, 1979. Datum of gage is 35.67 ft above sea level.

REMARKS.--No estimated daily discharges. Records good. Diversion for irrigation of about l50 acres upstream from station during some years. Several measurements of water temperature were made during this year. Water-quality data for some prior years have been collected at this location.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 30 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar 15	0630	33	3.35	Sep 16	1500	*57	*3.84

Minimum discharge, 0.37 ft^3/s, Aug 9-11.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.68	.65	.56	.65	3.9	5.2	5.0	3.4	1.6	1.6	.50	.51
2	.63	.67	.53	.63	4.6	3.9	5.1	3.4	1.6	1.3	.46	.51
3	.63	.68	.53	13	4.1	3.7	4.7	3.5	1.5	1.2	.45	.54
4	.94	.69	.53	4.9	4.0	3.8	5.0	3.4	1.3	1.1	.47	.53
5	.86	.62	.53	2.7	3.6	3.4	4.9	3.2	1.3	1.1	.48	.54
6	.76	.63	.53	2.5	3.7	3.6	4.4	3.2	1.3	1.0	.47	.50
7	.69	.63	.53	2.4	3.6	3.8	4.3	3.2	1.3	.93	.44	1.1
8	2.4	.63	.60	2.2	3.7	3.5	4.3	3.0	1.2	.85	.46	.63
9	2.9	.62	.97	2.5	3.5	3.6	4.5	2.9	1.2	.85	.44	.57
10	1.4	.59	.67	2.2	3.4	3.8	5.0	2.8	1.2	.78	.43	.75
11	1.1	.72	.60	2.0	3.3	3.7	5.6	2.7	1.3	.76	.43	.60
12	.98	.68	.58	2.0	3.5	3.6	6.5	2.7	1.3	.87	.46	.56
13	1.0	.67	1.7	1.9	4.2	3.5	5.4	2.5	1.4	1.1	.49	.55
14	.91	.63	1.3	2.0	3.4	4.9	5.0	2.3	1.6	.98	1.1	.53
15	.81	.61	.92	7.9	3.3	21	5.0	2.3	1.6	.92	.89	.73
16	.80	.63	.79	4.3	3.3	7.9	5.3	2.4	1.4	.78	.64	36
17	.77	.84	.75	3.1	3.3	6.6	5.0	2.3	1.3	.71	.57	11
18	.74	.90	.69	6.8	5.4	6.0	4.7	2.3	1.3	.71	.53	3.4
19	.72	.92	.69	8.2	4.8	5.5	4.5	2.6	1.2	.70	.51	2.8
20	.72	.74	.69	4.5	4.0	5.3	4.6	2.3	1.7	.69	.91	2.7
21	.69	.54	.69	3.8	3.7	6.2	4.4	2.1	2.0	.67	1.0	2.7
22	.69	.53	.69	3.5	3.6	14	4.6	2.0	1.6	.80	.67	2.8
23	.69	.55	.67	3.5	3.4	7.5	4.5	2.8	1.3	.73	.60	2.4
24	.69	.59	.69	9.7	3.5	6.7	4.2	2.4	1.3	.70	.56	2.3
25	.69	.54	.69	7.6	3.5	6.1	4.0	2.1	1.3	.67	.59	2.2
26	.69	.66	.69	5.3	3.4	5.5	4.0	2.0	1.3	.68	.63	2.1
27	.69	.60	.67	4.9	3.3	5.4	3.8	1.9	1.2	.64	.59	2.2
28	.69	.58	.71	4.5	4.2	5.9	3.7	1.8	1.2	.61	.55	2.1
29	.66	.54	.76	4.2	---	5.4	3.6	1.8	1.2	.59	.52	2.1
30	.64	.53	.73	4.0	---	5.0	3.5	1.7	1.3	.55	.51	2.6
31	.66	---	.69	3.9	---	4.9	---	1.7	---	.52	.51	---
TOTAL	27.92	19.41	22.37	131.28	105.2	178.9	139.1	78.7	41.3	26.09	17.86	88.55
MEAN	.90	.65	.72	4.23	3.76	5.77	4.64	2.54	1.38	.84	.58	2.95
MAX	2.9	.92	1.7	13	5.4	21	6.5	3.5	2.0	1.6	1.1	36
MIN	.63	.53	.53	.63	3.3	3.4	3.5	1.7	1.2	.52	.43	.50
CFSM	.32	.23	.25	1.50	1.33	2.04	1.64	.90	.49	.30	.20	1.04
IN.	.37	.26	.29	1.73	1.38	2.35	1.83	1.03	.54	.34	.23	1.16

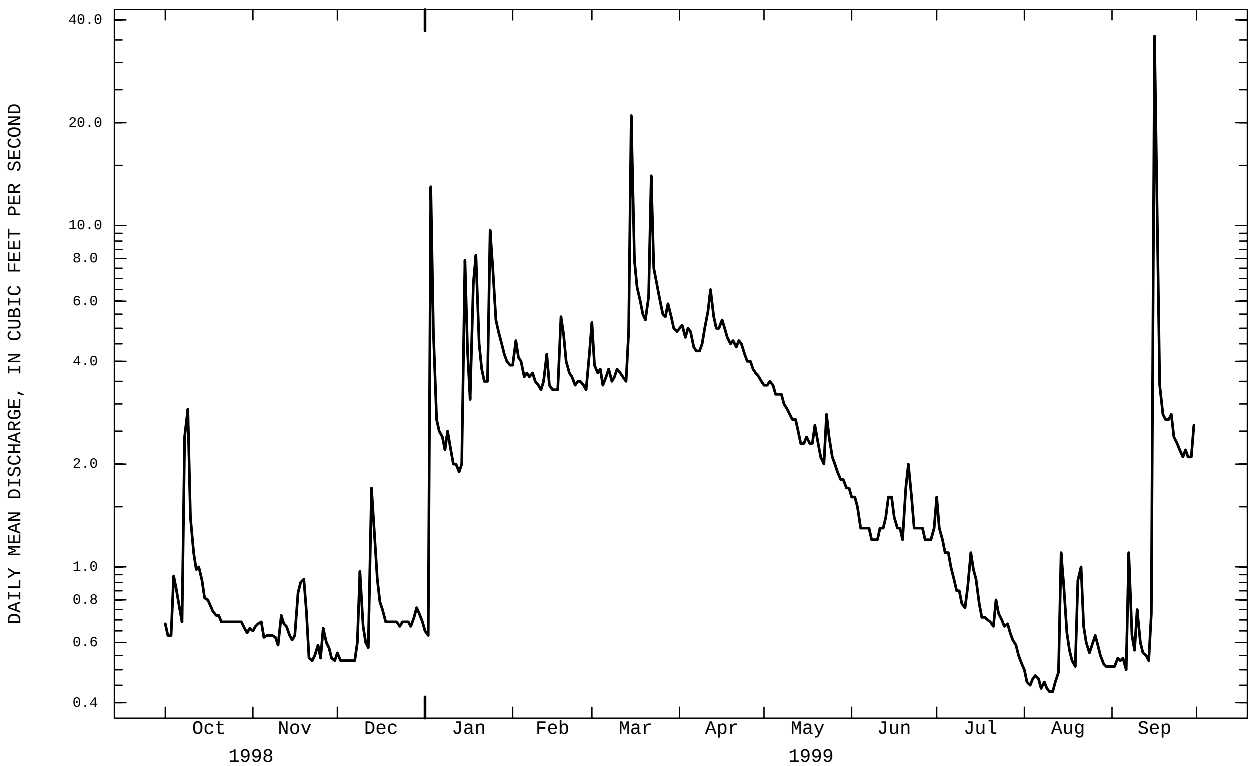
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1958 - 1999, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1.81	2.17	3.20	4.58	5.55	6.49	5.62	4.43	3.03	2.68	2.36	2.04
MAX	4.69	7.56	11.5	10.7	16.2	18.0	11.0	10.5	6.17	16.8	9.38	10.1
(WY)	1959	1998	1973	1978	1998	1994	1983	1984	1979	1975	1967	1960
MIN	.37	.44	.48	.57	1.06	1.70	1.90	1.88	1.22	.42	.51	.44
(WY)	1987	1988	1966	1966	1966	1966	1985	1977	1986	1977	1987	1986

01484100 BEAVERDAM BRANCH AT HOUSTON, DE--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1958 - 1999	
ANNUAL TOTAL	1794.73		876.68			
ANNUAL MEAN	4.92		2.40		3.62	
HIGHEST ANNUAL MEAN					5.92	1998
LOWEST ANNUAL MEAN					1.20	1966
HIGHEST DAILY MEAN	58	Feb 5	36	Sep 16	98	May 30 1984
LOWEST DAILY MEAN	.53	(a)	.43	(b)	(c).00	Jul 28 1977
ANNUAL SEVEN-DAY MINIMUM	.53	Nov 30	.45	Aug 6	.06	Jul 19 1977
INSTANTANEOUS PEAK FLOW			57	Sep 16	(d)176	Sep 12 1960
INSTANTANEOUS PEAK STAGE			3.84	Sep 16	5.55	Sep 12 1960
INSTANTANEOUS LOW FLOW			.37	(f)	(c).00	(g)
ANNUAL RUNOFF (CFSM)	1.74		.85		1.28	
ANNUAL RUNOFF (INCHES)	23.59		11.52		17.38	
10 PERCENT EXCEEDS	10		5.0		6.6	
50 PERCENT EXCEEDS	2.7		1.3		2.8	
90 PERCENT EXCEEDS	.66		.54		.80	

a Nov. 22, Dec. 2-7.
b Aug. 10, 11.
c Result of pumpage for irrigation.
d From rating curve extended above 75 ft^3/s.
f Aug. 9-11.
g July 18-30, 1977.



DAILY MEAN DISCHARGE - 1999 WATER YEAR

01484500 STOCKLEY BRANCH AT STOCKLEY, DE

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

DRAINAGE AREA.--5.24 mi^2.

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

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

REMARKS.--No estimated daily discharges. Records good. Natural flow of stream affected by inflow from sand mine dewatering process since October 1992. Several measurements of water temperature were made during the year. Water-quality records for some prior periods have been collected at this location.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 45 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Sep 16	1400	*73	*3.58	Sep 21	1945	49	3.25

Minimum discharge, 0.61 ft^3/s, Aug 8.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.7	1.8	5.8	8.0	8.9	12	15	15	8.4	5.6	.96	1.5
2	4.8	9.6	4.9	1.2	10	14	15	15	6.0	10	7.6	5.7
3	1.5	4.8	5.6	9.2	11	15	13	9.5	8.1	1.6	9.6	11
4	3.2	5.4	4.9	13	9.0	9.3	11	9.2	8.4	1.3	6.5	1.5
5	6.2	5.1	4.4	8.4	7.4	7.7	14	13	3.5	1.6	3.2	.83
6	2.3	5.6	2.3	4.4	5.5	7.5	14	8.5	1.8	9.9	5.6	.71
7	3.2	4.6	4.2	10	7.0	6.3	13	8.5	6.4	10	1.9	8.5
8	5.8	2.2	6.1	4.0	10	9.5	14	7.9	13	6.4	1.2	11
9	9.8	3.9	8.4	4.7	10	6.4	13	3.7	5.1	4.1	9.3	3.1
10	3.3	10	5.4	7.8	8.4	13	20	13	7.9	2.4	7.1	3.5
11	2.4	5.6	4.8	3.8	10	7.7	14	16	8.1	3.7	2.9	2.6
12	3.8	3.9	4.0	7.3	11	5.6	23	12	8.6	9.5	6.4	1.4
13	11	4.8	6.6	4.2	7.6	5.9	15	12	3.8	8.5	7.8	9.6
14	12	4.0	6.8	7.3	6.5	14	15	11	12	8.2	5.2	12
15	12	1.8	9.2	15	8.1	36	14	9.7	8.4	12	4.2	13
16	9.2	4.1	4.5	7.7	7.3	19	14	4.7	4.6	5.3	9.3	53
17	5.3	12	5.7	3.4	8.3	12	12	13	8.6	2.2	7.8	14
18	7.4	4.8	5.0	4.6	9.6	8.8	12	9.7	8.0	3.0	5.2	8.5
19	3.5	6.1	3.1	8.4	11	16	13	11	6.2	9.8	2.9	7.1
20	2.9	5.5	2.5	6.4	8.3	12	10	9.1	3.3	7.9	3.5	2.4
21	2.9	4.7	4.8	7.1	7.5	12	13	9.5	12	6.2	2.5	15
22	3.9	2.5	5.3	7.3	5.1	31	8.1	4.5	8.6	8.6	1.3	15
23	4.8	4.4	5.3	6.4	8.4	21	7.4	3.0	7.9	3.1	9.2	5.0
24	5.2	6.7	1.9	10	9.2	18	8.7	13	6.0	2.0	11	5.9
25	1.6	6.5	1.2	12	4.7	17	6.0	10	6.5	1.2	6.9	4.2
26	3.7	3.6	1.2	14	12	16	7.0	9.3	2.5	7.7	5.5	2.7
27	9.7	9.3	2.5	9.3	4.3	15	5.5	8.3	1.5	9.2	6.0	7.6
28	4.5	4.0	3.4	9.4	4.9	14	7.9	8.4	5.0	3.4	2.3	4.5
29	3.9	2.7	10	9.3	---	15	9.5	8.1	10	9.4	1.3	5.6
30	3.6	4.6	4.2	7.2	---	13	15	5.8	5.2	4.0	9.3	7.2
31	2.2	---	10	5.2	---	14	---	11	---	2.1	6.6	---
TOTAL	165.3	154.6	154.0	236.0	231.0	423.7	372.1	302.4	205.4	179.9	170.06	243.64
MEAN	5.33	5.15	4.97	7.61	8.25	13.7	12.4	9.75	6.85	5.80	5.49	8.12
MAX	12	12	10	15	12	36	23	16	13	12	11	53
MIN	1.5	1.8	1.2	1.2	4.3	5.6	5.5	3.0	1.5	1.2	.96	.71
CFSM	1.02	.98	.95	1.45	1.57	2.61	2.37	1.86	1.31	1.11	1.05	1.55
IN.	1.17	1.10	1.09	1.68	1.64	3.01	2.64	2.15	1.46	1.28	1.21	1.73

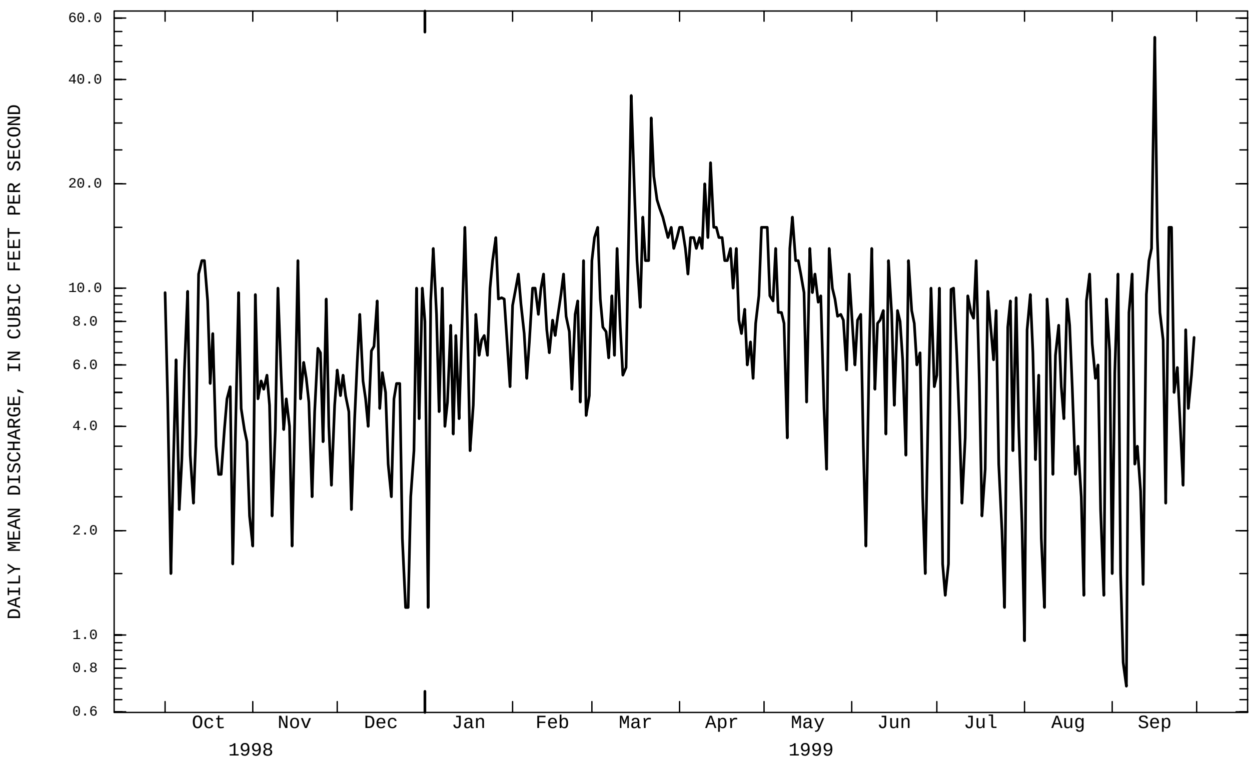
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1943 - 1999, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	3.41	4.64	6.73	9.52	10.7	12.7	10.4	7.77	5.62	4.18	4.84	3.44
MAX	10.5	14.3	22.8	24.8	29.9	31.2	24.4	19.7	25.3	17.5	24.8	12.2
(WY)	1972	1957	1946	1978	1998	1994	1983	1948	1948	1945	1989	1992
MIN	.67	.77	.76	.92	1.19	4.05	3.78	2.36	1.80	1.21	.65	.67
(WY)	1989	1989	1989	1989	1989	1966	1985	1985	1977	1977	1944	1988

01484500 STOCKLEY BRANCH AT STOCKLEY, DE--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1943 - 1999	
ANNUAL TOTAL	3768.6		2838.10			
ANNUAL MEAN	10.3		7.78		7.00	
HIGHEST ANNUAL MEAN					12.0	1958
LOWEST ANNUAL MEAN					3.24	1966
HIGHEST DAILY MEAN	137	Feb 5	53	Sep 16	195	Mar 3 1994
LOWEST DAILY MEAN	1.2	(a)	.71	Sep 6	.13	(b)
ANNUAL SEVEN-DAY MINIMUM	2.5	Aug 4	3.0	Dec 22	.13	Sep 2 1944
INSTANTANEOUS PEAK FLOW			73	Sep 16	(c)303	Mar 3 1994
INSTANTANEOUS PEAK STAGE			3.58	Sep 16	5.52	Mar 3 1994
INSTANTANEOUS LOW FLOW			.61	Aug 8	.13	(d)
ANNUAL RUNOFF (CFSM)	1.97		1.48		1.34	
ANNUAL RUNOFF (INCHES)	26.75		20.15		18.15	
10 PERCENT EXCEEDS	21		14		14	
50 PERCENT EXCEEDS	6.7		7.3		5.1	
90 PERCENT EXCEEDS	2.5		2.5		1.5	

a Dec. 25, 26.
b Sept. 2-11, 1944.
c From rating curve extended above 150 ft^3/s.
d Sept. 1-11, 1944.



DAILY MEAN DISCHARGE - 1999 WATER YEAR

01484525 MILLSBORO POND OUTLET AT MILLSBORO, DE

LOCATION.--Lat 38°35'40", long 75°17'29", Sussex County, Hydrologic Unit 02060010, on right bank just upstream from Millsboro Pond Dam, 10 ft upstream from bridge on State Highway 24, at Millsboro.

DRAINAGE AREA.--66.0 mi^2.

PERIOD OF RECORD.--May 1986 to September 1988, March 1991 to current year.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 1.98 ft above sea level.

REMARKS.--Records good, except those for estimated daily discharges(recorder malfunction and lift gates open), which are poor. Outflow from lake controlled by sluice gates at outlet. Natural flow of stream affected by inflow from sand mine dewatering process. Several measurements of water temperature were made during the period.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, UNKNOWN; minimum discharge, UNKNOWN.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	33	25	27	e29	e60	e85	107	84	42	41	21	18
2	30	25	33	e27	e70	e83	121	85	38	42	17	22
3	25	28	33	e33	e84	74	115	86	39	45	21	28
4	27	29	34	e80	e76	75	108	90	37	42	21	27
5	31	33	25	e70	e60	69	112	88	36	31	17	26
6	29	29	25	e35	e52	66	107	84	34	29	17	25
7	28	30	23	e43	e60	67	101	83	30	31	17	27
8	31	31	28	e34	e70	62	101	79	35	30	13	30
9	61	26	48	e34	e75	62	104	75	38	26	13	33
10	56	29	44	e34	73	69	140	70	37	26	16	34
11	42	39	34	33	70	69	140	72	44	26	15	31
12	37	37	30	36	e60	68	139	71	52	25	14	28
13	39	34	53	34	e74	62	141	67	59	64	16	25
14	42	34	62	e37	63	75	128	64	72	53	27	28
15	42	34	47	e90	60	174	122	64	76	47	51	37
16	40	28	41	e80	60	213	114	65	69	39	32	65
17	37	29	37	e32	62	153	108	64	70	28	28	e100
18	38	31	35	e30	76	122	100	66	69	27	26	e400
19	33	25	34	e35	88	102	99	72	65	26	21	e300
20	29	26	29	e50	75	100	99	77	71	28	20	e200
21	27	29	28	e47	67	104	93	71	88	26	28	e80
22	26	25	32	e52	66	168	97	69	80	29	25	132
23	24	25	29	e48	64	193	97	60	68	28	22	132
24	25	24	35	e58	e70	160	113	61	60	24	22	80
25	25	24	31	e70	e70	145	96	e58	54	22	24	73
26	23	33	31	e85	e68	143	90	55	51	23	28	67
27	27	33	28	e70	68	127	88	49	49	24	28	67
28	30	30	31	e66	65	134	80	47	44	25	27	67
29	28	25	34	e60	---	135	80	47	44	22	22	64
30	29	24	35	e55	---	132	84	47	44	23	17	70
31	29	---	e30	e50	---	122	---	44	---	22	19	---
TOTAL	1023	874	1066	1537	1906	3413	3224	2114	1595	974	685	2316
MEAN	33.0	29.1	34.4	49.6	68.1	110	107	68.2	53.2	31.4	22.1	77.2
MAX	61	39	62	90	88	213	141	90	88	64	51	400
MIN	23	24	23	27	52	62	80	44	30	22	13	18
CFSM	.50	.44	.52	.75	1.03	1.67	1.63	1.03	.81	.48	.33	1.17
IN.	.58	.49	.60	.87	1.07	1.92	1.82	1.19	.90	.55	.39	1.31

e Estimated

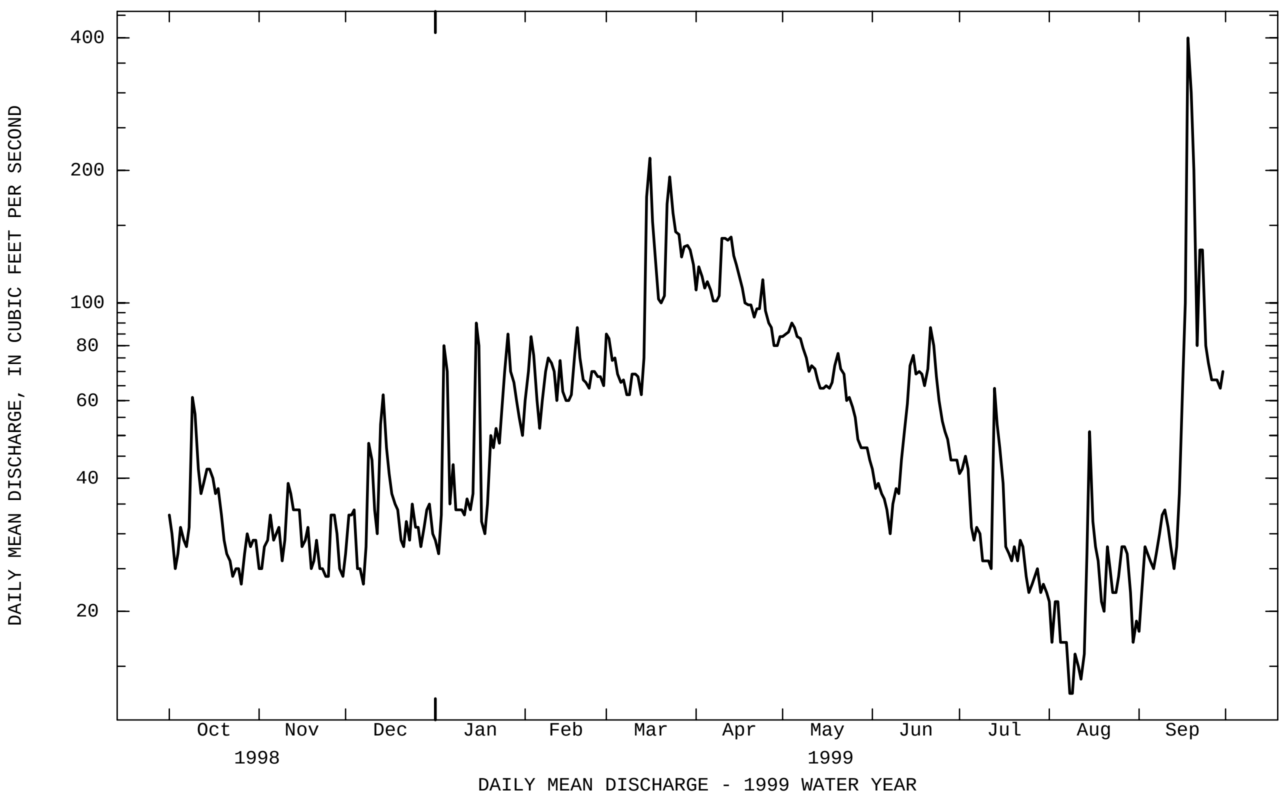
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1986 - 1999, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	48.4	53.1	80.4	109	156	172	134	99.7	64.9	48.7	47.4	47.7
MAX	109	81.6	198	174	428	373	184	151	85.6	75.8	85.6	106
(WY)	1997	1998	1997	1998	1998	1994	1994	1996	1993	1996	1992	1992
MIN	20.8	24.3	33.2	49.6	68.1	94.1	69.1	47.3	34.0	23.2	22.1	20.1
(WY)	1987	1988	1988	1999	1999	1992	1995	1986	1986	1986	1999	1986

01484525 MILLSBORO POND OUTLET AT MILLSBORO, DE--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1986 - 1999	
ANNUAL TOTAL	45479.00		20727			
ANNUAL MEAN	125		56.8		89.4	
HIGHEST ANNUAL MEAN					132	1998
LOWEST ANNUAL MEAN					55.0	1988
HIGHEST DAILY MEAN	1220	Jan 29	400	Sep 18	1260	Mar 4 1994
LOWEST DAILY MEAN	(a, e).00	Aug 30	13	(b)	(a, e).00	Aug 30 1998
ANNUAL SEVEN-DAY MINIMUM	25	Oct 21	15	Aug 7	15	Aug 7 1999
INSTANTANEOUS PEAK FLOW			UNKNOWN		1770	Mar 3 1994
INSTANTANEOUS PEAK STAGE			3.38	Mar 16	4.94	Mar 3 1994
INSTANTANEOUS LOW FLOW			UNKNOWN		(a, e).00	(c)
ANNUAL RUNOFF (CFSM)	1.89		.86		1.36	
ANNUAL RUNOFF (INCHES)	25.63		11.68		18.41	
10 PERCENT EXCEEDS	290		103		159	
50 PERCENT EXCEEDS	71		44		69	
90 PERCENT EXCEEDS	27		25		26	

a As a result of lake being filled after gates were closed.
e Estimated
b Aug. 8, 9.
c Aug. 29-31, 1998.



01485000 POCOMOKE RIVER NEAR WILLARDS, MD

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

DRAINAGE AREA.--60.5 mi^2.

WATER-DISCHARGE RECORDS

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

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

REMARKS.--Water-discharge records good except those for estimated daily discharges (backwater from leaves) which are fair.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 500 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar 15	1800	*589	*10.01	No other peak greater than base discharge.			

Minimum discharge, 1.5 ft^3/s, Aug 30.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.0	e2.0	e3.6	8.0	55	104	89	39	12	7.6	4.4	2.3
2	2.0	e2.2	e3.7	7.7	62	92	96	38	12	7.4	4.1	2.6
3	1.8	e3.0	e3.9	14	84	75	91	39	11	11	3.8	2.9
4	2.2	e4.5	e4.2	25	75	74	86	40	11	14	3.5	2.9
5	3.1	3.5	e4.1	18	75	63	105	38	11	9.4	3.5	3.1
6	2.8	e3.2	e4.2	15	66	56	96	37	10	8.1	3.6	3.0
7	2.3	e3.1	e4.0	14	62	54	87	36	10	7.4	3.1	3.4
8	2.5	e3.0	e4.5	13	100	47	78	35	9.7	6.8	3.0	3.0
9	3.5	e3.2	e8.5	14	90	44	73	32	9.1	6.4	2.8	2.7
10	3.4	e2.9	8.8	17	76	46	94	30	8.9	6.4	2.6	3.5
11	2.9	e3.2	7.6	16	65	48	90	28	9.0	6.4	2.6	3.5
12	2.5	e4.5	6.8	14	59	48	107	26	8.9	6.2	2.6	2.6
13	3.5	e3.8	11	14	73	45	97	25	9.2	8.3	2.5	2.0
14	3.4	e3.2	15	16	69	46	83	24	9.8	8.9	3.4	2.0
15	2.6	e2.9	9.4	35	59	519	75	23	9.4	8.0	4.8	2.8
16	2.2	e2.8	8.2	66	54	469	80	22	8.9	7.2	4.1	64
17	2.2	e2.8	7.5	44	51	309	76	21	8.9	6.6	3.5	227
18	2.1	e2.9	7.2	45	62	215	67	21	8.9	6.2	2.7	108
19	2.2	e2.8	6.9	103	109	156	60	22	8.9	6.0	2.4	59
20	2.1	e3.0	7.0	71	89	125	56	22	9.0	5.7	2.8	43
21	1.9	e3.0	7.2	54	74	117	53	20	11	5.6	2.8	39
22	1.9	e3.1	7.8	56	62	317	51	19	10	6.3	2.4	65
23	4.6	e3.0	7.2	54	53	276	52	19	9.2	6.5	2.1	58
24	2.4	e3.1	7.5	153	50	196	78	19	8.4	5.9	1.9	44
25	2.3	e3.5	7.6	292	49	156	72	18	8.0	5.7	1.9	36
26	1.8	e5.0	7.2	168	49	128	63	17	8.0	6.4	2.6	31
27	2.0	e5.4	7.0	120	47	113	56	16	7.7	5.8	2.7	28
28	2.3	e4.5	7.3	101	48	130	49	15	7.5	5.3	2.2	26
29	2.1	e4.0	9.1	83	---	130	45	15	7.4	5.0	1.8	24
30	2.1	e3.8	9.4	70	---	111	42	13	7.4	4.7	1.6	30
31	e2.0	---	8.5	61	---	96	---	13	---	4.5	1.9	---
TOTAL	76.7	100.9	221.9	1781.7	1867	4405	2247	782	280.2	215.7	89.7	924.3
MEAN	2.47	3.36	7.16	57.5	66.7	142	74.9	25.2	9.34	6.96	2.89	30.8
MAX	4.6	5.4	15	292	109	519	107	40	12	14	4.8	227
MIN	1.8	2.0	3.6	7.7	47	44	42	13	7.4	4.5	1.6	2.0
CFSM	.04	.06	.12	.95	1.10	2.35	1.24	.42	.15	.12	.05	.51
IN.	.05	.06	.14	1.10	1.15	2.71	1.38	.48	.17	.13	.06	.57

e Estimated

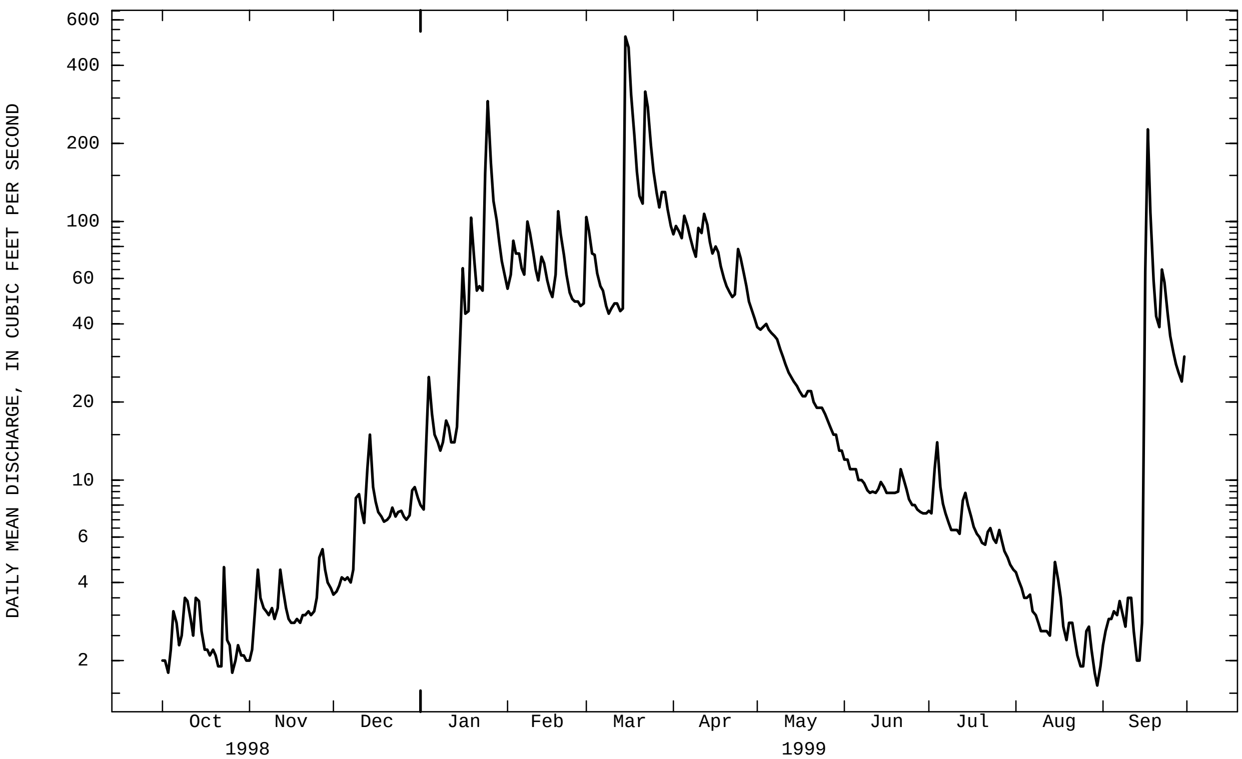
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1950 - 1999, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	35.1	49.1	81.7	114	129	145	100	59.4	43.4	33.8	50.3	25.7
MAX	164	221	306	322	482	393	277	236	216	217	507	128
(WY)	1977	1980	1997	1978	1998	1994	1983	1978	1972	1975	1989	1979
MIN	2.47	3.36	7.16	15.5	50.0	49.7	29.5	16.1	9.31	6.29	2.89	3.13
(WY)	1999	1999	1999	1981	1981	1981	1995	1985	1986	1986	1999	1995

01485000 POCOMOKE RIVER NEAR WILLARDS, MD--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1950 - 1999	
ANNUAL TOTAL	37185.4		12992.1			
ANNUAL MEAN	102		35.6		72.6	
HIGHEST ANNUAL MEAN					130	1979
LOWEST ANNUAL MEAN					24.8	1981
HIGHEST DAILY MEAN	1860	Jan 29	519	Mar 15	2580	Aug 20 1989
LOWEST DAILY MEAN	1.8	(a)	1.6	Aug 30	1.3	Sep 15 1995
ANNUAL SEVEN-DAY MINIMUM	2.0	Sep 28	2.0	Oct 26	1.8	Sep 10 1995
INSTANTANEOUS PEAK FLOW			589	Mar 15	(b)2820	Aug 20 1989
INSTANTANEOUS PEAK STAGE			10.01	Mar 15	15.41	Aug 20 1989
INSTANTANEOUS LOW FLOW			1.5	Aug 30	1.2	(c)
ANNUAL RUNOFF (CFSM)	1.68		.59		1.20	
ANNUAL RUNOFF (INCHES)	22.86		7.99		16.31	
10 PERCENT EXCEEDS	250		90		158	
50 PERCENT EXCEEDS	24		9.4		40	
90 PERCENT EXCEEDS	2.8		2.5		8.3	

a Oct. 3, 26.
b From rating curve extended above 1,600 Ft3/s.
c Sept. 12, 15, 16, 1995.



DAILY MEAN DISCHARGE - 1999 WATER YEAR

01485000 POCOMOKE RIVER NEAR WILLARDS, MD--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1974-78, 1991, October 1998 to September 1999.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)
JUN 1999												
17...	1300	8.9	96	6.2	19.5	19.0	--	6.0	--	21	5.6	1.7
SEP												
16...	1030	24	83	6.3	22.0	21.6	744	7.0	81	18	4.8	1.5
17...	0930	253	110	6.0	22.0	19.9	761	4.4	48	24	5.7	2.3
21...	1130	36	165	6.4	--	18.3	764	6.4	68	40	10	3.5

DATE	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	ALKA-LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	BICAR-BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	NITRO-GEN, TOTAL (MG/L AS N) (00600)
JUN 1999										
17...	9.0	2.3	21	26	4.8	9.4	<.10	25	--	1.1
SEP										
16...	6.6	4.3	16	19	5.6	7.8	<.10	15	69	2.0
17...	5.6	9.2	13	16	11	9.2	<.10	7.0	92	4.5
21...	10	6.0	15	18	23	15	<.10	21	130	3.2

DATE	NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS N) (00618)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	ALUM-INUM, DIS-SOLVED (UG/L AS AL) (01106)	ANTI-MONY, DIS-SOLVED (UG/L AS SB) (01095)	IRON, DIS-SOLVED (UG/L AS FE) (01046)
JUN 1999												
17...	.457	.020	.477	.108	.61	.57	.184	.086	.083	--	--	2300
SEP												
16...	1.05	.011	1.06	.122	.92	.47	.209	.093	.068	83	<1.0	710
17...	2.45	.042	2.50	.151	2.0	1.1	.654	.233	.201	175	<1.0	810
21...	2.28	.027	2.31	.125	.87	.77	.084	.037	.026	101	<1.0	660

DATE	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	ACETO-CHLOR, WATER FLTRD REC (UG/L) (49260)	ALA-CHLOR, WATER, DISS, REC, (UG/L) (46342)	ATRA-ZINE, WATER, DISS, REC (UG/L) (39632)	BEN-FLUR-ALIN WAT FLD 0.7 U GF, REC (UG/L) (82673)	BUTYL-ATE, WATER, DISS, REC (UG/L) (04028)	CAR-BARYL WATER FLTRD 0.7 U GF, REC (UG/L) (82680)	CARBO-FURAN WATER FLTRD 0.7 U GF, REC (UG/L) (82674)	CHLOR-PYRIFOS DIS-SOLVED (UG/L) (38933)	CYANA-ZINE, WATER, DISS, REC (UG/L) (04041)	DCPA WATER FLTRD 0.7 U GF, REC (UG/L) (82682)	DEETHYL ATRA-ZINE, WATER, DISS, REC (UG/L) (04040)
JUN 1999												
17...	35	<.0020	.005	.028	<.0020	<.0020	<.0030	<.0030	<.0040	<.0040	<.0020	E.0068
SEP												
16...	54	<.0020	<.002	.014	<.0020	<.0020	E.0051	<.0030	<.0040	<.0040	<.0020	<.0020
17...	118	.0430	<.002	.358	<.0020	<.0020	<.0030	<.0030	<.0040	<.0040	<.0020	E.0356
21...	70	<.0020	<.002	.071	<.0020	<.0020	<.0030	E.0212	<.0040	<.0040	<.0020	E.0137

DATE	DI-AZINON, DIS-SOLVED (UG/L) (39572)	DI-ELDRIN DIS-SOLVED (UG/L) (39381)	2,6-DI-ETHYL ANILINE WAT FLT 0.7 U GF, REC (UG/L) (82660)	DISUL-FOTON WATER FLTRD 0.7 U GF, REC (UG/L) (82677)	EPTC WATER FLTRD 0.7 U GF, REC (UG/L) (82668)	ETHAL-FLUR-ALIN WAT FLT 0.7 U GF, REC (UG/L) (82663)	ETHO-PROP WATER FLTRD 0.7 U GF, REC (UG/L) (82672)	FONOFOS WATER DISS REC (UG/L) (04095)	LINDANE DIS-SOLVED (UG/L) (39341)	LIN-URON WATER FLTRD 0.7 U GF, REC (UG/L) (82666)	MALA-THION, DIS-SOLVED (UG/L) (39532)	METHYL AZIN-PHOS WAT FLT 0.7 U GF, REC (UG/L) (82686)
JUN 1999												
17...	<.002	<.001	<.0030	<.0170	<.0020	<.0040	<.0030	<.0030	<.004	<.0020	<.005	<.0010
SEP												
16...	<.002	<.001	<.0030	<.0170	<.0020	<.0040	<.0030	<.0030	<.004	<.0020	<.005	<.0010
17...	<.002	<.001	<.0030	<.0170	<.0020	<.0040	<.0030	<.0030	<.004	<.0020	<.005	<.0010
21...	<.002	<.001	<.0030	<.0170	<.0020	<.0040	<.0030	<.0030	<.004	<.0020	<.005	<.0010

E Estimated

01485000 POCOMOKE RIVER NEAR WILLARDS, MD--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	METHYL PARA- THION WAT FLT 0.7 U GF, REC (UG/L) (82667)	METO- LACHLOR WATER DISSOLV (UG/L) (39415)	METRI- BUZIN SENCOR WATER DISSOLV (UG/L) (82630)	MOL- INATE WATER FLTRD 0.7 U GF, REC (UG/L) (82671)	NAPROP- AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82684)	PARA- THION, DIS- SOLVED (UG/L) (39542)	PEB- ULATE WATER FILTRD 0.7 U GF, REC (UG/L) (82669)	PENDI- METH- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82683)	PER- METHRIN CIS WAT FLT 0.7 U GF, REC (UG/L) (82687)	PHORATE WATER FLTRD 0.7 U GF, REC (UG/L) (82664)	PRO- METON, WATER, DISS, REC (UG/L) (04037)	PRON- AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82676)
JUN 1999												
17...	<.0060	.038	<.004	<.0040	<.0030	<.004	<.0040	<.0040	<.0050	<.0020	E.0089	<.0030
SEP												
16...	<.0060	.032	<.004	<.0040	<.0030	<.004	<.0040	<.0040	<.0050	<.0020	.0512	<.0030
17...	<.0060	.617	<.004	<.0040	<.0030	<.004	<.0040	<.0040	<.0050	<.0020	.0647	<.0030
21...	<.0060	.200	<.004	<.0040	<.0030	<.004	<.0040	<.0040	<.0050	<.0020	E.0128	<.0030

DATE	PROP- CHLOR, WATER, DISS, REC (UG/L) (04024)	PRO- PARGITE WATER FLTRD 0.7 U GF, REC (UG/L) (82685)	PRO- PANIL WATER FLTRD 0.7 U GF, REC (UG/L) (82679)	SI- MAZINE, WATER, DISS, REC (UG/L) (04035)	TEBU- THIURON WATER FLTRD 0.7 U GF, REC (UG/L) (82670)	TER- BACIL WATER FLTRD 0.7 U GF, REC (UG/L) (82665)	TER- BUFOS WATER FLTRD 0.7 U GF, REC (UG/L) (82675)	THIO- BENCARB WATER FLTRD 0.7 U GF, REC (UG/L) (82681)	TRIAL- LATE WATER FLTRD 0.7 U GF, REC (UG/L) (82678)	TRI- FLUR- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82661)	ALPHA BHC DIS- SOLVED (UG/L) (34253)
JUN 1999											
17...	<.0070	<.0130	<.0040	.0100	<.0100	<.0070	<.0130	<.0020	<.0010	<.0020	<.0020
SEP											
16...	<.0070	<.0130	<.0040	<.0050	<.0100	<.0070	<.0130	<.0020	<.0010	<.0020	<.0020
17...	<.0070	<.0130	<.0040	.181	<.0100	<.0070	<.0130	<.0020	<.0010	<.0020	<.0020
21...	<.0070	<.0130	<.0040	.0363	<.0100	<.0070	<.0130	<.0020	<.0010	<.0020	<.0020

E Estimated

01485500 NASSAWANGO CREEK NEAR SNOW HILL, MD

LOCATION.--Lat 38°13'44", long 75°28'19", Worcester County, Hydrologic Unit 02060009, on right bank 15 ft downstream from bridge on State Highway 12, 0.5 mi upstream from Furnace Branch, 0.6 mi downstream from Millville Creek, 5.5 mi northwest of Snow Hill, and 7.3 mi upstream from mouth.

DRAINAGE AREA.--44.9 mi^2.

WATER-DISCHARGE RECORDS

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

REVISED RECORDS.--WSP 1332: 1953.

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

REMARKS.--No estimated daily discharges. Water-discharge records good.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 280 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar 16	1400	*598	*6.28	No other peak greater than base discharge.			

Minimum discharge, 0.77 ft^3/s, Oct 2, 3.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.1	1.4	2.6	6.6	26	51	67	23	6.6	4.9	2.0	2.4
2	.83	1.5	2.7	5.7	29	62	61	22	6.1	4.9	1.8	2.5
3	.84	2.1	2.7	18	36	64	56	21	5.7	4.4	1.7	2.7
4	1.5	3.0	3.0	22	42	57	52	22	5.2	4.9	1.6	2.9
5	1.8	2.4	3.1	16	46	44	63	21	5.0	3.9	1.9	3.2
6	1.6	2.2	3.2	11	43	35	65	21	4.9	3.0	3.8	3.5
7	1.5	2.2	2.9	9.3	39	31	63	20	4.9	2.5	2.6	5.2
8	1.5	2.1	3.4	9.2	48	27	53	19	4.7	2.1	2.4	5.5
9	1.7	2.3	15	13	59	25	44	18	4.2	2.0	3.2	4.5
10	1.8	2.0	12	16	61	26	69	16	3.9	2.4	3.8	11
11	1.7	2.4	7.7	13	50	27	96	14	4.3	2.6	3.5	11
12	1.5	3.6	6.0	11	39	29	97	13	4.3	2.3	3.1	6.6
13	3.3	2.7	20	11	45	29	85	13	5.3	5.6	2.7	4.9
14	3.2	2.2	23	11	42	35	70	12	6.8	5.8	3.8	4.5
15	2.3	2.1	14	31	38	225	57	11	6.1	4.9	11	9.4
16	1.8	2.0	11	36	32	554	64	10	5.9	3.8	8.5	134
17	1.7	2.0	10	39	28	434	58	10	5.9	2.9	5.8	233
18	1.6	2.1	8.1	42	38	243	49	9.6	5.8	2.5	4.6	220
19	1.6	2.0	6.8	57	55	151	39	29	5.3	2.2	3.6	143
20	1.6	2.2	6.1	61	66	100	34	52	6.0	2.0	4.0	81
21	1.5	2.2	5.6	57	63	81	30	31	12	2.0	17	52
22	1.4	2.3	5.4	47	50	136	29	23	9.9	15	9.9	42
23	1.4	2.2	5.0	44	36	213	29	18	6.8	21	6.2	37
24	1.4	2.3	5.6	65	30	206	44	17	5.3	12	4.6	36
25	1.4	2.3	5.8	112	28	147	48	17	4.8	7.2	4.0	30
26	1.4	3.6	5.4	156	28	101	53	14	4.5	5.2	5.1	25
27	1.4	3.6	5.1	118	28	78	42	12	4.2	4.6	5.3	21
28	1.5	3.0	8.0	77	30	92	32	10	3.9	3.7	4.6	18
29	1.4	2.9	13	57	---	107	29	9.3	3.7	3.2	3.8	16
30	1.5	2.8	11	40	---	104	26	8.1	3.8	2.8	3.0	27
31	1.4	---	8.1	31	---	82	---	7.1	---	2.3	2.5	---
TOTAL	50.17	71.7	241.3	1242.8	1155	3596	1604	543.1	165.8	148.6	141.4	1194.8
MEAN	1.62	2.39	7.78	40.1	41.2	116	53.5	17.5	5.53	4.79	4.56	39.8
MAX	3.3	3.6	23	156	66	554	97	52	12	21	17	233
MIN	.83	1.4	2.6	5.7	26	25	26	7.1	3.7	2.0	1.6	2.4
CFSM	.04	.05	.17	.89	.92	2.58	1.19	.39	.12	.11	.10	.89
IN.	.04	.06	.20	1.03	.96	2.98	1.33	.45	.14	.12	.12	.99

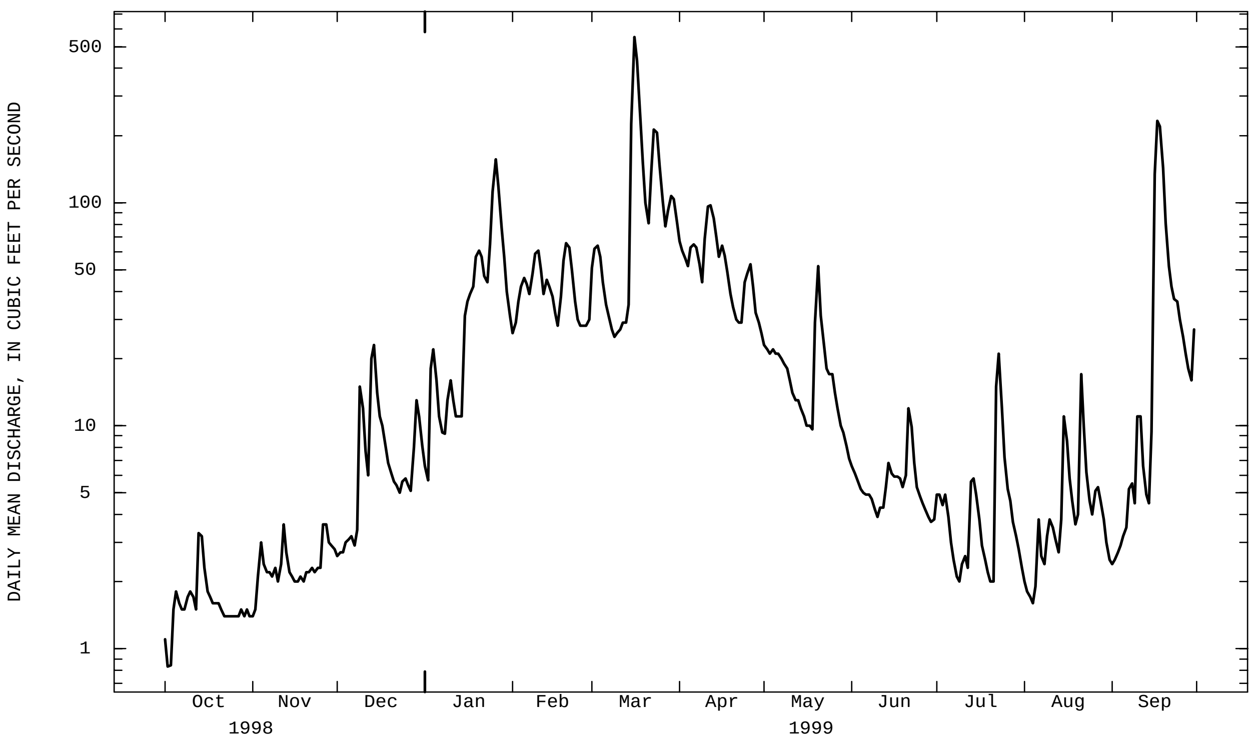
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1950 - 1999, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	24.7	35.4	57.3	86.9	98.7	116	76.3	44.1	27.8	20.7	38.5	18.4
MAX	150	175	196	261	322	302	202	183	160	120	346	177
(WY)	1977	1980	1997	1978	1998	1994	1983	1978	1972	1975	1989	1979
MIN	1.62	2.39	6.33	10.8	32.1	29.5	17.6	7.10	2.52	2.02	1.59	1.64
(WY)	1999	1999	1966	1966	1991	1986	1985	1986	1986	1986	1966	1980

01485500 NASSAWANGO CREEK NEAR SNOW HILL, MD--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1950 - 1999	
ANNUAL TOTAL	27009.82		10154.67			
ANNUAL MEAN	74.0		27.8		54.1	
HIGHEST ANNUAL MEAN					116	1979
LOWEST ANNUAL MEAN					20.8	1981
HIGHEST DAILY MEAN	2130	Jan 29	554	Mar 16	2590	Aug 19 1989
LOWEST DAILY MEAN	.83	Oct 2	.83	Oct 2	.80	(a)
ANNUAL SEVEN-DAY MINIMUM	1.0	Sep 27	1.3	Oct 1	.86	Sep 7 1966
INSTANTANEOUS PEAK FLOW			598	Mar 16	(b)3930	Aug 19 1989
INSTANTANEOUS PEAK STAGE			6.28	Mar 16	9.07	Aug 19 1989
INSTANTANEOUS LOW FLOW			.77	(c)	.77	(c)
ANNUAL RUNOFF (CFSM)	1.65		.62		1.20	
ANNUAL RUNOFF (INCHES)	22.38		8.41		16.36	
10 PERCENT EXCEEDS	191		64		125	
50 PERCENT EXCEEDS	13		8.5		26	
90 PERCENT EXCEEDS	1.6		2.0		3.3	

a Sept. 8-10, 1966.
b From rating curve extended above 1,300 ft^3/s on basis of contracted-opening measurement at gage height 9.07 ft.
c Oct. 2, 3, 1998.



DAILY MEAN DISCHARGE - 1999 WATER YEAR

01485500 NASSAWANGO CREEK NEAR SNOW HILL, MD--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1974-78, 1991, 1999 to current year.

REMARKS.--Nutrient analyses were performed at the Maryland Department of Health and Mental Hygiene laboratory (DHMH), Baltimore, MD.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	TUR-BID-ITY (NTU) (00076)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)	OXYGEN DEMAND, CHEM-ICAL (LOW LEVEL) (MG/L) (00335)
OCT 1998											
28...	1045	1.5	76	6.3	16.0	12.0	759	19	5.5	51	<10
NOV											
18...	1330	2.1	80	6.4	10.5	10.0	772	9.9	3.9	34	14
DEC											
09...	0415	9.6	--	--	--	--	--	13	--	--	31
09...	1415	19	--	--	--	--	--	11	--	--	33
13...	1330	27	--	--	--	--	--	11	--	--	32
14...	0130	30	--	--	--	--	--	5.0	--	--	26
15...	1230	14	--	5.9	8.5	5.5	--	1.9	9.7	--	13
JAN 1999											
03...	1430	26	--	--	--	--	--	15	--	--	35
04...	0230	26	--	--	--	--	--	5.3	--	--	28
12...	1045	11	163	6.0	9.0	3.0	--	3.4	11.0	--	17
15...	0930	26	--	--	--	--	--	--	--	--	--
15...	2130	42	--	--	--	--	--	--	--	--	--
25...	1015	102	--	--	--	--	--	7.8	--	--	41
25...	2230	148	--	--	--	--	--	8.2	--	--	42
26...	1030	160	--	--	--	--	--	9.9	--	--	41
26...	2230	147	--	--	--	--	--	7.2	--	--	40
27...	1030	121	--	--	--	--	--	4.9	--	--	35
FEB											
17...	1045	29	108	5.8	17.0	5.5	761	3.7	10.2	81	25
MAR											
11...	1100	26	93	5.6	2.0	3.5	--	1.8	11.5	--	22
14...	2215	63	--	--	--	--	--	14	--	--	45
15...	1600	267	--	--	--	--	--	8.2	--	--	46
16...	1400	598	--	--	--	--	--	14	--	--	45
17...	1000	453	--	--	--	--	--	10	--	--	46
APR											
07...	1030	64	73	5.5	24.0	14.0	--	2.9	8.1	--	45
MAY											
10...	0830	16	72	5.9	19.5	16.0	--	5.7	--	--	58
20...	1310	49	--	--	--	--	--	--	--	--	--
21...	0910	33	--	--	--	--	--	--	--	--	--
JUN											
17...	1100	5.9	65	7.0	18.0	17.0	--	--	--	--	--
23...	1030	7.1	--	--	--	--	--	9.6	--	--	24
JUL											
08...	0730	2.3	74	6.5	25.5	22.5	--	16	3.9	--	24
22...	0815	9.6	--	--	--	--	--	36	--	--	--
AUG											
17...	1015	5.9	83	6.4	27.5	21.5	--	7.4	6.1	--	31
SEP											
08...	0900	5.9	74	6.3	26.0	21.0	--	13	5.2	--	28
16...	1200	140	--	--	--	--	--	20	--	--	79
16...	1600	174	--	--	--	--	--	--	--	--	--
17...	1200	235	--	--	--	--	--	--	--	--	--
18...	0800	232	--	--	--	--	--	--	--	--	--
19...	0400	168	--	--	--	--	--	--	--	--	--

01485500 NASSAWANGO CREEK NEAR SNOW HILL, MD--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L) (00310)	ANC WATER UNFLTRD IT FIELD MG/L AS CACO3 (00419)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	ALKA-LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	BICAR-BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)
OCT 1998										
28...	<1.1	22	--	--	--	--	--	--	--	--
NOV										
18...	4.5	20	--	--	--	--	--	--	--	--
DEC										
09...	--	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--	--
15...	<1.0	5	--	--	--	--	--	--	--	--
JAN 1999										
03...	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--
12...	<.7	6	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--
27...	--	--	--	--	--	--	--	--	--	--
FEB										
17...	1.5	--	--	--	--	--	--	--	--	--
MAR										
11...	<1.7	5	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--
APR										
07...	<.9	4	--	--	--	--	--	--	--	--
MAY										
10...	<1.5	15	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--	--	--
JUN										
17...	--	--	12	2.9	1.3	7.6	2.0	25	30	1.1
23...	--	--	--	--	--	--	--	--	--	--
JUL										
08...	<1.1	20	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--
AUG										
17...	<1.1	10	--	--	--	--	--	--	--	--
SEP										
08...	<1.5	17	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	---
19...	--	--	--	--	--	--	--	--	--	--

01485500 NASSAWANGO CREEK NEAR SNOW HILL, MD--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	RESIDUE TOTAL AT 105 DEG. C, SUS- PENDED (MG/L) (00530)	NITRO- GEN, TOTAL (MG/L AS N) (00600)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N) (00618)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)
OCT 1998										
28...	--	--	29	6	.32	.033	.002	.035	.008	.29
NOV										
18...	--	--	32	10	.31	.007	.002	.009	<.005	.30
DEC										
09...	--	--	15	11	.57	.026	.006	.032	<.007	.54
09...	--	--	14	12	.68	.146	.006	.152	<.006	.53
13...	--	--	12	18	.89	.333	.005	.338	.010	.55
14...	--	--	12	6	.94	.486	.004	.490	.009	.45
15...	--	--	14	1	1.5	1.15	.007	1.15	.018	.34
JAN 1999										
03...	--	--	21	18	.86	.249	.004	.253	.012	.61
04...	--	--	20	6	.76	.322	.003	.325	.009	.44
12...	--	--	12	<1	1.3	.868	.004	.872	.016	.38
15...	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--
25...	--	--	14	27	1.9	1.03	.005	1.03	.013	.83
25...	--	--	13	7	2.1	1.26	.004	1.26	.013	.87
26...	--	--	12	6	2.9	1.92	.004	1.92	.013	.99
26...	--	--	13	3	3.0	2.11	.004	2.11	.016	.86
27...	--	--	13	3	2.9	2.03	.004	2.03	.015	.87
FEB										
17...	--	--	14	1	1.5	.845	.004	.849	.015	.61
MAR										
11...	--	--	11	<1	1.0	.504	.004	.508	.016	.49
14...	--	--	9.9	19	1.4	.522	.003	.525	.031	.90
15...	--	--	6.1	4	1.2	.349	.002	.351	.024	.80
16...	--	--	5.1	8	1.5	.703	.005	.708	.024	.82
17...	--	--	5.2	2	1.8	.875	.006	.881	.031	.96
APR										
07...	--	--	3.0	<1	.74	--	<.001	.053	.015	.69
MAY										
10...	--	--	13	4	1.3	.111	.007	.118	.083	1.1
20...	--	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--	--	--
JUN										
17...	8.6	<.10	27	--	.73	--	<.010	.166	.081	.56
23...	--	--	27	<1	.80	.154	.004	.158	.054	.64
JUL										
08...	--	--	29	6	.75	.145	.004	.149	.066	.60
22...	--	--	27	37	1.3	.182	.004	.186	.102	1.1
AUG										
17...	--	--	26	<1	1.1	.458	.004	.462	.038	.60
SEP										
08...	--	--	32	<1	.52	.059	.003	.062	.039	.46
16...	--	--	13	58	2.2	.715	.005	.720	.031	1.5
16...	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--

01485500 NASSAWANGO CREEK NEAR SNOW HILL, MD--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)	CARBON, ORGANIC DIS-SOLVED (MG/L AS C) (00681)	SEDI-MENT, SUS-PENDED (MG/L) (80154)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY) (80155)
OCT 1998										
28...	.17	.135	.028	.008	--	--	3.3	--	4	.02
NOV										
18...	.10	.159	.045	.012	--	--	7.8	6.5	7	.04
DEC										
09...	.26	.174	.055	.041	--	--	3.1	2.8	10	.26
09...	.30	.161	.035	.030	--	--	12	11	11	.56
13...	.34	.127	.030	.021	--	--	13	12	20	1.5
14...	.33	.030	.028	.017	--	--	12	12	10	.80
15...	.29	.039	.019	.015	--	--	9.2	9.2	1	.04
JAN 1999										
03...	.31	.127	.048	.011	--	--	9.9	8.2	21	1.5
04...	.25	.070	.043	.009	--	--	8.9	7.8	7	.48
12...	.37	.033	.013	.006	--	--	7.6	6.7	2	.06
15...	--	--	--	--	--	--	--	--	14	.98
15...	--	--	--	--	--	--	--	--	10	1.1
25...	.74	.090	.022	.014	--	--	16	14	17	4.7
25...	.68	.071	.035	.013	--	--	16	15	13	5.2
26...	.96	.079	.040	.019	--	--	17	16	8	3.5
26...	.73	.074	.061	.013	--	--	16	15	6	2.4
27...	.78	.058	.036	.014	--	--	16	15	5	1.6
FEB										
17...	.59	.063	.041	.009	--	--	12	11	3	.25
MAR										
11...	.48	.024	.024	.013	--	--	11	11	3	.19
14...	.47	.100	.017	.009	--	--	12	11	31	5.3
15...	.56	.084	.036	.020	--	--	16	15	14	10
16...	.64	.094	.049	.026	--	--	17	16	27	43
17...	.77	.089	.051	.037	--	--	18	18	14	17
APR										
07...	.62	.027	.018	.012	--	--	17	16	9	1.5
MAY										
10...	1.0	.135	.060	.034	--	--	24	23	37	1.6
20...	--	--	--	--	--	--	--	--	35	4.6
21...	--	--	--	--	--	--	--	--	24	2.1
JUN										
17...	--	.185	.111	.114	1600	29	--	--	4	.07
23...	.55	.142	.054	.048	--	--	--	--	4	.08
JUL										
08...	.41	.223	.053	.015	--	--	8.7	6.1	4	.02
22...	.35	.249	.034	.012	--	--	6.9	5.3	36	.93
AUG										
17...	.42	.130	.040	.028	--	--	8.3	8.4	2	.04
SEP										
08...	.38	.151	.038	.027	--	--	9.3	8.4	4	.06
16...	.52	.213	.021	.021	--	--	16	16	52	20
16...	--	--	--	--	--	--	--	--	21	10
17...	--	--	--	--	--	--	--	--	21	14
18...	--	--	--	--	--	--	--	--	11	6.6
19...	--	--	--	--	--	--	--	--	4	2.0

01486000 MANOKIN BRANCH NEAR PRINCESS ANNE, MD

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

DRAINAGE AREA.--4.80 mi^2.

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

REVISED RECORDS.--WDR MD-DE-75-1: Drainage area. WDR MD-DE-85-1: 1983-84 (P).

GAGE.--Water-stage recorder. Datum of gage is 7.03 ft above sea level. Artificial control since Apr. 30, 1975. Nov. 26, 1968, to Sept. 30, 1971, water-stage recorder above and nonrecording gage below gage height 1.4 ft. Prior to Nov. 26, 1968, recording gage at site 40 ft upstream at datum 1.0 ft higher.

REMARKS.--No estimated daily discharges. Records good below 170 ft^3/s and poor above. Several measurements of water temperature were made during the year. Water-quality data for some prior years have been collected at this location.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 50 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar 15	0300	130	3.57	Sep 16	1445	*257	*4.61

Minimum discharge, 0.11 ft^3/s, Oct 30, 31, Nov 1-3, 18-20, Dec 1, 2, 4.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.20	.11	.12	.36	3.6	12	7.3	2.4	1.2	.95	.54	.55
2	.17	.11	.11	.35	5.1	8.0	8.0	2.5	1.1	.68	.47	.55
3	.16	.16	.12	1.7	6.4	6.8	7.1	2.5	1.1	.60	.42	.55
4	.20	.16	.12	1.7	5.6	6.6	7.1	2.6	.94	.57	.39	.55
5	.20	.14	.13	1.2	5.3	5.3	9.6	2.5	.88	.56	.45	.56
6	.19	.13	.12	1.0	4.7	5.0	7.7	2.4	.87	.55	.83	.55
7	.18	.13	.12	1.0	4.5	4.7	6.7	2.3	.87	.54	.55	.93
8	.20	.13	.17	.95	6.7	4.1	6.0	2.1	.84	.49	.52	.68
9	.46	.13	.53	1.1	5.6	4.2	5.7	2.0	.78	.46	.48	.72
10	.47	.14	.30	.97	4.9	4.5	7.3	1.9	.72	.68	.39	.98
11	.42	.19	.19	.93	4.4	5.1	6.7	1.8	.75	.66	.45	1.0
12	.32	.16	.17	.92	4.3	5.4	7.9	1.8	.77	.55	.39	.87
13	.19	.21	.70	.92	6.3	5.1	6.5	1.7	.98	1.2	.36	.76
14	.21	.19	.59	.90	5.2	7.7	5.5	1.6	1.3	.94	.64	.72
15	.17	.20	.40	4.7	4.5	80	5.4	1.5	.97	.71	.92	.85
16	.17	.17	.35	4.3	4.2	34	6.5	1.5	.87	.60	.56	126
17	.16	.13	.49	3.0	4.0	20	5.5	1.5	.86	.56	.52	74
18	.18	.11	.47	4.7	7.0	15	4.5	1.5	.81	.55	.52	28
19	.16	.11	.42	8.8	9.7	11	3.8	2.2	.73	.55	.41	15
20	.16	.12	.42	5.2	7.3	8.6	3.5	4.0	.88	.54	.47	9.4
21	.14	.13	.42	4.2	6.0	10	3.3	2.6	1.1	.54	.93	8.0
22	.13	.12	.48	3.6	5.1	25	3.3	2.2	.91	3.0	.74	11
23	.13	.12	.55	3.4	4.4	16	3.4	2.1	.76	3.4	.57	7.8
24	.12	.13	.49	13	4.4	12	4.7	2.0	.69	1.4	.50	5.8
25	.12	.12	.38	16	4.6	10	4.0	1.8	.70	.91	.53	4.9
26	.12	.20	.39	8.7	5.4	8.3	3.6	1.7	.69	.83	1.5	4.1
27	.13	.17	.38	6.8	5.3	7.8	3.2	1.5	.67	.70	1.2	3.7
28	.13	.13	.43	5.8	6.1	17	2.9	1.4	.67	.65	.70	3.4
29	.13	.12	.45	4.9	---	13	2.7	1.3	.66	.62	.62	3.2
30	.12	.12	.44	4.2	---	9.3	2.5	1.3	.74	.56	.56	5.1
31	.12	---	.37	3.7	---	7.7	---	1.2	---	.55	.55	---
TOTAL	5.96	4.29	10.82	119.00	150.6	389.2	161.9	61.4	25.81	26.10	18.68	320.22
MEAN	.19	.14	.35	3.84	5.38	12.6	5.40	1.98	.86	.84	.60	10.7
MAX	.47	.21	.70	16	9.7	80	9.6	4.0	1.3	3.4	1.5	126
MIN	.12	.11	.11	.35	3.6	4.1	2.5	1.2	.66	.46	.36	.55
CFSM	.04	.03	.07	.80	1.12	2.62	1.12	.41	.18	.18	.13	2.22
IN.	.05	.03	.08	.92	1.17	3.02	1.25	.48	.20	.20	.14	2.48

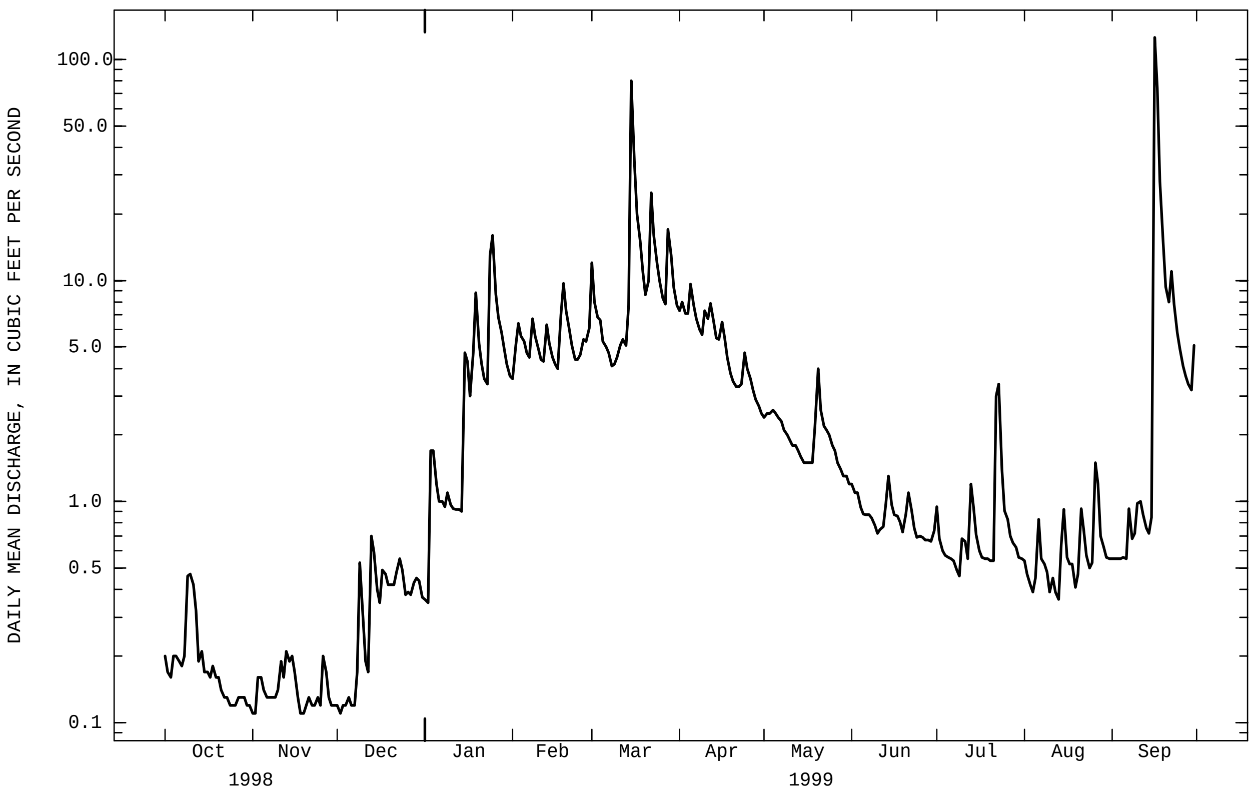
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1951 - 1971, 1975 - 1999, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1.77	2.47	5.08	8.49	9.47	11.1	7.24	3.94	2.38	1.69	3.60	1.95
MAX	10.5	17.5	22.5	24.9	29.1	30.3	17.3	12.2	12.7	9.20	27.8	18.7
(WY)	1980	1980	1997	1998	1998	1994	1983	1978	1979	1975	1969	1979
MIN	.030	.050	.13	.51	2.40	2.64	1.64	.62	.39	.16	.003	.017
(WY)	1967	1967	1967	1966	1981	1981	1967	1957	1964	1953	1966	1966

01486000 MANOKIN BRANCH NEAR PRINCESS ANNE, MD--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1951 - 1971, 1971 - 1999	
ANNUAL TOTAL	2634.10		1293.98			
ANNUAL MEAN	7.22		3.55		4.91	
HIGHEST ANNUAL MEAN					10.3	1979
LOWEST ANNUAL MEAN					1.41	1981
HIGHEST DAILY MEAN	255	Jan 28	126	Sep 16	255	Jan 28 1998
LOWEST DAILY MEAN	.11	(a)	.11	(a)	.00	(b)
ANNUAL SEVEN-DAY MINIMUM	.12	Nov 17	.12	Nov 17	.00	Aug 23 1963
INSTANTANEOUS PEAK FLOW			257	Sep 16	(c)547	Aug 20 1969
INSTANTANEOUS PEAK STAGE			4.61	Sep 16	(d)7.08	Aug 19 1985
INSTANTANEOUS LOW FLOW			.11	(f)	.00	(b)
ANNUAL RUNOFF (CFSM)	1.50		.74		1.02	
ANNUAL RUNOFF (INCHES)	20.41		10.03		13.91	
10 PERCENT EXCEEDS	17		7.7		11	
50 PERCENT EXCEEDS	1.7		.92		2.0	
90 PERCENT EXCEEDS	.14		.14		.32	

a Nov. 1, 2, 18, 19, Dec. 2.
b No flow during 1954, 1963, 1964, 1966.
c From rating curve extended above 27 ft^3/s on basis of channel-conveyance study.
d Gage height of 5.44 ft occurred on Aug. 20, 1969 following ditching of stream channel.
f Oct. 30, 31, Nov. 1-3, 3, 18, 18-20, Dec. 1, 2, 4.



DAILY MEAN DISCHARGE - 1999 WATER YEAR

01487000 NANTICOKE RIVER NEAR BRIDGEVILLE, DE

LOCATION.--Lat 38°43'42", long 75°33'44", Sussex County, Hydrologic Unit 02060008, on left bank at downstream side of highway bridge on county road No. 545, 800 ft downstream from Gum Branch, 2.5 mi southeast of Bridgeville, and 50.5 mi upstream from mouth.

DRAINAGE AREA.--75.4 mi^2.

WATER-DISCHARGE RECORDS

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

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

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

REMARKS.--No estimated daily discharges. Water-discharge records good.

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

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 360 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar 15	1015	417	6.64	Sep 17	0400	*1,760	*9.19

Minimum discharge, 15 ft^3/s, Aug 11.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	24	21	20	21	103	131	147	90	46	35	20	20
2	22	21	19	21	112	115	149	89	42	32	21	20
3	22	21	19	142	115	108	141	90	40	29	19	19
4	25	21	20	182	109	114	140	92	38	27	17	20
5	25	22	30	75	106	102	145	88	37	28	18	23
6	24	22	21	57	102	100	137	87	39	26	18	22
7	24	21	19	53	102	105	135	86	38	25	18	35
8	27	21	20	50	103	97	132	83	33	23	18	28
9	43	21	26	52	97	98	132	80	31	21	19	25
10	36	21	23	50	95	104	139	77	33	21	16	36
11	30	25	21	48	92	101	132	72	34	23	15	28
12	28	25	21	48	94	98	142	71	34	23	18	25
13	26	24	32	48	115	95	136	69	36	27	17	24
14	26	24	36	48	103	99	130	66	39	27	22	24
15	24	23	37	105	99	325	126	64	43	26	26	38
16	24	23	28	121	97	238	128	63	40	23	23	639
17	23	24	26	80	99	187	123	63	39	21	21	1430
18	23	24	24	90	114	176	116	61	38	21	20	469
19	23	23	23	168	129	165	112	60	35	21	19	232
20	22	23	23	116	116	156	111	60	36	19	31	186
21	22	24	23	100	109	157	109	57	47	20	32	170
22	21	23	23	97	105	234	108	56	44	25	26	167
23	21	24	22	92	100	206	110	58	40	27	23	156
24	21	24	22	125	98	183	117	59	38	23	22	146
25	21	23	22	186	98	175	107	57	35	22	23	139
26	21	26	22	144	97	166	105	53	31	22	26	131
27	21	25	22	130	93	160	104	51	29	21	23	125
28	21	38	22	125	100	163	98	47	31	20	22	121
29	21	27	23	117	---	158	95	47	31	18	21	117
30	21	20	22	110	---	151	93	45	31	17	21	126
31	20	---	22	105	---	146	---	46	---	19	20	---
TOTAL	752	704	733	2906	2902	4613	3699	2087	1108	732	655	4741
MEAN	24.3	23.5	23.6	93.7	104	149	123	67.3	36.9	23.6	21.1	158
MAX	43	38	37	186	129	325	149	92	47	35	32	1430
MIN	20	20	19	21	92	95	93	45	29	17	15	19
CFSM	.32	.31	.31	1.24	1.37	1.97	1.64	.89	.49	.31	.28	2.10
IN.	.37	.35	.36	1.43	1.43	2.28	1.82	1.03	.55	.36	.32	2.34

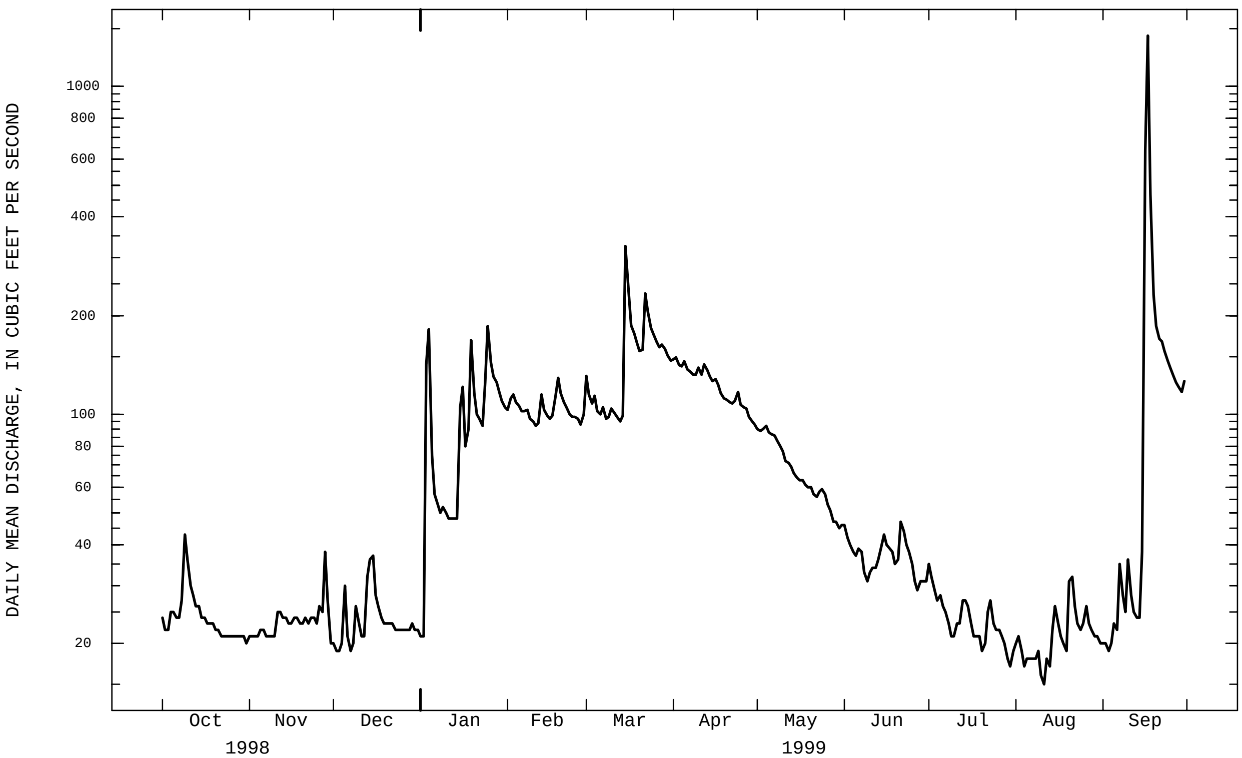
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1943 - 1999, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	44.8	59.4	87.4	120	138	163	139	103	74.3	57.2	61.2	47.6
MAX	137	192	294	311	388	421	300	219	298	210	412	234
(WY)	1980	1957	1949	1978	1998	1994	1958	1990	1948	1959	1967	1960
MIN	17.9	21.2	23.6	23.8	50.9	61.5	47.8	45.8	29.3	17.5	13.6	10.1
(WY)	1944	1988	1999	1966	1950	1977	1985	1951	1986	1944	1943	1943

01487000 NANTICOKE RIVER NEAR BRIDGEVILLE, DE--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1943 - 1999	
ANNUAL TOTAL	44379		25632			
ANNUAL MEAN	122		70.2		91.2	
HIGHEST ANNUAL MEAN					170	1958
LOWEST ANNUAL MEAN					43.8	1985
HIGHEST DAILY MEAN	1140	Jan 29	1430	Sep 17	2880	Feb 26 1979
LOWEST DAILY MEAN	19	Dec 2	15	Aug 11	6.6	Sep 29 1943
ANNUAL SEVEN-DAY MINIMUM	21	Oct 25	17	Aug 7	7.8	Sep 23 1943
INSTANTANEOUS PEAK FLOW			1760	Sep 17	3020	Feb 26 1979
INSTANTANEOUS PEAK STAGE			9.19	Sep 17	10.31	Feb 26 1979
INSTANTANEOUS LOW FLOW			15	Aug 11	(a)6.3	Sep 29 1943
ANNUAL RUNOFF (CFSM)	1.61		.93		1.21	
ANNUAL RUNOFF (INCHES)	21.90		12.65		16.44	
10 PERCENT EXCEEDS	279		140		175	
50 PERCENT EXCEEDS	63		37		66	
90 PERCENT EXCEEDS	22		21		26	

a Minimum discharge observed.



DAILY MEAN DISCHARGE - 1999 WATER YEAR

01487000 NANTICOKE RIVER NEAR BRIDGEVILLE, DE--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1961-72, 1974-80, 1991, 1994, 1995, 1998 to current year.

REMARKS.--Nutrient analyses were performed at the Maryland Department of Health and Mental Hygiene laboratory (DHMH), Baltimore, MD.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	TUR-BID-ITY (NTU) (00076)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)
OCT 1998										
08...	2145	43	--	--	--	--	--	--	--	--
09...	1545	41	--	--	--	--	--	--	--	--
10...	0945	36	--	--	--	--	--	--	--	--
19...	0900	23	144	6.4	22.0	15.5	760	3.1	8.9	89
28...	1515	22	155	6.5	18.5	15.0	759	2.8	9.5	94
NOV										
18...	1030	24	145	6.6	8.5	10.5	772	1.5	9.9	87
DEC										
13...	1230	36	--	--	--	--	--	10	--	--
14...	0630	38	--	--	--	--	--	5.5	--	--
15...	1000	28	--	6.3	2.0	4.0	--	2.9	10.7	--
JAN 1999										
12...	1315	48	157	6.7	12.5	7.0	--	4.0	11.8	--
14...	1945	50	--	--	--	--	--	--	--	--
15...	1345	119	--	--	--	--	--	--	--	--
16...	0745	136	--	--	--	--	--	--	--	--
24...	2100	177	--	--	--	--	--	75	--	--
25...	1500	178	--	--	--	--	--	--	--	--
26...	0900	145	--	--	--	--	--	19	--	--
FEB										
17...	1345	97	115	6.7	--	10.0	761	3.4	11.6	103
MAR										
01...	0215	126	--	--	--	--	--	12	--	--
11...	1400	101	147	6.4	4.0	7.5	--	2.5	--	--
15...	0145	165	--	--	--	--	--	20	--	--
15...	1400	392	--	--	--	--	--	170	--	--
APR										
07...	1330	137	--	--	--	--	--	2.8	--	--
MAY										
10...	1205	77	121	5.9	23.0	18.5	--	3.3	--	--
JUN										
15...	1300	44	--	--	--	--	--	4.5	--	--
JUL										
08...	1015	25	137	6.6	28.0	24.5	--	2.9	9.4	--
AUG										
17...	0800	21	135	6.5	27.0	22.5	--	7.3	6.9	--
SEP										
05...	1330	26	--	--	--	--	--	--	--	--
06...	0730	23	--	--	--	--	--	--	--	--
07...	0130	24	--	--	--	--	--	--	--	--
07...	1930	32	--	--	--	--	--	43	--	--
08...	1115	28	134	6.3	28.0	23.5	--	5.9	8.7	--
15...	1130	35	--	--	--	--	--	45	--	--
16...	0530	129	--	--	--	--	--	150	--	--
16...	1315	642	--	--	--	--	--	380	--	--
16...	1800	1020	--	--	--	--	--	--	--	--
17...	1400	1400	--	--	--	--	--	--	--	--
18...	1000	448	--	--	--	--	--	--	--	--
19...	0600	251	--	--	--	--	--	--	--	--

01487000 NANTICOKE RIVER NEAR BRIDGEVILLE, DE--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	OXYGEN DEMAND, CHEM- ICAL (LOW LEVEL) (MG/L) (00335)	OXYGEN DEMAND, BIO- CHEM- ICAL, 5 DAY (MG/L) (00310)	ANC WATER UNFLTRD IT FIELD MG/L AS CACO3 (00419)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2) (00405)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)
OCT 1998										
08...	--	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--	--
19...	<10	--	14	34	7.9	3.5	10	3.2	10	5.6
28...	<10	<1.1	14	--	--	--	--	--	--	--
NOV										
18...	<10	2.3	14	--	--	--	--	--	--	--
DEC										
13...	23	--	--	--	--	--	--	--	--	--
14...	<10	--	--	--	--	--	--	--	--	--
15...	<10	<1.1	13	--	--	--	--	--	--	--
JAN 1999										
12...	<10	<.4	12	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--
24...	30	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--
26...	16	--	--	--	--	--	--	--	--	--
FEB										
17...	<10	1.1	--	--	--	--	--	--	--	--
MAR										
01...	16	--	--	--	--	--	--	--	--	--
11...	<10	<1.6	13	--	--	--	--	--	--	--
15...	23	--	--	--	--	--	--	--	--	--
15...	49	--	--	--	--	--	--	--	--	--
APR										
07...	11	<.8	--	--	--	--	--	--	--	--
MAY										
10...	<10	<.7	15	--	--	--	--	--	--	--
JUN										
15...	<10	<1.2	--	--	--	--	--	--	--	--
JUL										
08...	<10	<1.1	16	--	--	--	--	--	--	--
AUG										
17...	16	<1.2	16	--	--	--	--	--	--	--
SEP										
05...	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--
07...	--	--	--	--	--	--	--	--	--	--
07...	30	--	--	--	--	--	--	--	--	--
08...	10	<1.0	14	--	--	--	--	--	--	--
15...	33	--	--	--	--	--	--	--	--	--
16...	78	--	--	--	--	--	--	--	--	--
16...	140	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--

01487000 NANTICOKE RIVER NEAR BRIDGEVILLE, DE--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	RESIDUE TOTAL AT 105 DEG. C, SUS- PENDED (MG/L) (00530)	NITRO- GEN, TOTAL (MG/L AS N) (00600)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N) (00618)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)
OCT 1998										
08...	--	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--	--
19...	15	<.10	17	2	5.5	5.27	.013	5.28	.030	.20
28...	--	--	16	7	5.9	5.55	.043	5.60	.028	.34
NOV										
18...	--	--	17	4	5.6	5.25	.038	5.29	.020	.35
DEC										
13...	--	--	14	17	4.8	4.21	.032	4.24	.052	.57
14...	--	--	14	9	5.1	4.59	.014	4.61	.034	.46
15...	--	--	15	6	5.8	5.43	.013	5.44	.024	.35
JAN 1999										
12...	--	--	20	2	6.0	5.69	.013	5.70	.059	.30
14...	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--
24...	--	--	12	92	2.7	1.81	.011	1.83	.060	.92
25...	--	--	--	--	--	--	--	--	--	--
26...	--	--	18	15	3.7	3.04	.027	3.07	.038	.65
FEB										
17...	--	--	18	2	4.9	4.58	.011	4.59	.040	.27
MAR										
01...	--	--	16	29	4.0	3.37	.027	3.39	.058	.59
11...	--	--	18	<1	5.2	4.84	.011	4.85	.015	.39
15...	--	--	10	31	3.7	2.79	.014	2.80	.137	.91
15...	--	--	9.8	166	4.0	2.05	.012	2.06	.191	1.9
APR										
07...	--	--	15	<1	4.7	4.22	.012	4.23	.030	.49
MAY										
10...	--	--	16	<1	4.4	3.62	.190	3.81	.045	.55
JUN										
15...	--	--	17	1	4.4	3.77	.027	3.79	.080	.57
JUL										
08...	--	--	14	<1	4.7	4.23	.015	4.24	.043	.46
AUG										
17...	--	--	14	11	4.2	3.77	.014	3.79	.056	.42
SEP										
05...	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--
07...	--	--	--	--	--	--	--	--	--	--
07...	--	--	16	77	4.6	3.31	.091	3.40	.047	1.2
08...	--	--	16	11	4.4	3.99	.012	4.00	.057	.39
15...	--	--	15	78	4.9	3.43	.009	3.44	.034	1.4
16...	--	--	11	258	4.4	1.76	.021	1.78	.082	2.6
16...	--	--	5.2	603	5.4	.799	.016	.815	.053	4.6
16...	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--

01487000 NANTICOKE RIVER NEAR BRIDGEVILLE, DE--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)	CARBON, ORGANIC DIS-SOLVED (MG/L AS C) (00681)	SEDI-MENT, SUS-PENDED (MG/L) (80154)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY) (80155)
OCT 1998										
08...	--	--	--	--	--	--	--	--	196	23
09...	--	--	--	--	--	--	--	--	45	5.0
10...	--	--	--	--	--	--	--	--	21	2.0
19...	.19	.053	.027	.018	92	33	2.2	2.1	5	.31
28...	.29	.099	.074	.050	--	--	2.5	3.1	4	.24
NOV										
18...	.30	.045	.027	.021	--	--	2.6	2.6	2	.13
DEC										
13...	.32	.102	.046	.027	--	--	12	12	16	1.6
14...	.35	.053	.014	.010	--	--	8.0	7.8	7	.72
15...	.30	.035	.027	.022	--	--	5.4	5.2	1	.08
JAN 1999										
12...	.21	.056	.039	.028	--	--	5.1	4.6	3	.39
14...	--	--	--	--	--	--	--	--	244	33
15...	--	--	--	--	--	--	--	--	54	17
16...	--	--	--	--	--	--	--	--	50	18
24...	.48	.197	.046	.038	--	--	10	8.2	93	44
25...	--	--	--	--	--	--	--	--	33	16
26...	.48	.092	.044	.022	--	--	9.4	9.3	19	7.4
FEB										
17...	.19	.033	.025	<.001	--	--	5.8	5.7	2	.60
MAR										
01...	.42	.068	.027	.007	--	--	7.7	6.8	30	10
11...	.20	.045	.020	.020	--	--	4.3	4.2	2	.63
15...	.51	.133	.057	.040	--	--	9.4	9.1	40	18
15...	.86	.480	.133	.084	--	--	10	9.9	185	196
APR										
07...	.23	.038	.019	.018	--	--	4.5	4.3	12	4.5
MAY										
10...	.24	.052	.027	.017	--	--	6.4	6.3	4	.91
JUN										
15...	.44	.093	.070	.054	--	--	--	--	7	.81
JUL										
08...	.38	.055	.052	.022	--	--	3.4	2.5	6	.42
AUG										
17...	.28	.105	.046	.027	--	--	2.5	2.4	14	.77
SEP										
05...	--	--	--	--	--	--	--	--	114	8.0
06...	--	--	--	--	--	--	--	--	28	1.8
07...	--	--	--	--	--	--	--	--	26	1.7
07...	.41	.265	.023	.022	--	--	5.0	4.3	81	7.0
08...	.29	.093	.069	.043	--	--	2.4	2.8	9	.68
15...	.25	.285	.028	.028	--	--	7.6	7.0	83	7.8
16...	.40	.774	.032	.032	--	--	8.4	7.5	283	99
16...	.44	1.68	.061	.059	--	--	9.4	7.9	723	1250
16...	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--

01488500 MARSHYHOPE CREEK NEAR ADAMSVILLE, DE

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

DRAINAGE AREA.--43.9 mi^2.

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

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

GAGE.--Water-stage recorder. Datum of gage is 26.21 ft above sea level. Prior to Nov. 24, 1953, nonrecording gage and crest-stage gage, and Nov. 24, 1953, to March 1969, recording gage at site on old channel about 240 ft southeast of present site at datum 2.00 ft higher.

REMARKS.--Records good except those for estimated daily discharges (partially plugged intakes), which are poor. Several measurements of water temperature were made during the year. Water-quality data for some prior years have been collected at this location.

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

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 450 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jan 3	1600	872	6.41	Mar 22	0900	496	5.05
Mar 15	0530	997	6.82	Sep 17	0045	*3,340	*12.92

Minimum discharge, 4.7 ft^3/s, Aug 3, 7.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	e9.0	e8.6	e9.0	48	85	69	39	18	17	7.9	9.4
2	e8.5	e9.0	e8.6	e9.0	53	63	71	39	16	37	8.3	9.3
3	e7.5	e9.0	e8.4	328	58	56	67	39	16	29	6.5	9.0
4	e13	e9.0	e8.4	114	54	59	67	39	17	27	6.6	8.7
5	11	e8.8	e8.4	38	54	51	83	37	16	18	6.6	9.6
6	10	e8.8	e8.6	29	52	50	73	37	15	14	6.6	9.5
7	10	e8.8	e9.2	26	50	57	68	36	15	14	5.7	10
8	13	e8.8	e11	24	51	52	64	35	14	15	7.0	10
9	23	e8.8	e14	25	48	51	64	34	15	12	7.7	10
10	20	e8.8	e11	24	48	54	82	33	15	11	8.4	9.6
11	14	e11	e10	22	45	53	77	32	14	11	7.3	9.2
12	12	e10	e11	22	45	51	126	30	14	12	7.1	8.5
13	12	e9.5	e22	22	54	48	93	30	15	14	8.3	8.0
14	11	e8.8	29	21	49	52	80	30	16	14	9.9	8.1
15	12	e8.8	e20	109	46	536	73	28	18	12	12	9.7
16	11	e8.8	e15	84	45	179	73	26	16	11	11	1790
17	11	e8.8	e12	47	44	130	66	27	15	11	10	2590
18	e10	e8.8	e10	68	64	109	61	26	16	9.8	10	525
19	e10	e8.6	e10	141	82	93	57	28	15	9.0	9.4	160
20	e10	e8.6	e9.8	66	62	82	56	27	17	8.5	11	105
21	e10	e8.4	e9.8	54	56	87	54	24	19	8.3	13	87
22	e10	e8.4	e9.8	49	51	320	53	24	18	10	14	83
23	e9.8	e9.0	e9.6	46	48	162	54	27	17	11	12	74
24	e9.6	e9.0	e9.6	150	47	125	51	26	16	11	10	64
25	e9.6	e9.0	e9.6	156	47	108	48	24	16	9.8	11	58
26	e9.4	e9.4	e9.8	86	46	95	47	23	15	10	11	53
27	e9.4	e11	e9.8	72	43	88	46	21	15	9.7	11	49
28	e9.4	e12	e11	65	48	89	43	20	15	8.8	11	47
29	e9.2	e10	e12	58	---	84	42	18	14	9.5	10	45
30	e9.2	e9.0	e11	53	---	75	40	20	15	8.3	9.7	47
31	e9.2	---	e10	49	---	69	---	19	---	7.3	9.4	---
TOTAL	344.8	275.7	357.0	2066.0	1438	3213	1948	898	473	410.0	289.4	5915.6
MEAN	11.1	9.19	11.5	66.6	51.4	104	64.9	29.0	15.8	13.2	9.34	197
MAX	23	12	29	328	82	536	126	39	19	37	14	2590
MIN	7.5	8.4	8.4	9.0	43	48	40	18	14	7.3	5.7	8.0
CFSM	.25	.21	.26	1.52	1.17	2.36	1.48	.66	.36	.30	.21	4.49
IN.	.29	.23	.30	1.75	1.22	2.72	1.65	.76	.40	.35	.25	5.01

e Estimated

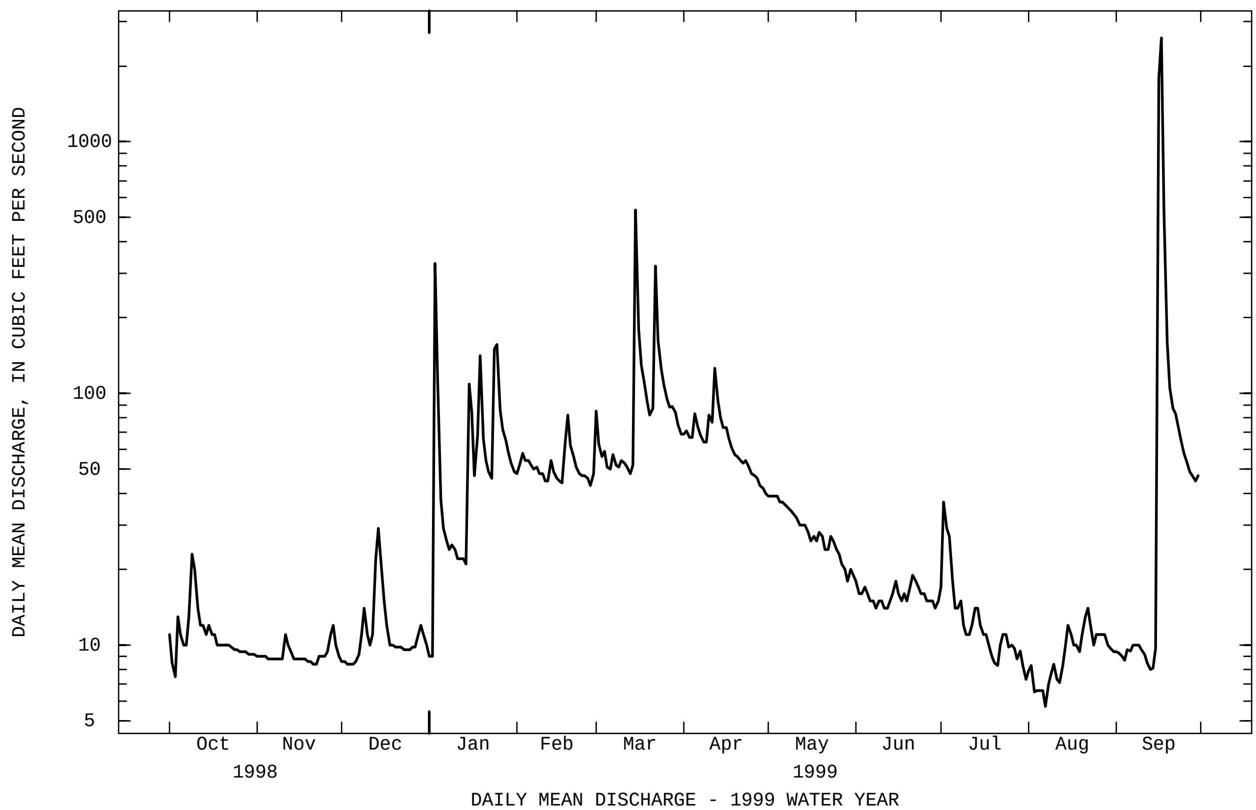
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1943 - 1969, 1972 - 1999, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	19.3	35.0	60.1	85.1	90.9	111	76.8	53.2	35.5	34.3	36.2	22.7
MAX	101	190	219	258	279	284	226	178	156	297	340	197
(WY)	1972	1957	1997	1978	1998	1994	1983	1989	1948	1975	1967	1999
MIN	3.46	4.95	3.22	4.30	27.8	27.8	21.7	15.5	7.32	4.58	2.83	2.78
(WY)	1966	1966	1966	1966	1966	1966	1985	1957	1965	1944	1964	1964

01488500 MARSHYHOPE CREEK NEAR ADAMSVILLE, DE--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1943 - 1969 1972 - 1999	
ANNUAL TOTAL	27206.6		17628.5			
ANNUAL MEAN	74.5		48.3		55.4	
HIGHEST ANNUAL MEAN					111	1958
LOWEST ANNUAL MEAN					16.2	1966
HIGHEST DAILY MEAN	1550	Feb 5	2590	Sep 17	2710	Aug 5 1967
LOWEST DAILY MEAN	(e)7.0	Sep 29	5.7	Aug 7	1.2	(a)
ANNUAL SEVEN-DAY MINIMUM	7.6	Sep 24	6.7	Aug 3	1.3	Sep 5 1964
INSTANTANEOUS PEAK FLOW			3340	Sep 17	(b)3700	Jul 13 1975
INSTANTANEOUS PEAK STAGE			12.92	Sep 17	13.98	Aug 5 1967
INSTANTANEOUS LOW FLOW			4.7	(c)	1.0	(d)
ANNUAL RUNOFF (CFSM)	1.70		1.10		1.26	
ANNUAL RUNOFF (INCHES)	23.05		14.94		17.16	
10 PERCENT EXCEEDS	152		81		115	
50 PERCENT EXCEEDS	24		16		29	
90 PERCENT EXCEEDS	8.8		8.8		7.5	

e Estimated.
a Sept. 9, 10, 1964.
b From rating curve extended above 3,300 ft^3/s.
c Aug. 3, 7.
d Sept. 9, 10, 1964; Aug. 20, 1965.



01491000 CHOPTANK RIVER NEAR GREENSBORO, MD

LOCATION.--Lat 38°59'50", long 75°47'10", Caroline County, Hydrologic Unit 02060005, on left bank at highway bridge, 0.1 mi upstream from Gravelly Branch, 2.0 mi northeast of Greensboro, and 60 mi upstream from mouth.

DRAINAGE AREA.--113 mi^2.

WATER-DISCHARGE RECORDS

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

REVISED RECORDS.--WSP 1622: 1948. WDR MD-DE-79-1: 1961(P).

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

REMARKS.--No estimated daily discharges. Water-discharge records good. Diversions for irrigation of about 500 acres upstream from station.

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

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Sep 17	0400	*6,420	*13.92	No other peak greater than base discharge.			

Minimum discharge, 0.83 ft^3/s, Aug 13.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15	12	17	20	100	139	152	83	26	40	3.6	15
2	13	12	16	19	110	167	164	82	24	73	3.8	14
3	12	13	16	70	140	144	166	79	20	51	3.8	12
4	14	13	16	180	145	138	166	80	18	33	3.2	13
5	17	13	16	167	131	133	223	78	20	26	2.6	17
6	16	12	16	85	122	121	207	75	20	18	2.0	25
7	16	12	16	51	116	139	180	74	18	16	2.2	34
8	16	13	18	44	114	179	163	72	17	11	4.1	16
9	25	14	32	45	108	155	154	69	15	10	4.7	15
10	26	16	30	51	102	146	178	65	13	7.6	3.1	15
11	23	37	25	45	97	146	201	58	13	8.8	2.2	14
12	20	38	22	40	95	141	274	54	13	7.3	1.2	12
13	18	22	28	40	115	131	305	53	17	13	1.0	12
14	18	19	33	39	125	126	251	52	25	14	2.8	11
15	18	17	28	105	114	480	198	49	50	13	14	20
16	17	16	26	241	106	732	180	46	37	6.7	14	2600
17	17	16	24	204	103	439	170	45	30	4.6	11	5600
18	17	16	22	130	129	285	156	45	28	5.8	7.8	1890
19	16	15	21	190	215	230	140	45	25	3.6	4.8	614
20	15	15	21	226	220	195	131	43	27	4.9	5.2	344
21	14	16	21	148	168	187	126	39	44	3.6	9.8	234
22	14	16	22	115	142	420	125	38	40	7.1	13	210
23	14	16	22	102	125	646	121	40	32	14	12	187
24	14	16	21	140	116	429	120	41	28	11	9.9	146
25	14	15	21	346	112	299	112	41	26	9.0	12	131
26	12	17	20	308	109	234	104	37	24	7.5	77	119
27	13	21	19	191	105	207	100	33	20	6.1	87	107
28	14	20	20	152	106	192	95	32	16	6.1	45	100
29	13	18	23	136	---	185	90	29	15	6.3	28	97
30	12	17	24	120	---	175	85	29	17	7.2	21	123
31	11	---	23	108	---	160	---	28	---	7.6	16	---
TOTAL	494	513	679	3858	3490	7500	4837	1634	718	452.8	427.8	12747
MEAN	15.9	17.1	21.9	124	125	242	161	52.7	23.9	14.6	13.8	425
MAX	26	38	33	346	220	732	305	83	50	73	87	5600
MIN	11	12	16	19	95	121	85	28	13	3.6	1.0	11
CFSM	.14	.15	.19	1.10	1.10	2.14	1.43	.47	.21	.13	.12	3.76
IN.	.16	.17	.22	1.27	1.15	2.47	1.59	.54	.24	.15	.14	4.20

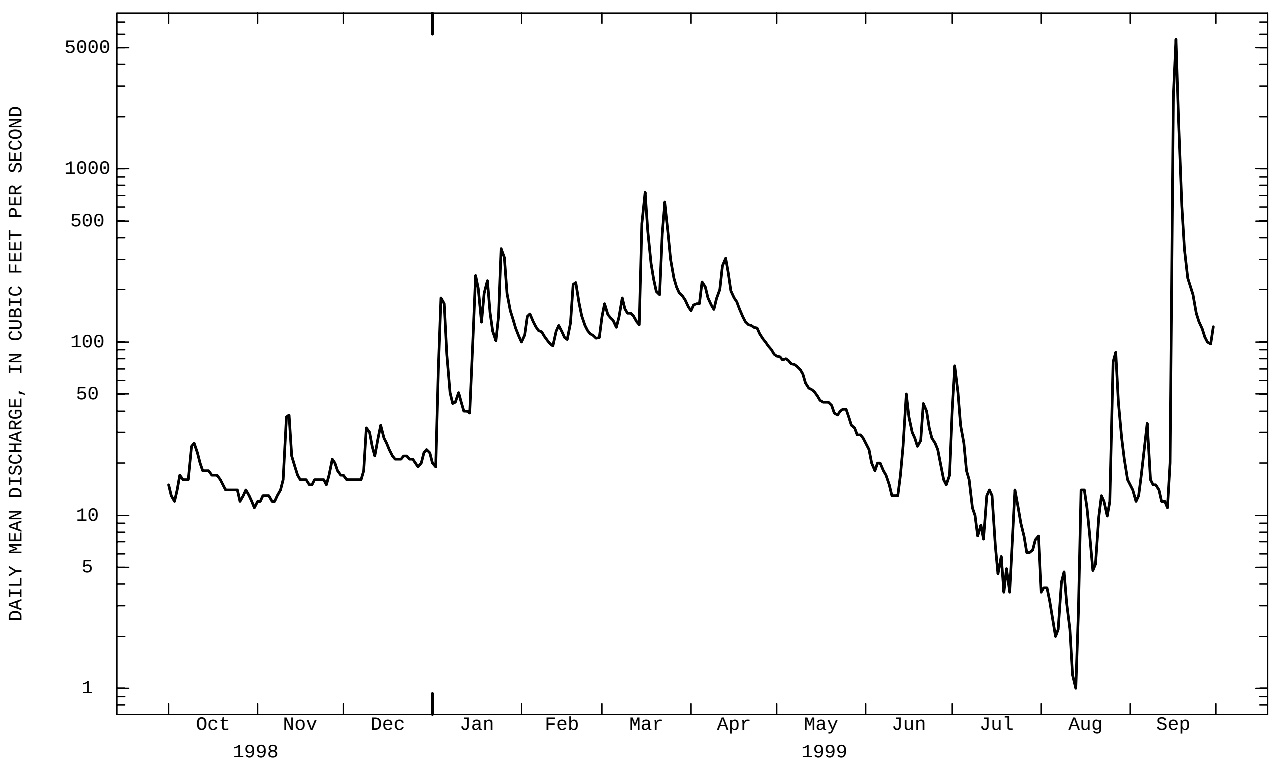
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1948 - 1999, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	53.3	87.5	150	202	225	269	200	134	93.8	57.5	82.6	53.0
MAX	402	476	680	559	646	826	649	457	381	421	829	425
(WY)	1972	1957	1997	1978	1979	1994	1983	1989	1996	1975	1967	1999
MIN	9.85	10.9	13.3	17.9	42.8	43.7	47.2	30.3	19.5	9.49	5.31	9.38
(WY)	1966	1966	1966	1966	1966	1966	1966	1977	1986	1977	1966	1987

01491000 CHOPTANK RIVER NEAR GREENSBORO, MD--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1948 - 1999	
ANNUAL TOTAL	58133.7		37350.6			
ANNUAL MEAN	159		102		133	
HIGHEST ANNUAL MEAN					237	1972
LOWEST ANNUAL MEAN					26.6	1966
HIGHEST DAILY MEAN	2710	Jan 29	5600	Sep 17	6160	Aug 4 1967
LOWEST DAILY MEAN	5.5	Aug 8	1.0	Aug 13	1.0	Aug 13 1999
ANNUAL SEVEN-DAY MINIMUM	8.0	Aug 4	2.6	Aug 7	2.2	Aug 26 1966
INSTANTANEOUS PEAK FLOW			6420	Sep 17	(a)6970	Aug 4 1967
INSTANTANEOUS PEAK STAGE			13.92	Sep 17	14.47	Aug 4 1967
INSTANTANEOUS LOW FLOW			.83	Aug 13	.83	Aug 13 1999
ANNUAL RUNOFF (CFSM)	1.41		.91		1.17	
ANNUAL RUNOFF (INCHES)	19.14		12.30		15.96	
10 PERCENT EXCEEDS	405		188		287	
50 PERCENT EXCEEDS	45		28		72	
90 PERCENT EXCEEDS	14		10		15	

a From rating curve extended above 3,600 ft^3/s.



DAILY MEAN DISCHARGE - 1999 WATER YEAR

01491000 CHOPTANK RIVER NEAR GREENSBORO, MD--Continued

WATER-QUALITY RECORDS

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

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1974 to September 1981, October 1984 to September 1991.
WATER TEMPERATURE: October 1974 to September 1991.
SUSPENDED-SEDIMENT DISCHARGE: October 1980 to September 1991.

REMARKS.--On May 5 and Nov. 15, 1994 samples were collected and analyzed using ultraclean methodologies. Data on trace metals for these dates are available from the University of Delaware. Data on organics for these dates are available from George Mason University. Sample for Sept. 17, 1999 was collected at highway bridge on MD State Rte. 287, approximately 3 mi upstream from gaging station.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE (water years 1975-81, 1988, 1990-91): Maximum daily, 313 microsiemens, Dec. 20, 1987; minimum daily, 40 microsiemens, Jan. 31, 1980.
WATER TEMPERATURE (water years 1975-81, 1985, 1988-91): Maximum daily, 28.5℃, Aug. 14, 1988; minimum daily, 0.0℃, on many days during winter periods.
SEDIMENT CONCENTRATION: Maximun daily mean, 107 mg/L, Dec. 26, 1986; minimum daily mean, 1 mg/L, on many days during water years 1982-91.
SEDIMENT LOAD: Maximum daily, 448 tons, Dec. 26, 1986; minimum daily, 0.02 ton, Aug. 30, Sept. 7, 1982, July 25, 1986, Oct. 16, 23, 26, 27, 1987, Sept. 23, 1988.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)
OCT 1998									
07...	0845	16	169	6.8	17.0	16.0	772	8.0	80
NOV									
03...	1000	13	170	7.2	6.5	10.0	761	8.9	79
DEC									
02...	1145	16	178	7.2	15.5	8.5	768	9.8	83
14...	1030	33	164	7.1	6.0	7.0	767	9.0	74
JAN 1999									
05...	1245	163	152	6.5	-1.5	1.0	771	11.7	81
16...	1430	271	131	6.8	8.5	4.0	761	10.9	83
26...	0945	316	107	6.9	8.0	8.0	775	9.0	74
FEB									
11...	1015	97	135	6.4	12.0	6.5	771	10.9	88
MAR									
05...	1045	135	--	6.8	7.5	6.0	772	11.3	--
15...	1645	582	89	6.9	6.5	5.0	755	10.9	86
23...	1030	679	81	6.6	12.0	8.0	768	9.4	78
APR									
06...	0845	214	125	6.8	13.5	13.0	770	8.3	78
MAY									
04...	1045	81	130	6.9	22.5	15.0	760	8.7	87
JUN									
02...	1200	24	141	7.1	31.0	23.5	760	6.7	79
21...	1230	47	145	7.0	20.0	18.0	768	7.0	73
JUL									
07...	0945	17	152	7.3	29.5	27.0	760	4.5	57
AUG									
03...	0915	3.6	188	7.5	27.5	24.0	764	3.7	44
16...	1130	14	164	7.6	28.5	24.5	767	6.3	75
26...	1300	89	147	6.4	28.0	23.0	757	5.6	66
SEP									
07...	1030	33	191	7.0	26.0	25.0	757	5.6	68
16...	1115	1070	67	6.3	--	--	--	--	--
17...	1245	5860	86	6.4	20.5	18.9	764	4.7	50
18...	1700	1250	58	6.1	18.0	19.0	764	5.9	64
21...	0900	241	114	5.8	19.0	19.0	758	6.2	67

01491000 CHOPTANK RIVER NEAR GREENSBORO, MD--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	ALKA-LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	BICAR-BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	NITRO-GEN, TOTAL (MG/L AS N) (00600)	NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS N) (00618)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)
OCT 1998									
07...	26	32	14	1.9	1.38	.003	1.38	.024	.53
NOV									
03...	27	33	13	1.5	--	<.001	1.20	<.020	.28
DEC									
02...	31	38	15	1.5	1.25	.006	1.26	.022	.23
14...	26	32	15	--	--	.010	<.050	.089	.33
JAN 1999									
05...	12	14	10	1.8	.915	.008	.923	.110	.91
16...	13	16	14	1.8	.942	.011	.953	.167	.87
26...	14	17	14	1.3	.590	.007	.597	.034	.69
FEB									
11...	14	16	21	1.8	1.56	.010	1.57	.032	.26
MAR									
05...	13	16	16	1.4	1.05	.009	1.06	<.020	.32
15...	--	--	11	2.0	1.10	.008	1.10	.116	.89
23...	12	15	11	1.7	.760	.008	.768	.081	.93
APR									
06...	15	18	13	1.3	.802	.008	.810	.035	.50
MAY									
04...	20	24	15	1.4	.999	.008	1.01	.071	.40
JUN									
02...	24	29	17	1.8	1.28	.008	1.29	.052	.48
21...	--	--	16	1.7	1.26	.009	1.27	.052	.44
JUL									
07...	26	32	14	1.7	--	<.010	1.26	<.020	.46
AUG									
03...	40	48	15	1.8	--	--	1.41	<.020	.42
16...	24	29	16	1.7	1.36	.006	1.37	<.020	.30
26...	--	--	12	1.9	1.23	.010	1.24	.082	.62
SEP									
07...	42	52	<.10	1.5	1.07	.016	1.09	.053	.40
16...	--	--	5.5	1.9	.731	.009	.740	.054	1.1
17...	--	--	2.7	.94	.285	.008	.293	.024	.65
18...	--	--	6.0	1.1	.393	.006	.399	.040	.68
21...	10	12	<.10	1.5	.898	.006	.904	.059	.61

DATE	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)	SEDI-MENT, SUS-PENDED (MG/L) (80154)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
OCT 1998								
07...	.27	.056	.013	.010	3.5	2	.09	--
NOV								
03...	.17	<.050	.009	.007	3.6	1	.04	--
DEC								
02...	.23	<.050	.007	.005	3.2	1	.04	--
14...	.29	<.050	.013	.009	3.9	3	.27	--
JAN 1999								
05...	.56	.214	.026	.015	7.7	44	19	98
16...	.53	.171	.029	.018	9.5	31	23	87
26...	.49	.141	.047	.029	12	17	15	98
FEB								
11...	.18	.045	.010	.007	3.3	4	1.2	--
MAR								
05...	<.10	.044	.012	.007	4.5	4	1.5	--
15...	.41	.160	.027	.012	8.9	36	56	--
23...	.69	.130	.041	.023	11	19	35	91
APR								
06...	.47	.066	.025	.014	9.8	6	3.8	--
MAY								
04...	.35	.053	.009	.005	5.3	2	.46	--
JUN								
02...	.34	.081	.028	.022	5.7	2	.16	--
21...	.31	.072	.027	.019	5.5	2	.22	--
JUL								
07...	.35	.097	.038	.040	--	3	.14	--
AUG								
03...	.29	.059	.026	.021	5.0	3	.03	--
16...	.28	.073	.026	.019	4.8	2	.08	--
26...	.43	.123	.036	.024	7.0	16	3.9	--
SEP								
07...	.28	.039	.020	.011	4.6	1	.12	--
16...	.37	.330	.091	.077	--	--	--	--
17...	.49	.224	.147	.130	10	22	348	86
18...	.39	.150	.100	.087	14	10	35	--
21...	.56	.087	.052	.040	9.3	4	2.7	--

01493000 UNICORN BRANCH NEAR MILLINGTON, MD

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

DRAINAGE AREA.--19.7 mi^2.

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

REVISED RECORDS.--WSP 1382: 1952(P). WRD MD-DE-95-1: Drainage area.

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

REMARKS.--No estimated daily discharges. Records good. Occasional regulation at low and medium flow by Unicorn Lake Dam upstream from station. Several measurements of water temperature were made during the year. Water-quality records for some prior periods have been collected at this location.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 180 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Sep 16	1830	*2,600	*9.40	No other peak greater than base discharge.			

Minimum discharge, 2.9 ft^3/s, Feb 17, Aug 13, 14.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.3	7.7	18	8.6	14	23	22	15	9.1	59	5.1	8.6
2	7.3	7.3	22	8.6	18	20	23	14	9.4	25	5.5	8.9
3	6.8	7.2	19	13	26	18	22	14	8.9	12	4.8	8.6
4	8.9	7.2	13	20	13	19	21	15	8.7	11	4.2	8.9
5	9.4	7.6	10	22	12	18	22	14	8.3	9.7	4.3	12
6	8.3	9.0	9.5	17	13	18	21	14	8.3	9.3	4.3	10
7	9.2	8.5	8.1	11	17	20	20	14	8.1	8.8	3.9	10
8	9.7	8.4	8.1	8.5	16	19	20	14	8.6	8.6	3.9	12
9	10	8.2	7.9	8.8	13	18	22	14	8.2	7.9	4.4	9.5
10	10	8.3	8.9	9.0	12	18	30	13	7.5	7.6	5.7	9.5
11	9.5	11	11	9.0	12	18	29	12	7.0	7.4	5.6	9.0
12	8.9	8.9	11	12	13	17	39	12	6.0	8.1	4.7	8.4
13	8.7	8.3	11	14	13	17	32	10	8.5	8.7	3.6	7.9
14	9.1	8.2	11	7.2	13	19	25	11	9.6	8.2	4.0	8.0
15	8.6	8.1	8.3	15	20	70	23	11	9.4	8.7	5.4	11
16	8.6	8.1	6.8	32	23	66	24	11	8.0	8.5	5.5	1200
17	8.6	8.1	7.6	32	3.8	39	22	11	8.9	8.4	5.7	1110
18	8.4	8.7	8.6	15	4.7	28	20	11	9.5	7.9	5.3	239
19	8.5	8.2	8.6	25	27	24	19	11	9.2	7.7	4.9	120
20	8.5	8.3	8.6	11	21	21	19	10	13	7.4	5.5	79
21	7.9	8.3	8.6	13	18	25	19	11	17	6.7	7.0	63
22	7.7	8.1	8.6	19	16	86	19	10	12	8.8	6.2	77
23	7.8	8.2	8.6	12	15	72	19	12	11	11	5.6	63
24	8.0	8.1	8.6	11	15	41	19	14	9.8	9.0	8.3	50
25	8.1	8.1	8.6	31	15	32	18	14	9.2	8.5	12	43
26	7.9	11	8.6	27	14	27	17	12	9.2	8.4	47	37
27	7.9	9.9	8.6	13	14	24	17	11	9.0	7.2	25	33
28	7.9	8.9	8.6	16	17	25	16	10	8.8	6.4	15	31
29	7.8	8.6	8.6	14	---	24	15	9.9	8.7	6.6	10	28
30	7.9	8.5	8.6	14	---	22	15	9.5	16	6.1	9.5	44
31	7.7	---	8.6	14	---	21	---	9.2	---	6.1	8.8	---
TOTAL	261.9	253.0	311.6	482.7	428.5	909	649	373.6	284.9	324.7	250.7	3359.3
MEAN	8.45	8.43	10.1	15.6	15.3	29.3	21.6	12.1	9.50	10.5	8.09	112
MAX	10	11	22	32	27	86	39	15	17	59	47	1200
MIN	6.8	7.2	6.8	7.2	3.8	17	15	9.2	6.0	6.1	3.6	7.9
CFSM	.43	.43	.51	.79	.78	1.49	1.10	.61	.48	.53	.41	5.69
IN.	.50	.48	.59	.91	.81	1.72	1.23	.71	.54	.61	.47	6.35

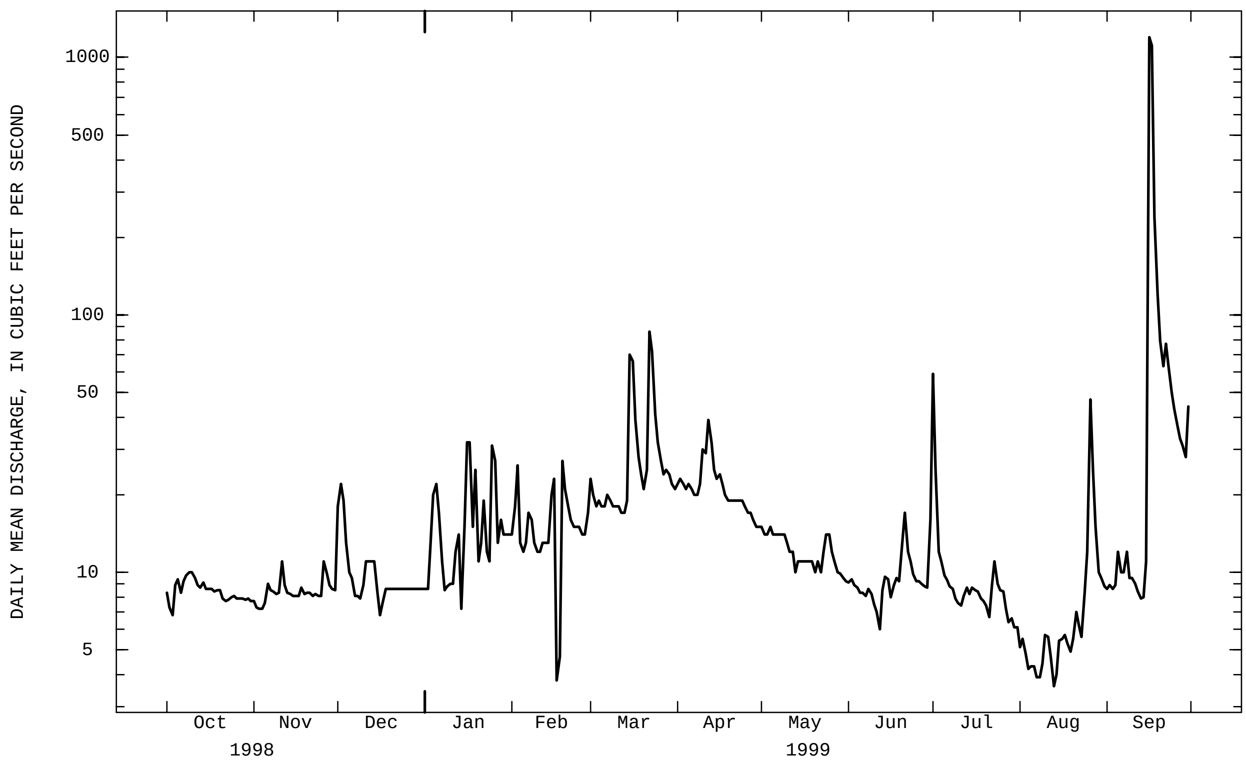
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1948 - 1999, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	14.4	17.1	25.6	32.7	36.8	43.7	36.2	26.6	21.0	16.3	17.5	16.2
MAX	91.5	65.4	124	83.7	83.7	105	109	66.8	86.9	52.5	62.5	112
(WY)	1972	1972	1997	1978	1961	1994	1983	1989	1996	1972	1967	1999
MIN	5.27	4.99	5.32	5.80	12.1	9.29	10.7	8.64	4.51	5.22	3.15	4.79
(WY)	1966	1966	1966	1966	1966	1966	1966	1977	1966	1977	1966	1977

01493000 UNICORN BRANCH NEAR MILLINGTON, MD--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1948 - 1999	
ANNUAL TOTAL	10337.3		7888.9			
ANNUAL MEAN	28.3		21.6		25.2	
HIGHEST ANNUAL MEAN					51.8	1972
LOWEST ANNUAL MEAN					7.08	1966
HIGHEST DAILY MEAN	315	Mar 21	1200	Sep 16	1200	Sep 16 1999
LOWEST DAILY MEAN	6.6	Aug 7	3.6	Aug 13	.10	Jun 9 1965
ANNUAL SEVEN-DAY MINIMUM	7.5	Oct 30	4.3	Aug 3	.14	Jun 8 1965
INSTANTANEOUS PEAK FLOW			(a)2600	Sep 16	(a)2600	Sep 16 1999
INSTANTANEOUS PEAK STAGE			9.40	Sep 16	9.40	Sep 16 1999
INSTANTANEOUS LOW FLOW			2.0	(b)	.00	(c)
ANNUAL RUNOFF (CFSM)	1.44		1.10		1.28	
ANNUAL RUNOFF (INCHES)	19.54		14.91		17.39	
10 PERCENT EXCEEDS	57		25		47	
50 PERCENT EXCEEDS	14		10		16	
90 PERCENT EXCEEDS	8.1		7.2		7.3	

a From rating curve extended above 600 ft^3/s on basis of USGS Cap Culvert Analysis of peak flow.
b Feb. 17, Aug. 13, 14.
c No flow for part of each day June 13, 14, 1965 and Jan. 6, 7, 10, 13-16, 20, 21, 23, 24, 27, 31, Feb. 2, 3, 14, 20, 1997, caused by regulation at Unicorn Lake Dam.



DAILY MEAN DISCHARGE - 1999 WATER YEAR

01493112 CHESTERVILLE BRANCH NEAR CRUMPTON, MD

LOCATION.--Lat 39°15'26", long 75°56'26", Kent County, Hydrologic Unit 02060002, on middle pier of double box culvert at downstream side of State Highway 291, 1.2 mi upstream from mouth, and 1.5 mi northwest of Crumpton.

DRAINAGE AREA.--6.12 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1996 to September 1999.

GAGE.--Water-stage recorder. Datum of gage is 2.00 ft above sea level.

REMARKS.--Water-discharge records good except those for estimated daily discharges (backwater from beaver dams), which are poor.

EXTREMES FOR CURRENT PERIOD.--Peak discharges greater than base discharge of 60 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Dec 14, 1996	0530	*63	*6.82	No other peak greater than base discharge.			
Feb 24, 1998	0130	67	4.80	Jun 13, 1998	0845	*83	*5.35
Mar 21, 1998	1045	80	5.24	Sep 2, 1998	1715	77	5.14
Jan 15, 1999	1700	50	4.24	Sep 16, 1999	1230	*3,210	*10.22
Jul 1, 1999	1615	118	6.21				

July - September 1996 Minimum discharge, 4.0 ft^3/s, Jul 24-25.
1997 Water Year Minimum discharge, 2.1 ft^3/s, Sep 17.
1998 Water Year Minimum discharge, Unknown.
1999 Water Year Minimum discharge, 1.1 ft^3/s, Aug 30.

DISCHARGE, CUBIC FEET PER SECOND, JULY 1996 TO SEPTEMBER 1996
DAILY MEAN VALUES

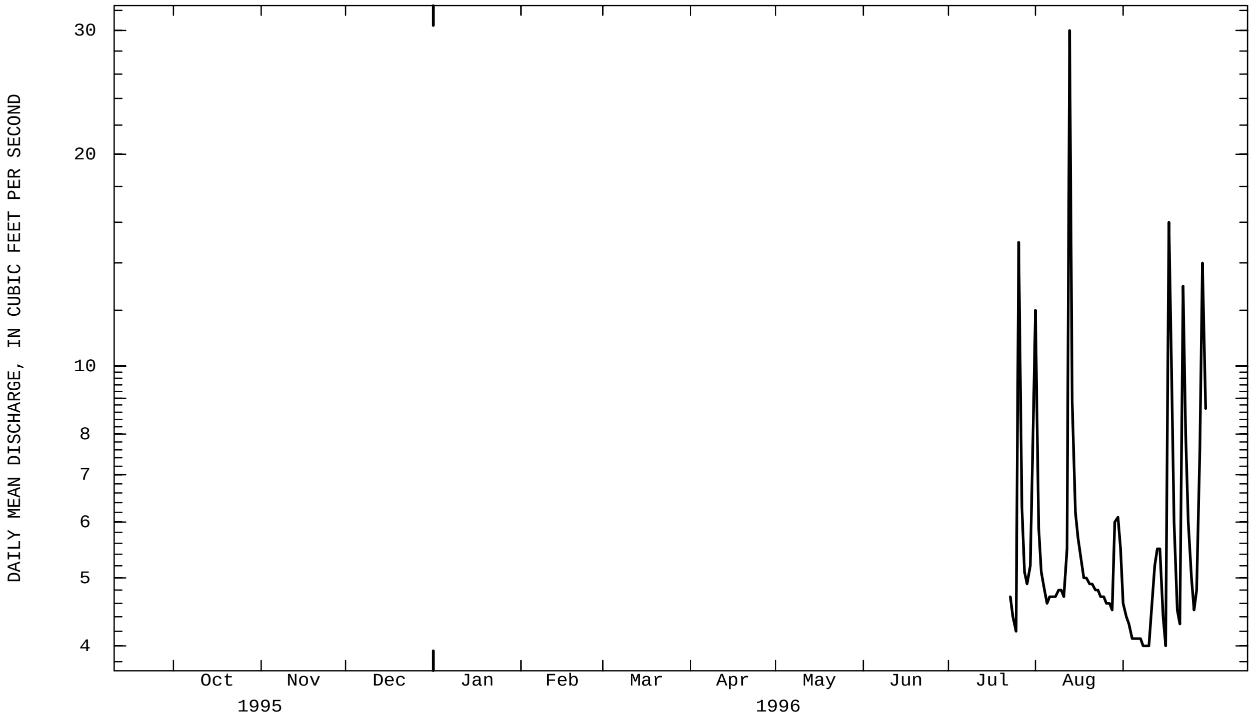
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	---	---	12	e4.6
2	---	---	---	---	---	---	---	---	---	---	5.9	e4.4
3	---	---	---	---	---	---	---	---	---	---	5.1	e4.3
4	---	---	---	---	---	---	---	---	---	---	4.8	e4.1
5	---	---	---	---	---	---	---	---	---	---	4.6	e4.1
6	---	---	---	---	---	---	---	---	---	---	4.7	e4.1
7	---	---	---	---	---	---	---	---	---	---	4.7	e4.1
8	---	---	---	---	---	---	---	---	---	---	4.7	e4.0
9	---	---	---	---	---	---	---	---	---	---	4.8	e4.0
10	---	---	---	---	---	---	---	---	---	---	4.8	e4.0
11	---	---	---	---	---	---	---	---	---	---	4.7	e4.5
12	---	---	---	---	---	---	---	---	---	---	5.5	e5.2
13	---	---	---	---	---	---	---	---	---	---	30	e5.5
14	---	---	---	---	---	---	---	---	---	---	8.9	e5.5
15	---	---	---	---	---	---	---	---	---	---	6.2	e4.4
16	---	---	---	---	---	---	---	---	---	---	5.7	e4.0
17	---	---	---	---	---	---	---	---	---	---	5.3	16
18	---	---	---	---	---	---	---	---	---	---	5.0	e10
19	---	---	---	---	---	---	---	---	---	---	e5.0	e6.0
20	---	---	---	---	---	---	---	---	---	---	e4.9	e4.5
21	---	---	---	---	---	---	---	---	---	---	e4.9	e4.3
22	---	---	---	---	---	---	---	---	---	---	e4.8	13
23	---	---	---	---	---	---	---	---	---	4.7	e4.8	e8.0
24	---	---	---	---	---	---	---	---	---	4.4	e4.7	e6.0
25	---	---	---	---	---	---	---	---	---	4.2	e4.7	e5.0
26	---	---	---	---	---	---	---	---	---	15	e4.6	e4.5
27	---	---	---	---	---	---	---	---	---	6.3	e4.6	e4.8
28	---	---	---	---	---	---	---	---	---	5.1	e4.5	7.6
29	---	---	---	---	---	---	---	---	---	4.9	e6.0	14
30	---	---	---	---	---	---	---	---	---	5.2	6.1	8.7
31	---	---	---	---	---	---	---	---	---	7.8	e5.5	---
TOTAL	---	---	---	---	---	---	---	---	---	---	192.5	183.2
MEAN	---	---	---	---	---	---	---	---	---	---	6.21	6.11
MAX	---	---	---	---	---	---	---	---	---	---	30	16
MIN	---	---	---	---	---	---	---	---	---	---	4.5	4.0
CFSM	---	---	---	---	---	---	---	---	---	---	1.01	1.00
IN.	---	---	---	---	---	---	---	---	---	---	1.17	1.11

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1996 - 1996, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	---	---	---	---	---	---	---	---	---	---	6.21	6.11
MAX	---	---	---	---	---	---	---	---	---	---	6.21	6.11
(WY)	---	---	---	---	---	---	---	---	---	---	1996	1996
MIN	---	---	---	---	---	---	---	---	---	---	6.21	6.11
(WY)	---	---	---	---	---	---	---	---	---	---	1996	1996

01493112 CHESTERVILLE BRANCH NEAR CRUMPTON, MD--Continued



DAILY MEAN DISCHARGE - 1996 WATER YEAR

01493112 CHESTERVILLE BRANCH NEAR CRUMPTON, MD--Continued

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e6.0	e6.8	11	11	11	17	15	8.7	11	6.3	3.9	e3.2
2	e5.2	e6.8	25	11	11	14	11	8.6	14	6.3	4.1	e2.8
3	e4.8	e7.3	11	11	10	21	11	8.9	12	6.1	4.3	2.5
4	e4.6	e7.1	9.5	11	11	23	10	8.8	10	6.1	4.3	2.5
5	e4.5	e6.9	8.8	11	23	13	10	8.3	9.2	5.9	4.4	2.7
6	e4.5	e6.8	23	11	14	12	10	8.2	9.2	6.1	4.3	2.8
7	e5.0	e6.8	14	11	12	11	10	8.2	8.8	6.4	4.3	2.8
8	e8.0	e9.0	16	11	11	11	9.7	8.2	8.7	6.4	4.3	3.0
9	14	16	9.9	11	12	11	9.5	8.5	8.6	6.8	4.3	3.2
10	10	11	9.1	12	11	13	9.4	8.6	8.3	7.3	4.1	3.4
11	7.9	9.9	8.9	12	11	12	9.4	9.3	8.2	6.8	4.1	e6.0
12	6.5	9.0	8.7	11	11	11	9.8	8.6	8.3	6.5	4.1	3.5
13	6.0	8.8	20	10	11	10	11	7.9	8.7	6.0	4.1	3.4
14	6.0	8.4	48	10	13	12	9.6	7.9	8.8	6.3	4.1	3.4
15	5.9	8.2	18	10	20	13	9.2	7.8	8.3	7.0	4.1	3.4
16	5.8	8.1	14	14	13	11	9.1	7.8	8.0	6.8	4.0	3.6
17	6.3	8.6	14	13	12	11	9.2	7.9	8.2	6.4	4.0	3.1
18	6.9	8.4	13	12	11	11	9.5	7.8	8.0	6.1	4.1	3.5
19	22	8.3	15	11	11	13	9.2	7.7	8.9	5.7	4.0	3.6
20	7.6	8.1	13	10	11	12	9.1	7.7	8.3	5.6	10	3.6
21	6.5	8.1	12	10	11	11	9.1	8.1	8.1	5.6	29	3.6
22	6.2	8.3	12	10	11	11	9.1	9.0	7.9	5.8	e10	e3.8
23	6.5	8.0	12	11	10	10	9.0	9.6	7.7	5.9	e6.0	e3.4
24	7.0	8.0	12	10	10	10	11	9.9	7.4	5.6	e4.0	e3.6
25	7.0	8.0	14	13	10	10	9.6	11	7.1	5.2	e3.8	e3.7
26	6.9	10	12	11	10	15	8.8	14	7.6	4.6	e3.5	e4.0
27	6.7	9.7	12	11	11	12	8.6	10	7.9	4.1	e3.3	e3.8
28	7.9	9.1	12	14	11	11	23	9.9	7.0	4.2	e4.0	e3.9
29	e7.5	9.1	12	12	---	11	10	9.8	6.4	4.0	e3.7	e4.5
30	e7.0	9.1	12	11	---	11	9.0	10	6.0	3.7	e3.3	e4.0
31	e6.8	---	11	11	---	17	---	10	---	3.8	e3.2	---
TOTAL	223.5	257.7	442.9	348	334	391	307.9	276.7	256.6	179.4	162.7	104.3
MEAN	7.21	8.59	14.3	11.2	11.9	12.6	10.3	8.93	8.55	5.79	5.25	3.48
MAX	22	16	48	14	23	23	23	14	14	7.3	29	6.0
MIN	4.5	6.8	8.7	10	10	10	8.6	7.7	6.0	3.7	3.2	2.5
CFSM	1.18	1.40	2.33	1.83	1.95	2.06	1.68	1.46	1.40	.95	.86	.57
IN.	1.36	1.57	2.69	2.12	2.03	2.38	1.87	1.68	1.56	1.09	.99	.63

e Estimated

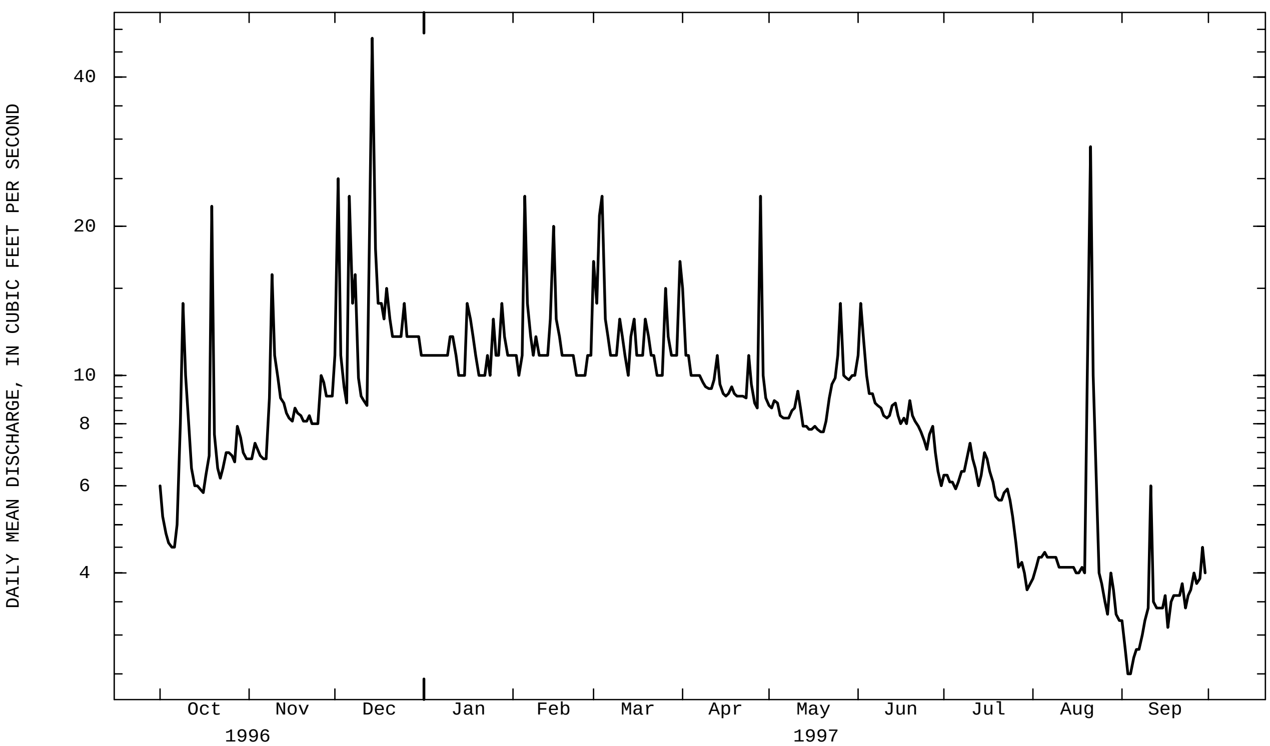
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1996 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	7.21	8.59	14.3	11.2	11.9	12.6	10.3	8.93	8.55	5.79	5.73	4.79
MAX	7.21	8.59	14.3	11.2	11.9	12.6	10.3	8.93	8.55	5.79	6.21	6.11
(WY)	1997	1997	1997	1997	1997	1997	1997	1997	1997	1997	1996	1996
MIN	7.21	8.59	14.3	11.2	11.9	12.6	10.3	8.93	8.55	5.79	5.25	3.48
(WY)	1997	1997	1997	1997	1997	1997	1997	1997	1997	1997	1997	1997

01493112 CHESTERVILLE BRANCH NEAR CRUMPTON, MD--Continued

SUMMARY STATISTICS	FOR 1997 WATER YEAR		WATER YEARS 1996 - 1997	
ANNUAL TOTAL	3284.7			
ANNUAL MEAN	9.00		9.00	
HIGHEST ANNUAL MEAN			9.00	1997
LOWEST ANNUAL MEAN			9.00	1997
HIGHEST DAILY MEAN	48	Dec 14	48	Dec 14 1996
LOWEST DAILY MEAN	2.5	(a)	2.5	(a)
ANNUAL SEVEN-DAY MINIMUM	2.7	Sep 2	2.7	Sep 2 1997
INSTANTANEOUS PEAK FLOW	63	Dec 14	63	Dec 14 1996
INSTANTANEOUS PEAK STAGE	6.82	Dec 14	6.82	Dec 14 1996
INSTANTANEOUS LOW FLOW	2.1	Sep 17	2.1	Sep 17 1997
ANNUAL RUNOFF (CFSM)	1.47		1.47	
ANNUAL RUNOFF (INCHES)	19.97		19.98	
10 PERCENT EXCEEDS	13		13	
50 PERCENT EXCEEDS	8.8		8.2	
90 PERCENT EXCEEDS	4.0		4.0	

a Sep. 3, 4, 1997.



DAILY MEAN DISCHARGE - 1997 WATER YEAR

01493112 CHESTERVILLE BRANCH NEAR CRUMPTON, MD--Continued

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.4	e3.8	e4.6	e3.9	e6.5	7.6	9.8	7.9	8.4	6.2	7.1	5.5
2	3.4	e11	e4.2	e4.2	e6.0	7.8	12	8.6	8.5	6.0	5.1	38
3	e6.0	e4.0	e4.0	e4.4	e5.8	40	11	8.4	8.5	5.9	4.9	10
4	e4.0	e2.8	e7.5	e4.2	e9.5	30	11	8.7	8.4	6.0	4.9	4.6
5	3.6	e2.6	e5.0	e4.0	e17	12	11	8.4	7.8	6.4	4.9	4.1
6	e4.0	e2.6	e4.6	e4.0	e12	8.9	9.7	9.2	7.3	6.1	4.8	4.1
7	e3.8	e3.2	e4.2	e5.5	e9.5	7.9	9.3	9.5	7.3	6.2	4.7	4.4
8	3.6	e28	e4.0	e11	e7.5	11	9.0	13	8.3	18	4.8	8.0
9	3.6	e14	e3.8	e9.0	e6.5	37	e10	13	8.6	12	4.8	5.4
10	e4.0	e7.5	e4.0	e6.0	e6.3	15	e17	10	7.9	6.8	14	4.3
11	e5.5	e5.5	e7.0	e4.8	e7.5	8.3	11	10	7.9	6.1	28	4.2
12	e3.8	e4.6	e6.0	e4.4	e13	7.1	8.5	33	14	5.8	6.5	4.3
13	3.5	e4.4	e4.4	e4.2	e9.0	7.0	8.6	22	48	5.7	4.7	4.3
14	3.4	e11	e3.5	e5.0	e7.0	7.0	8.5	16	25	4.3	4.5	4.3
15	3.4	e10	e3.4	e8.0	e6.0	6.7	7.3	13	11	5.1	4.5	4.2
16	e3.6	e5.5	e3.6	e21	e5.9	6.5	7.7	11	8.4	5.0	4.5	4.2
17	e3.8	e5.0	e3.8	e12	e9.5	6.3	8.8	10	7.1	5.0	4.7	4.3
18	e15	e4.8	e3.6	e7.5	e14	6.2	10	7.9	6.9	4.1	6.1	5.5
19	e7.0	e4.6	e3.6	e5.5	e10	30	9.5	8.1	6.9	4.0	5.3	4.8
20	e5.0	e4.8	e3.8	e5.0	e7.5	11	11	14	7.2	4.5	4.5	4.8
21	e3.8	e5.5	e3.4	e4.8	e6.8	53	9.6	11	11	4.9	4.4	5.0
22	3.3	e17	e4.4	e4.6	e6.5	30	9.1	11	7.0	6.5	4.5	5.2
23	3.3	e6.5	e8.5	e40	e10	18	8.8	7.8	10	8.8	4.6	4.8
24	e3.4	e5.5	e7.0	e55	57	14	8.7	8.9	7.5	4.9	4.9	4.6
25	e13	e5.3	e14	e30	26	12	8.7	8.4	7.2	5.0	e4.6	4.8
26	e7.0	e5.1	e8.5	e10	12	12	8.4	6.3	13	6.7	4.6	4.9
27	e11	e4.9	e7.5	e6.0	9.1	12	8.5	6.8	10	6.0	e4.4	4.2
28	e4.0	e4.8	e11	e25	8.1	11	8.4	7.3	7.1	5.0	e4.1	4.3
29	e3.4	e5.0	e7.0	e49	---	11	8.4	7.5	6.7	5.0	e3.8	4.8
30	3.0	e4.8	e12	e13	---	10	8.0	7.5	6.5	5.1	e3.7	8.1
31	3.0	---	e7.5	e9.0	---	9.8	---	5.2	---	15	e3.7	---
TOTAL	151.6	204.1	179.4	380.0	311.5	466.1	287.3	329.4	309.4	202.1	180.6	184.0
MEAN	4.89	6.80	5.79	12.3	11.1	15.0	9.58	10.6	10.3	6.52	5.83	6.13
MAX	15	28	14	55	57	53	17	33	48	18	28	38
MIN	3.0	2.6	3.4	3.9	5.8	6.2	7.3	5.2	6.5	4.0	3.7	4.1
CFSM	.80	1.11	.95	2.00	1.82	2.46	1.56	1.74	1.69	1.07	.95	1.00
IN.	.92	1.24	1.09	2.31	1.89	2.83	1.75	2.00	1.88	1.23	1.10	1.12

e Estimated

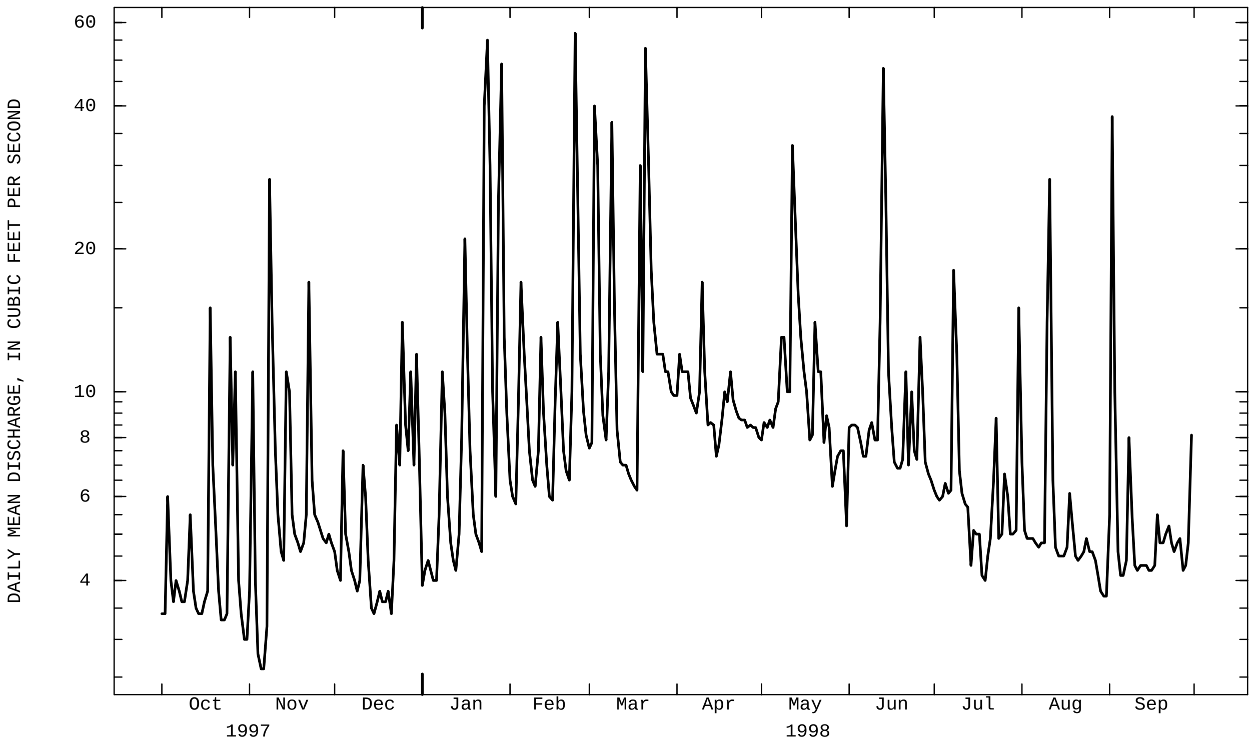
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1996 - 1998, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	6.05	7.70	10.0	11.7	11.5	13.8	9.92	9.78	9.43	6.15	5.76	5.24
MAX	7.21	8.59	14.3	12.3	11.9	15.0	10.3	10.6	10.3	6.52	6.21	6.13
(WY)	1997	1997	1997	1998	1997	1998	1997	1998	1998	1998	1996	1998
MIN	4.89	6.80	5.79	11.2	11.1	12.6	9.58	8.93	8.55	5.79	5.25	3.48
(WY)	1998	1998	1998	1997	1998	1997	1998	1997	1997	1997	1997	1997

01493112 CHESTERVILLE BRANCH NEAR CRUMPTON, MD--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1996 - 1998	
ANNUAL TOTAL	2895.7		3185.5			
ANNUAL MEAN	7.93		8.73		8.86	
HIGHEST ANNUAL MEAN					9.00	1997
LOWEST ANNUAL MEAN					8.73	1998
HIGHEST DAILY MEAN	29	Aug 21	57	Feb 24	57	Feb 24 1998
LOWEST DAILY MEAN	2.5	(a)	2.6	(b)	2.5	(a)
ANNUAL SEVEN-DAY MINIMUM	2.7	Sep 2	3.6	Dec 15	2.7	Sep 2 1997
INSTANTANEOUS PEAK FLOW			83	Jun 13	83	Jun 13 1998
INSTANTANEOUS PEAK STAGE			5.35	Jun 13	5.35	Jun 13 1998
INSTANTANEOUS LOW FLOW			UNKNOWN		2.1	Sep 17 1997
ANNUAL RUNOFF (CFSM)	1.30		1.43		1.45	
ANNUAL RUNOFF (INCHES)	17.60		19.36		19.68	
10 PERCENT EXCEEDS	12		14		13	
50 PERCENT EXCEEDS	7.9		6.8		7.6	
90 PERCENT EXCEEDS	3.5		3.9		4.0	

a Sep. 3, 4, 1997.
b Nov. 5, 6.



DAILY MEAN DISCHARGE - 1998 WATER YEAR

01493112 CHESTERVILLE BRANCH NEAR CRUMPTON, MD--Continued

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.0	3.9	3.1	2.7	5.4	6.9	5.4	4.6	4.2	54	2.8	4.6
2	5.9	4.0	2.9	2.7	6.5	5.7	5.5	4.6	4.0	16	2.7	2.6
3	6.3	4.1	e3.0	15	6.6	4.7	5.1	4.7	3.9	5.0	2.4	2.1
4	6.2	4.1	e3.1	8.4	6.0	5.0	5.1	4.7	3.7	4.0	2.0	2.9
5	5.3	4.0	e3.4	4.4	5.9	4.8	5.4	4.7	3.8	3.8	2.2	2.9
6	5.1	4.1	e3.8	3.3	5.4	4.4	5.1	4.7	3.6	3.8	2.3	3.4
7	5.0	3.6	e3.5	2.8	5.3	5.0	5.1	4.8	3.6	3.7	2.3	5.9
8	6.3	3.4	e3.9	2.6	5.4	4.8	5.8	4.5	3.5	3.4	2.5	4.1
9	7.7	3.5	e4.9	2.9	5.2	4.5	5.7	4.4	3.4	3.6	2.5	2.5
10	8.9	3.5	e7.4	3.1	5.2	4.8	7.9	4.6	3.4	3.7	2.1	2.8
11	6.4	5.0	3.3	2.8	5.1	4.9	7.0	4.6	3.3	3.5	2.2	2.4
12	5.0	5.4	3.5	2.7	5.5	4.7	8.8	4.8	3.2	3.3	2.2	2.0
13	5.0	4.1	6.6	3.2	8.4	4.7	6.4	4.9	4.2	3.6	2.2	2.0
14	5.0	4.2	6.3	3.0	6.5	5.2	5.3	4.8	5.0	3.6	2.4	1.9
15	4.6	4.5	4.5	22	5.7	13	5.1	4.7	5.3	3.7	3.3	4.0
16	4.3	4.5	4.1	13	5.2	7.5	5.4	4.7	4.4	3.4	2.6	722
17	4.3	4.5	4.1	7.4	4.9	5.4	4.4	4.7	4.2	3.5	2.5	58
18	4.4	4.4	e3.9	12	12	5.0	4.3	4.7	4.2	3.2	2.4	17
19	4.6	4.3	e3.8	11	7.9	4.8	4.3	4.8	4.2	3.1	2.3	9.1
20	4.6	5.2	e3.7	7.3	5.7	4.7	4.4	4.8	6.2	2.9	3.0	9.6
21	4.4	5.6	e3.9	6.6	5.2	6.9	5.4	4.7	12	3.0	5.1	16
22	4.1	4.3	e4.0	5.8	4.9	25	5.8	4.7	7.0	4.9	3.2	15
23	4.6	4.0	3.5	5.8	4.5	8.5	5.2	4.9	5.0	4.8	2.4	7.3
24	4.6	3.9	3.3	10	4.4	6.5	5.1	19	4.8	3.6	e5.0	5.4
25	4.5	3.8	3.2	9.5	4.4	5.4	4.8	10	4.7	3.0	e4.5	4.0
26	4.4	5.3	3.1	6.3	4.7	5.3	4.8	6.2	4.8	2.7	17	3.7
27	4.3	5.2	3.0	6.1	4.5	5.2	4.7	7.0	4.9	2.9	9.1	3.8
28	3.8	4.2	2.9	5.9	5.2	5.5	4.7	5.9	5.5	3.0	3.5	3.8
29	3.9	3.9	3.2	5.7	---	5.9	4.6	4.6	5.4	2.7	1.8	3.8
30	3.8	3.4	3.3	5.6	---	6.5	4.6	4.3	6.0	2.7	1.7	9.1
31	3.8	---	2.9	5.5	---	5.1	---	4.3	---	2.8	1.8	---
TOTAL	159.1	127.9	119.1	205.1	161.6	196.3	161.2	169.4	141.4	170.9	104.0	933.7
MEAN	5.13	4.26	3.84	6.62	5.77	6.33	5.37	5.46	4.71	5.51	3.35	31.1
MAX	8.9	5.6	7.4	22	12	25	8.8	19	12	54	17	722
MIN	3.8	3.4	2.9	2.6	4.4	4.4	4.3	4.3	3.2	2.7	1.7	1.9
CFSM	.84	.70	.63	1.08	.94	1.03	.88	.89	.77	.90	.55	5.09
IN.	.97	.78	.72	1.25	.98	1.19	.98	1.03	.86	1.04	.63	5.68

e Estimated

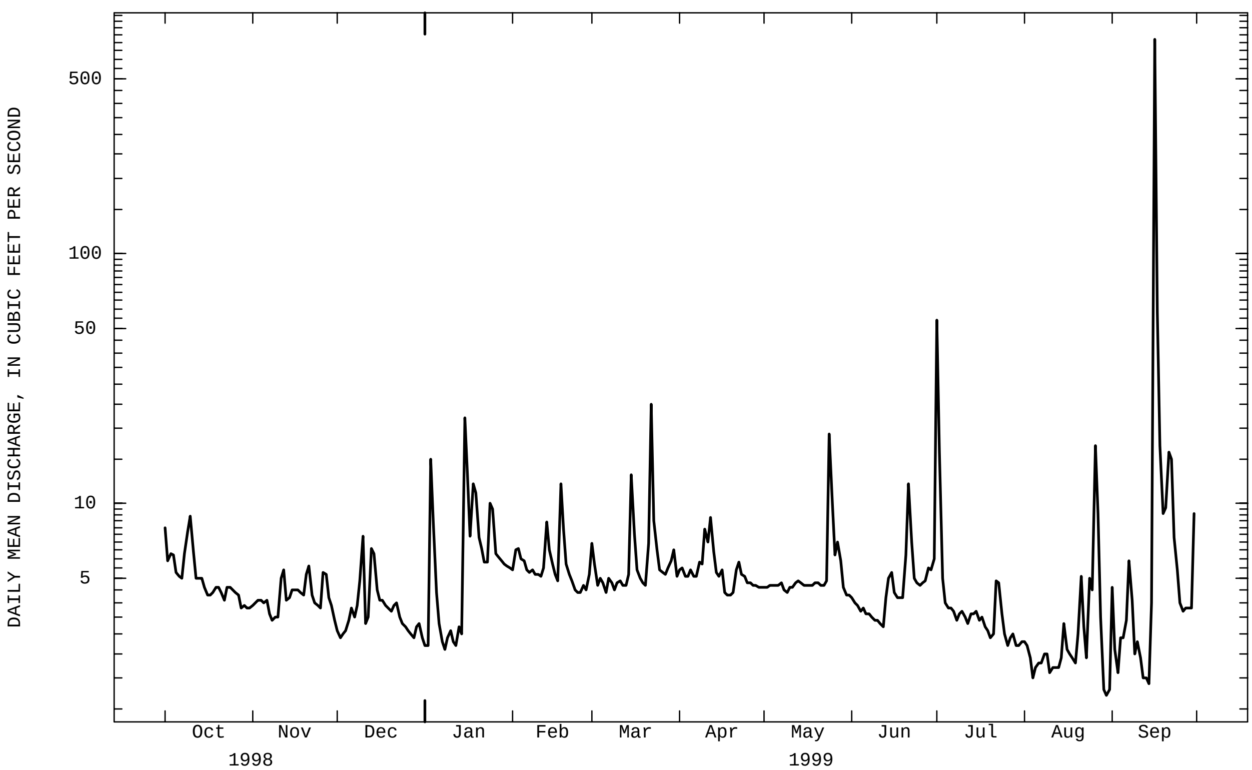
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1996 - 1999, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	5.74	6.55	7.97	10.0	9.61	11.3	8.40	8.34	7.86	5.94	5.16	11.7
MAX	7.21	8.59	14.3	12.3	11.9	15.0	10.3	10.6	10.3	6.52	6.21	31.1
(WY)	1997	1997	1997	1998	1997	1998	1997	1998	1998	1998	1996	1999
MIN	4.89	4.26	3.84	6.62	5.77	6.33	5.37	5.46	4.71	5.51	3.35	3.48
(WY)	1998	1999	1999	1999	1999	1999	1999	1999	1999	1999	1999	1997

01493112 CHESTERVILLE BRANCH NEAR CRUMPTON, MD--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1996 - 1999	
ANNUAL TOTAL	3056.5		2649.7			
ANNUAL MEAN	8.37		7.26		8.33	
HIGHEST ANNUAL MEAN					9.00	1997
LOWEST ANNUAL MEAN					7.26	1999
HIGHEST DAILY MEAN	57	Feb 24	722	Sep 16	722	Sep 16 1999
LOWEST DAILY MEAN	2.9	Dec 2	1.7	Aug 30	1.7	Aug 30 1999
ANNUAL SEVEN-DAY MINIMUM	3.1	Dec 25	2.3	Aug 4	2.3	Aug 4 1999
INSTANTANEOUS PEAK FLOW			(a)3220	Sep 16	(a)3220	Sep 16 1999
INSTANTANEOUS PEAK STAGE			10.22	Sep 16	10.22	Sep 16 1999
INSTANTANEOUS LOW FLOW			1.1	Aug 30	1.1	Aug 30 1999
ANNUAL RUNOFF (CFSM)	1.37		1.19		1.36	
ANNUAL RUNOFF (INCHES)	18.58		16.11		18.49	
10 PERCENT EXCEEDS	13		7.4		12	
50 PERCENT EXCEEDS	6.3		4.6		5.9	
90 PERCENT EXCEEDS	3.9		2.8		3.5	

a From rating curve extended above 60 ft^3/s on basis of culvert determination of peak flow.



DAILY MEAN DISCHARGE - 1999 WATER YEAR

01493112 CHESTERVILLE BRANCH NEAR CRUMPTON, MD--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1996 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)
OCT 1998											
08...	0830	4.7	171	6.8	22.0	16.5	761	7.6	78	58	15
19...	1200	4.3	--	5.3	--	--	--	10.6	--	--	--
NOV											
05...	0900	4.1	171	7.1	13.5	8.0	762	9.4	80	--	--
18...	1400	4.3	178	5.1	11.5	9.0	--	10.0	--	--	--
DEC											
01...	1100	3.2	173	6.9	18.0	11.5	765	8.7	79	58	16
21...	1130	9.6	121	5.7	13.5	9.5	--	5.0	--	--	--
JAN 1999											
03...	1600	18	145	6.3	--	--	--	--	--	--	--
15...	1330	24	157	6.7	--	--	--	--	--	--	--
18...	2115	19	131	7.1	8.0	4.0	761	--	--	--	--
24...	2045	16	142	6.5	6.5	7.0	--	--	--	--	--
FEB											
08...	1330	5.4	174	6.5	4.7	6.8	764	10.8	88	56	15
18...	1430	18	136	6.8	--	--	--	--	--	--	--
24...	1130	4.3	179	7.1	2.5	4.0	--	--	--	--	--
26...	1145	4.7	--	6.5	11.0	6.0	763	11.2	--	58	16
MAR											
10...	1200	4.9	179	6.5	3.0	4.0	--	12.3	--	57	15
15...	0927	14	196	6.1	6.5	5.0	--	--	--	49	13
22...	0015	22	179	6.3	9.0	7.0	--	--	--	--	--
APR											
06...	1000	4.7	170	6.4	16.0	13.0	--	8.5	--	--	--
21...	1000	4.6	124	6.8	12.0	10.0	--	10.2	--	--	--
MAY											
05...	1100	4.9	172	5.9	20.0	15.0	--	9.6	--	54	14
17...	1030	4.6	172	5.9	20.0	16.0	--	9.7	--	--	--
24...	1407	29	142	6.5	21.0	19.8	--	--	--	43	11
JUN											
08...	1000	3.6	165	6.1	28.0	22.5	--	7.0	--	--	--
20...	1700	6.8	165	--	--	--	--	--	--	--	--
21...	0930	15	143	5.6	16.5	17.0	--	7.1	--	47	12
JUL											
06...	1000	3.7	157	6.6	33.0	21.0	--	4.2	--	--	--
21...	0915	2.6	167	5.7	26.5	24.0	--	6.8	--	--	--
AUG											
03...	1000	2.5	174	7.2	26.5	21.7	--	7.3	--	61	17
26...	1030	23	127	6.8	26.5	21.0	758	5.9	67	44	11
SEP											
16...	1000	823	40	6.0	18.0	19.0	746	--	--	--	--
16...	1300	2940	24	6.5	17.5	19.0	741	--	--	--	--
16...	1450	1730	--	--	--	--	--	--	--	--	--
17...	0955	55	--	--	--	--	--	--	--	--	--

01493112 CHESTERVILLE BRANCH NEAR CRUMPTON, MD--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	ALKA- LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	ANC WATER UNFLTRD FET FIELD MG/L AS HCO3 (00440)	ANC WATER UNFLTRD FET FIELD MG/L AS CACO3 (00410)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)
OCT 1998											
08...	4.6	5.1	3.7	28	34	--	--	3.3	13	<.10	9.0
19...	--	--	--	--	--	40	33	--	--	--	--
NOV											
05...	--	--	--	24	29	--	--	--	--	--	--
18...	--	--	--	--	--	34	28	--	--	--	--
DEC											
01...	4.4	5.6	3.6	--	--	--	--	2.8	13	<.10	9.8
21...	--	--	--	--	--	--	--	--	--	--	--
JAN 1999											
03...	--	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	16	20	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	21	26	--	--	--	--	--	--
FEB											
08...	4.4	5.4	3.3	24	29	--	--	4.6	12	<.10	10
18...	--	--	--	20	25	--	--	--	--	--	--
24...	--	--	--	--	--	29	24	--	--	--	--
26...	4.5	5.3	3.6	23	28	--	--	4.6	13	<.10	9.9
MAR											
10...	4.5	5.2	3.2	18	22	--	--	4.2	17	<.10	9.3
15...	4.2	13	3.8	22	27	--	--	5.3	27	<.10	6.9
22...	--	--	--	22	27	--	--	--	--	--	--
APR											
06...	--	--	--	28	34	--	--	--	--	--	--
21...	--	--	--	27	33	--	--	--	--	--	--
MAY											
05...	4.4	5.3	3.0	30	37	--	--	3.7	13	<.10	6.2
17...	--	--	--	--	--	--	--	--	--	--	--
24...	3.5	4.2	6.5	30	37	--	--	4.8	9.2	.10	6.4
JUN											
08...	--	--	--	36	44	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--
21...	4.1	4.7	4.1	31	38	--	--	5.1	11	<.10	7.8
JUL											
06...	--	--	--	33	40	--	--	--	--	--	--
21...	--	--	--	36	44	--	--	--	--	--	--
AUG											
03...	4.3	5.5	3.0	35	43	--	--	2.8	12	<.10	8.1
26...	3.9	4.6	5.1	26	31	--	--	8.3	12	<.10	8.3
SEP											
16...	--	--	--	--	--	--	--	--	--	--	1.5
16...	--	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--	--

01493112 CHESTERVILLE BRANCH NEAR CRUMPTON, MD--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	NITRO-GEN, TOTAL (MG/L AS N) (00600)	NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS N) (00618)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)
OCT 1998											
08...	112	7.5	7.17	.017	7.18	.036	.28	.21	<.050	.005	<.010
19...	--	7.2	6.92	.014	6.94	.026	.31	.22	<.050	<.050	<.010
NOV											
05...	--	7.7	7.41	.017	7.43	.034	.29	.16	<.050	.005	<.010
18...	--	7.5	7.13	.038	7.17	.044	.34	.28	E.037	<.050	.010
DEC											
01...	113	7.1	6.89	.026	6.92	.031	.23	.19	<.050	.003	<.010
21...	--	8.6	8.32	.038	8.36	.086	.26	.20	E.032	<.050	.016
JAN 1999											
03...	--	6.7	4.21	.030	4.24	.526	2.5	1.2	.706	.759	.191
15...	--	6.0	3.66	.042	3.70	.431	2.3	.76	.657	.115	.104
18...	--	4.9	3.86	.026	3.89	.214	.97	.59	.277	.063	.055
24...	--	5.6	4.40	.063	4.47	.281	1.1	.63	.245	.050	.037
FEB											
08...	105	--	7.47	.057	7.53	.145	<.10	.32	.044	.006	<.010
18...	--	6.5	4.97	.064	5.03	.433	1.5	.92	.300	.064	.050
24...	--	8.7	8.00	.068	8.07	.293	.68	.55	.132	.009	<.010
26...	114	8.6	7.89	.075	7.97	.248	.63	.51	.105	.008	.003
MAR											
10...	128	8.6	8.21	.048	8.26	.092	.38	.31	.048	.004	.020
15...	129	7.0	5.58	.039	5.62	.568	1.4	.83	.203	.065	.062
22...	--	6.3	5.19	.024	5.22	.127	1.0	.51	.622	.371	.348
APR											
06...	--	--	--	.158	--	.041	.45	<.10	.042	.012	.044
21...	--	6.2	5.79	.013	5.80	.034	.35	.28	.041	.011	<.010
MAY											
05...	120	6.9	6.39	.025	6.41	.053	.44	.24	.038	.008	.003
17...	--	7.2	6.74	.039	6.78	.075	.44	.22	.039	.009	.003
24...	120	5.8	3.68	.061	3.74	.525	2.1	1.1	.676	.217	.251
JUN											
08...	--	5.9	5.13	.040	5.17	.086	.77	.32	.079	.019	.005
20...	--	5.1	4.53	.044	4.58	.081	.54	.32	.060	.018	.002
21...	--	4.1	3.20	.045	3.25	.140	.89	.64	.139	.040	.012
JUL											
06...	--	5.1	4.49	.070	4.56	.099	.51	.35	.075	.016	.011
21...	--	3.6	3.27	.021	3.29	.029	.33	.42	.044	.012	.014
AUG											
03...	106	5.3	4.88	.016	4.90	<.020	.37	.15	.030	.020	.011
26...	82	2.6	1.60	.020	1.62	.056	.96	.51	.240	.051	.035
SEP											
16...	--	2.6	.593	.016	.609	.088	2.0	.49	1.13	.026	.094
16...	--	2.1	--	<.010	.313	.063	1.8	.34	1.13	.266	.234
16...	--	2.0	--	<.010	.305	.058	1.7	.28	1.28	.206	.195
17...	--	1.2	--	<.010	.671	.049	.55	.36	.257	.118	.108

E Estimated

01493112 CHESTERVILLE BRANCH NEAR CRUMPTON, MD--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	IRON, DIS-SOLVED (UG/L AS FE) (01046)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)	ACETO-CHLOR, WATER FLTRD REC (UG/L) (49260)	ALA-CHLOR, WATER, DISS, REC, (UG/L) (46342)	ATRA-ZINE, WATER, DISS, REC (UG/L) (39632)	BEN-FLUR-ALIN WAT FLD 0.7 U GF, REC (UG/L) (82673)	BUTYL-ATE, WATER, DISS, REC (UG/L) (04028)	CAR-BARYL WATER FLTRD 0.7 U GF, REC (UG/L) (82680)	CARBO-FURAN WATER FLTRD 0.7 U GF, REC (UG/L) (82674)	CHLOR-PYRIFOS DIS-SOLVED (UG/L) (38933)
OCT 1998											
08...	52	100	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--
NOV											
05...	--	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--	--
DEC											
01...	92	150	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--	--	--	--
JAN 1999											
03...	--	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--	--
FEB											
08...	110	237	--	<.0020	.044	.028	<.0020	<.0020	<.0030	E.0108	E.0026
18...	--	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--	--
26...	80	230	--	<.0020	.069	.034	<.0020	<.0020	E.0053	E.0118	.0058
MAR											
10...	110	186	--	<.0020	.068	.033	<.0020	<.0020	E.0037	E.0131	E.0029
15...	130	197	--	<.0020	.050	.103	<.0020	<.0020	E.0054	<.0030	.0070
22...	--	--	--	<.0020	.035	.054	<.0020	<.0020	E.0038	<.0030	E.0039
APR											
06...	--	--	--	<.0020	.122	.037	<.0020	<.0020	<.0030	<.0030	.0056
21...	--	--	--	<.0020	.105	.040	<.0020	<.0020	<.0030	E.0210	E.0036
MAY											
05...	82	120	--	<.0020	.057	.062	<.0020	<.0020	<.0030	<.0030	<.0040
17...	--	--	--	<.0020	.041	.052	<.0020	<.0020	E.0125	E.0095	<.0040
24...	260	396	--	.0228	.037	4.10	<.0020	<.0020	E.0093	<.0030	<.0040
JUN											
08...	--	--	--	<.0020	.030	.476	<.0020	<.0020	<.0030	E.0344	<.0040
20...	--	--	--	<.0020	.032	.222	<.0020	<.0020	E.0271	<.0030	<.0040
21...	320	199	--	<.0050	.035	1.31	<.0020	<.0020	<.0030	<.0030	<.0040
JUL											
06...	--	--	--	<.0020	.045	.166	<.0020	<.0020	<.0030	<.0030	.0046
21...	--	--	--	<.0020	.026	.036	<.0020	<.0020	<.0030	<.0030	<.0040
AUG											
03...	18	78	--	<.0020	.035	.030	<.0020	<.0020	<.0030	E.0089	E.0023
26...	140	271	--	<.0020	.197	.189	<.0020	<.0020	<.0030	<.0030	<.0040
SEP											
16...	--	--	18	--	--	--	--	--	--	--	--
16...	--	--	12	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--	--

E Estimated

01493112 CHESTERVILLE BRANCH NEAR CRUMPTON, MD--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	CYANA- ZINE, WATER, DISS, REC (UG/L) (04041)	DCPA WATER FLTRD 0.7 U GF, REC (UG/L) (82682)	DEETHYL ATRA- ZINE, WATER, DISS, REC (UG/L) (04040)	DI- AZINON, DIS- SOLVED (UG/L) (39572)	DI- ELDRIN DIS- SOLVED (UG/L) (39381)	2,6-DI- ETHYL ANILINE WAT FLT 0.7 U GF, REC (UG/L) (82660)	DISUL- FOTON WATER FLTRD 0.7 U GF, REC (UG/L) (82677)	EPTC WATER FLTRD 0.7 U GF, REC (UG/L) (82668)	ETHAL- FLUR- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82663)	ETHO- PROP WATER FLTRD 0.7 U GF, REC (UG/L) (82672)	FONOFOS WATER DISS REC (UG/L) (04095)
OCT 1998											
08...	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--
NOV											
05...	--	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--	--
DEC											
01...	--	--	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--	--	--	--
JAN 1999											
03...	--	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--	--
FEB											
08...	<.0040	<.0020	E.0722	<.002	<.001	<.0030	<.0170	<.0020	<.0040	<.0030	<.0030
18...	--	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--	--
26...	<.0040	<.0020	E.0905	<.002	<.001	<.0030	<.0170	<.0020	<.0040	<.0030	<.0030
MAR											
10...	<.0040	<.0020	E.105	<.002	<.001	<.0030	<.0170	<.0020	<.0040	<.0030	<.0030
15...	E.0031	<.0020	E.0825	E.003	<.001	<.0030	<.0170	<.0020	<.0040	<.0030	<.0030
22...	<.0040	<.0020	E.0897	E.004	<.001	<.0030	<.0170	E.0023	<.0040	<.0030	<.0030
APR											
06...	<.0040	<.0020	E.112	<.002	<.001	<.0030	<.0170	<.0020	<.0040	<.0030	<.0030
21...	.0043	<.0020	E.141	<.002	<.001	<.0030	<.0170	<.0020	<.0040	<.0030	<.0030
MAY											
05...	<.0040	<.0020	E.196	<.002	<.001	<.0030	<.0170	<.0020	<.0040	<.0030	<.0030
17...	<.0040	<.0020	E.161	<.002	<.001	<.0030	<.0170	<.0020	<.0040	<.0030	<.0030
24...	<.0040	<.0020	E.215	<.002	<.001	<.0030	<.0170	<.0020	<.0040	<.0030	<.0030
JUN											
08...	<.0040	<.0020	E.118	<.002	<.001	<.0030	<.0170	<.0020	<.0040	<.0030	<.0030
20...	<.0040	<.0020	E.0965	.005	<.001	<.0030	<.0170	<.0020	<.0040	<.0030	<.0030
21...	<.0040	<.0020	E.109	<.002	<.001	<.0030	<.0170	<.0020	<.0040	<.0030	<.0030
JUL											
06...	<.0040	<.0020	E.169	<.002	<.001	<.0030	<.0170	<.0020	<.0040	<.0030	<.0030
21...	<.0040	<.0020	E.164	<.002	<.001	<.0030	<.0170	<.0020	<.0040	<.0030	<.0030
AUG											
03...	<.0040	<.0020	E.166	<.002	<.001	<.0030	<.0170	<.0020	<.0040	<.0030	<.0030
26...	<.0040	<.0020	E.0809	<.002	<.001	<.0030	<.0170	<.0020	<.0040	<.0030	<.0030
SEP											
16...	--	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--	--

E Estimated

01493112 CHESTERVILLE BRANCH NEAR CRUMPTON, MD--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	LINDANE DIS- SOLVED (UG/L) (39341)	LIN- URON WATER FLTRD 0.7 U GF, REC (UG/L) (82666)	MALA- THION, DIS- SOLVED (UG/L) (39532)	METHYL AZIN- PHOS WAT FLT 0.7 U GF, REC (UG/L) (82686)	METHYL PARA- THION WAT FLT 0.7 U GF, REC (UG/L) (82667)	METO- LACHLOR WATER DISSOLV (UG/L) (39415)	METRI- BUZIN SENCOR WATER DISSOLV (UG/L) (82630)	MOL- INATE WATER FLTRD 0.7 U GF, REC (UG/L) (82671)	NAPROP- AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82684)	PARA- THION, DIS- SOLVED (UG/L) (39542)
OCT 1998										
08...	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--
NOV										
05...	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--
DEC										
01...	--	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--	--	--
JAN 1999										
03...	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--
FEB										
08...	<.004	<.0020	<.005	<.0010	<.0060	.143	<.004	<.0040	<.0030	<.004
18...	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--
26...	<.004	<.0020	<.005	<.0010	<.0060	.198	<.004	<.0040	<.0030	<.004
MAR										
10...	<.004	<.0020	<.005	<.0010	<.0060	.389	<.004	<.0040	<.0030	<.004
15...	<.004	.0246	<.005	<.0010	<.0060	3.61	<.004	<.0040	<.0030	<.004
22...	<.004	<.0020	<.005	<.0010	<.0060	1.06	<.004	<.0040	<.0030	<.004
APR										
06...	<.004	<.0020	<.005	<.0010	<.0060	1.42	<.004	<.0040	<.0030	<.004
21...	<.004	<.0020	<.005	<.0010	<.0060	1.20	<.004	<.0040	<.0030	<.004
MAY										
05...	<.004	<.0020	<.005	<.0010	<.0060	.530	<.004	<.0040	<.0030	<.004
17...	<.004	<.0020	<.005	<.0010	<.0060	.280	<.004	<.0040	<.0030	<.004
24...	<.004	.0241	<.005	<.0010	<.0060	.928	<.004	<.0040	<.0030	<.004
JUN										
08...	<.004	<.0020	<.005	<.0010	<.0060	.604	<.004	<.0040	<.0030	<.004
20...	<.004	<.0020	<.005	<.0010	<.0060	.493	<.004	<.0040	<.0030	<.004
21...	<.004	<.0020	.034	<.0010	<.0060	1.93	<.004	<.0040	<.0030	<.004
JUL										
06...	<.004	.0364	<.005	<.0010	<.0060	1.47	<.004	<.0040	<.0030	<.004
21...	<.004	<.0020	<.005	<.0010	<.0060	.190	<.004	<.0040	<.0030	<.004
AUG										
03...	<.004	<.0020	<.005	<.0010	<.0060	.130	<.004	<.0040	<.0030	<.004
26...	<.004	<.0020	<.005	<.0010	<.0060	1.11	<.004	<.0040	<.0030	<.004
SEP										
16...	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--

01493112 CHESTERVILLE BRANCH NEAR CRUMPTON, MD--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	PEB-ULATE WATER FILTRD 0.7 U GF, REC (UG/L) (82669)	PENDI-METH-ALIN WAT FLT 0.7 U GF, REC (UG/L) (82683)	PER-METHRIN CIS WAT FLT 0.7 U GF, REC (UG/L) (82687)	PHORATE WATER FLTRD 0.7 U GF, REC (UG/L) (82664)	PRO-METON, WATER, DISS, REC (UG/L) (04037)	PRON-AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82676)	PROP-CHLOR, WATER, DISS, REC (UG/L) (04024)	PRO-PARGITE WATER FLTRD 0.7 U GF, REC (UG/L) (82685)	PRO-PANIL WATER FLTRD 0.7 U GF, REC (UG/L) (82679)	SI-MAZINE, WATER, DISS, REC (UG/L) (04035)
OCT 1998										
08...	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--
NOV										
05...	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--
DEC										
01...	--	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--	--	--
JAN 1999										
03...	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--
FEB										
08...	<.0040	<.0040	<.0050	<.0020	<.0180	.275	<.0070	<.0130	<.0040	.104
18...	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--
26...	<.0040	<.0040	<.0050	<.0020	<.0180	.156	<.0070	<.0130	<.0040	.397
MAR										
10...	<.0040	<.0040	<.0050	<.0020	<.0180	.0867	<.0070	<.0130	<.0040	.338
15...	<.0040	.0143	<.0050	<.0020	E.0023	.0938	<.0070	<.0130	<.0040	.896
22...	<.0040	<.0040	<.0050	<.0020	<.0180	.0642	<.0070	<.0130	<.0040	.654
APR										
06...	<.0040	<.0040	<.0050	<.0020	<.0180	.0525	<.0070	<.0130	<.0040	1.01
21...	<.0040	<.0040	<.0050	<.0020	<.0180	.0336	<.0070	<.0130	<.0040	1.04
MAY										
05...	<.0040	<.0040	<.0050	<.0020	<.0180	.0323	<.0070	<.0130	<.0040	.327
17...	<.0040	<.0040	<.0050	<.0020	<.0180	.0222	<.0070	<.0130	<.0040	.156
24...	<.0040	.0141	<.0050	<.0020	<.0180	.0260	<.0070	<.0130	<.0040	3.12
JUN										
08...	<.0040	<.0040	<.0050	<.0020	<.0180	.0216	<.0070	<.0130	<.0040	.617
20...	<.0040	<.0040	<.0050	<.0020	<.0180	.0173	<.0070	<.0130	<.0040	.273
21...	<.0040	<.0040	<.0050	<.0020	<.0180	.0247	<.0070	<.0130	<.0040	.561
JUL										
06...	<.0040	.0175	<.0050	<.0020	<.0180	.0196	<.0070	<.0130	<.0040	3.74
21...	<.0040	<.0040	<.0050	<.0020	<.0180	.0075	<.0070	<.0130	<.0040	.464
AUG										
03...	<.0040	<.0040	<.0050	<.0020	<.0180	.0069	<.0070	<.0130	<.0040	.474
26...	<.0040	<.0040	<.0050	<.0020	<.0180	.0112	<.0070	<.0130	<.0040	2.01
SEP										
16...	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--

E Estimated

01493112 CHESTERVILLE BRANCH NEAR CRUMPTON, MD--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	TEBU-THIURON WATER FLTRD 0.7 U GF, REC (UG/L) (82670)	TER-BACIL WATER FLTRD 0.7 U GF, REC (UG/L) (82665)	TER-BUFOS WATER FLTRD 0.7 U GF, REC (UG/L) (82675)	THIO-BENCARB WATER FLTRD 0.7 U GF, REC (UG/L) (82681)	TRIAL-LATE WATER FLTRD 0.7 U GF, REC (UG/L) (82678)	TRI-FLUR-ALIN WAT FLT 0.7 U GF, REC (UG/L) (82661)	ALPHA BHC DIS-SOLVED (UG/L) (34253)	SEDI-MENT, SUS-PENDED (MG/L) (80154)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
OCT 1998										
08...	--	--	--	--	--	--	--	4	.05	--
19...	--	--	--	--	--	--	--	--	--	--
NOV										
05...	--	--	--	--	--	--	--	6	.07	--
18...	--	--	--	--	--	--	--	--	--	--
DEC										
01...	--	--	--	--	--	--	--	7	.06	--
21...	--	--	--	--	--	--	--	--	--	--
JAN 1999										
03...	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--
FEB										
08...	<.0100	<.0070	<.0130	<.0020	<.0010	<.0020	<.0020	--	--	--
18...	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--
26...	<.0100	<.0070	<.0130	<.0020	<.0010	<.0020	<.0020	21	.27	--
MAR										
10...	<.0100	<.0070	<.0130	<.0020	<.0010	<.0020	<.0020	--	--	--
15...	<.0100	<.0070	<.0130	<.0020	<.0010	E.0033	<.0020	35	1.3	--
22...	<.0100	<.0070	<.0130	<.0020	<.0010	<.0020	<.0020	143	8.5	85
APR										
06...	<.0100	<.0070	<.0130	<.0020	<.0010	<.0020	<.0020	18	.23	--
21...	<.0100	<.0070	<.0130	<.0020	<.0010	<.0020	<.0020	11	.13	--
MAY										
05...	<.0100	<.0070	<.0130	<.0020	<.0010	<.0020	<.0020	11	.14	--
17...	<.0100	<.0070	<.0130	<.0020	<.0010	<.0020	<.0020	11	.13	--
24...	<.0100	<.0070	<.0130	<.0020	<.0010	.0045	<.0020	233	18	--
JUN										
08...	<.0100	<.0070	<.0130	<.0020	<.0010	<.0020	<.0020	22	.21	--
20...	<.0100	<.0070	<.0130	<.0020	<.0010	<.0020	<.0020	28	.51	--
21...	<.0100	<.0070	<.0130	<.0020	<.0010	E.0021	<.0020	32	1.3	--
JUL										
06...	<.0100	<.0070	<.0130	<.0020	<.0010	<.0020	<.0020	17	.17	--
21...	<.0100	<.0070	<.0130	<.0020	<.0010	<.0020	<.0020	8	.05	--
AUG										
03...	<.0100	<.0070	<.0130	<.0020	<.0010	<.0020	<.0020	4	.03	--
26...	<.0100	<.0070	<.0130	<.0020	<.0010	<.0020	<.0020	--	--	--
SEP										
16...	--	--	--	--	--	--	--	608	1350	96
16...	--	--	--	--	--	--	--	406	3220	98
16...	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--

E Estimated

01493500 MORGAN CREEK NEAR KENNEDYVILLE, MD

LOCATION.--Lat 39°16'48", long 76°00'54", Kent County, Hydrologic Unit 02060002, on right bank 200 ft upstream from highway bridge, 2.0 mi southwest of Kennedyville, and 4.5 mi upstream from mouth.

DRAINAGE AREA.--12.7 mi^2.

WATER DISCHARGE RECORDS

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

REVISED RECORDS.--WSP 1552: 1952, 1953(P), 1954(M), 1955, 1956-57(M). WDR MD-DE-76-1: Drainage area. WDR MD-DE- 79-1: 1961(M). WDR MD-DE-80-1: 1976(P).

GAGE.--Water-stage recorder and concrete control. Datum of gage is 1.76 ft above sea level.

REMARKS.--Water-quality records good except those for estimated daily discharges (backwater from storm tides and backwater from material on control), which are fair.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 200 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Sep 16	UNKNOWN	*11,200	*15.03	No other peak greater than base discharge.			

Minimum discharge, 1.8 ft^3/s, Aug 10.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.6	5.1	6.2	5.5	6.3	14	8.8	5.7	3.8	e72	2.5	2.7
2	3.4	5.2	6.2	4.9	12	8.1	9.6	5.3	3.6	e60	2.5	2.6
3	3.7	5.3	6.5	e30	9.9	8.6	7.9	5.6	3.4	11	2.1	2.5
4	6.1	5.5	6.4	e18	7.8	e8.6	8.1	6.0	3.4	5.9	2.1	e2.8
5	6.3	5.4	6.9	7.3	7.3	7.1	10	6.2	3.3	4.7	2.3	e3.6
6	5.4	5.5	7.1	5.8	6.2	7.8	7.7	5.9	3.3	3.9	2.2	e5.4
7	4.8	5.3	6.8	6.4	6.3	9.2	7.1	6.2	3.4	3.6	2.2	e15
8	6.0	5.4	7.3	6.2	7.0	6.1	6.9	6.4	3.3	3.3	2.5	6.6
9	8.8	5.3	9.6	8.3	6.6	6.5	9.5	6.5	3.1	3.1	2.6	4.1
10	17	5.5	7.6	8.5	6.6	7.7	18	5.5	3.1	3.2	2.3	4.5
11	6.8	8.8	6.8	6.6	6.2	7.8	13	5.1	3.5	3.1	e2.3	3.9
12	6.4	8.5	6.9	7.7	8.2	6.8	15	5.1	3.4	3.1	2.3	3.3
13	4.7	6.7	9.7	e9.1	14	6.2	9.1	5.1	5.3	3.4	2.2	3.0
14	e7.0	6.2	8.9	8.4	8.1	8.1	7.4	4.9	6.0	e3.3	2.3	2.9
15	4.3	5.8	7.1	37	6.7	30	7.5	4.7	5.4	3.3	2.8	5.5
16	4.5	6.0	6.8	e24	6.6	17	8.3	4.6	4.0	3.1	2.6	e3600
17	4.7	6.1	6.7	12	6.6	9.1	7.7	4.9	3.9	3.2	2.4	e200
18	4.6	5.3	6.5	21	26	7.6	6.9	5.0	4.8	2.7	2.3	e57
19	5.0	5.4	5.8	18	17	6.4	6.6	6.1	4.1	2.8	2.1	e21
20	5.0	6.3	5.7	10	8.9	6.2	6.9	5.7	6.8	2.7	3.6	e13
21	5.0	6.3	5.7	8.0	7.2	13	7.1	4.9	13	2.8	3.3	19
22	4.8	6.2	6.3	7.6	6.9	63	8.3	4.6	6.6	7.4	3.0	21
23	4.8	6.3	5.9	7.3	6.5	19	8.3	5.5	4.8	5.2	2.7	11
24	5.1	6.6	7.4	19	6.9	10	7.7	14	4.1	3.6	7.8	7.3
25	5.5	6.3	6.5	18	6.9	8.8	6.6	11	3.6	3.3	7.4	6.2
26	5.5	10	5.7	9.5	7.0	7.9	6.5	5.6	3.8	3.0	11	5.8
27	5.4	9.0	5.7	7.7	6.6	7.5	6.1	4.6	3.6	2.8	14	5.7
28	7.3	6.8	6.6	7.6	10	8.5	5.8	4.3	3.7	2.6	5.9	5.8
29	5.3	6.2	8.0	6.8	---	7.9	5.8	4.2	4.0	2.7	3.4	5.8
30	4.7	6.2	8.1	6.2	---	7.2	7.5	4.2	5.4	2.6	2.7	13
31	4.8	---	6.2	6.2	---	7.0	---	4.0	---	2.8	2.6	---
TOTAL	176.3	188.5	213.6	358.6	242.3	348.7	251.7	177.4	133.5	240.2	112.0	4060.0
MEAN	5.69	6.28	6.89	11.6	8.65	11.2	8.39	5.72	4.45	7.75	3.61	135
MAX	17	10	9.7	37	26	63	18	14	13	72	14	3600
MIN	3.4	5.1	5.7	4.9	6.2	6.1	5.8	4.0	3.1	2.6	2.1	2.5
CFSM	.45	.49	.54	.91	.68	.89	.66	.45	.35	.61	.28	10.7
IN.	.52	.55	.63	1.05	.71	1.02	.74	.52	.39	.70	.33	11.89

e Estimated

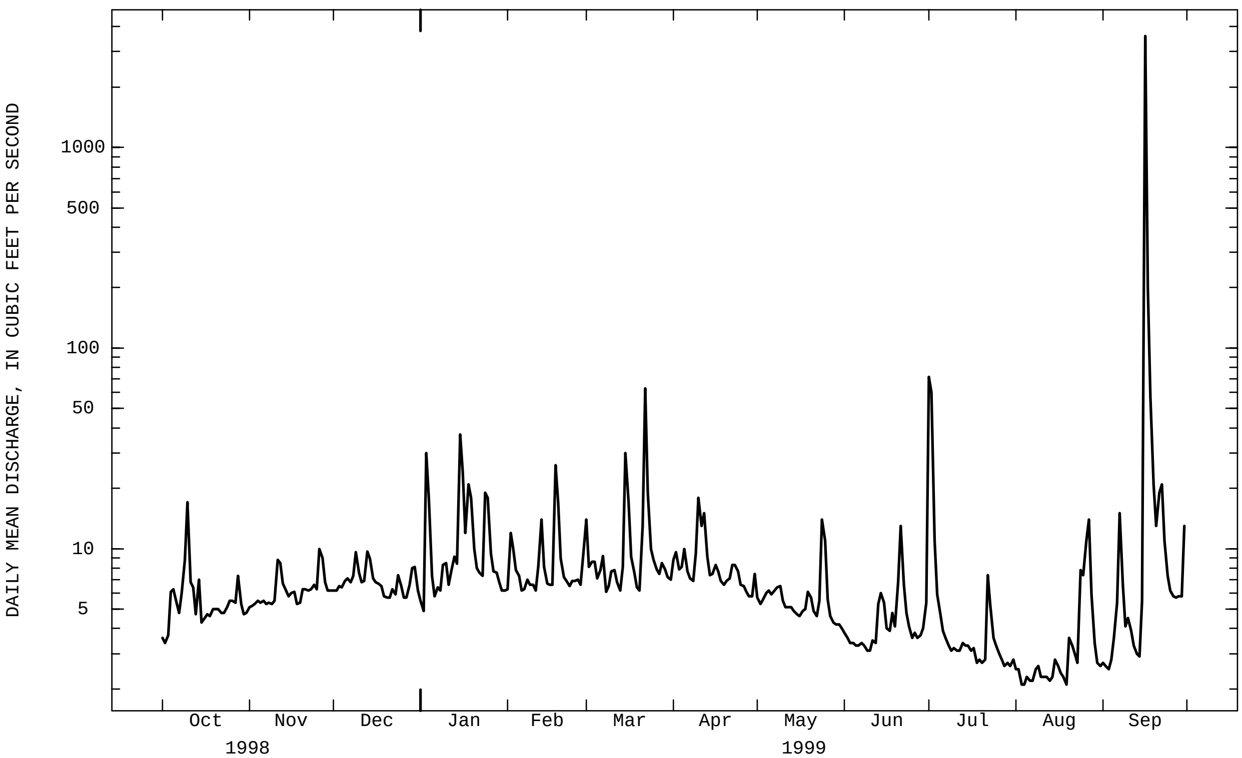
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1951 - 1999, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	7.63	9.18	12.1	14.0	14.2	14.3	11.0	9.39	13.2	8.64	8.54	10.3
MAX	32.3	30.7	51.3	45.6	47.1	36.7	29.5	20.6	113	26.9	27.8	135
(WY)	1972	1973	1997	1978	1979	1994	1983	1990	1972	1989	1971	1999
MIN	2.98	3.14	3.21	3.74	5.09	4.47	4.49	3.77	1.96	1.11	1.41	2.07
(WY)	1964	1966	1966	1966	1968	1966	1966	1955	1966	1966	1966	1967

01493500 MORGAN CREEK NEAR KENNEDYVILLE, MD--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1951 - 1999	
ANNUAL TOTAL	4377.7		6502.8			
ANNUAL MEAN	12.0		17.8		11.0	
HIGHEST ANNUAL MEAN					24.2	1972
LOWEST ANNUAL MEAN					3.67	1966
HIGHEST DAILY MEAN	190	Jun 13	(e)3600	Sep 16	(e)3600	Sep 16 1999
LOWEST DAILY MEAN	3.4	Oct 2	2.1	(a)	.70	(b)
ANNUAL SEVEN-DAY MINIMUM	3.9	Sep 27	2.3	Aug 1	.71	Sep 7 1966
INSTANTANEOUS PEAK FLOW			(c)11200	Sep 16	(c)11200	Sep 16 1999
INSTANTANEOUS PEAK STAGE			(d)15.03	Sep 16	(d)15.03	Sep 16 1999
INSTANTANEOUS LOW FLOW			1.8	Aug 10	.60	(f)
ANNUAL RUNOFF (CFSM)	.94		1.40		.87	
ANNUAL RUNOFF (INCHES)	12.82		19.05		11.81	
10 PERCENT EXCEEDS	18		12		16	
50 PERCENT EXCEEDS	7.6		6.2		6.4	
90 PERCENT EXCEEDS	4.8		3.0		3.2	

e Estimated.
a Aug. 3, 4, 19.
b July 21, Aug. 28-31, Sept. 4, 8-13, 1966.
c From rating curve extended above 640 ft^3/s on basis of USGS Cap Culvert Analysis and flow-over-road measurement of peak flow.
d From floodmark.
f Aug. 28, 29, 1966.



DAILY MEAN DISCHARGE - 1999 WATER YEAR

01493500 MORGAN CREEK NEAR KENNEDYVILLE, MD--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1973-80, 1991, 1998 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	OXYGEN, DIS-SOLVED (MG/L) (00300)	ANC WATER UNFLTRD FET FIELD MG/L AS HCO3 (00440)	ANC WATER UNFLTRD FET FIELD MG/L AS CACO3 (00410)
OCT 1998									
19...	1030	6.6	173	5.4	--	15.7	7.5	54	44
NOV									
18...	1100	5.1	187	5.4	10.0	7.5	8.6	49	40
DEC									
21...	1000	5.5	184	5.4	12.5	7.0	8.9	47	39
FEB 1999									
24...	1000	6.6	209	6.5	3.0	.5	--	39	32

DATE	NITRO-GEN, TOTAL (MG/L AS N) (00600)	NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS N) (00618)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)
OCT 1998										
19...	3.0	2.65	.010	2.66	.031	.35	.26	.057	<.050	.017
NOV										
18...	3.1	2.59	.027	2.62	.091	.44	.36	.057	<.050	.011
DEC										
21...	4.2	3.48	.044	3.53	.161	.68	.42	.055	<.050	.015
FEB 1999										
24...	5.4	4.04	.031	4.07	.696	1.4	1.2	.138	.022	.013

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01495000 BIG ELK CREEK AT ELK MILLS, MD

LOCATION.--Lat 39°39'26", long 75°49'20", Cecil County, Hydrologic Unit 02060002, on right bank 100 ft downstream from highway bridge at Elk Mills (State Highway 277), 3.5 mi north of Elkton, and 7 mi upstream from confluence with Little Elk Creek.

DRAINAGE AREA.--52.6 mi^2.

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

REVISED RECORDS.--WSP 1432: 1932-33, 1934(M), 1935, 1936(M), 1938, 1919-40(M), 1942(M), 1943-51, 1952-53(P).

GAGE.--Water-stage recorder. Datum of gage is 68.69 ft above sea level. Prior to May 17, 1946, nonrecording gage at bridge 100 ft upstream at same datum.

REMARKS.--Records good except those for estimated daily discharges (ice effect), which are fair. Slight diurnal fluctuation caused by mills upstream from station. Several measurements of water temperature were made during the year. Water-quality records for some prior periods have been collected at this location.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 1884 reached a stage of about 19 ft, from information by local residents; discharge, about 18,000 ft^3/s.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,700 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Sep 16	1630	*9,780	*14.54	No other peak greater than base discharge.			

Minimum discharge, 4.7 ft^3/s, Aug 8.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15	21	18	20	33	110	47	35	29	22	8.1	11
2	14	21	19	17	106	52	59	35	28	23	6.9	10
3	11	21	20	347	79	43	47	35	33	78	6.1	9.4
4	17	21	20	80	48	63	45	37	30	27	6.1	10
5	20	22	20	32	41	48	47	35	27	21	6.3	14
6	17	22	20	e25	37	47	42	34	26	18	6.2	25
7	16	23	20	e24	37	67	41	35	26	17	5.7	36
8	24	23	21	20	54	43	40	35	25	15	6.0	25
9	119	23	32	41	49	40	48	34	24	14	8.6	18
10	129	23	26	72	40	40	127	32	23	14	8.3	103
11	31	29	22	31	36	39	91	30	25	14	7.0	29
12	23	35	20	30	39	37	151	30	25	14	7.3	19
13	21	21	20	54	94	35	75	52	27	15	7.0	17
14	23	19	21	100	48	38	58	36	35	14	7.2	16
15	20	19	20	341	40	72	52	32	34	14	14	17
16	20	20	20	131	38	84	56	31	27	13	12	4570
17	19	19	20	98	38	81	60	30	26	12	10	326
18	18	19	20	497	155	89	50	30	30	11	9.2	86
19	18	19	19	179	84	52	46	32	27	11	7.6	56
20	18	19	20	66	52	44	46	32	27	11	12	44
21	18	23	19	53	44	171	43	29	32	14	13	91
22	18	22	20	50	39	575	60	28	30	15	14	173
23	18	20	21	47	39	112	54	32	26	16	12	65
24	18	20	21	220	36	79	61	99	24	13	11	46
25	17	20	17	108	38	67	45	73	24	11	11	39
26	17	44	17	59	35	58	42	40	23	9.9	147	35
27	17	33	22	47	34	53	40	36	23	8.7	257	33
28	17	21	22	42	51	55	39	34	21	8.4	31	34
29	20	18	24	39	---	51	37	33	23	7.9	19	33
30	20	17	26	35	---	46	36	31	20	8.4	13	173
31	20	---	23	33	---	44	---	30	---	8.5	11	---
TOTAL	793	677	650	2938	1464	2435	1685	1147	800	498.8	700.6	6163.4
MEAN	25.6	22.6	21.0	94.8	52.3	78.5	56.2	37.0	26.7	16.1	22.6	205
MAX	129	44	32	497	155	575	151	99	35	78	257	4570
MIN	11	17	17	17	33	35	36	28	20	7.9	5.7	9.4
CFSM	.49	.43	.40	1.80	.99	1.49	1.07	.70	.51	.31	.43	3.91
IN.	.56	.48	.46	2.08	1.04	1.72	1.19	.81	.57	.35	.50	4.36

e Estimated

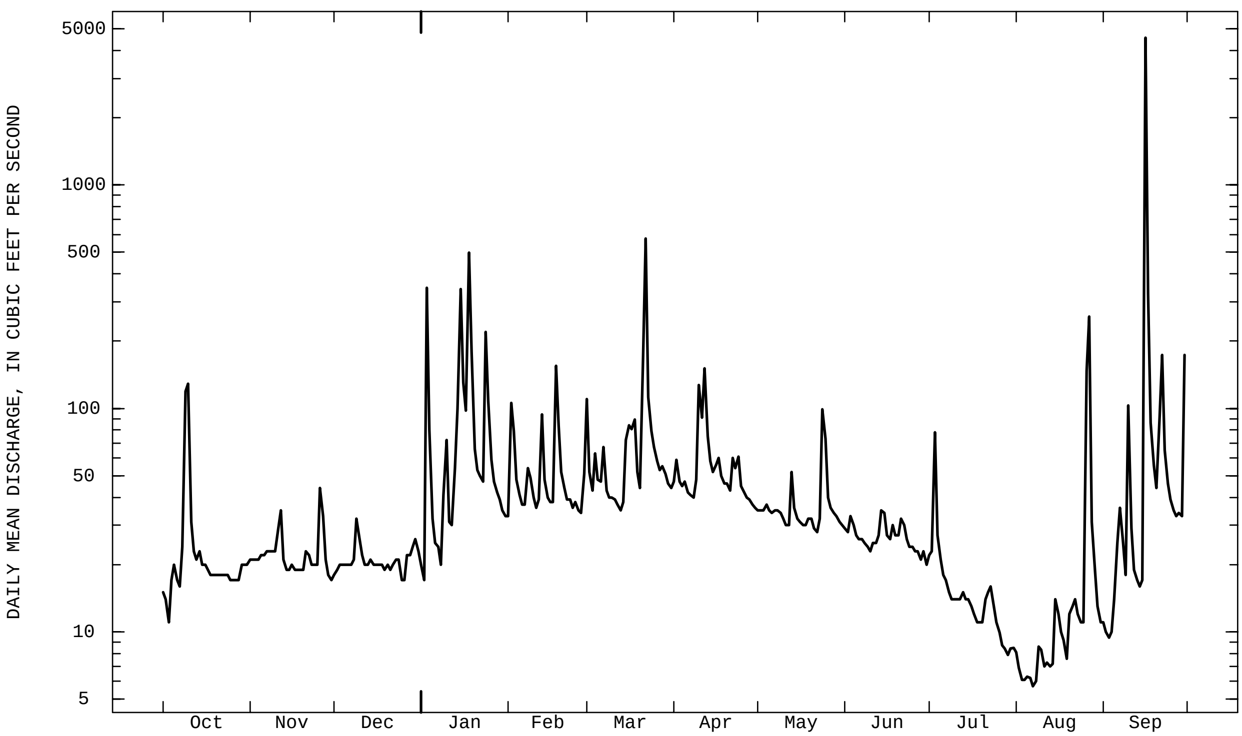
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1932 - 1999, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	41.9	54.8	68.9	87.6	97.9	101	90.1	76.6	58.7	56.2	51.7	45.8
MAX	152	125	276	283	236	247	191	160	216	248	241	205
(WY)	1997	1997	1997	1979	1936	1994	1993	1958	1972	1975	1933	1999
MIN	11.1	17.1	18.7	19.2	41.4	35.6	34.5	26.8	21.4	10.5	8.32	9.95
(WY)	1964	1966	1966	1966	1947	1981	1963	1955	1963	1963	1966	1932

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

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1932 - 1999	
ANNUAL TOTAL	20120		19951.8			
ANNUAL MEAN	55.1		54.7		69.3	
HIGHEST ANNUAL MEAN					109	1972
LOWEST ANNUAL MEAN					35.4	1966
HIGHEST DAILY MEAN	451	Mar 9	4570	Sep 16	4570	Sep 16 1999
LOWEST DAILY MEAN	11	Oct 3	5.7	Aug 7	4.8	(a)
ANNUAL SEVEN-DAY MINIMUM	14	Sep 27	6.2	Aug 2	4.9	Sep 7 1966
INSTANTANEOUS PEAK FLOW			9780	Sep 16	(b)10600	Jul 5 1937
INSTANTANEOUS PEAK STAGE			14.54	Sep 16	(c)14.54	Sep 16 1999
INSTANTANEOUS LOW FLOW			4.7	Aug 8	4.5	(d)
ANNUAL RUNOFF (CFSM)	1.05		1.04		1.32	
ANNUAL RUNOFF (INCHES)	14.23		14.11		17.91	
10 PERCENT EXCEEDS	105		79		114	
50 PERCENT EXCEEDS	34		29		46	
90 PERCENT EXCEEDS	18		12		20	

a Sept. 8-10, 1966.
b From rating curve extended above 1,700 ft^3/s on basis of velocity-area and conveyance studies.
c From floodmarks.
d Result of freezeup.



01578310 SUSQUEHANNA RIVER AT CONOWINGO, MD

LOCATION.--Lat 39°39'28", long 76°10'29", Harford County, Hydrologic Unit 02050306, at downstream side of Conowingo Dam, 1.0 mi southwest of Conowingo, and 9.9 mi upstream from mouth.

DRAINAGE AREA.--27,100 mi^2.

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder. Datum of gage is 5.00 ft above sea level.

REMARKS.--No estimated daily discharges. Water-discharge records good. Flow regulated by Conowingo Reservoir beginning October 1928, usable capacity, 55,070,000,000 gal; dead storage, 45,290,000,000 gal. Records do not include a small infrequent diversion upstream from station to augment municipal supply of city of Baltimore. Records of diversion available from Baltimore Department of Public Works.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 257,000 ft^3/s, Jan 26, gage height, 22.90 ft; minimum discharge, 741 ft^3/s, Dec 6.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

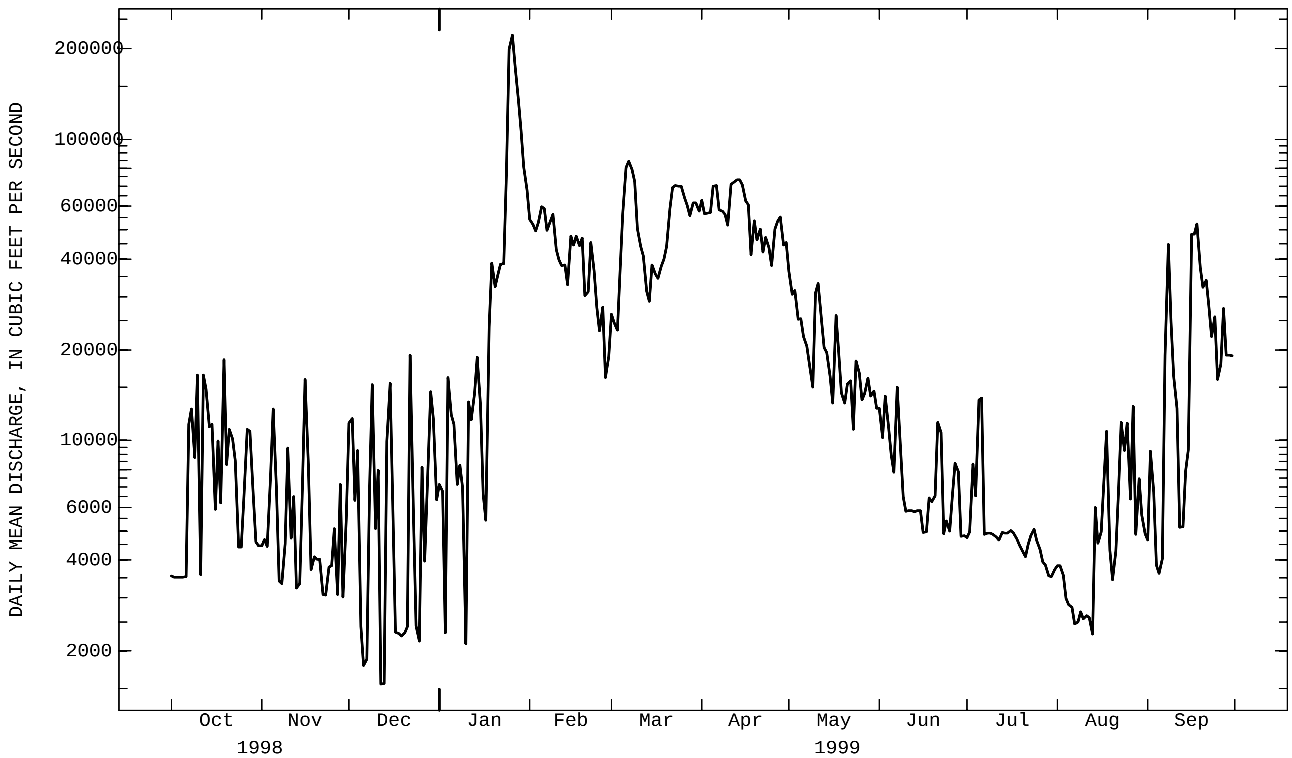
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3550	4460	11400	7140	54200	26300	62800	36400	12800	4760	3840	4660
2	3510	4690	11800	6780	52100	24600	56700	30500	10200	4980	3840	9200
3	3520	4450	6320	2300	49500	23200	57000	31500	14000	8350	3560	6730
4	3510	7540	9250	16200	52900	36600	57100	25300	11100	6530	2990	3860
5	3510	12700	2410	12200	59600	56600	69900	25400	8950	13600	2840	3620
6	3530	6880	1790	11300	58800	80300	70100	22100	7850	13800	2790	4050
7	11300	3410	1880	7140	49800	84700	58200	20600	15000	4880	2460	19200
8	12700	3340	6850	8270	53400	79300	57600	17800	10300	4930	2500	44700
9	8760	4540	15300	6970	56300	72200	56400	15000	6510	4920	2700	24700
10	16500	9460	5090	2110	43000	50600	51900	30900	5820	4880	2560	16300
11	3580	4740	7960	13400	39700	44000	70700	33200	5850	4770	2620	12800
12	16500	6520	1550	11700	38100	41000	71900	25300	5850	4670	2580	5150
13	14800	3240	1560	14300	38300	31300	73300	20400	5780	4960	2270	5170
14	11100	3350	9920	18900	32800	29000	73400	19600	5850	4920	6000	7920
15	11300	6980	15500	13100	47700	38300	70600	16300	5850	4930	4560	9310
16	5890	15900	6100	6650	44600	35700	62300	13300	4940	5010	4980	48500
17	9970	8270	2310	5420	47600	34500	60500	26000	4970	4930	7310	48500
18	6210	3720	2280	23800	44300	37900	41400	19600	6440	4720	10700	52400
19	18500	4110	2240	38800	47100	39900	53500	14400	6270	4480	4310	37600
20	8310	4030	2290	32400	30300	44000	46400	13300	6540	4320	3440	32300
21	10900	4020	2410	35400	31100	58900	50200	15400	11500	4110	4290	34000
22	10100	3080	19200	38400	45500	69100	42200	15800	10600	4520	6810	27800
23	8580	3070	5790	38700	36400	70300	47200	10900	4900	4830	11500	22100
24	4430	3790	2420	77000	27700	69800	43600	18400	5410	5060	9270	25800
25	4430	3840	2150	199000	23100	69900	38100	16700	5000	4650	11400	15900
26	6470	5100	8160	222000	27700	63900	50200	13600	6550	4340	6370	17900
27	10900	3080	3970	175000	16200	60300	53300	14300	8390	3950	13000	27400
28	10700	7130	8190	135000	19000	55800	55300	16100	7870	3860	4880	19200
29	6620	3020	14500	107000	---	61600	44500	14000	4800	3550	7480	19200
30	4600	5480	11800	81000	---	61600	45500	14600	4840	3530	5650	19100
31	4470	---	6340	67700	---	57700	---	12800	---	3730	4910	---
TOTAL	258750	163940	208730	1435080	1166800	1608900	1691800	619500	230730	165470	164410	625070
MEAN	8347	5465	6733	46290	41670	51900	56390	19980	7691	5338	5304	20840
MAX	18500	15900	19200	222000	59600	84700	73400	36400	15000	13800	13000	52400
MIN	3510	3020	1550	2110	16200	23200	38100	10900	4800	3530	2270	3620
CFSM	.31	.20	.25	1.71	1.54	1.92	2.08	.74	.28	.20	.20	.77
IN.	.36	.23	.29	1.97	1.60	2.21	2.32	.85	.32	.23	.23	.86

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1968 - 1999, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	23310	36060	49190	43700	53170	74040	79430	48240	34540	19710	13670	16330
MAX	81800	73170	113700	122500	115800	147800	250100	108200	208000	59050	48580	88450
(WY)	1977	1978	1997	1996	1984	1994	1993	1989	1972	1972	1994	1975
MIN	5557	5465	6733	7164	13050	28320	33850	19980	7691	5338	5304	3476
(WY)	1970	1999	1999	1981	1980	1969	1995	1999	1999	1999	1999	1995

01578310 SUSQUEHANNA RIVER AT CONOWINGO, MD--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1968 - 1999	
ANNUAL TOTAL	15084440		8339180			
ANNUAL MEAN	41330		22850		40850	
HIGHEST ANNUAL MEAN					61090	1978
LOWEST ANNUAL MEAN					22850	1999
HIGHEST DAILY MEAN	332000	Jan 10	222000	Jan 26	1120000	Jun 24 1972
LOWEST DAILY MEAN	1550	Dec 12	1550	Dec 12	269	Jul 13 1969
ANNUAL SEVEN-DAY MINIMUM	3690	Nov 18	2530	Aug 7	1810	Sep 24 1980
INSTANTANEOUS PEAK FLOW			257000	Jan 26	1130000	Jun 24 1972
INSTANTANEOUS PEAK STAGE			22.90	Jan 26	36.83	Jun 24 1972
INSTANTANEOUS LOW FLOW			741	Dec 6	144	Mar 2 1969
ANNUAL RUNOFF (CFSM)	1.52		.84		1.51	
ANNUAL RUNOFF (INCHES)	20.71		11.45		20.48	
10 PERCENT EXCEEDS	105000		57300		85500	
50 PERCENT EXCEEDS	22200		11400		27400	
90 PERCENT EXCEEDS	3820		3520		5560	



DAILY MEAN DISCHARGE - 1999 WATER YEAR

01578310 SUSQUEHANNA RIVER AT CONOWINGO, MD--Continued

WATER-QUALITY RECORDS

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

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: June 1979 to April 1981, July 1984 to September 1992.
WATER TEMPERATURE: June 1979 to April 1981, July 1984 to September 1992.
SUSPENDED-SEDIMENT DISCHARGE: October 1979 to April 1981, July 1984 to September 1992.

REMARKS.--During the period Oct. 1994 to Jan. 1995, monthly samples were collected and analyzed using ultraclean methodologies. Data on trace metals for this period are available from the University of Delaware. Data on organics for this period are available from George Mason University.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE (water years 1980, 1985-89, 1991-92): Maximum daily, 475 microsiemens, Nov. 13-15, 1980 and Aug. 31, 1991; minimum daily, 100 microsiemens, May 1, 1991.
WATER TEMPERATURE (water years 1980, 1985-89, 1991-92): Maximum daily, 30.5°C, Aug. 18, 1988; minimum daily, 1.0°C, Feb. 5, 6, 9, 1980, Feb. 12, 1988.
SEDIMENT CONCENTRATION: Maximun daily mean, 207 mg/L, Mar. 17, 1986; minimum daily mean, 1 mg/L, June 27, 1987, May 27, 28, 30, Nov. 1-3, 10, 11, Dec. 22-24, 27, 30, 31, 1991.
SEDIMENT LOAD: Maximum daily, 197,000 tons, Mar. 16, 17, 1986; minimum daily, 4.4 tons, Feb. 10, 1985.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)
OCT 1998												
06...	1015	3510	399	7.4	20.0	22.0	773	5.1	57	140	36	13
NOV												
04...	1015	4810	402	7.9	8.5	15.0	760	8.4	84	150	39	13
DEC												
16...	1215	3470	411	7.5	13.5	12.0	757	10.0	94	150	40	13
JAN 1999												
07...	1100	6550	385	7.6	.0	5.5	768	12.5	99	150	38	12
25...	1030	206000	257	6.9	7.5	2.0	765	14.4	104	--	--	--
26...	1400	231000	142	7.1	9.0	3.0	771	15.1	111	--	--	--
29...	1115	130000	147	7.2	6.0	3.5	770	14.4	107	--	--	--
FEB												
09...	1200	70600	185	7.4	7.0	4.5	763	12.9	99	68	19	4.9
MAR												
04...	1200	31500	202	7.3	--	6.0	752	12.6	103	84	23	6.2
APR												
08...	1045	69200	166	7.4	30.0	15.0	756	10.5	105	55	15	4.0
MAY												
05...	1115	11000	205	8.4	23.0	18.0	760	11.1	118	--	--	--
JUN												
09...	0800	6850	298	7.1	28.5	26.0	759	6.8	84	--	--	--
JUL												
08...	0830	4910	345	7.5	27.5	30.0	760	5.1	68	120	32	9.9
AUG												
05...	1030	2830	390	7.8	29.0	31.0	755	5.1	70	140	35	12
SEP												
08...	1015	54300	383	7.4	27.0	28.0	756	4.6	59	130	31	12
21...	1315	57900	251	6.0	16.0	20.5	756	7.7	87	--	--	--

01578310 SUSQUEHANNA RIVER AT CONOWINGO, MD--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	ALKA- LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	NITRO- GEN, TOTAL (MG/L AS N) (00600)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N) (00618)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)
OCT 1998												
06...	21	2.9	68	83	65	28	.15	.51	235	2.0	.995	.121
NOV												
04...	19	3.0	64	78	67	26	<.10	1.5	239	1.8	1.40	.033
DEC												
16...	19	3.0	81	99	62	29	.11	E.042	238	1.6	1.26	.012
JAN 1999												
07...	20	2.6	82	101	58	30	.10	.19	228	1.7	1.40	.009
25...	--	--	38	46	--	--	--	3.8	--	2.2	1.42	.012
26...	--	--	24	30	--	--	--	3.5	--	2.0	1.04	.007
29...	--	--	24	29	--	--	--	4.1	--	1.5	1.02	.008
FEB												
09...	8.6	1.5	34	42	27	15	<.10	4.9	114	1.5	1.24	.007
MAR												
04...	9.9	1.5	40	49	30	18	<.10	4.3	130	1.5	1.28	.008
APR												
08...	6.2	1.2	30	37	22	12	<.10	3.1	94	.88	.673	.010
MAY												
05...	--	--	32	40	--	--	--	--	--	1.0	.641	.007
JUN												
09...	--	--	60	73	--	--	--	1.4	--	1.2	.464	.029
JUL												
08...	16	.39	70	85	51	24	.10	1.1	210	1.2	.624	.110
AUG												
05...	20	2.8	64	78	68	30	<.10	2.1	221	--	--	--
SEP												
08...	21	3.0	62	75	66	31	<.10	1.8	219	1.3	.577	.073
21...	--	--	49	60	--	--	--	4.3	--	2.6	1.99	.027

DATE	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N) (00623)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	STRON- TIUM, DIS- SOLVED (UG/L AS SR) (01080)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)	ACETO- CHLOR, WATER FLTRD REC (UG/L) (49260)
OCT 1998												
06...	1.12	.090	.85	.28	.086	.008	.004	E5.8	14	232	3.2	--
NOV												
04...	1.43	.028	.35	.21	<.050	.006	.001	<10	<4.0	254	3.6	--
DEC												
16...	1.27	.071	.37	.21	<.050	.005	.002	<10	E1.7	248	2.4	--
JAN 1999												
07...	1.41	.034	.29	.19	.026	.012	.004	<10	<3.0	235	3.1	--
25...	1.43	.214	.80	.46	.149	.041	.034	--	--	--	5.5	--
26...	1.04	.139	.99	.38	.196	.033	.026	--	--	--	7.9	--
29...	1.02	.098	.52	.28	.099	.017	.012	--	--	--	5.6	--
FEB												
09...	1.24	.095	.30	.22	.041	.016	.011	43	80	90	2.8	--
MAR												
04...	1.29	.085	.25	.18	.031	.011	.008	71	136	101	2.4	--
APR												
08...	.683	.033	.20	.16	.027	.007	.003	43	122	69	2.4	<.0020
MAY												
05...	.648	.061	.39	.22	.029	.006	<.001	--	--	--	2.8	<.0020
JUN												
09...	.493	.359	.71	<.10	.032	.009	.003	--	--	--	2.8	.0054
JUL												
08...	.734	.062	.43	.99	.028	.005	.001	<10	40	186	3.7	<.0020
AUG												
05...	.477	.067	<.10	<.10	.024	<.004	<.001	<10	4.2	226	4.0	<.0020
SEP												
08...	.650	.036	.63	.24	.027	.004	<.001	<10	3.2	235	3.3	<.0020
21...	2.02	.093	.57	.40	.089	.059	.051	--	--	--	5.0	--

E Estimated

01578310 SUSQUEHANNA RIVER AT CONOWINGO, MD--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	ALA-CHLOR, WATER, DISS, REC, (UG/L) (46342)	ATRA-ZINE, WATER, DISS, REC (UG/L) (39632)	BEN-FLUR-ALIN WAT FLD 0.7 U GF, REC (UG/L) (82673)	BUTYL-ATE, WATER, DISS, REC (UG/L) (04028)	CAR-BARYL WATER FLTRD 0.7 U GF, REC (UG/L) (82680)	CARBO-FURAN WATER FLTRD 0.7 U GF, REC (UG/L) (82674)	CHLOR-PYRIFOS DIS-SOLVED (UG/L) (38933)	CYANA-ZINE, WATER, DISS, REC (UG/L) (04041)	DCPA WATER FLTRD 0.7 U GF, REC (UG/L) (82682)	DEETHYL ATRA-ZINE, WATER, DISS, REC (UG/L) (04040)	DI-AZINON, DIS-SOLVED (UG/L) (39572)	DI-ELDRIN DIS-SOLVED (UG/L) (39381)
OCT 1998												
06...	--	--	--	--	--	--	--	--	--	--	--	--
NOV												
04...	--	--	--	--	--	--	--	--	--	--	--	--
DEC												
16...	--	--	--	--	--	--	--	--	--	--	--	--
JAN 1999												
07...	--	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--	--
29...	--	--	--	--	--	--	--	--	--	--	--	--
FEB												
09...	--	--	--	--	--	--	--	--	--	--	--	--
MAR												
04...	--	--	--	--	--	--	--	--	--	--	--	--
APR												
08...	<.002	.010	<.0020	<.0020	<.0030	<.0030	<.0040	<.0040	<.0020	E.0077	<.002	<.001
MAY												
05...	<.002	.013	<.0020	<.0020	<.0030	<.0030	<.0040	<.0040	<.0020	E.0169	<.002	<.001
JUN												
09...	.004	.077	<.0020	<.0020	<.0030	<.0030	<.0040	.0079	<.0020	E.0309	<.002	<.001
JUL												
08...	<.002	.090	<.0020	<.0020	<.0030	<.0030	<.0040	<.0040	<.0020	E.0431	<.002	<.001
AUG												
05...	<.002	.064	<.0020	<.0020	<.0030	<.0030	<.0040	.0058	<.0020	E.0504	<.002	<.001
SEP												
08...	<.002	.049	<.0020	<.0020	<.0030	<.0030	<.0040	<.0040	<.0020	E.0453	<.002	<.001
21...	--	--	--	--	--	--	--	--	--	--	--	--

DATE	2,6-DI-ETHYL ANILINE WAT FLT 0.7 U GF, REC (UG/L) (82660)	DISUL-FOTON WATER FLTRD 0.7 U GF, REC (UG/L) (82677)	EPTC WATER FLTRD 0.7 U GF, REC (UG/L) (82668)	ETHAL-FLUR-ALIN WAT FLT 0.7 U GF, REC (UG/L) (82663)	ETHO-PROP WATER FLTRD 0.7 U GF, REC (UG/L) (82672)	FONOFOS WATER DISS REC (UG/L) (04095)	LINDANE DIS-SOLVED (UG/L) (39341)	LIN-URON WATER FLTRD 0.7 U GF, REC (UG/L) (82666)	MALA-THION, DIS-SOLVED (UG/L) (39532)	METHYL AZIN-PHOS WAT FLT 0.7 U GF, REC (UG/L) (82686)	METHYL PARA-THION WAT FLT 0.7 U GF, REC (UG/L) (82667)	METO-LACHLOR WATER DISSOLV (UG/L) (39415)
OCT 1998												
06...	--	--	--	--	--	--	--	--	--	--	--	--
NOV												
04...	--	--	--	--	--	--	--	--	--	--	--	--
DEC												
16...	--	--	--	--	--	--	--	--	--	--	--	--
JAN 1999												
07...	--	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--	--
29...	--	--	--	--	--	--	--	--	--	--	--	--
FEB												
09...	--	--	--	--	--	--	--	--	--	--	--	--
MAR												
04...	--	--	--	--	--	--	--	--	--	--	--	--
APR												
08...	<.0030	<.0170	<.0020	<.0040	<.0030	<.0030	<.004	<.0020	<.005	<.0010	<.0060	.010
MAY												
05...	<.0030	<.0170	<.0020	<.0040	<.0030	<.0030	<.004	<.0020	<.005	<.0010	<.0060	.010
JUN												
09...	<.0030	<.0170	<.0020	<.0040	<.0030	<.0030	<.004	<.0020	<.005	<.0010	<.0060	.047
JUL												
08...	<.0030	<.0170	<.0020	<.0040	<.0030	<.0030	<.004	<.0020	<.005	<.0010	<.0060	.036
AUG												
05...	<.0030	<.0170	<.0020	<.0040	<.0030	<.0030	<.004	<.0020	<.005	<.0010	<.0060	.018
SEP												
08...	<.0030	<.0170	<.0020	<.0040	<.0030	<.0030	<.004	<.0020	<.005	<.0010	<.0060	.026
21...	--	--	--	--	--	--	--	--	--	--	--	--

E Estimated

01578310 SUSQUEHANNA RIVER AT CONOWINGO, MD--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	METRI- BUZIN SENCOR WATER DISSOLV (UG/L) (82630)	MOL- INATE WATER FLTRD 0.7 U GF, REC (UG/L) (82671)	NAPROP- AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82684)	PARA- THION, DIS- SOLVED (UG/L) (39542)	PEB- ULATE WATER FILTRD 0.7 U GF, REC (UG/L) (82669)	PENDI- METH- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82683)	PER- METHRIN CIS WAT FLT 0.7 U GF, REC (UG/L) (82687)	PHORATE WATER FLTRD 0.7 U GF, REC (UG/L) (82664)	PRO- METON, WATER, DISS, REC (UG/L) (04037)	PRON- AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82676)	PROP- CHLOR, WATER, DISS, REC (UG/L) (04024)	PRO- PARGITE WATER FLTRD 0.7 U GF, REC (UG/L) (82685)
OCT 1998												
06...	--	--	--	--	--	--	--	--	--	--	--	--
NOV												
04...	--	--	--	--	--	--	--	--	--	--	--	--
DEC												
16...	--	--	--	--	--	--	--	--	--	--	--	--
JAN 1999												
07...	--	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--	--
29...	--	--	--	--	--	--	--	--	--	--	--	--
FEB												
09...	--	--	--	--	--	--	--	--	--	--	--	--
MAR												
04...	--	--	--	--	--	--	--	--	--	--	--	--
APR												
08...	<.004	<.0040	<.0030	<.004	<.0040	<.0040	<.0050	<.0020	<.0180	<.0030	<.0070	<.0130
MAY												
05...	<.004	<.0040	<.0030	<.004	<.0040	<.0040	<.0050	<.0020	E.0018	<.0030	<.0070	<.0130
JUN												
09...	<.004	<.0040	<.0030	<.004	<.0040	<.0040	<.0050	<.0020	E.0086	<.0030	<.0070	<.0130
JUL												
08...	<.004	<.0040	<.0030	<.004	<.0040	<.0040	<.0050	<.0020	E.0154	<.0030	<.0070	<.0130
AUG												
05...	<.004	<.0040	<.0030	<.004	<.0040	<.0040	<.0050	<.0020	E.0113	<.0030	<.0070	<.0130
SEP												
08...	<.004	<.0040	<.0030	<.004	<.0040	<.0040	<.0050	<.0020	.0282	<.0030	<.0070	<.0130
21...	--	--	--	--	--	--	--	--	--	--	--	--

DATE	PRO- PANIL WATER FLTRD 0.7 U GF, REC (UG/L) (82679)	SI- MAZINE, WATER, DISS, REC (UG/L) (04035)	TEBU- THIURON WATER FLTRD 0.7 U GF, REC (UG/L) (82670)	TER- BACIL WATER FLTRD 0.7 U GF, REC (UG/L) (82665)	TER- BUFOS WATER FLTRD 0.7 U GF, REC (UG/L) (82675)	THIO- BENCARB WATER FLTRD 0.7 U GF, REC (UG/L) (82681)	TRIAL- LATE WATER FLTRD 0.7 U GF, REC (UG/L) (82678)	TRI- FLUR- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82661)	ALPHA BHC DIS- SOLVED (UG/L) (34253)	SEDI- MENT, SUS- PENDED (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
OCT 1998												
06...	--	--	--	--	--	--	--	--	--	10	95	97
NOV												
04...	--	--	--	--	--	--	--	--	--	7	91	89
DEC												
16...	--	--	--	--	--	--	--	--	--	5	47	90
JAN 1999												
07...	--	--	--	--	--	--	--	--	--	5	88	97
25...	--	--	--	--	--	--	--	--	--	58	32300	99
26...	--	--	--	--	--	--	--	--	--	137	85400	99
29...	--	--	--	--	--	--	--	--	--	50	17600	96
FEB												
09...	--	--	--	--	--	--	--	--	--	8	1520	99
MAR												
04...	--	--	--	--	--	--	--	--	--	5	425	98
APR												
08...	<.0040	.0056	<.0100	<.0070	<.0130	<.0020	<.0010	<.0020	<.0020	10	1790	--
MAY												
05...	<.0040	.0083	<.0100	<.0070	<.0130	<.0020	<.0010	<.0020	<.0020	7	208	92
JUN												
09...	<.0040	.0291	<.0100	<.0070	<.0130	<.0020	<.0010	<.0020	<.0020	6	118	--
JUL												
08...	<.0040	.0270	<.0100	<.0070	<.0130	<.0020	<.0010	<.0020	<.0020	7	90	--
AUG												
05...	<.0040	.0187	<.0100	<.0070	<.0130	<.0020	<.0010	<.0020	<.0020	3	24	--
SEP												
08...	<.0040	.0173	<.0100	<.0070	<.0130	<.0020	<.0010	<.0020	<.0020	6	821	--
21...	--	--	--	--	--	--	--	--	--	11	1780	--

E Estimated

01580000 DEER CREEK AT ROCKS, MD

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

DRAINAGE AREA.--94.4 mi^2.

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

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

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

REMARKS.--Records good except those for estimated daily discharges (missing record), which are fair. Prior to 1965, some regulation at low flow by mills upstream from station. Several measurements of water temperature were made during the year. Water-quality records for some prior periods have been collected at this location.

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

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,900 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jan 18	1730	3,360	8.05	Sep 16	1730	*3,730	*8.56

Minimum discharge, 14 ft^3/s, Aug 19, 20.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	49	53	53	e58	76	124	113	83	63	48	30	22
2	43	54	51	e50	151	91	117	82	65	49	28	20
3	44	53	51	e620	121	85	101	82	97	59	24	20
4	61	53	51	e140	96	162	97	83	70	50	21	20
5	58	51	52	e80	87	e125	96	82	64	43	20	27
6	55	52	51	e71	82	e111	89	81	62	40	19	37
7	55	52	51	e63	83	e107	89	82	58	38	17	62
8	274	52	55	e56	98	e100	87	106	57	36	18	43
9	156	53	73	e102	89	99	98	85	53	35	22	37
10	135	52	60	e105	82	98	142	80	53	36	19	72
11	87	63	55	e69	78	94	139	77	57	37	18	40
12	72	60	53	e91	82	88	158	78	54	34	17	31
13	67	55	52	e130	115	84	118	170	61	35	16	29
14	64	54	52	114	86	88	107	94	70	35	18	27
15	62	54	51	398	80	110	102	83	83	34	21	36
16	59	53	51	220	79	110	109	81	58	32	22	1430
17	57	52	51	253	81	135	108	79	62	30	19	454
18	57	52	50	1410	160	152	99	77	84	29	17	108
19	57	52	49	328	123	115	94	77	62	28	14	77
20	56	53	49	144	100	104	96	75	60	28	20	66
21	54	55	49	122	90	118	93	70	68	30	30	92
22	54	53	50	117	84	304	126	70	63	63	28	112
23	55	52	48	117	89	154	109	88	57	45	22	79
24	55	52	48	374	85	135	106	105	54	36	21	66
25	54	51	47	194	76	125	95	94	52	32	24	59
26	54	75	52	131	75	114	92	77	52	29	41	55
27	55	67	e49	110	73	108	88	73	51	27	97	55
28	55	56	e48	99	113	109	86	70	51	27	40	60
29	55	54	e48	89	---	103	85	68	51	26	30	61
30	53	54	e50	83	---	96	83	66	48	28	25	184
31	52	---	e54	79	---	94	---	65	---	28	23	---
TOTAL	2164	1642	1604	6017	2634	3642	3122	2583	1840	1127	781	3481
MEAN	69.8	54.7	51.7	194	94.1	117	104	83.3	61.3	36.4	25.2	116
MAX	274	75	73	1410	160	304	158	170	97	63	97	1430
MIN	43	51	47	50	73	84	83	65	48	26	14	20
CFSM	.74	.58	.55	2.06	1.00	1.24	1.10	.88	.65	.39	.27	1.23
IN.	.85	.65	.63	2.37	1.04	1.44	1.23	1.02	.73	.44	.31	1.37

e Estimated

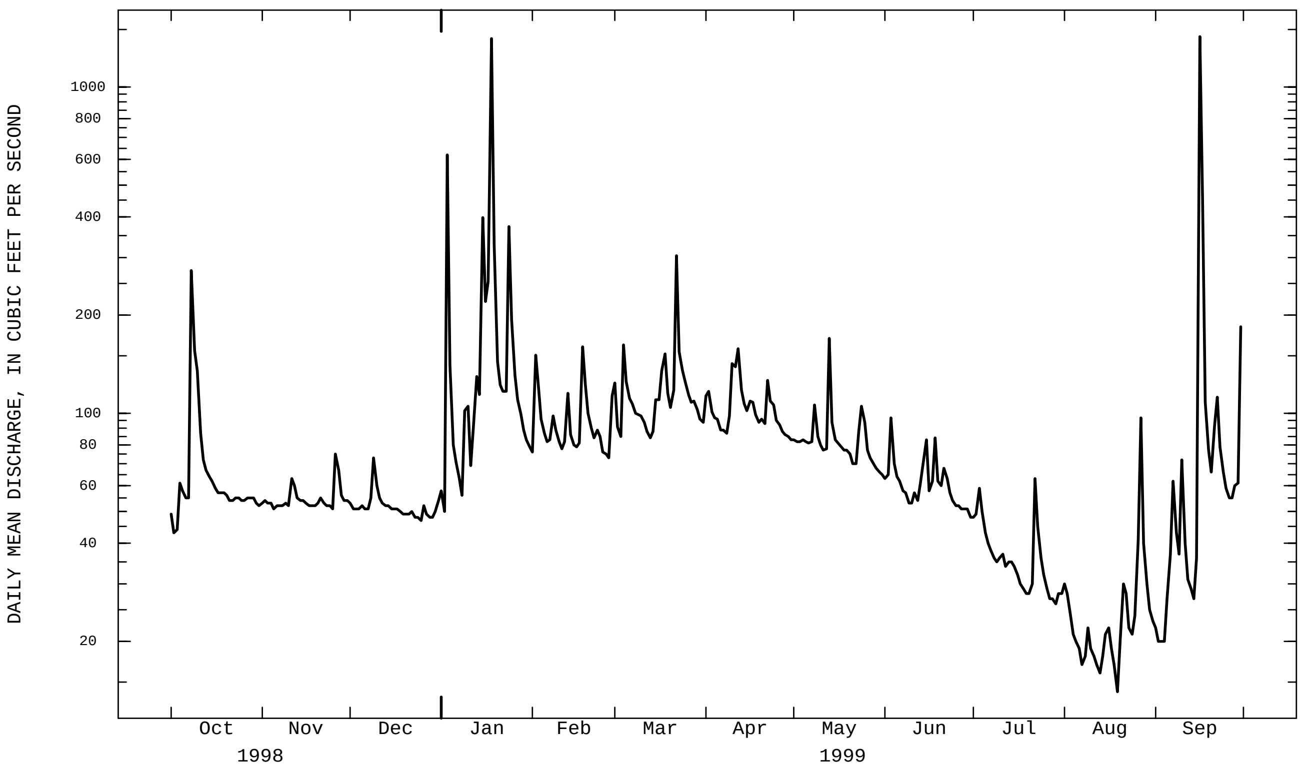
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1927 - 1999, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	84.0	103	117	145	163	171	169	150	124	104	94.6	87.4
MAX	317	266	392	422	415	486	379	421	576	279	362	345
(WY)	1980	1927	1997	1996	1979	1994	1984	1989	1972	1972	1933	1975
MIN	26.0	32.5	37.8	41.7	60.2	62.2	63.2	50.9	42.8	21.0	17.4	29.0
(WY)	1964	1932	1966	1966	1932	1981	1963	1963	1966	1966	1966	1986

01580000 DEER CREEK AT ROCKS, MD--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1927 - 1999	
ANNUAL TOTAL	52068		30637			
ANNUAL MEAN	143		83.9		126	
HIGHEST ANNUAL MEAN					224	1972
LOWEST ANNUAL MEAN					58.2	1966
HIGHEST DAILY MEAN	1020	Mar 21	1430	Sep 16	6610	Jun 22 1972
LOWEST DAILY MEAN	43	Oct 2	14	Aug 19	8.6	(a)
ANNUAL SEVEN-DAY MINIMUM	47	Sep 27	18	Aug 7	9.0	Sep 7 1966
INSTANTANEOUS PEAK FLOW			3730	Sep 16	(b)13600	Aug 23 1933
INSTANTANEOUS PEAK STAGE			8.56	Sep 16	(c)17.70	Aug 23 1933
INSTANTANEOUS LOW FLOW			14	(d)	8.0	(f)
ANNUAL RUNOFF (CFSM)	1.51		.89		1.33	
ANNUAL RUNOFF (INCHES)	20.52		12.07		18.11	
10 PERCENT EXCEEDS	273		121		212	
50 PERCENT EXCEEDS	100		62		94	
90 PERCENT EXCEEDS	51		28		45	

a Sept. 11, 12, 1966.
b From rating curve extended above 3,000 ft^3/s, on basis of slope-area measurements at gage heights 13.3 ft and 17.7 ft.
c From floodmarks.
d Aug. 19, 20.
f Dec. 16, 1930, Jan. 26, 1939, result of regulation.



DAILY MEAN DISCHARGE - 1999 WATER YEAR

01581500 BYNUM RUN AT BEL AIR, MD

LOCATION.--Lat 39°32'30", long 76°19'50", Harford County, Hydrologic Unit 02060003, on right bank 30 ft downstream from bridge on State Highway 22, 1.0 mi east of Bel Air, and 8.5 mi upstream from mouth..

DRAINAGE AREA.--8.52 mi^2.

PERIOD OF RECORD.--June 1944 to April 1951, July 1955 to September 1970, June 1999 to September 1999.

GAGE.--Water-stage recorder. Datum of gage is 251.43 ft above sea level.

REMARKS.--Records good except those for estimated daily discharges (missing record), which are fair. Several measurements of water temperature were made during the year. Water-quality records for some prior periods have been collected at this location.

EXTREMES FOR CURRENT PERIOD.--Peak discharges greater than base discharge of 440 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Aug 26	0015	1,240	5.09	Sep 16	1345	*7,330	*9.91

Minimum discharge, 0.01 ft^3/s, Jul 18, Aug 13.

DISCHARGE, CUBIC FEET PER SECOND, JUNE 1999 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	e3.0	2.7	1.9	1.7
2	---	---	---	---	---	---	---	---	e3.2	2.7	.78	1.5
3	---	---	---	---	---	---	---	---	e4.5	2.2	.38	1.7
4	---	---	---	---	---	---	---	---	2.9	1.9	.27	1.9
5	---	---	---	---	---	---	---	---	2.7	1.5	.23	5.4
6	---	---	---	---	---	---	---	---	3.0	1.2	.16	3.1
7	---	---	---	---	---	---	---	---	3.5	.93	.18	44
8	---	---	---	---	---	---	---	---	2.7	.75	.21	6.8
9	---	---	---	---	---	---	---	---	2.1	.57	.15	10
10	---	---	---	---	---	---	---	---	2.2	.66	.10	8.7
11	---	---	---	---	---	---	---	---	2.5	.56	.08	3.5
12	---	---	---	---	---	---	---	---	2.4	.47	.03	2.5
13	---	---	---	---	---	---	---	---	2.7	.82	.02	2.2
14	---	---	---	---	---	---	---	---	7.6	.77	2.1	2.1
15	---	---	---	---	---	---	---	---	5.1	.69	1.9	8.5
16	---	---	---	---	---	---	---	---	2.9	.60	.58	2320
17	---	---	---	---	---	---	---	---	6.1	e.62	.29	37
18	---	---	---	---	---	---	---	---	6.5	e.54	.21	12
19	---	---	---	---	---	---	---	---	3.3	e.47	.13	6.9
20	---	---	---	---	---	---	---	---	7.9	e.48	3.1	5.8
21	---	---	---	---	---	---	---	---	6.2	e1.5	7.8	51
22	---	---	---	---	---	---	---	---	3.9	e9.0	1.5	45
23	---	---	---	---	---	---	---	---	3.1	e6.4	.84	9.6
24	---	---	---	---	---	---	---	---	2.7	e4.0	2.0	6.5
25	---	---	---	---	---	---	---	---	2.6	e2.5	65	5.3
26	---	---	---	---	---	---	---	---	2.5	e1.8	129	4.4
27	---	---	---	---	---	---	---	---	2.5	e1.2	11	5.7
28	---	---	---	---	---	---	---	---	2.4	1.0	4.2	5.0
29	---	---	---	---	---	---	---	---	2.4	1.1	2.7	5.8
30	---	---	---	---	---	---	---	---	2.1	1.9	2.2	78
31	---	---	---	---	---	---	---	---	---	1.2	2.0	---
TOTAL	---	---	---	---	---	---	---	---	107.2	52.73	241.04	2701.6
MEAN	---	---	---	---	---	---	---	---	3.57	1.70	7.78	90.1
MAX	---	---	---	---	---	---	---	---	7.9	9.0	129	2320
MIN	---	---	---	---	---	---	---	---	2.1	.47	.02	1.5
CFSM	---	---	---	---	---	---	---	---	.42	.20	.91	10.6
IN.	---	---	---	---	---	---	---	---	.47	.23	1.05	11.80

e Estimated

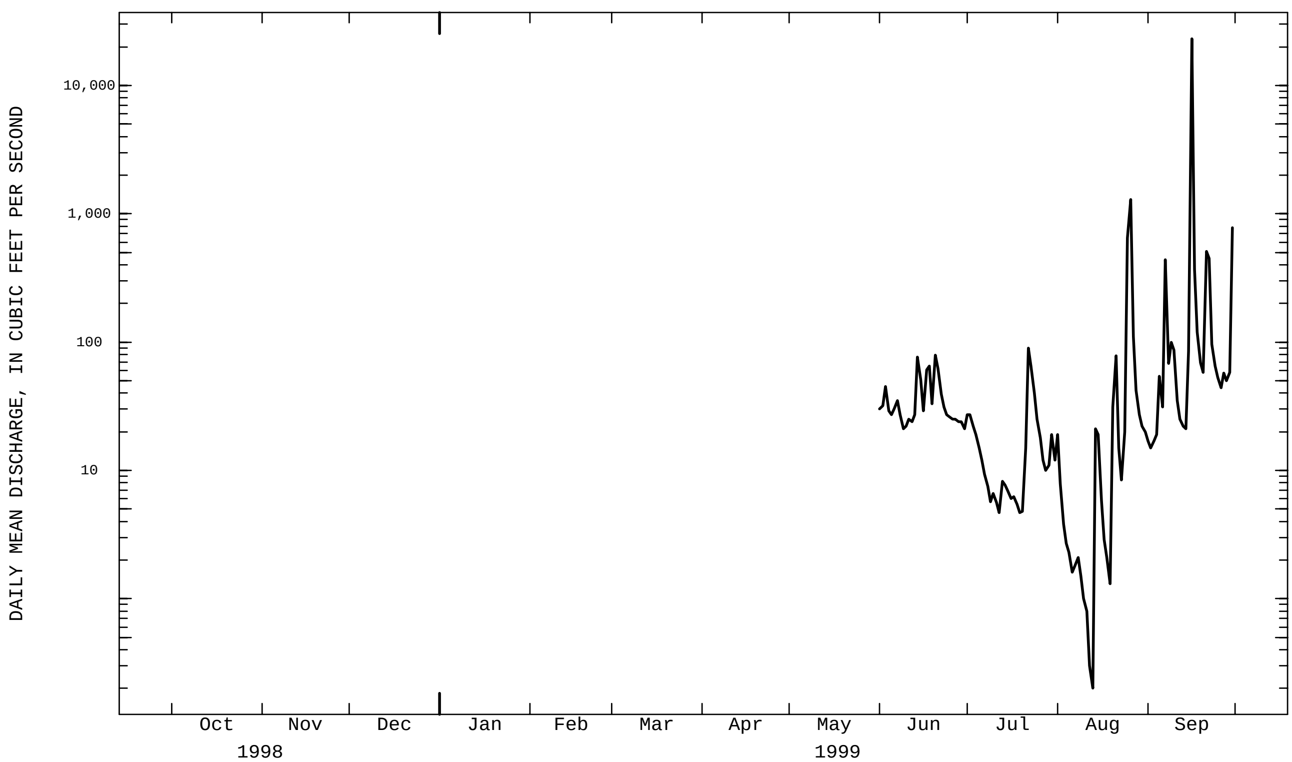
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1944 - 1951, 1955 - 1970, 1999, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	4.24	8.37	12.0	13.1	16.9	16.7	13.8	10.1	7.53	6.32	8.53	10.3
MAX	9.25	20.8	36.5	33.4	35.2	38.2	29.7	25.2	16.5	21.7	63.0	90.1
(WY)	1967	1957	1958	1958	1961	1958	1961	1948	1970	1945	1967	1999
MIN	.95	1.74	1.74	2.46	5.24	5.68	4.17	2.89	2.07	.92	.96	.97
(WY)	1964	1966	1966	1966	1947	1966	1963	1963	1969	1963	1966	1962

01581500 BYNUM RUN AT BEL AIR, MD--Continued

SUMMARY STATISTICS	WATER YEARS 1944 - 1951, 1955 - 1970, 1999	
ANNUAL MEAN	10.2	
HIGHEST ANNUAL MEAN	19.2	1958
LOWEST ANNUAL MEAN	5.58	1969
HIGHEST DAILY MEAN	2320	Sep 16 1999
LOWEST DAILY MEAN	.02	Aug 13 1999
ANNUAL SEVEN-DAY MINIMUM	.11	Aug 7 1999
INSTANTANEOUS PEAK FLOW	(a)7330	Sep 16 1999
INSTANTANEOUS PEAK STAGE	9.91	Sep 16 1999
INSTANTANEOUS LOW FLOW	.00	(b)
ANNUAL RUNOFF (CFSM)	1.20	
ANNUAL RUNOFF (INCHES)	16.34	
10 PERCENT EXCEEDS	18	
50 PERCENT EXCEEDS	4.7	
90 PERCENT EXCEEDS	1.6	

a From rating curve extended above 560 ft^3/s on basis of contracted-opening measurement at gage height 6.18 ft.
b Sept. 8-10, 1966.



DAILY MEAN DISCHARGE - 1999 WATER YEAR

01581700 WINTERS RUN NEAR BENSON, MD

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

DRAINAGE AREA.--34.8 mi^2.

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

GAGE.--Water-stage recorder. Elevation of gage is 195 ft above sea level, from topographic map.

REMARKS.--No estimated daily discharges. Records good below 200 ft^3/s and fair above. Several measurements of water temperature were made during the year. Water-quality records for some prior periods have been collected at this location.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Sep 16	1445	*6,340	*10.58	No other peak greater than base discharge.			

Minimum discharge, 3.6 ft^3/s, Aug 10, 13.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15	15	18	19	28	52	51	26	17	13	9.8	12
2	12	15	18	16	76	35	54	26	18	14	11	9.3
3	13	15	17	227	47	33	41	26	24	12	7.1	9.7
4	23	15	19	51	36	62	38	27	18	12	6.0	12
5	18	15	18	40	32	43	40	25	17	11	5.9	21
6	17	16	18	33	30	46	35	25	16	9.8	6.8	18
7	16	17	18	26	34	60	34	25	15	9.0	5.1	23
8	69	18	21	23	40	38	32	48	15	9.0	5.9	21
9	54	17	32	63	33	35	39	32	14	7.7	6.7	30
10	46	18	22	56	30	35	50	26	14	9.1	4.6	50
11	25	27	19	32	28	33	74	24	16	8.6	5.3	20
12	20	21	17	29	36	32	73	24	15	8.9	4.5	14
13	19	19	19	63	47	31	45	29	17	9.9	4.5	13
14	18	19	18	52	32	35	40	25	31	9.5	9.1	12
15	17	19	17	190	30	60	38	23	29	8.0	12	18
16	17	19	18	86	29	61	40	21	18	7.4	7.6	1890
17	16	19	17	72	30	69	38	23	20	7.8	6.1	141
18	16	19	17	234	106	66	34	21	28	7.1	5.3	51
19	16	19	17	83	53	46	33	22	18	6.2	4.5	34
20	15	20	17	48	39	41	33	21	28	6.4	33	27
21	15	22	17	41	34	78	33	19	27	7.5	41	60
22	15	20	18	39	31	152	42	19	21	48	14	78
23	15	19	16	39	31	60	38	33	17	18	9.6	38
24	15	20	17	153	29	52	33	41	15	11	12	28
25	15	20	18	70	28	46	31	33	14	9.3	40	23
26	14	43	20	46	28	42	31	24	14	8.1	119	19
27	15	24	18	39	27	40	29	21	14	7.6	49	21
28	16	20	18	35	55	42	29	19	14	8.2	18	21
29	14	19	18	31	---	39	28	18	14	11	14	17
30	15	18	19	29	---	35	27	18	13	10	12	112
31	15	---	19	28	---	34	---	17	---	8.8	11	---
TOTAL	626	587	575	1993	1079	1533	1183	781	551	333.9	500.4	2843.0
MEAN	20.2	19.6	18.5	64.3	38.5	49.5	39.4	25.2	18.4	10.8	16.1	94.8
MAX	69	43	32	234	106	152	74	48	31	48	119	1890
MIN	12	15	16	16	27	31	27	17	13	6.2	4.5	9.3
CFSM	.58	.56	.53	1.85	1.11	1.42	1.13	.72	.53	.31	.46	2.72
IN.	.67	.63	.61	2.13	1.15	1.64	1.26	.83	.59	.36	.53	3.04

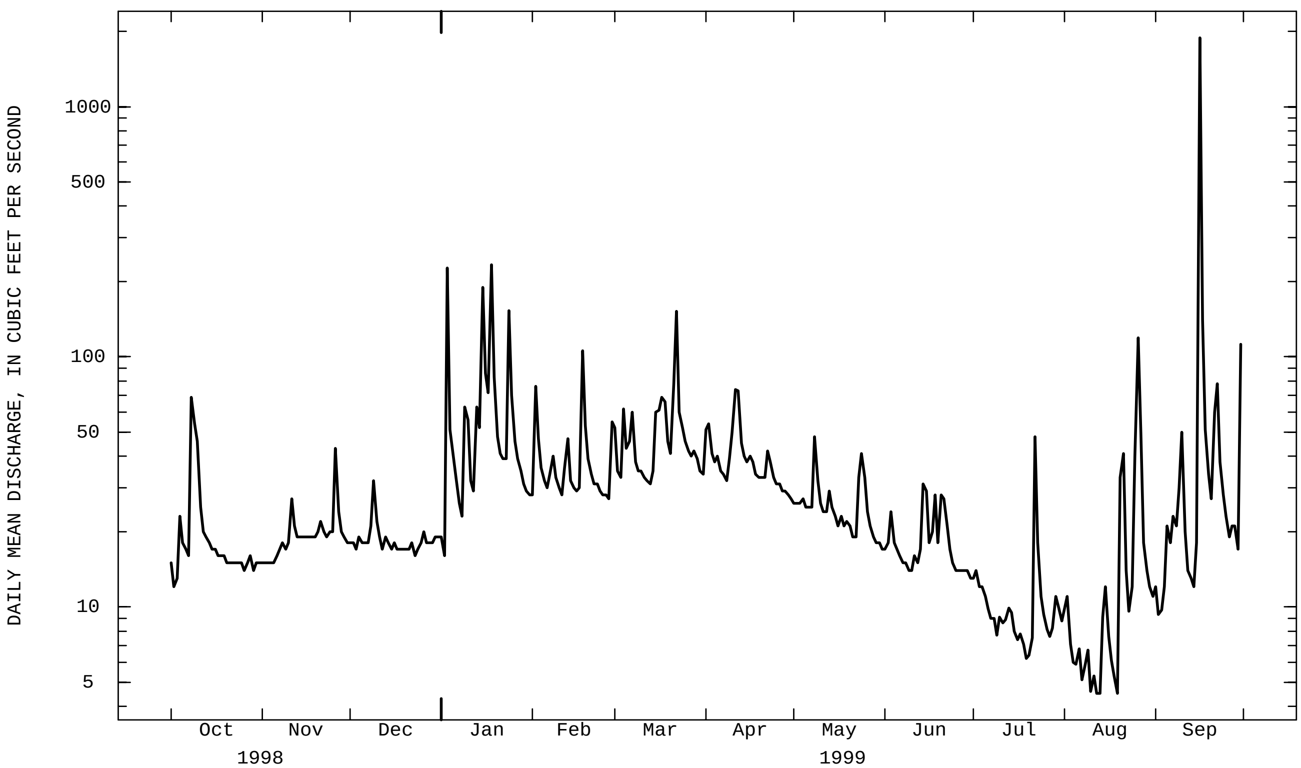
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1967 - 1999, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	36.5	46.3	54.7	65.8	69.1	70.1	64.2	60.4	51.7	43.7	37.5	41.6
MAX	94.0	93.5	149	167	151	163	134	162	204	133	137	140
(WY)	1980	1997	1997	1996	1979	1994	1983	1989	1972	1975	1971	1975
MIN	13.4	12.5	18.2	16.9	28.1	22.5	28.8	17.9	12.9	10.8	11.6	10.4
(WY)	1970	1982	1981	1981	1992	1981	1969	1969	1969	1999	1981	1986

01581700 WINTERS RUN NEAR BENSON, MD--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1967 - 1999	
ANNUAL TOTAL	18955		12585.3			
ANNUAL MEAN	51.9		34.5		53.1	
HIGHEST ANNUAL MEAN					86.0	1972
LOWEST ANNUAL MEAN					22.9	1981
HIGHEST DAILY MEAN	521	Mar 21	1890	Sep 16	3000	Jun 22 1972
LOWEST DAILY MEAN	12	Oct 2	4.5	(a)	4.5	(a)
ANNUAL SEVEN-DAY MINIMUM	14	Sep 27	5.2	Aug 7	5.2	Aug 7 1999
INSTANTANEOUS PEAK FLOW			6340	Sep 16	(b)7600	Jun 22 1972
INSTANTANEOUS PEAK STAGE			10.58	Sep 16	11.60	Jun 22 1972
INSTANTANEOUS LOW FLOW			3.6	(c)	(d)3.0	Jan 10 1982
ANNUAL RUNOFF (CFSM)	1.49		.99		1.53	
ANNUAL RUNOFF (INCHES)	20.26		13.45		20.75	
10 PERCENT EXCEEDS	101		52		89	
50 PERCENT EXCEEDS	39		21		38	
90 PERCENT EXCEEDS	16		9.6		16	

a Aug. 12, 13, 19, 1999.
b From rating curve extended above 4,600 ft^3/s.
c Aug. 10, 13.
d Result of freezeup.



DAILY MEAN DISCHARGE - 1999 WATER YEAR

01582000 LITTLE FALLS AT BLUE MOUNT, MD

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

DRAINAGE AREA.--52.9 mi^2.

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

REVISED RECORDS.--WSP 111: 1944(M), 1945-47(P). WDR MD-DE-85-1: 1984(P).

GAGE.--Water-stage recorders. Elevation of gage is 305 ft above sea level, from topographic map.

REMARKS.--Records good except those for estimated daily discharges (ice effect, plugged intake), which are fair. Slight diurnal fluctuation at low flow caused by mill upstream from station. Several measurements of water temperature were made during the year. Water-quality records for some prior periods have been collected at this location.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jan 18	1645	1,500	5.12	Sep 16	1630	*1,740	*5.61

Minimum discharge, 8.7 ft^3/s, Aug 19.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	25	29	28	e26	42	60	63	43	28	22	21	12
2	23	28	28	25	93	47	62	42	30	23	17	12
3	24	28	28	250	63	46	54	43	42	27	14	12
4	37	28	28	e90	54	87	53	43	30	21	13	12
5	31	28	28	e70	49	62	56	42	28	19	12	17
6	29	28	28	e66	46	70	50	41	28	18	11	20
7	27	28	27	e64	48	72	49	43	28	17	11	38
8	183	28	31	63	56	57	47	46	27	16	12	18
9	69	28	42	94	49	54	62	42	25	16	12	18
10	55	29	31	119	45	54	73	39	26	17	11	22
11	42	38	29	87	42	51	85	38	28	17	11	16
12	36	31	28	80	47	48	81	39	26	16	9.9	14
13	35	29	28	112	58	46	65	76	29	17	9.7	13
14	33	29	28	105	45	49	59	43	39	16	13	13
15	32	29	27	e210	43	62	58	39	36	16	14	24
16	31	28	27	e130	42	62	60	38	27	15	12	582
17	31	28	27	e130	45	78	57	38	33	14	11	105
18	31	28	26	684	84	77	53	37	39	13	10	42
19	31	28	26	e200	61	61	51	36	28	13	9.1	31
20	30	28	26	e100	52	56	53	34	28	14	12	27
21	30	29	26	e65	48	73	51	33	31	14	21	50
22	29	28	27	65	44	143	74	33	28	46	14	51
23	29	28	25	68	45	79	60	50	26	21	12	34
24	30	28	26	201	45	72	56	52	24	17	13	28
25	29	27	26	100	40	67	51	42	23	16	14	25
26	29	45	e26	72	39	62	50	35	23	15	32	24
27	29	34	e26	61	38	59	48	33	23	14	46	23
28	29	30	27	55	65	59	46	32	23	14	18	30
29	29	29	28	50	---	55	46	30	24	14	15	29
30	28	28	28	46	---	52	44	30	21	14	13	121
31	28	---	e27	43	---	50	---	28	---	17	13	---
TOTAL	1154	884	863	3531	1428	1970	1717	1240	851	549	456.7	1463
MEAN	37.2	29.5	27.8	114	51.0	63.5	57.2	40.0	28.4	17.7	14.7	48.8
MAX	183	45	42	684	93	143	85	76	42	46	46	582
MIN	23	27	25	25	38	46	44	28	21	13	9.1	12
CFSM	.70	.56	.53	2.15	.96	1.20	1.08	.76	.54	.33	.28	.92
IN.	.81	.62	.61	2.48	1.00	1.39	1.21	.87	.60	.39	.32	1.03

e Estimated

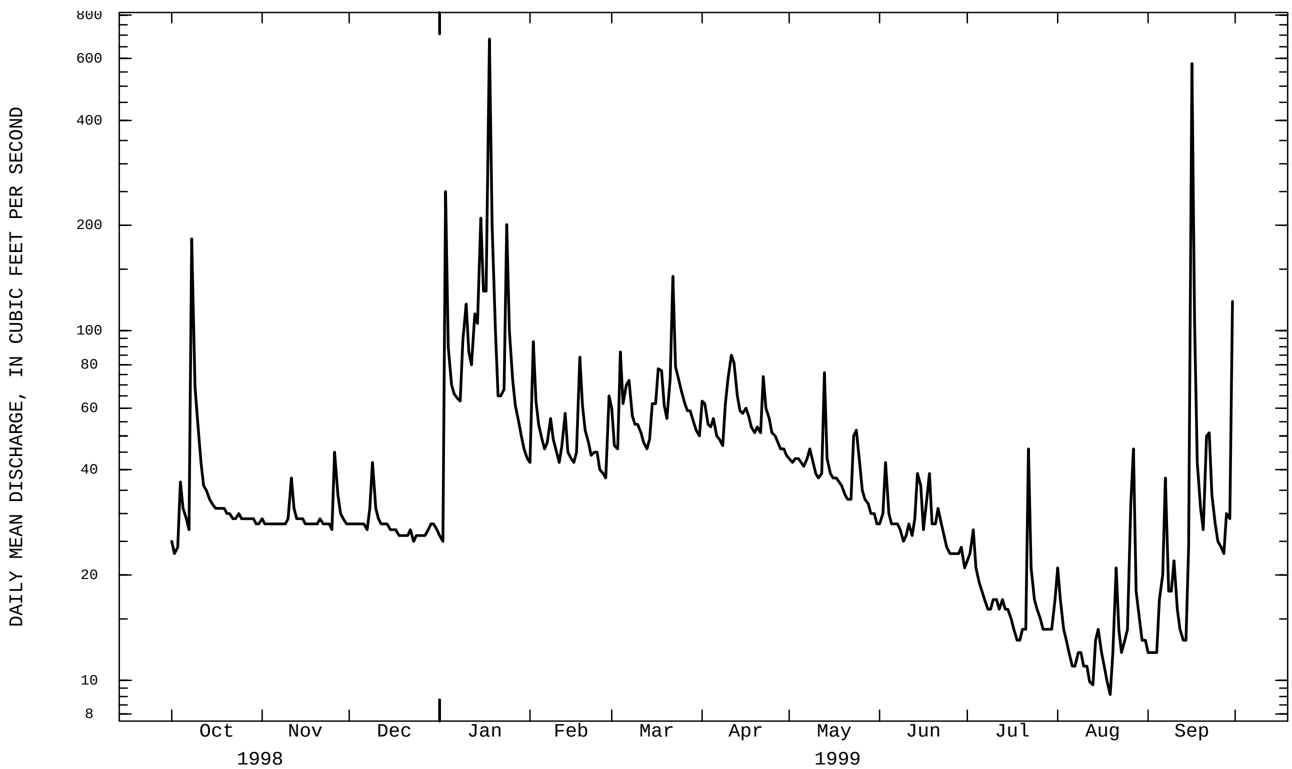
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1944 - 1999, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	45.7	56.2	65.4	78.2	88.2	94.0	92.3	84.1	69.9	57.2	46.9	47.5
MAX	203	129	198	190	187	261	194	202	353	158	159	227
(WY)	1980	1972	1997	1996	1979	1994	1952	1952	1972	1972	1971	1975
MIN	16.7	22.8	20.9	22.1	37.9	40.3	38.4	29.4	24.3	12.2	9.44	17.2
(WY)	1964	1982	1966	1981	1967	1981	1963	1969	1966	1966	1966	1986

01582000 LITTLE FALLS AT BLUE MOUNT, MD--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1944 - 1999	
ANNUAL TOTAL	26686		16106.7			
ANNUAL MEAN	73.1		44.1		68.8	
HIGHEST ANNUAL MEAN					132	1972
LOWEST ANNUAL MEAN					31.8	1966
HIGHEST DAILY MEAN	436	Mar 9	684	Jan 18	4730	Jun 22 1972
LOWEST DAILY MEAN	23	Oct 2	9.1	Aug 19	4.5	Sep 11 1966
ANNUAL SEVEN-DAY MINIMUM	25	Sep 27	11	Aug 7	4.8	Sep 6 1966
INSTANTANEOUS PEAK FLOW			1740	Sep 16	(a)8280	Jun 22 1972
INSTANTANEOUS PEAK STAGE			5.61	Sep 16	18.54	Jun 22 1972
INSTANTANEOUS LOW FLOW			8.7	Aug 19	1.9	Aug 26 1966
ANNUAL RUNOFF (CFSM)	1.38		.83		1.30	
ANNUAL RUNOFF (INCHES)	18.77		11.33		17.66	
10 PERCENT EXCEEDS	136		71		118	
50 PERCENT EXCEEDS	54		31		52	
90 PERCENT EXCEEDS	28		14		25	

a From rating curve extended above 1,300 ft^3/s on basis of contracted-opening measurement of peak flow.



DAILY MEAN DISCHARGE - 1999 WATER YEAR

01582500 GUNPOWDER FALLS AT GLENCOE, MD

LOCATION.--Lat 39°32'59", long 76°38'11", Baltimore County, Hydrologic Unit 02060003, on right downstream wingwall of bridge on Glencoe Road at intersection of Upper Glencoe Road and Lower Glencoe Road in Glencoe, and 0.7 mi upstream from Piney Creek.

DRAINAGE AREA.--160 mi^2.

PERIOD OF RECORD.--October 1977 to June 1980, December 1982 to current year.

REVISED RECORDS.--WDR MD-DE-89-1: 1985(M).

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 250 ft above sea level, from topographic map.

REMARKS.--Records good except those for estimated daily discharges (ice effect), which are fair. Flow regulated by Prettyboy Reservoir, 12 mi upstream, beginning Apr. 10, 1933, for water supply of Baltimore City (usable capacity, 20,000,000,000 gal; dead storage, 1,080,000,000 gal). Several measurements of water temperature were made during the year.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,210 ft^3/s, Sep 16, gage height, 7.88 ft; minimum discharge, 30 ft^3/s, Sep 3.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	187	187	172	155	106	139	152	115	91	315	376	34
2	174	186	170	153	170	117	151	112	91	320	350	34
3	94	186	170	459	141	113	137	112	111	323	322	31
4	110	185	170	200	125	170	134	114	93	318	325	35
5	104	184	170	135	119	139	139	112	90	313	323	51
6	101	184	170	e130	114	144	130	111	88	285	318	66
7	99	184	169	e125	116	156	127	111	88	173	316	88
8	294	184	171	125	129	131	125	117	86	170	315	58
9	165	184	188	164	119	126	132	113	83	170	313	50
10	135	184	174	179	114	125	173	109	103	171	304	66
11	120	196	170	132	110	122	179	106	166	173	241	53
12	114	190	169	131	113	117	191	106	165	170	166	52
13	133	187	168	147	133	114	156	149	166	172	147	53
14	183	186	167	136	113	118	145	113	180	172	152	63
15	182	186	166	294	109	152	139	107	191	176	152	83
16	172	186	164	195	107	153	143	104	186	186	150	841
17	107	186	164	211	110	167	140	103	193	222	144	191
18	106	185	163	945	167	180	133	103	214	300	124	75
19	106	184	162	249	140	155	128	103	195	307	116	58
20	128	184	162	163	125	146	130	101	195	351	111	52
21	178	186	162	141	118	161	128	98	199	372	105	83
22	178	184	163	139	111	278	152	97	196	353	85	89
23	177	183	161	140	111	176	138	122	191	184	81	63
24	177	182	161	314	109	164	133	131	214	175	80	53
25	178	182	158	199	107	157	126	115	316	172	65	50
26	177	205	156	153	106	147	124	103	316	169	78	46
27	176	193	160	136	104	142	122	99	315	182	106	45
28	178	186	162	128	135	141	119	97	315	254	46	51
29	188	184	162	120	---	137	118	95	321	298	39	54
30	188	183	164	114	---	131	116	94	314	333	36	160
31	188	---	158	109	---	128	---	91	---	363	34	---
TOTAL	4797	5586	5146	6121	3381	4546	4160	3363	5472	7642	5520	2728
MEAN	155	186	166	197	121	147	139	108	182	247	178	90.9
MAX	294	205	188	945	170	278	191	149	321	372	376	841
MIN	94	182	156	109	104	113	116	91	83	169	34	31
(†)	20533	21044	20993	24046	24108	24077	24000	22531	21543	19687	21914	22954

e Estimated

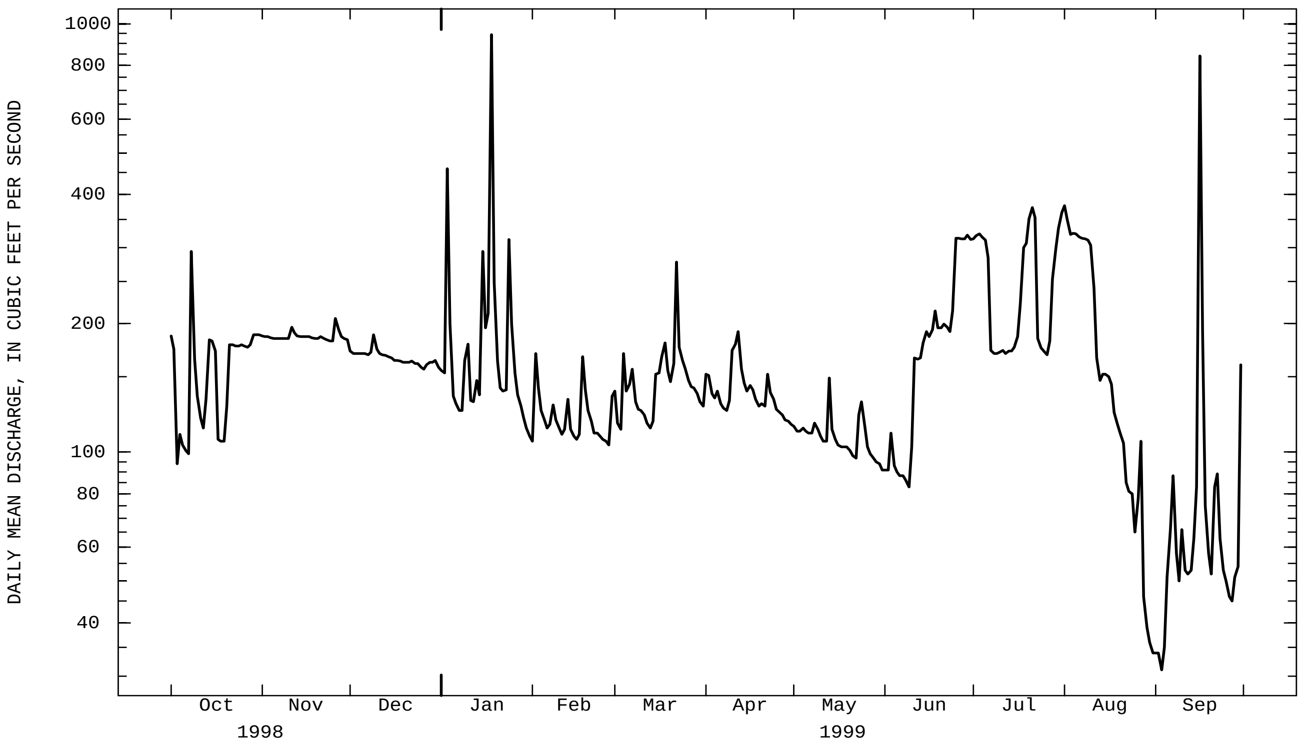
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1978 - 1980, 1983 - 1999, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	166	174	198	239	239	277	274	261	188	178	154	160
MAX	603	342	604	625	598	755	586	476	284	280	267	512
(WY)	1980	1997	1997	1979	1979	1994	1993	1989	1989	1986	1996	1979
MIN	52.4	81.6	84.6	63.3	85.8	127	114	85.5	82.4	94.8	70.8	69.6
(WY)	1987	1993	1998	1983	1983	1992	1992	1992	1992	1985	1985	1983

(†) Monthend contents, in millions of gallons, in Prettyboy Reservoir (contents on Sept. 30, 1998, 19,677,000,000 gal). Records furnished by Baltimore Department of Public Works.

01582500 GUNPOWDER FALLS AT GLENCOE, MD--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1978 - 1980 1983 - 1999	
ANNUAL TOTAL	75837		58462			
ANNUAL MEAN	208		160		210	
HIGHEST ANNUAL MEAN					314	1980
LOWEST ANNUAL MEAN					118	1987
HIGHEST DAILY MEAN	868	Apr 2	945	Jan 18	4500	Sep 6 1979
LOWEST DAILY MEAN	88	Jan 7	31	Sep 3	31	Sep 3 1999
ANNUAL SEVEN-DAY MINIMUM	90	Jan 1	35	Aug 29	35	Aug 29 1999
INSTANTANEOUS PEAK FLOW			2210	Sep 16	6110	Sep 6 1979
INSTANTANEOUS PEAK STAGE			7.88	Sep 16	15.30	Sep 6 1979
INSTANTANEOUS LOW FLOW			30	Sep 3	30	Sep 3 1999
ANNUAL RUNOFF (CFSM)	1.30		1.00		1.31	
ANNUAL RUNOFF (INCHES)	17.63		13.59		17.83	
10 PERCENT EXCEEDS	364		281		364	
50 PERCENT EXCEEDS	177		151		167	
90 PERCENT EXCEEDS	104		87		84	



DAILY MEAN DISCHARGE - 1999 WATER YEAR

01583100 PINEY RUN AT DOVER, MD

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

DRAINAGE AREA.--12.3 mi^2.

PERIOD OF RECORD.--May 1982 to February 1988. October 1996 to current year.

REVISED RECORDS.--WDR MD-DE-87-1: 1984-86(P).

GAGE.--Water-stage recorder. Elevation of gage is 380 ft above sea level, from topographic map.

REMARKS.--No estimated daily discharges. Records good. Several measurements of water temperature were made during the year.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 300 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jan 3	0830	574	5.17	Aug 26	2030	*719	*5.59
Jan 18	0900	524	5.01	Sep 16	1430	644	5.38
Jan 18	1600	546	5.08				

Minimum discharge, 2.9 ft^3/s, Aug 12, 13.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.4	6.9	7.1	7.0	9.6	11	14	8.5	5.8	5.0	9.4	3.7
2	6.3	6.6	6.9	6.8	22	9.4	12	8.3	5.9	5.1	5.1	3.6
3	6.3	6.6	6.9	91	14	9.0	10	8.4	8.8	5.1	4.1	3.6
4	8.5	6.6	6.9	15	13	16	11	8.4	6.1	4.5	3.8	3.7
5	7.9	6.6	6.9	12	11	12	16	8.3	5.7	4.6	3.6	7.2
6	7.3	6.6	6.9	12	10	15	12	8.1	5.6	4.1	3.5	5.8
7	7.2	6.6	6.9	9.3	11	15	11	8.2	5.5	4.0	3.3	9.7
8	47	6.6	7.9	8.5	13	12	10	9.7	5.4	3.8	3.5	5.2
9	18	6.6	11	32	11	11	14	8.3	5.2	3.7	3.5	4.6
10	12	6.6	7.8	16	10	11	15	7.9	5.1	3.7	3.3	5.2
11	9.4	9.6	7.4	11	9.6	10	22	7.6	5.4	3.8	3.2	4.6
12	8.2	7.7	7.0	17	9.9	9.8	20	7.4	5.3	3.9	3.1	4.3
13	7.9	7.3	7.0	21	10	9.4	15	7.6	5.7	4.0	3.1	4.3
14	7.4	7.3	7.1	14	9.0	10	13	7.3	7.0	4.0	4.7	4.2
15	7.3	7.5	6.9	46	9.1	13	12	6.9	7.3	3.7	4.8	18
16	7.2	7.5	6.9	29	9.1	13	12	6.9	5.6	3.7	3.7	197
17	6.9	7.5	6.9	29	9.9	19	12	7.0	6.1	3.5	3.5	23
18	6.9	7.3	6.7	163	20	16	12	7.0	6.8	3.3	3.3	13
19	7.6	7.3	6.6	25	13	13	11	6.9	5.6	3.2	3.1	10
20	7.4	7.3	6.6	16	11	12	11	6.7	5.7	4.0	6.6	9.4
21	6.9	7.4	6.7	14	10	16	10	6.6	6.5	4.2	13	17
22	6.8	7.3	7.1	13	9.7	24	11	6.9	6.0	21	5.0	15
23	6.9	7.3	7.0	13	10	15	12	9.1	5.5	5.8	4.1	9.9
24	6.9	7.3	6.9	39	9.3	13	11	11	5.2	4.6	4.0	8.3
25	7.1	7.3	6.9	20	8.5	12	10	8.0	5.1	4.3	4.1	7.0
26	6.9	11	7.2	16	8.6	11	10	6.9	5.0	4.1	88	6.5
27	6.9	8.5	7.1	13	8.3	11	9.5	6.6	4.8	3.9	17	6.4
28	6.9	7.6	7.0	12	13	11	9.2	6.3	5.1	5.7	6.3	8.0
29	6.8	7.3	7.0	11	---	10	9.1	6.1	8.0	4.9	4.9	7.4
30	6.8	7.3	7.1	11	---	9.7	8.8	6.0	5.0	4.2	4.2	27
31	6.9	---	6.6	9.9	---	9.5	---	5.9	---	4.0	3.9	---
TOTAL	278.9	220.9	220.9	752.5	312.6	388.8	365.6	234.8	175.8	147.4	236.7	452.6
MEAN	9.00	7.36	7.13	24.3	11.2	12.5	12.2	7.57	5.86	4.75	7.64	15.1
MAX	47	11	11	163	22	24	22	11	8.8	21	88	197
MIN	6.3	6.6	6.6	6.8	8.3	9.0	8.8	5.9	4.8	3.2	3.1	3.6
CFSM	.73	.60	.58	1.97	.91	1.02	.99	.62	.48	.39	.62	1.23
IN.	.84	.67	.67	2.28	.95	1.18	1.11	.71	.53	.45	.72	1.37

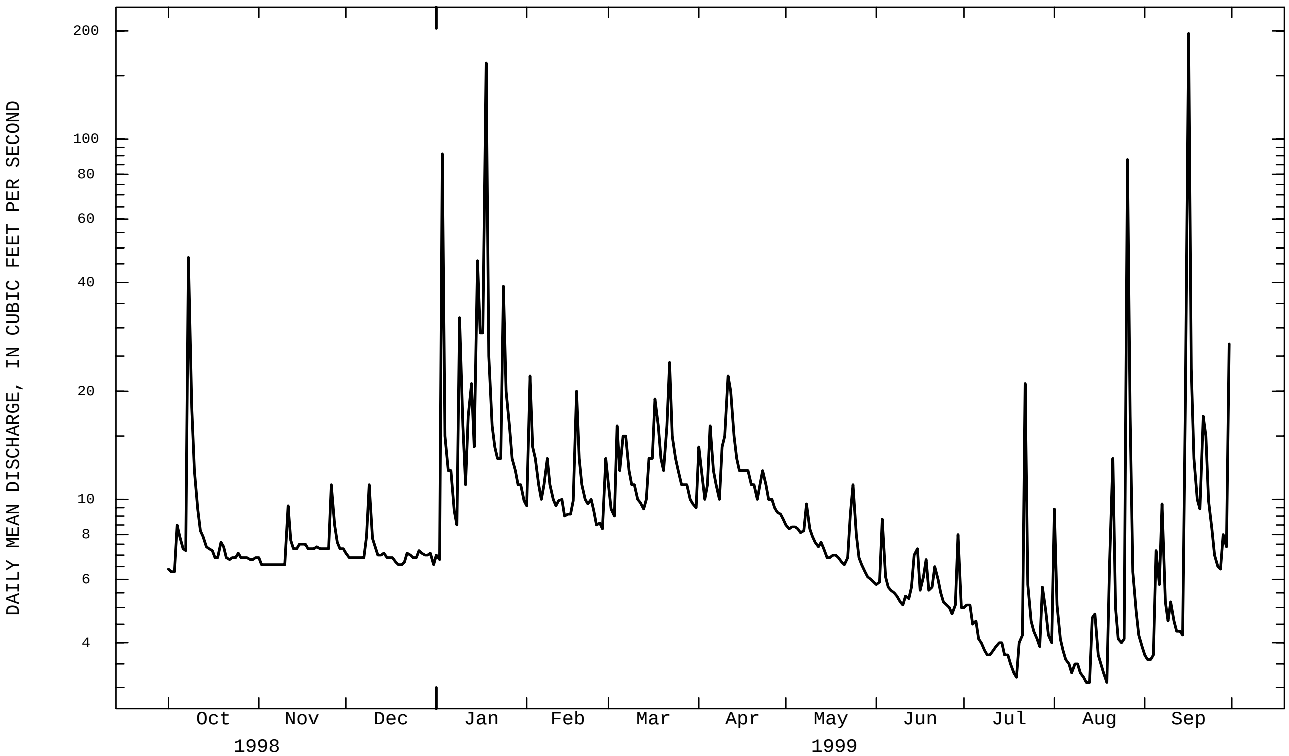
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1982 - 1988, 1997 - 1999, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	10.4	14.0	17.6	17.2	21.1	20.4	21.7	17.7	12.9	10.6	8.19	9.31
MAX	26.0	28.7	49.8	31.1	37.9	35.5	36.1	28.5	20.0	25.7	18.2	21.3
(WY)	1997	1997	1997	1997	1985	1998	1983	1998	1998	1984	1984	1987
MIN	4.68	7.36	7.13	8.26	11.2	12.5	11.7	7.57	5.57	4.75	5.05	3.95
(WY)	1987	1999	1999	1983	1999	1999	1985	1999	1986	1999	1986	1986

01583100 PINEY RUN AT DOVER, MD--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1982 - 1988 1997 - 1999	
ANNUAL TOTAL	6497.2		3787.5			
ANNUAL MEAN	17.8		10.4		15.1	
HIGHEST ANNUAL MEAN					21.6	1997
LOWEST ANNUAL MEAN					9.56	1986
HIGHEST DAILY MEAN	144	Mar 9	197	Sep 16	599	Feb 12 1985
LOWEST DAILY MEAN	6.3	(a)	3.1	Aug 12	2.6	Aug 15 1986
ANNUAL SEVEN-DAY MINIMUM	6.6	Sep 13	3.3	Aug 7	3.0	Aug 9 1986
INSTANTANEOUS PEAK FLOW			719	Aug 26	3220	Sep 8 1987
INSTANTANEOUS PEAK STAGE			5.59	Aug 26	8.28	Sep 8 1987
INSTANTANEOUS LOW FLOW			2.9	(b)	2.4	Aug 15 1986
ANNUAL RUNOFF (CFSM)	1.45		.84		1.23	
ANNUAL RUNOFF (INCHES)	19.65		11.45		16.73	
10 PERCENT EXCEEDS	31		15		26	
50 PERCENT EXCEEDS	13		7.3		11	
90 PERCENT EXCEEDS	6.9		4.1		5.4	

a Oct. 2, 3.
b Aug. 12, 13.



DAILY MEAN DISCHARGE - 1999 WATER YEAR

01583500 WESTERN RUN AT WESTERN RUN, MD

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

DRAINAGE AREA.--59.8 mi^2.

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

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

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

REMARKS.--Records good except those for estimated daily discharges (ice effect), which are fair. Several measurements of water temperature were made during the year. Water-quality records for some prior periods have been collected at this location.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jan 18	1230	1,280	4.82	Sep 16	1830	*1,680	*5.50
Aug 27	0030	1,070	4.41				

Minimum discharge, 11 ft^3/s, Jul 20, Aug 12, 13, 19, 20.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	23	27	28	e26	43	59	74	47	27	20	37	18
2	21	27	27	29	87	48	70	46	28	21	21	17
3	22	27	27	235	62	46	59	45	34	20	16	16
4	30	27	28	66	54	69	59	46	27	18	14	17
5	29	26	27	49	50	58	91	44	26	17	13	35
6	27	26	27	e37	48	64	67	44	25	16	13	35
7	26	26	27	e35	48	78	61	46	25	15	13	46
8	133	26	30	33	55	57	58	49	24	14	13	27
9	67	27	44	86	49	55	62	45	23	14	13	22
10	46	27	33	75	46	54	83	42	23	14	12	23
11	38	36	30	49	44	52	98	41	25	15	12	20
12	33	31	28	56	45	49	107	40	23	14	12	18
13	32	28	29	81	50	48	76	42	26	16	12	17
14	31	28	28	64	43	50	68	39	31	14	19	17
15	29	28	27	173	42	64	65	37	31	14	21	45
16	29	28	27	112	42	66	67	37	24	13	14	725
17	29	28	27	111	44	84	63	37	27	13	13	207
18	28	27	26	528	93	84	60	36	34	12	12	71
19	27	27	26	148	65	63	58	36	25	12	11	56
20	28	28	26	77	55	57	59	34	26	12	25	50
21	27	30	26	65	50	68	58	33	31	14	56	85
22	26	28	27	62	46	137	60	33	27	64	20	85
23	27	27	26	62	44	76	61	49	24	23	16	57
24	27	27	27	170	44	69	60	56	22	17	16	48
25	27	27	27	93	43	64	55	46	21	15	16	42
26	27	44	e27	66	43	59	53	36	21	15	135	38
27	27	35	27	57	42	56	51	34	20	14	703	38
28	28	30	27	53	59	56	50	32	21	22	458	42
29	27	29	28	49	---	54	49	31	24	32	26	42
30	27	28	28	46	---	52	48	29	20	17	22	111
31	27	---	26	44	---	51	---	28	---	17	19	---
TOTAL	1025	860	868	2837	1436	1947	1950	1240	765	554	1803	2070
MEAN	33.1	28.7	28.0	91.5	51.3	62.8	65.0	40.0	25.5	17.9	58.2	69.0
MAX	133	44	44	528	93	137	107	56	34	64	703	725
MIN	21	26	26	26	42	46	48	28	20	12	11	16
CFSM	.55	.48	.47	1.53	.86	1.05	1.09	.67	.43	.30	.97	1.15
IN.	.64	.53	.54	1.76	.89	1.21	1.21	.77	.48	.34	1.12	1.29

e Estimated

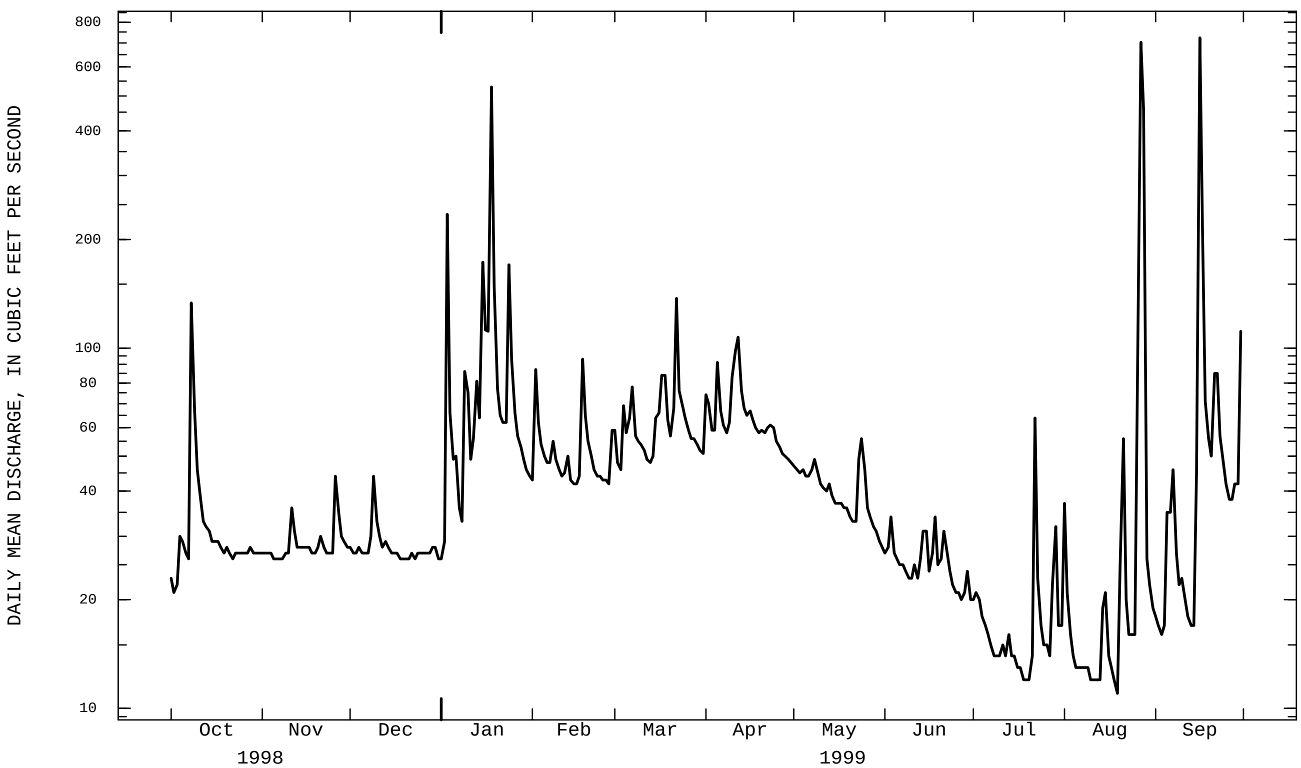
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1944 - 1999, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	45.9	57.1	68.2	82.4	92.3	96.8	90.8	82.6	70.4	55.7	49.2	47.8
MAX	209	143	217	222	240	237	209	227	395	164	183	261
(WY)	1980	1997	1997	1979	1979	1994	1952	1952	1972	1972	1971	1975
MIN	16.4	20.4	19.0	20.5	34.4	45.9	39.8	31.5	21.1	11.3	7.78	14.8
(WY)	1964	1966	1966	1966	1967	1981	1963	1963	1966	1966	1966	1963

01583500 WESTERN RUN AT WESTERN RUN, MD--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1944 - 1999	
ANNUAL TOTAL	28000		17369			
ANNUAL MEAN	76.7		47.6		69.8	
HIGHEST ANNUAL MEAN					138	1972
LOWEST ANNUAL MEAN					28.9	1966
HIGHEST DAILY MEAN	651	Mar 9	725	Sep 16	7000	Jun 22 1972
LOWEST DAILY MEAN	21	Oct 2	11	Aug 19	2.5	Sep 12 1966
ANNUAL SEVEN-DAY MINIMUM	24	Sep 27	12	Aug 7	3.8	Sep 6 1966
INSTANTANEOUS PEAK FLOW			1680	Sep 16	(a)38000	Jun 22 1972
INSTANTANEOUS PEAK STAGE			5.50	Sep 16	(b)26.00	Jun 22 1972
INSTANTANEOUS LOW FLOW			11	(c)	2.4	Sep 12 1966
ANNUAL RUNOFF (CFSM)	1.28		.80		1.17	
ANNUAL RUNOFF (INCHES)	17.42		10.80		15.87	
10 PERCENT EXCEEDS	143		69		119	
50 PERCENT EXCEEDS	54		32		52	
90 PERCENT EXCEEDS	27		16		23	

a From rating curve extended above 3,200 ft^3/s, on basis of slope-area measurement and contracted-opening measurement of peak flow.
b From floodmarks.
c July 20, Aug. 12, 13, 19, 20.



DAILY MEAN DISCHARGE - 1999 WATER YEAR

01583570 POND BRANCH AT OREGON RIDGE, MD

LOCATION.--Lat 39°28'49", long 76°41'16", Baltimore County, Hydrologic Unit 02060003, on left bank 500 ft upstream from pond, 600 ft above mouth, 1.0 mi southwest of Beaver Dam Road and Ivy Hill Road interchange, and 2.3 mi west of Cockeysville.

DRAINAGE AREA.--0.16 mi^2.

PERIOD OF RECORD.--January 1983 to September 1986, April 1998 to September 1999.

GAGE.--Water-stage recorder, crest-stage gage, and triple V-notch sharp-crested weir plate. Datum of gage is 450 ft above sea level.

REMARKS.--Records fair except those for estimated daily discharges (Apr-Sep 1998, missing record; 1999 Water Year, ice effect, lagging intake), which are poor. Several measurements of water temperature were made during the year.

EXTREMES FOR CURRENT PERIOD.--
Apr - Sep 1998: Maximum discharge, 1.8 ft^3/s, May 2, gage height, 1.61 ft; minimum discharge, unknown.
1999 Water Year: Maximum discharge, 8.6 ft^3/s, Aug 20, gage height, 1.97 ft; minimum discharge, 0.00 ft^3/s, July 16-19.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR APRIL 1998 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	.33	e.33	.18	.14	e.08
2	---	---	---	---	---	---	---	.44	e.28	e.17	.13	e.25
3	---	---	---	---	---	---	---	.36	e.24	e.17	.12	e.11
4	---	---	---	---	---	---	---	.31	.25	e.17	.11	e.09
5	---	---	---	---	---	---	---	.31	.25	e.17	e.11	e.08
6	---	---	---	---	---	---	---	.28	.25	e.16	e.10	e.07
7	---	---	---	---	---	---	---	.27	.25	e.16	e.10	e.07
8	---	---	---	---	---	---	---	.40	.25	e.35	e.10	e.08
9	---	---	---	---	---	---	---	.29	.23	e.23	e.10	e.08
10	---	---	---	---	---	---	---	.32	.25	e.19	e.50	e.07
11	---	---	---	---	---	---	---	.36	.25	e.17	e.18	e.06
12	---	---	---	---	---	---	---	.48	.36	e.16	e.13	e.06
13	---	---	---	---	---	---	---	.38	.34	e.15	e.12	e.06
14	---	---	---	---	---	---	---	.34	.29	e.15	e.12	e.06
15	---	---	---	---	---	---	---	.31	.28	.14	e.11	e.06
16	---	---	---	---	---	---	.19	.30	.27	.15	e.11	e.06
17	---	---	---	---	---	---	.19	.29	.24	.15	e.15	e.06
18	---	---	---	---	---	---	.19	.29	.23	.14	e.13	e.06
19	---	---	---	---	---	---	.31	.28	.26	.14	e.10	e.06
20	---	---	---	---	---	---	.26	.28	.25	.14	e.10	e.06
21	---	---	---	---	---	---	.22	.29	.20	.14	e.09	e.06
22	---	---	---	---	---	---	.21	.28	.21	.14	e.09	e.12
23	---	---	---	---	---	---	.21	.29	.21	.15	e.09	e.07
24	---	---	---	---	---	---	.20	.28	.20	.14	e.09	e.07
25	---	---	---	---	---	---	.18	.29	.16	.13	e.09	e.07
26	---	---	---	---	---	---	.18	.28	.22	.13	e.08	e.07
27	---	---	---	---	---	---	.21	.27	.19	.13	e.08	e.06
28	---	---	---	---	---	---	.20	e.26	.16	.13	e.08	e.06
29	---	---	---	---	---	---	.19	e.27	.17	.13	e.08	e.05
30	---	---	---	---	---	---	.19	e.28	.18	.13	e.08	e.05
31	---	---	---	---	---	---	---	e.26	---	.20	e.08	---
TOTAL	---	---	---	---	---	---	---	9.67	7.25	4.99	3.69	2.26
MEAN	---	---	---	---	---	---	---	.31	.24	.16	.12	.075
MAX	---	---	---	---	---	---	---	.48	.36	.35	.50	.25
MIN	---	---	---	---	---	---	---	.26	.16	.13	.08	.05
CFSM	---	---	---	---	---	---	---	1.95	1.51	1.01	.74	.47
IN.	---	---	---	---	---	---	---	2.25	1.69	1.16	.86	.53

e Estimated

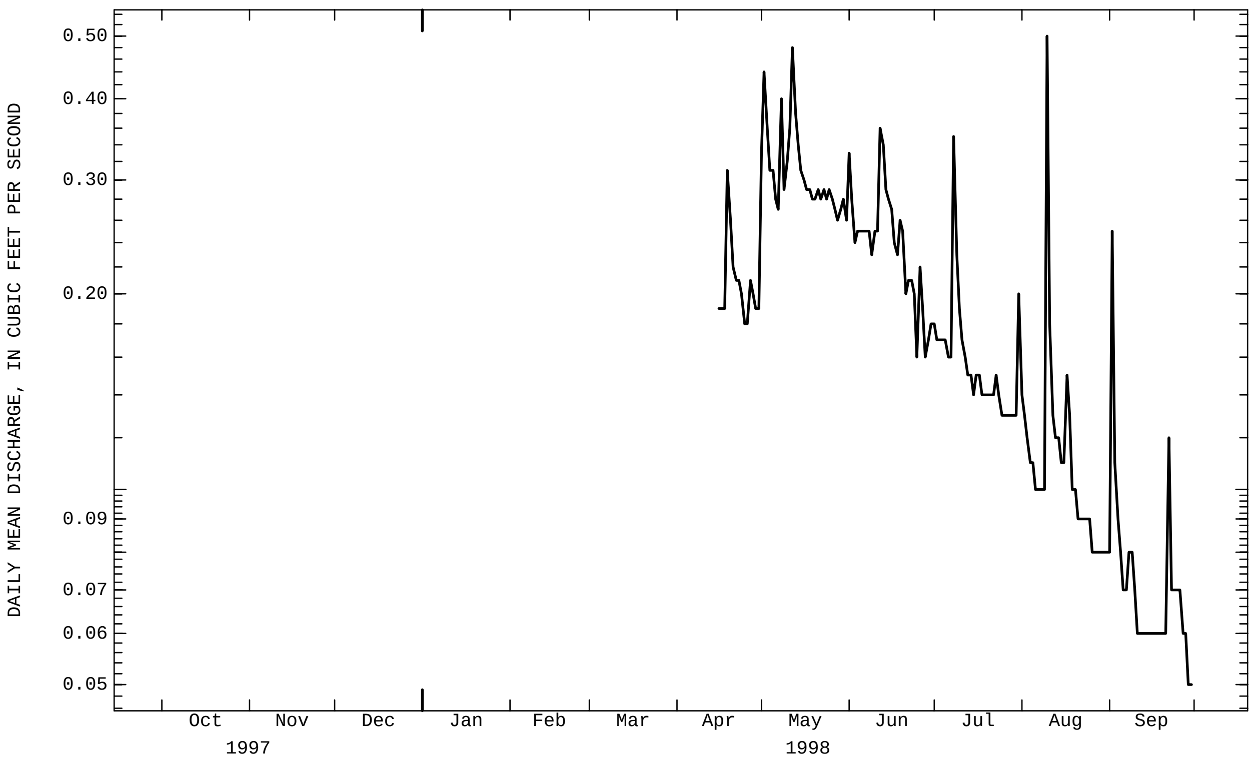
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1983 - 1986, 1998, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.11	.15	.17	.10	.15	.17	.24	.26	.18	.13	.087	.067
MAX	.13	.20	.30	.14	.20	.24	.40	.41	.28	.27	.16	.13
(WY)	1985	1984	1984	1984	1984	1983	1983	1984	1983	1984	1984	1984
MIN	.077	.10	.081	.078	.10	.098	.099	.069	.040	.014	.008	.009
(WY)	1986	1986	1986	1986	1986	1986	1985	1986	1986	1986	1986	1986

01583570 POND BRANCH AT OREGON RIDGE, MD--Continued

SUMMARY STATISTICS	WATER YEARS 1983 - 1986	
		1998
ANNUAL MEAN	.13	
HIGHEST ANNUAL MEAN	.23	1984
LOWEST ANNUAL MEAN	.065	1986
HIGHEST DAILY MEAN	1.8	Jul 1 1984
LOWEST DAILY MEAN	.00	(a)
ANNUAL SEVEN-DAY MINIMUM	.00	Jul 11 1986
INSTANTANEOUS PEAK FLOW	18	Jul 1 1984
INSTANTANEOUS PEAK STAGE	2.19	Jul 1 1984
INSTANTANEOUS LOW FLOW	.00	(b)
ANNUAL RUNOFF (CFSM)	.84	
ANNUAL RUNOFF (INCHES)	11.40	
10 PERCENT EXCEEDS	.32	
50 PERCENT EXCEEDS	.12	
90 PERCENT EXCEEDS	.05	

a July 7-9, 10-19, 31, Aug. 1, 3-16, 18, 19, 24-27, Sept. 11-30, 1986.
b No flow at times in 1986.



DAILY MEAN DISCHARGE - 1998 WATER YEAR

01583570 POND BRANCH AT OREGON RIDGE, MD--Continued

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e.05	.08	.09	e.09	.10	.11	e.16	.12	e.07	.10	.01	.04
2	e.05	.07	.09	e.09	.20	.10	.13	.12	e.06	.10	.01	.04
3	e.05	.07	.09	.67	.13	.12	e.12	.12	e.06	.05	.01	.04
4	e.07	.07	.09	e.17	.12	.15	.13	.12	e.06	.05	.01	.05
5	e.06	.07	.07	e.13	.12	.10	e.18	.12	e.05	.06	.01	.06
6	e.06	.07	.08	e.11	.12	.14	e.14	.12	e.05	.06	.01	.06
7	.06	.08	.08	e.10	.12	.12	e.14	.13	e.05	.04	.01	.07
8	.38	.08	.09	e.09	.12	.10	.13	.13	.05	.03	.01	.07
9	.16	.08	.09	e.25	.12	.10	e.15	.12	.05	.03	.03	.05
10	.10	.08	.08	e.16	.12	.11	e.18	.10	.05	.02	.04	.05
11	.10	.16	.09	e.12	.12	.10	e.25	.10	.05	.02	.03	.04
12	.10	.08	.08	e.15	.16	.09	e.18	.11	.05	.02	.02	.03
13	.10	.06	.09	e.22	.14	.09	e.15	.13	.06	.02	.02	.03
14	.10	.06	.09	e.16	.12	.09	e.15	.12	.10	.02	.14	.03
15	.10	.07	.08	e.13	.12	.12	e.15	.12	.08	.02	.08	.07
16	.10	.06	.09	e.11	.12	.15	e.15	.12	.06	.01	.06	1.1
17	.10	.06	.09	e.13	.12	.17	e.15	.12	.13	.01	.04	.20
18	.10	.06	.09	.40	.26	.14	e.14	.12	.12	.01	.03	.12
19	.09	.06	.10	.19	.16	.14	e.14	.11	.09	.01	.03	.11
20	.09	.06	.10	.16	.16	.13	e.14	.09	.13	.01	.85	.09
21	.09	.07	.09	.12	.14	.26	.13	.09	.12	.01	.23	.10
22	.09	.07	.10	.12	.11	.27	.13	.09	.10	.01	.10	.10
23	.10	.06	.09	.12	.10	.20	.17	.27	.09	.01	.07	.09
24	.10	.06	.09	.30	.10	.19	.16	.28	e.07	.01	.08	.08
25	.10	.06	.09	.17	.10	.17	.14	.19	e.06	.01	.08	.08
26	.10	.16	.09	.14	.09	.14	.13	e.11	e.05	.01	.39	.08
27	.10	.09	.09	.14	.09	.14	.13	e.09	.05	.01	.11	.08
28	.10	.09	e.09	.14	.17	.15	.13	e.09	.06	.01	.06	.09
29	.10	.09	e.09	.14	---	.14	.12	e.08	.05	.01	.05	.09
30	.10	.08	e.09	.13	---	.13	.12	e.08	.05	.01	.05	.23
31	.09	---	e.09	.10	---	.13	---	e.07	---	.01	.05	---
TOTAL	3.09	2.31	2.75	5.25	3.65	4.29	4.42	3.78	2.12	0.80	2.72	3.37
MEAN	.10	.077	.089	.17	.13	.14	.15	.12	.071	.026	.088	.11
MAX	.38	.16	.10	.67	.26	.27	.25	.28	.13	.10	.85	1.1
MIN	.05	.06	.07	.09	.09	.09	.12	.07	.05	.01	.01	.03
CFSM	.62	.48	.55	1.06	.81	.86	.92	.76	.44	.16	.55	.70
IN.	.72	.54	.64	1.22	.85	1.00	1.03	.88	.49	.19	.63	.78

e Estimated

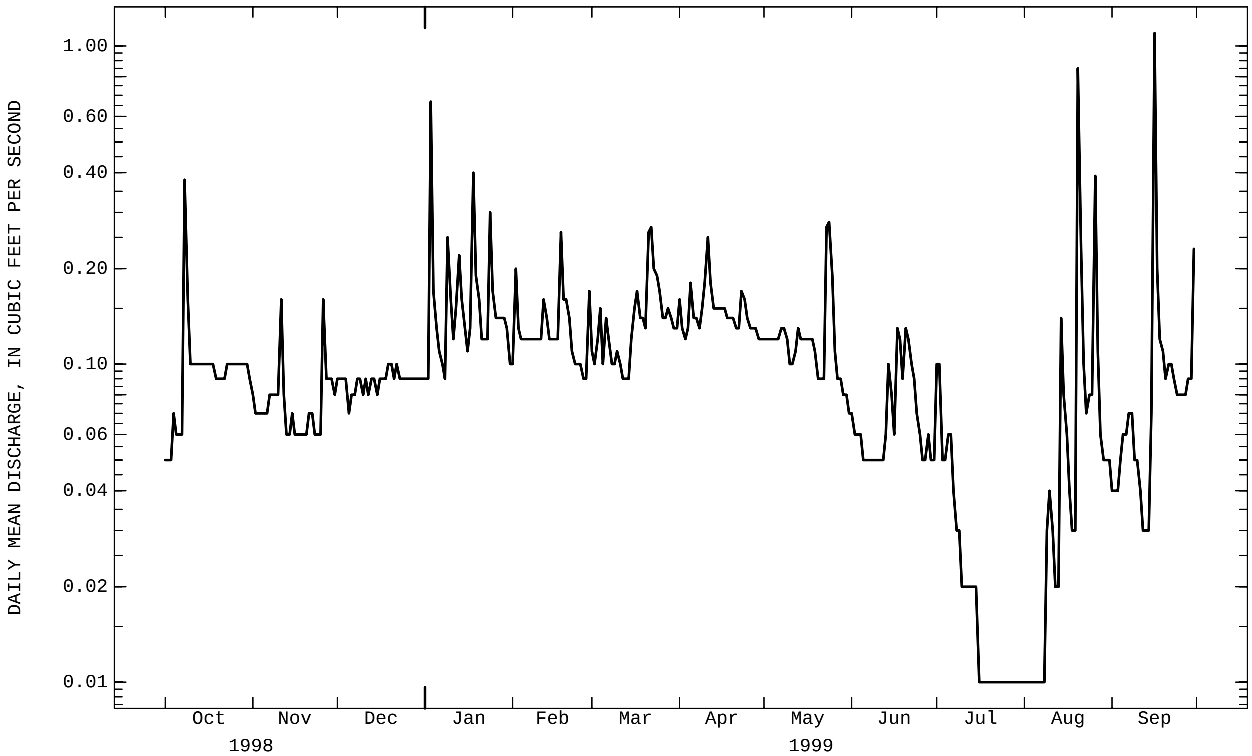
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1983 - 1986, 1998 - 1999, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.11	.13	.15	.12	.15	.16	.22	.23	.16	.12	.087	.075
MAX	.13	.20	.30	.17	.20	.24	.40	.41	.28	.27	.16	.13
(WY)	1985	1984	1984	1999	1984	1983	1983	1984	1983	1984	1984	1984
MIN	.077	.077	.081	.078	.10	.098	.099	.069	.040	.014	.008	.009
(WY)	1986	1999	1986	1986	1986	1986	1985	1986	1986	1986	1986	1986

01583570 POND BRANCH AT OREGON RIDGE, MD--Continued

SUMMARY STATISTICS	FOR 1999 WATER YEAR		WATER YEARS 1983 - 1986 1998 - 1999	
ANNUAL TOTAL	38.55			
ANNUAL MEAN	.11		.13	
HIGHEST ANNUAL MEAN			.23	1984
LOWEST ANNUAL MEAN			.065	1986
HIGHEST DAILY MEAN	1.1	Sep 16	1.8	Jul 1 1984
LOWEST DAILY MEAN	.01	(a)		(b)
ANNUAL SEVEN-DAY MINIMUM	.01	Jul 16	.00	Jul 11 1986
INSTANTANEOUS PEAK FLOW	8.6	Aug 20	18	Jul 1 1984
INSTANTANEOUS PEAK STAGE	1.97	Aug 20	2.19	Jul 1 1984
INSTANTANEOUS LOW FLOW	.00	(c)	.00	(b)
ANNUAL RUNOFF (CFSM)	.66		.79	
ANNUAL RUNOFF (INCHES)	8.96		10.79	
10 PERCENT EXCEEDS	.16		.30	
50 PERCENT EXCEEDS	.09		.11	
90 PERCENT EXCEEDS	.03		.04	

a Sept 16 to Aug. 8.
b Many days in 1986, 1999.
c July 16-19.



DAILY MEAN DISCHARGE - 1999 WATER YEAR

01583600 BEAVERDAM RUN AT COCKEYSVILLE, MD

LOCATION.--Lat 39°29'08", long 76°38'45", Baltimore County, Hydrologic Unit 02060003, on left bank of bridge on Maryland Route 45 at Cockeysville, and 0.45 mi upstream from mouth.

DRAINAGE AREA.--20.9 mi^2.

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

REVISED RECORDS.--WDR MD-DE-88: 1983-87.

GAGE.--Water-stage recorder. Datum of gage is 240.42 ft above sea level. Previously operated as a low-flow site during water years 1955-59 and 1962-64 at same site. Dec. 15, 1982 to June 15, 1993, water-stage recorder 600 ft downstream and 50 ft upstream from bridge on Beaverdam Run Lane at datum 1.38 ft lower.

REMARKS.--Records good except those for estimated daily discharges (ice effect and recorder malfunction), which are fair. Several measurements of water temperature were made during the year. Water-quality records for some prior periods have been collected at this location.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 650 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jan 3	0700	677	5.21	Aug 20	2315	738	5.51
Aug 14	1545	659	5.12	Aug 26	2100	1,170	7.52
Aug 20	0245	904	6.30	Sep 16	1445	*1,610	*9.37

Minimum discharge, 5.0 ft^3/s, Jul 19-20.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	12	13	13	16	25	56	16	11	13	52	14
2	10	11	12	9.6	58	18	33	16	9.7	12	9.6	14
3	12	10	11	173	24	29	25	16	9.0	13	7.7	13
4	26	9.9	12	24	21	44	49	15	8.6	11	7.3	39
5	13	10	13	19	18	22	47	15	9.0	10	6.9	77
6	12	11	13	20	17	38	26	14	8.9	8.8	7.0	27
7	11	11	11	15	24	32	24	14	8.7	7.8	7.7	44
8	129	12	20	13	21	23	22	20	9.2	5.7	8.4	55
9	24	12	27	47	17	22	34	14	9.2	6.0	6.8	66
10	16	12	12	26	16	22	30	12	10	8.6	6.7	27
11	13	27	13	17	15	19	58	13	8.5	8.6	7.7	19
12	11	13	12	17	35	19	35	14	9.1	6.6	8.2	e17
13	10	12	13	25	24	17	26	13	26	6.2	8.2	e16
14	9.5	13	12	27	17	24	24	11	36	5.8	82	15
15	9.4	12	12	131	16	53	26	13	16	6.5	14	40
16	9.6	13	10	40	16	39	29	11	9.9	7.9	9.5	759
17	11	12	11	31	22	40	24	11	37	6.5	8.1	78
18	11	12	10	195	89	31	22	11	17	6.4	7.1	36
19	10	12	10	38	27	24	19	12	11	5.7	6.5	26
20	9.7	15	11	25	22	23	18	11	27	7.3	287	38
21	9.7	15	12	24	20	85	19	11	15	5.6	81	78
22	9.7	13	12	24	18	77	24	11	11	90	17	48
23	10	13	11	24	17	31	32	40	11	8.5	12	28
24	11	12	12	121	17	26	24	47	11	7.0	31	25
25	12	12	12	32	16	24	20	15	11	7.4	27	24
26	11	51	13	26	17	24	17	11	9.7	6.3	255	22
27	9.9	15	11	23	18	21	16	11	10	7.1	80	21
28	10	13	12	20	55	24	15	11	11	45	e45	26
29	11	13	15	17	---	20	15	13	10	12	e24	29
30	10	13	14	17	---	20	17	13	11	13	16	107
31	11	---	12	16	---	21	---	10	---	11	14	---
TOTAL	484.5	421.9	394	1249.6	693	937	826	465	401.5	376.3	1160.4	1828
MEAN	15.6	14.1	12.7	40.3	24.8	30.2	27.5	15.0	13.4	12.1	37.4	60.9
MAX	129	51	27	195	89	85	58	47	37	90	287	759
MIN	9.4	9.9	10	9.6	15	17	15	10	8.5	5.6	6.5	13
CFSM	.75	.67	.61	1.93	1.18	1.45	1.32	.72	.64	.58	1.79	2.92
IN.	.86	.75	.70	2.22	1.23	1.67	1.47	.83	.71	.67	2.07	3.25

e Estimated

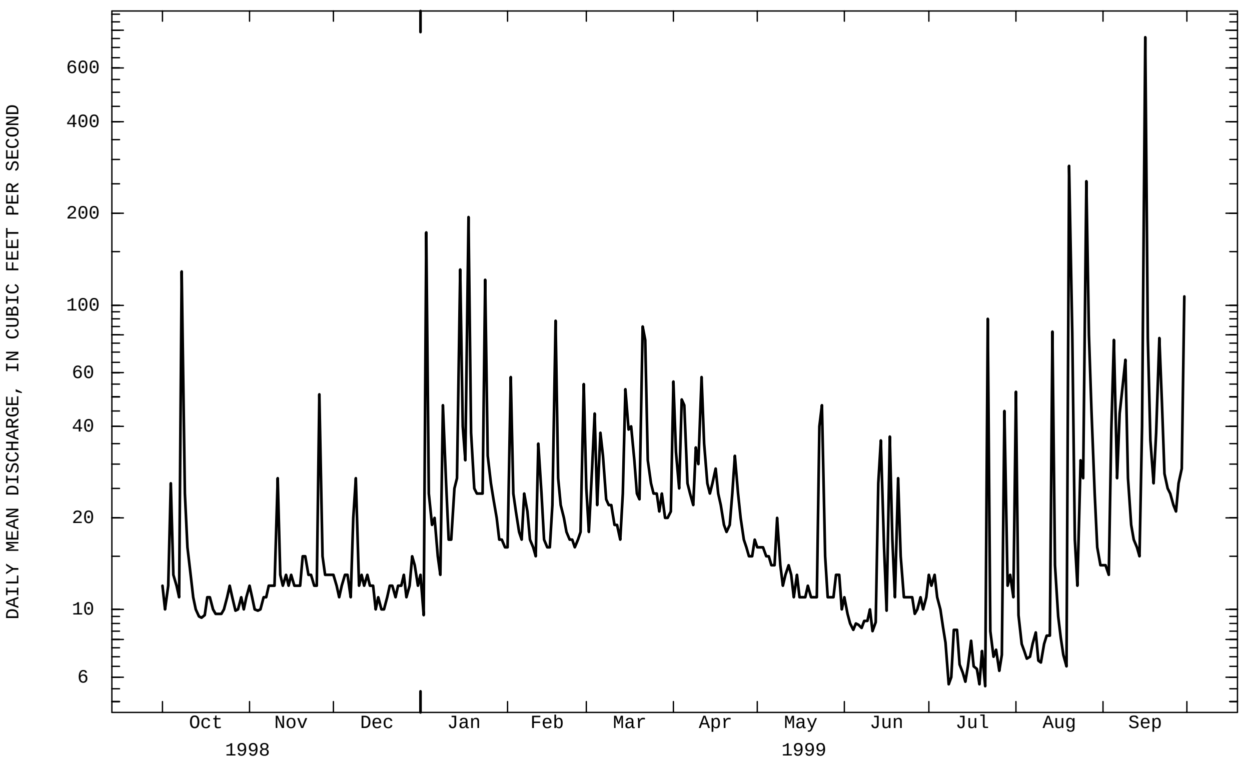
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1983 - 1999, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	20.7	29.9	31.2	34.2	34.3	43.5	38.3	37.6	25.9	26.4	21.8	23.0
MAX	45.3	55.4	91.0	69.5	57.5	90.2	81.6	80.5	50.7	72.7	46.0	60.9
(WY)	1997	1997	1997	1996	1994	1994	1983	1989	1996	1996	1996	1999
MIN	10.4	14.1	12.7	16.9	18.5	21.4	18.5	14.5	9.23	8.94	10.0	7.29
(WY)	1983	1999	1999	1992	1992	1985	1985	1986	1986	1986	1985	1986

01583600 BEAVERDAM RUN AT COCKEYSVILLE, MD--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1983 - 1999	
ANNUAL TOTAL	11777.4		9237.2			
ANNUAL MEAN	32.3		25.3		30.5	
HIGHEST ANNUAL MEAN					45.8	1996
LOWEST ANNUAL MEAN					17.2	1986
HIGHEST DAILY MEAN	344	Mar 9	759	Sep 16	903	Jan 19 1996
LOWEST DAILY MEAN	9.4	Oct 15	5.6	Jul 21	5.5	(a)
ANNUAL SEVEN-DAY MINIMUM	10	Oct 14	6.4	Jul 13	5.8	Aug 10 1986
INSTANTANEOUS PEAK FLOW			1610	Sep 16	(b)3360	Jul 1 1984
INSTANTANEOUS PEAK STAGE			9.37	Sep 16	(c)12.10	Jul 1 1984
INSTANTANEOUS LOW FLOW			5.0	(d)	4.1	Oct 1 1986
ANNUAL RUNOFF (CFSM)	1.54		1.21		1.46	
ANNUAL RUNOFF (INCHES)	20.96		16.44		19.86	
10 PERCENT EXCEEDS	62		44		52	
50 PERCENT EXCEEDS	21		15		22	
90 PERCENT EXCEEDS	11		8.7		11	

a Aug. 16, 1986, Sept. 1, 1992.
b From rating curve extended above 1,000 ft^3/s.
c From floodmarks.
d July 19, 20.



DAILY MEAN DISCHARGE - 1999 WATER YEAR

01583980 MINEBANK RUN AT LOCH RAVEN, MD

LOCATION.--Lat 39°24’59", long 76°32’48", Baltimore County, Hydrologic Unit 02060003, on left bank 15 ft downtream from bridge on lane leading to Cromwell Valley Park-Willow Grove Farm, 0.3 mi off Cromwell Bridge Road, 0.4 mi west of Loch Raven, and 0.6 mi upstream from mouth.

DRAINAGE AREA.--2.90 mi^2.

PERIOD OF RECORD.--October 1996 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 185 ft above sea level, from topographic map.

REMARKS.--Records good except those above 150 ft^3/s and estimated daily discharges (ice effect), which are fair. Several measurements of water temperature were made during the year.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 500 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Aug 14	1535	1,230	6.35	Sep 9	1745	*1,650	*7.34
Aug 20	2130	746	5.29	Sep 16	1120	867	5.61
Aug 26	1830	955	5.83	Sep 16	1240	739	5.27

Minimum discharge, 0.08 ft^3/s, Jul 20.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.83	.45	.58	e.58	1.1	2.0	5.2	1.3	.83	1.5	7.2	.85
2	.78	.45	.58	e.58	8.8	1.5	1.9	1.3	.96	1.3	2.4	.78
3	.79	.45	.58	22	1.7	5.9	1.5	1.3	.83	1.0	2.2	.72
4	2.5	.53	.53	1.9	1.6	6.2	7.3	1.3	.83	.99	2.0	6.9
5	.91	.65	.45	1.5	1.4	2.0	3.7	1.3	.83	.99	1.4	14
6	.83	.59	.52	1.4	1.2	5.0	1.9	1.2	.77	.90	.83	2.0
7	.83	.45	.51	1.3	1.6	2.4	1.8	1.0	.68	.83	.35	3.2
8	9.2	.45	1.0	1.3	1.4	1.7	1.6	3.6	.75	.75	.35	5.6
9	1.7	.45	3.0	6.3	1.1	1.8	5.2	1.1	.74	.59	.49	98
10	1.1	.45	.76	1.8	.99	2.3	2.1	.99	.69	.54	.74	7.4
11	.74	2.0	.65	1.6	.99	1.7	11	.99	.75	.72	.35	3.4
12	.69	.73	.58	2.1	3.6	1.5	2.8	.94	.71	.99	.31	2.1
13	.69	.69	1.0	3.1	1.5	1.5	2.1	.83	2.8	.99	.31	1.6
14	1.3	.57	.76	2.8	1.1	3.2	1.9	.83	2.4	.99	31	1.5
15	.69	.53	.69	16	.99	8.5	1.9	.76	1.1	1.2	1.2	5.9
16	.69	.58	.69	3.1	.99	5.2	2.4	.69	.99	.88	.51	150
17	.69	.58	.63	2.2	2.2	3.5	1.8	.69	3.0	.35	.54	6.2
18	.63	.58	.58	15	13	2.5	1.6	.69	1.3	.35	.48	3.1
19	.53	.58	.58	3.4	2.0	2.1	1.6	.69	.99	.35	.45	2.3
20	.45	.58	.58	2.3	1.7	1.9	1.5	.69	7.7	.32	20	1.7
21	.46	.84	.58	1.9	1.5	15	1.8	.69	1.8	.31	2.9	6.8
22	.45	.69	.54	1.7	1.3	7.6	2.5	.69	1.1	21	.86	3.8
23	.45	.69	.58	1.5	1.2	3.0	2.4	3.5	.99	.94	.74	1.4
24	.41	.69	.58	13	1.3	2.4	1.7	11	.90	.75	3.1	1.1
25	.41	.69	.56	2.6	1.3	2.1	1.5	1.4	.76	.69	5.1	.86
26	.45	4.8	.58	1.9	1.3	1.9	1.5	1.2	.69	.69	46	.74
27	.45	.72	.58	1.7	1.3	1.8	1.5	1.2	.69	.69	5.1	.70
28	.45	.69	.58	1.6	7.2	2.4	1.3	1.1	.70	4.3	1.4	.60
29	.45	.64	.58	1.5	---	1.7	1.3	1.0	.69	.84	1.0	1.6
30	.45	.58	.67	1.3	---	1.7	1.3	.99	.69	.71	.96	13
31	.45	---	e.60	1.3	---	1.6	---	.90	---	.45	.89	---
TOTAL	31.45	23.37	21.68	120.26	65.36	103.6	77.6	45.86	38.66	47.90	141.16	347.85
MEAN	1.01	.78	.70	3.88	2.33	3.34	2.59	1.48	1.29	1.55	4.55	11.6
MAX	9.2	4.8	3.0	22	13	15	11	11	7.7	21	46	150
MIN	.41	.45	.45	.58	.99	1.5	1.3	.69	.68	.31	.31	.60
CFSM	.35	.27	.24	1.34	.80	1.15	.89	.51	.44	.53	1.57	4.00
IN.	.40	.30	.28	1.54	.84	1.33	1.00	.59	.50	.61	1.81	4.46

e Estimated

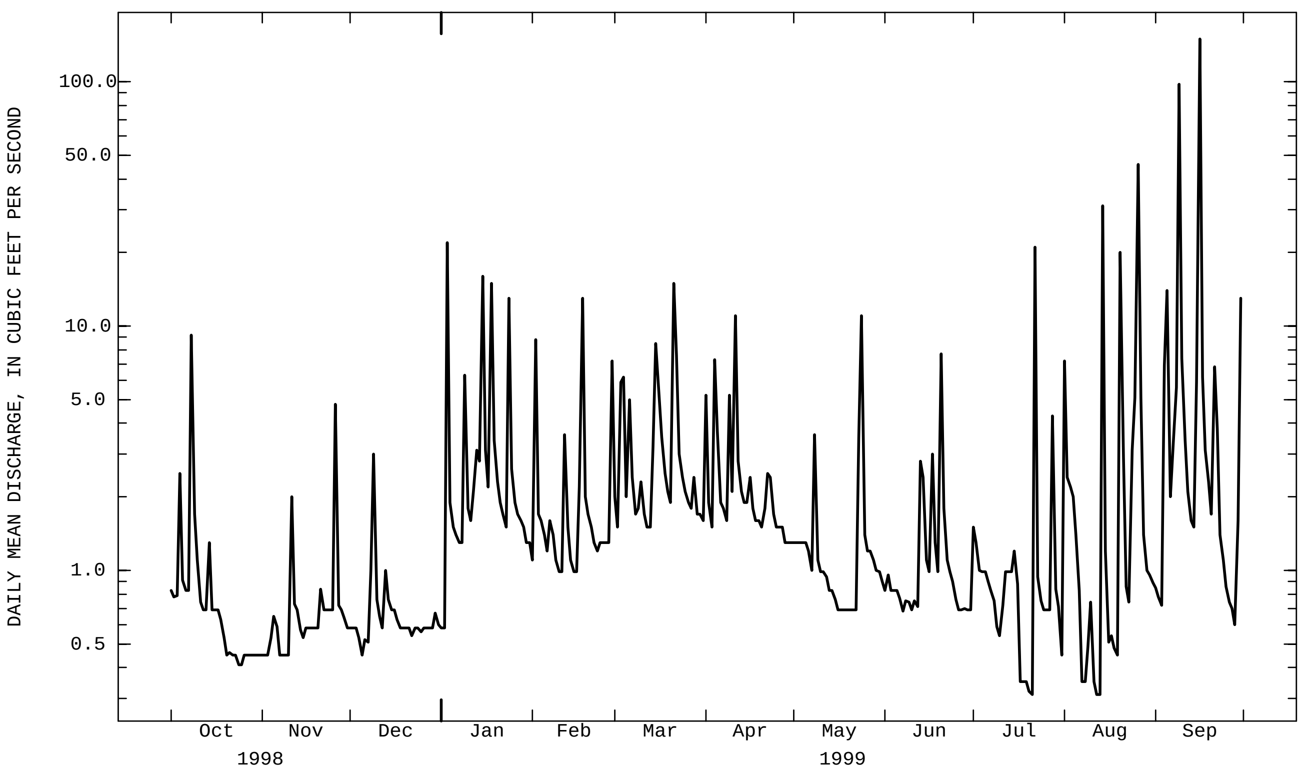
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1997 - 1999, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1.99	3.47	4.30	4.92	5.05	6.49	3.71	3.12	3.24	1.56	2.81	6.09
MAX	3.69	5.01	9.99	5.83	8.31	9.03	4.32	4.94	5.51	2.18	4.55	11.6
(WY)	1997	1998	1997	1998	1998	1998	1997	1998	1998	1998	1999	1999
MIN	1.01	.78	.70	3.88	2.33	3.34	2.59	1.48	1.29	.96	1.86	2.24
(WY)	1999	1999	1999	1999	1999	1999	1999	1999	1999	1997	1997	1998

01583980 MINEBANK RUN AT LOCH RAVEN, MD--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1997 - 1999	
ANNUAL TOTAL	1412.48		1064.75			
ANNUAL MEAN	3.87		2.92		3.88	
HIGHEST ANNUAL MEAN					4.37	1997
LOWEST ANNUAL MEAN					2.92	1999
HIGHEST DAILY MEAN	65	Jun 13	150	Sep 16	150	Sep 16 1999
LOWEST DAILY MEAN	.41	Oct 24	.31	(a)	.31	Jul 21 1999
ANNUAL SEVEN-DAY MINIMUM	.44	Oct 22	.41	Aug 7	.41	Aug 7 1999
INSTANTANEOUS PEAK FLOW			1650	Sep 9	(b)1960	Sep 2 1997
INSTANTANEOUS PEAK STAGE			7.34	Sep 9	7.94	Sep 2 1997
INSTANTANEOUS LOW FLOW			.08	Jul 20	.08	Jul 20 1999
ANNUAL RUNOFF (CFSM)	1.33		1.01		1.34	
ANNUAL RUNOFF (INCHES)	18.12		13.66		18.19	
10 PERCENT EXCEEDS	8.0		5.1		7.3	
50 PERCENT EXCEEDS	1.8		1.1		1.8	
90 PERCENT EXCEEDS	.58		.52		.65	

a July 21, Aug. 12-13.
b From rating curve extended above 150 ft^3/s on basis of contracted-opening and flow-over-road measurement of peak flow.



DAILY MEAN DISCHARGE - 1999 WATER YEAR

01584050 LONG GREEN CREEK AT GLEN ARM, MD

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

DRAINAGE AREA.--9.40 mi^2.

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

GAGE.--Water-stage recorder. Elevation of gage is 230 ft above sea level, from topographic map.

REMARKS.-- Records good except those for estimated daily discharges (ice effect) which are fair. Several measurements of water temperature were made during the year. Water-quality records for some prior periods have been collected at this location.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 300 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Aug 20	2300	303	3.51	Sep 16	1415	*1,620	*5.53
Sep 9	1915	566	4.19				

Minimum discharge, 1.1 ft^3/s, Aug 7, 8, 12, 13.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.4	3.1	3.4	3.1	5.9	8.4	9.3	5.6	3.5	2.4	3.3	2.8
2	3.0	3.1	3.3	3.0	15	6.7	8.5	5.6	3.3	2.4	2.2	2.7
3	3.1	3.1	3.3	38	e8.0	6.8	7.4	5.4	4.4	2.1	1.6	2.7
4	4.8	3.1	3.3	7.1	e6.7	10	8.1	5.5	4.2	2.2	1.5	3.5
5	3.8	3.0	3.3	e4.5	6.6	7.6	8.8	5.2	3.9	2.1	1.5	4.6
6	3.5	3.0	3.3	e4.2	6.1	8.5	7.5	5.3	3.9	2.2	1.3	3.6
7	3.5	3.1	3.3	e4.1	6.7	9.1	7.2	5.3	3.7	2.2	1.2	5.9
8	9.4	3.2	3.9	4.1	7.3	6.8	6.9	7.3	3.5	2.3	1.3	5.3
9	5.9	3.3	5.3	9.0	6.4	6.5	7.6	5.1	2.7	1.6	1.5	68
10	4.8	3.3	3.8	6.7	6.2	7.0	8.0	4.8	2.5	1.6	1.3	17
11	4.1	4.6	3.5	4.6	5.9	6.6	12	4.6	2.7	1.7	1.4	6.8
12	3.8	3.6	3.3	5.3	6.9	6.2	10	4.8	3.7	2.1	1.2	5.3
13	3.8	3.5	3.8	13	7.9	6.1	8.4	4.7	4.6	2.3	1.2	4.6
14	3.7	3.5	3.6	8.3	6.2	6.9	7.7	4.6	5.4	2.2	8.6	4.2
15	3.5	3.5	3.3	58	6.0	12	7.6	4.4	4.1	2.0	2.7	5.9
16	3.5	3.3	3.3	19	6.1	14	8.1	4.2	3.0	1.9	1.7	396
17	3.5	3.3	3.3	12	6.7	12	7.1	4.3	3.6	1.7	1.7	25
18	3.5	3.3	3.3	45	20	9.7	6.4	4.4	4.1	1.7	1.9	14
19	3.5	3.3	3.3	11	9.5	8.4	6.6	4.4	3.0	1.6	1.5	11
20	3.4	3.5	3.3	6.8	7.9	7.7	6.4	4.1	4.9	1.6	33	10
21	3.3	3.7	3.3	5.5	7.0	20	6.3	3.9	4.3	1.7	21	15
22	3.3	3.4	3.3	5.4	6.1	27	6.9	4.4	3.3	6.1	3.2	17
23	3.3	3.3	3.1	5.1	5.6	11	7.3	7.0	2.9	2.4	2.6	11
24	3.3	3.3	3.3	28	5.9	9.7	6.4	7.5	2.7	2.0	7.2	9.5
25	3.1	3.3	3.2	11	5.7	8.8	5.9	4.0	2.6	1.7	7.6	8.7
26	3.1	6.9	3.0	8.6	5.6	8.2	5.8	3.6	2.6	1.5	48	7.9
27	3.1	3.9	3.1	9.1	5.4	7.9	5.3	3.3	2.5	1.5	12	8.2
28	3.1	3.5	3.3	8.4	9.4	8.1	5.6	4.1	2.6	2.0	5.0	8.5
29	3.1	3.5	3.7	7.2	---	7.3	5.7	4.2	2.6	2.1	3.8	8.3
30	3.1	3.5	3.7	6.7	---	6.8	5.6	3.4	2.2	1.7	3.2	39
31	3.1	---	3.1	5.9	---	6.7	---	3.6	---	1.5	3.0	---
TOTAL	116.4	105.0	106.3	367.7	208.7	288.5	220.4	148.6	103.0	64.1	188.2	732.0
MEAN	3.75	3.50	3.43	11.9	7.45	9.31	7.35	4.79	3.43	2.07	6.07	24.4
MAX	9.4	6.9	5.3	58	20	27	12	7.5	5.4	6.1	48	396
MIN	3.0	3.0	3.0	3.0	5.4	6.1	5.3	3.3	2.2	1.5	1.2	2.7
CFSM	.40	.37	.36	1.26	.79	.99	.78	.51	.37	.22	.65	2.60
IN.	.46	.42	.42	1.46	.83	1.14	.87	.59	.41	.25	.74	2.90

e Estimated

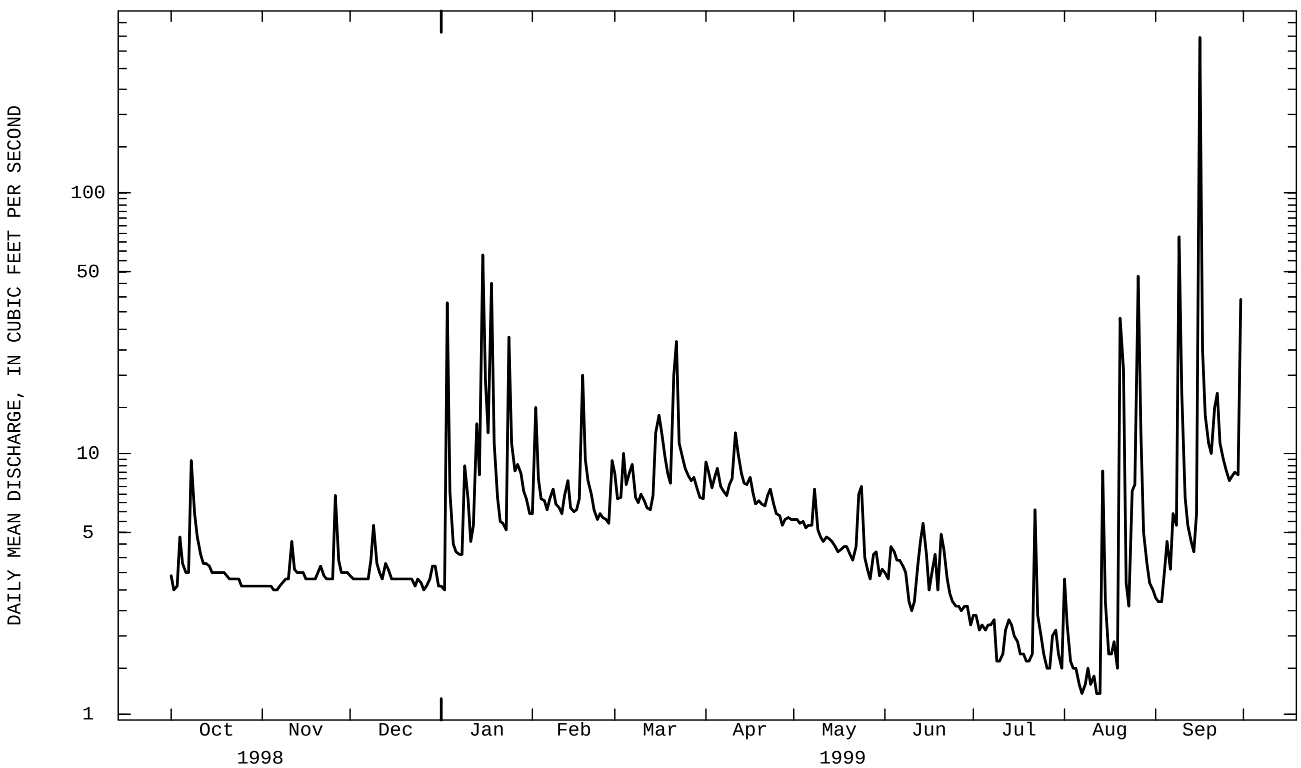
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1976 - 1999, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	7.76	9.03	11.7	15.1	14.7	17.1	14.2	12.9	10.2	8.97	7.75	8.36
MAX	25.1	18.0	33.0	38.4	39.3	39.2	35.3	28.1	18.5	28.0	26.9	32.2
(WY)	1980	1980	1997	1979	1979	1994	1983	1989	1996	1989	1978	1979
MIN	2.85	3.05	3.43	3.67	6.16	6.02	7.35	4.79	3.43	2.07	2.87	2.41
(WY)	1998	1982	1999	1981	1992	1981	1999	1999	1999	1999	1995	1986

01584050 LONG GREEN CREEK AT GLEN ARM, MD--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1976 - 1999	
ANNUAL TOTAL	3941.0		2648.9			
ANNUAL MEAN	10.8		7.26		11.5	
HIGHEST ANNUAL MEAN					18.1	1979
LOWEST ANNUAL MEAN					5.33	1981
HIGHEST DAILY MEAN	115	Mar 21	396	Sep 16	408	Jan 26 1978
LOWEST DAILY MEAN	3.0	(a)	1.2	(b)	1.2	(b)
ANNUAL SEVEN-DAY MINIMUM	3.1	Oct 31	1.3	Aug 7	1.3	Aug 7 1999
INSTANTANEOUS PEAK FLOW			1620	Sep 16	(c)3250	Jul 1 1984
INSTANTANEOUS PEAK STAGE			5.53	Sep 16	6.70	Jul 1 1984
INSTANTANEOUS LOW FLOW			1.1	(d)	(f)1.0	Jan 29 1977
ANNUAL RUNOFF (CFSM)	1.15		.77		1.22	
ANNUAL RUNOFF (INCHES)	15.60		10.48		16.58	
10 PERCENT EXCEEDS	19		9.7		18	
50 PERCENT EXCEEDS	6.5		4.2		8.3	
90 PERCENT EXCEEDS	3.3		2.2		3.4	

a Oct. 2, Nov. 6, Dec. 26.
b Aug. 7, 12, 13, 1999.
c From rating curve extended above 1,300 ft^3/s.
d Aug. 7, 8, 12, 13.
f Result of freezeup.



DAILY MEAN DISCHARGE - 1999 WATER YEAR

01584500 LITTLE GUNPOWDER FALLS AT LAUREL BROOK, MD

LOCATION.--Lat 39°30'18", long 76°25'56", Baltimore County, Hydrologic Unit 02060003, on right bank 700 ft upstream from Laurel Brook, 750 ft upstream from bridge on Bottom Road, 5 mi southwest of Bel Air, and 10.5 mi upstream from mouth.

DRAINAGE AREA.--36.1 mi^2.

PERIOD OF RECORD.--October 1926 to 1970, October 1998 to September 1999. Monthly discharge only for some periods, published in WSP 1302. Annual maximums, water years 1971-86.

REVISED RECORDS.--WSP 726: 1927-31, drainage area. WSP 1502: 1936 (M), 1944-46, 1947-48 (P), 1949 (M), 1950-51.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 261.43 ft above sea level (city of Baltimore benchmark).

REMARKS.--Records good except those for estimated daily discharges (ice effect), which are fair. Several measurements of water temperature were made during the year.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,400 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Sep 16	1630	*4,480	*7.30	No other peak greater than base discharge.			

Minimum discharge, 12 ft^3/s, Sep 3, 4.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16	19	20	e19	29	50	54	28	19	15	17	13
2	16	19	20	19	64	36	53	28	18	16	17	12
3	16	19	19	193	44	33	41	27	23	14	14	12
4	20	19	19	43	36	85	38	28	19	15	16	12
5	19	19	19	31	34	48	41	27	18	16	14	17
6	19	19	19	e24	32	45	36	27	18	13	13	18
7	19	19	19	e21	33	64	35	27	17	13	13	34
8	76	19	20	21	42	38	33	43	17	13	13	23
9	40	19	29	40	34	35	35	30	16	13	13	65
10	31	19	22	41	32	35	50	27	16	13	13	52
11	24	24	21	26	31	35	67	26	17	13	13	21
12	21	22	20	26	32	32	73	25	16	13	13	17
13	21	20	20	51	50	31	44	28	17	13	13	15
14	20	20	20	45	34	33	38	25	21	13	18	15
15	20	20	20	204	31	47	36	24	25	13	14	17
16	20	20	20	86	30	53	38	23	17	13	13	1530
17	20	20	20	79	31	68	38	23	18	13	13	148
18	20	20	20	284	94	60	35	23	24	13	13	52
19	19	20	19	82	50	43	33	23	18	13	13	40
20	19	20	19	46	39	38	33	22	21	13	103	36
21	19	20	19	40	35	47	33	21	24	13	42	59
22	19	20	19	39	31	151	39	21	20	37	17	70
23	18	19	19	39	30	53	36	31	18	16	14	42
24	18	19	19	156	30	47	35	45	16	13	15	36
25	19	19	19	68	29	43	32	36	16	13	15	32
26	18	34	e19	46	29	39	31	25	16	13	19	30
27	18	24	19	40	29	37	30	23	15	13	20	29
28	18	21	19	36	50	38	29	21	15	13	17	29
29	18	20	19	34	---	37	29	21	15	13	16	29
30	19	20	20	31	---	35	28	20	15	13	14	110
31	19	---	20	30	---	33	---	19	---	13	13	---
TOTAL	679	612	616	1940	1065	1469	1173	817	545	441	571	2615
MEAN	21.9	20.4	19.9	62.6	38.0	47.4	39.1	26.4	18.2	14.2	18.4	87.2
MAX	76	34	29	284	94	151	73	45	25	37	103	1530
MIN	16	19	19	19	29	31	28	19	15	13	13	12
CFSM	.61	.57	.55	1.73	1.05	1.31	1.08	.73	.50	.39	.51	2.41
IN.	.70	.63	.63	2.00	1.10	1.51	1.21	.84	.56	.45	.59	2.69

e Estimated

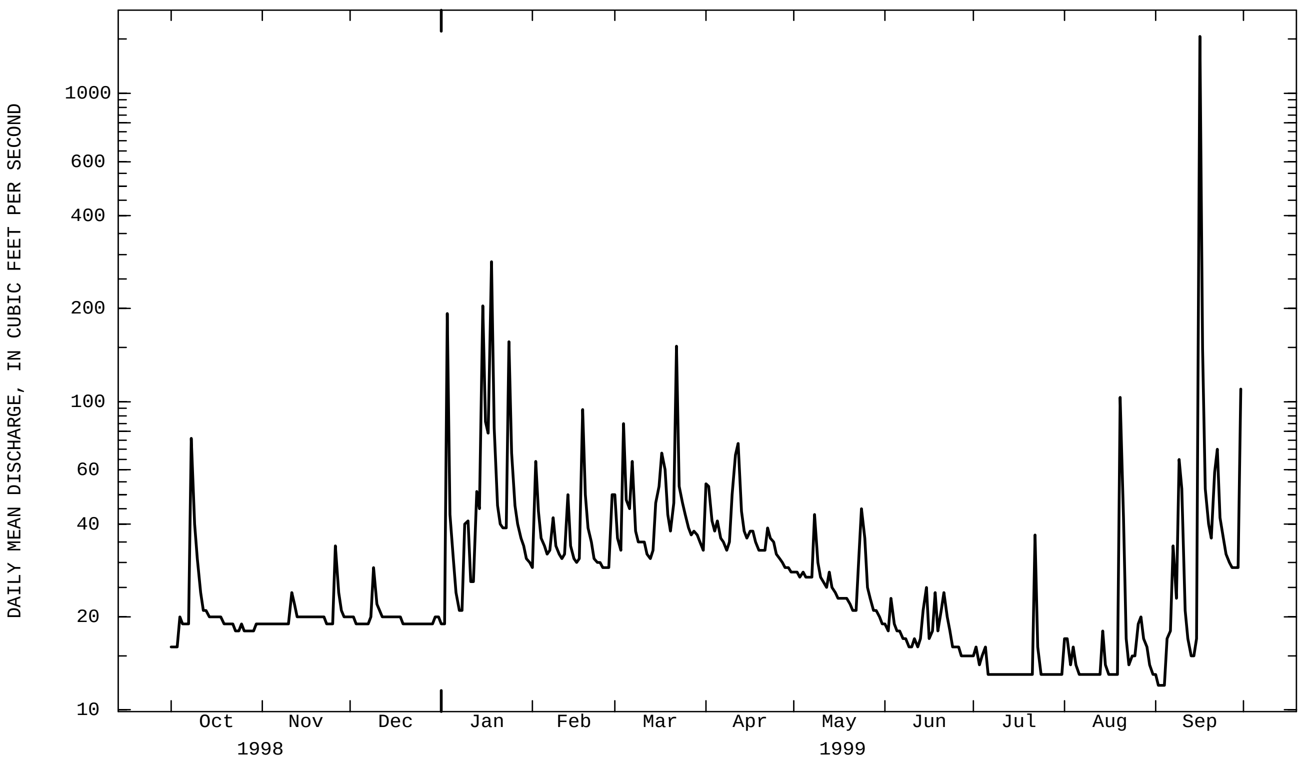
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1927 - 1970, 1999, BY WATER YEAR (WY)

MEAN	30.0	38.9	40.0	49.8	57.1	58.8	58.9	49.2	42.0	35.2	38.5	32.4
MAX	81.8	118	80.9	110	115	129	120	133	161	88.5	215	117
(WY)	1930	1927	1951	1936	1936	1936	1952	1952	1928	1952	1928	1934
MIN	7.83	9.29	12.1	16.2	20.8	29.1	23.8	17.2	14.3	7.44	5.33	8.79
(WY)	1932	1932	1932	1966	1932	1931	1963	1963	1969	1966	1966	1932

01584500 LITTLE GUNPOWDER FALLS AT LAUREL BROOK, MD--Continued

SUMMARY STATISTICS	FOR 1999 WATER YEAR		WATER YEARS 1927 - 1970 1999	
ANNUAL TOTAL	12543			
ANNUAL MEAN	34.4		43.9	
HIGHEST ANNUAL MEAN			81.5	1952
LOWEST ANNUAL MEAN			20.2	1931
HIGHEST DAILY MEAN	1530	Sep 16	2800	Aug 23 1933
LOWEST DAILY MEAN	12	(a)	(e)3.0	(b)
ANNUAL SEVEN-DAY MINIMUM	13	Jul 6	3.2	Sep 6 1966
INSTANTANEOUS PEAK FLOW	4480	Sep 16	(c)9200	Aug 23 1933
INSTANTANEOUS PEAK STAGE	7.30	Sep 16	10.30	Aug 23 1933
INSTANTANEOUS LOW FLOW	12	(d)	UNKNOWN	
ANNUAL RUNOFF (CFSM)	.95		1.22	
ANNUAL RUNOFF (INCHES)	12.93		16.54	
10 PERCENT EXCEEDS	50		72	
50 PERCENT EXCEEDS	21		32	
90 PERCENT EXCEEDS	13		15	

a Sept. 2-4.
e Estimated.
b Sept. 7-11, 1966.
c From rating curve extended above 2,300 ft^3/s on basis of slope-area measurement of peak flow.
d Sept. 3, 4.



DAILY MEAN DISCHARGE - 1999 WATER YEAR

01585090 WHITEMARSH RUN NEAR FULLERTON, MD

LOCATION.--Lat 39°22'46", long 76°29'46", Baltimore County, Hydrologic Unit 02060003, on right bank 200 ft downstream of Route 43 bridge, 1.0 mi west of White Marsh, and 5.0 mi upstream from mouth.

DRAINAGE AREA.--2.73 mi^2.

PERIOD OF RECORD.--January 1995 to current year.

GAGE.--Water-stage recorder. Datum of gage is 125 ft above sea level, from topographic map.

REMARKS.--Records good except those for estimated daily discharges (backwater from leaves, missing record), which are fair. Several measurements of water temperature were made during the year.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 750 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jul 22	0315	904	4.16	Aug 26	1915	*3,360	*5.93
Aug 14	1600	1,960	5.10	Sep 16	1230	1,910	5.07

Minimum discharge, 0.00 ft^3/s, Aug 14.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.23	e.50	.71	.43	1.2	3.5	10	1.2	e.43	.64	14	.24
2	.18	e.43	.72	.41	20	1.7	3.2	1.1	.38	.45	.44	.21
3	.19	e.38	.72	53	2.5	5.3	2.0	1.2	.33	.22	.18	.21
4	3.4	e.33	.80	2.8	1.8	7.7	19	1.3	.30	.18	.12	18
5	.52	e.37	.86	1.1	1.4	1.9	8.5	1.2	.32	.16	.27	33
6	e.32	e.40	1.0	.76	1.4	10	2.6	1.1	.30	.15	.15	6.7
7	e2.5	.36	.96	.68	2.0	3.7	2.1	1.2	.38	.14	.04	8.7
8	e13	.35	2.7	.69	1.7	1.7	1.9	4.9	.40	.19	1.3	1.3
9	e2.5	.34	5.6	14	1.1	1.6	12	1.2	.26	.07	.40	18
10	e.90	.35	.74	2.2	.96	2.4	3.4	1.1	.34	.06	.09	4.9
11	e.60	5.0	.61	1.2	.77	1.7	22	1.1	.43	.08	.04	1.2
12	e.50	.62	.58	2.5	6.4	1.3	4.1	1.3	.31	.55	.03	.77
13	e2.5	.36	2.4	3.8	2.1	1.2	1.9	.94	4.0	.43	.02	.53
14	e11	.28	.82	4.3	1.1	5.8	1.4	.86	6.3	.12	51	.58
15	e.70	.28	.58	36	1.0	27	1.4	.78	.97	.08	2.0	9.3
16	e.30	.31	.51	3.0	.95	7.3	1.6	.76	.41	.06	.45	418
17	e.30	.34	.46	1.7	3.2	3.2	1.3	.78	7.7	.05	.25	9.9
18	e.29	.36	.46	26	28	2.1	1.1	.80	1.4	.04	.20	2.4
19	e.28	.36	.46	3.1	3.1	1.6	.99	.88	.44	.03	.12	1.2
20	e.27	.86	.46	1.7	1.9	1.4	1.1	.70	13	.03	13	1.0
21	e.25	1.1	.46	1.5	1.6	39	1.6	.69	2.0	.06	3.4	17
22	e.23	.48	.60	1.5	1.4	17	3.2	.79	.70	53	.54	9.6
23	e.34	.46	.49	1.8	1.2	3.5	e1.3	4.7	.42	1.3	.23	1.7
24	e.30	.46	1.0	39	1.3	2.7	e1.3	23	.30	.50	5.6	1.1
25	e.26	.46	.68	3.2	1.2	2.3	e1.2	1.9	.30	.41	38	.98
26	e.21	12	.58	1.8	1.2	1.9	e1.3	.95	.28	.33	161	.88
27	e.30	1.0	.52	1.6	1.1	1.9	e1.3	e.80	.31	.27	8.5	1.6
28	e.35	.75	.53	1.5	17	3.4	1.3	e.70	.31	7.4	1.6	.94
29	e.43	.72	1.1	1.3	---	1.9	1.3	e.60	.30	1.0	.64	3.1
30	e.35	.72	.75	1.2	---	1.6	1.2	e.54	.26	.30	.35	33
31	e.30	---	.47	1.2	---	1.6	---	e.48	---	.17	.30	---
TOTAL	43.80	30.73	29.33	214.97	108.58	168.9	116.59	59.55	43.58	68.47	304.26	606.04
MEAN	1.41	1.02	.95	6.93	3.88	5.45	3.89	1.92	1.45	2.21	9.81	20.2
MAX	13	12	5.6	53	28	39	22	23	13	53	161	418
MIN	.18	.28	.46	.41	.77	1.2	.99	.48	.26	.03	.02	.21
CFSM	.52	.38	.35	2.54	1.42	2.00	1.42	.70	.53	.81	3.60	7.40
IN.	.60	.42	.40	2.93	1.48	2.30	1.59	.81	.59	.93	4.15	8.26

e Estimated

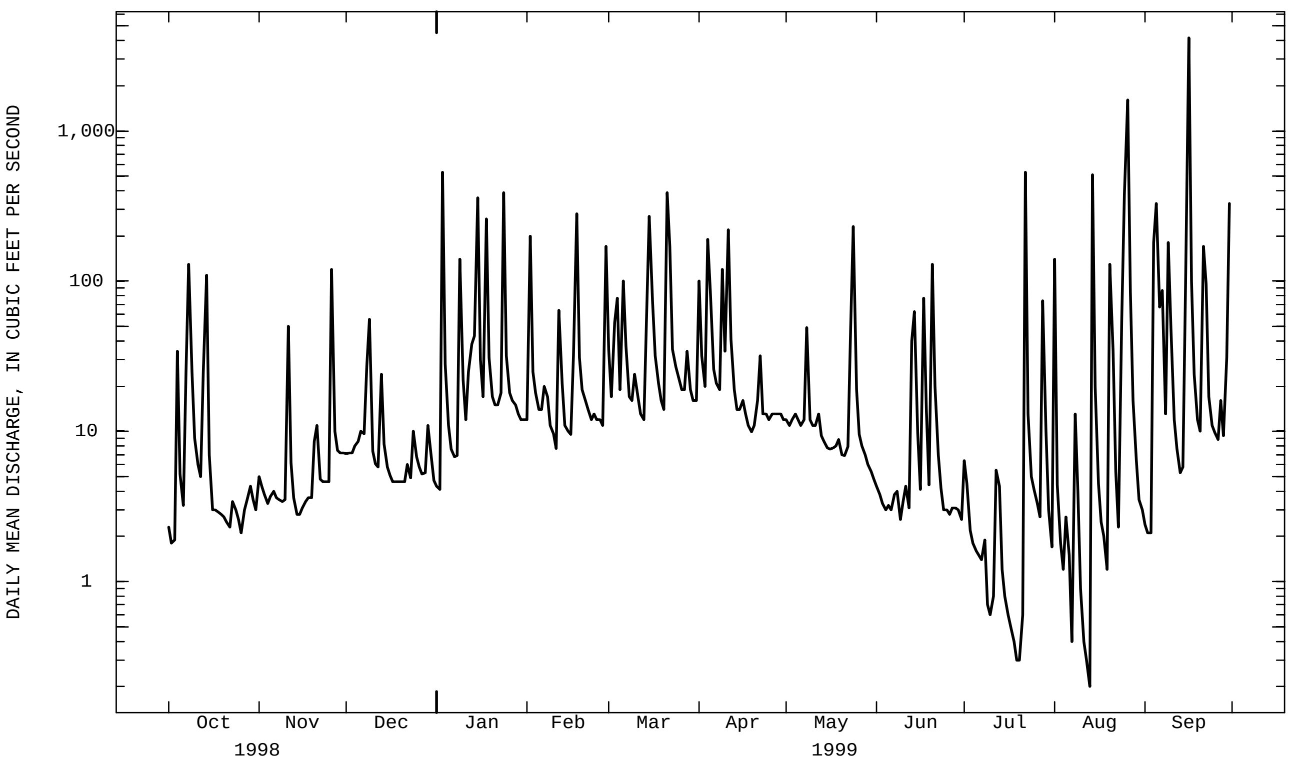
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1995 - 1999, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	4.75	5.06	4.85	8.53	5.73	7.45	4.02	4.08	4.88	2.67	3.99	6.70
MAX	10.8	7.49	12.6	13.2	12.0	13.1	6.58	6.88	13.5	7.22	9.81	20.2
(WY)	1996	1998	1997	1996	1998	1998	1996	1996	1996	1996	1999	1999
MIN	1.41	1.02	.95	5.47	2.95	4.61	1.99	1.64	1.44	.41	.96	2.41
(WY)	1999	1999	1999	1997	1995	1995	1995	1997	1995	1997	1995	1995

01585090 WHITEMARSH RUN NEAR FULLERTON, MD--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1995 - 1999	
ANNUAL TOTAL	1813.66		1794.80			
ANNUAL MEAN	4.97		4.92		5.66	
HIGHEST ANNUAL MEAN					7.35	1996
LOWEST ANNUAL MEAN					4.71	1997
HIGHEST DAILY MEAN	106	Jan 23	418	Sep 16	418	Sep 16 1999
LOWEST DAILY MEAN	.18	Oct 2	.02	Aug 13	.01	(a)
ANNUAL SEVEN-DAY MINIMUM	.26	Sep 27	.05	Jul 15	.02	Aug 23 1995
INSTANTANEOUS PEAK FLOW			3360	Aug 26	(b)3360	Aug 26 1999
INSTANTANEOUS PEAK STAGE			5.93	Aug 26	5.93	Aug 26 1999
INSTANTANEOUS LOW FLOW			.00	Aug 14	.00	(c)
ANNUAL RUNOFF (CFSM)	1.82		1.80		2.07	
ANNUAL RUNOFF (INCHES)	24.71		24.46		28.15	
10 PERCENT EXCEEDS	11		8.9		11	
50 PERCENT EXCEEDS	1.2		1.0		1.6	
90 PERCENT EXCEEDS	.36		.24		.33	

a Aug. 25-27, 1995.
b From rating curve extended above 120 ft^3/s.
c Aug. 26, 1995, Aug. 14, 1999.



DAILY MEAN DISCHARGE - 1999 WATER YEAR

01585095 NORTH FORK WHITEMARSH RUN NEAR WHITE MARSH, MD

LOCATION.--Lat 39°23'07", long 76°28'09", Baltimore County, Hydrologic Unit 02060003, on left bank 100 ft upstream of culverts under Baconsfield Drive, 0.6 mi upstream from confluence with Whitemarsh Run, 0.9 mi southeast of Perry Hall, and 2.1 mi east of White Marsh.

DRAINAGE AREA.--1.34 mi^2.

PERIOD OF RECORD.--April 1992 to current year.

GAGE.--Water-stage recorder. Datum of gage is 75 ft above sea level, from topographic map.

REMARKS.--Records good above 0.5 ft^3/s and fair below except those for estimated daily discharges (missing record), which are fair. Several measurements of water temperature were made during the year.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 250 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jul 22	0315	263	3.32	Aug 26	1930	*473	*4.84
Aug 25	2200	315	3.67	Sep 16	1145	446	4.65

Minimum discharge, 0.00 ft^3/s, Aug 6-8, 10-14.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.07	.20	.20	.21	.88	2.0	1.1	.28	.13	.11	4.4	.27
2	.04	.20	.17	.20	13	.89	1.0	.30	.23	.15	.10	.29
3	.04	.14	.17	27	1.4	2.4	.72	.37	.30	.11	.04	.34
4	4.1	.19	.19	.99	.88	3.8	.88	.36	.24	.10	.05	9.1
5	.18	.17	.20	.60	.74	.84	1.3	.41	.14	.04	.04	12
6	.14	.51	.20	.50	.72	6.6	.82	.42	.17	.04	.01	3.6
7	e.16	.20	.20	.50	1.3	2.3	.77	.42	.17	.04	.00	4.4
8	e8.0	.20	2.0	.41	1.1	.88	.83	1.6	.18	.02	.27	1.7
9	e2.0	.13	3.0	1.2	.69	1.2	5.4	.42	.15	.03	.07	11
10	e.70	.07	.32	1.1	.45	1.7	1.3	.46	.21	.03	.00	3.7
11	e.25	e2.5	.24	.67	.42	1.1	11	.58	.22	.03	.00	.97
12	.20	e.30	.15	.92	4.1	1.1	1.8	.58	.20	.79	.00	.74
13	5.8	e.15	1.5	1.2	1.2	1.0	.86	e.45	2.9	.25	.00	.66
14	2.6	e.14	.37	1.3	.65	4.1	.71	e.35	3.2	.06	10	.63
15	.25	e.14	.16	9.4	.65	20	.77	e.33	.41	.07	.56	4.5
16	.19	e.15	.11	1.5	.64	2.8	.75	e.31	.15	.04	.11	140
17	.14	e.17	.11	1.1	2.1	1.4	.65	e.31	3.6	.08	.11	2.7
18	.15	e.17	.11	15	16	.99	.54	e.35	.63	.15	.11	.86
19	.13	e.18	.11	1.5	1.5	.88	.38	e.39	.19	.40	.11	.56
20	.11	e.45	.11	1.1	.91	.88	.32	e.34	6.2	.19	4.5	.84
21	.13	e.53	.11	.93	.88	19	.60	e.33	.77	.11	1.2	11
22	.14	e.25	.27	.84	.61	7.3	1.1	e1.3	.27	20	.11	6.2
23	.12	e.23	.25	.80	.58	1.2	1.3	3.3	.21	.48	.08	1.1
24	.10	e.22	.55	19	.58	1.1	.54	10	.21	.16	3.7	.65
25	.11	.23	.23	1.5	.58	.86	.32	.82	.23	.14	22	.37
26	.11	7.7	.14	.97	.58	.75	.32	.50	.21	.18	35	.29
27	.15	.39	.14	.96	.58	.70	.30	.32	.17	.12	4.7	.57
28	.20	.32	.19	.88	11	.91	.28	.26	.59	3.1	1.1	.42
29	.20	.31	.66	.88	---	.67	.28	.17	.22	.34	.79	1.4
30	.18	.22	.36	.88	---	.57	.28	.15	.10	.10	.65	13
31	.20	---	.34	.88	---	.50	---	.13	---	.11	.49	---
TOTAL	26.89	16.76	12.86	94.92	64.72	90.42	37.22	26.31	22.60	27.57	90.30	233.86
MEAN	.87	.56	.41	3.06	2.31	2.92	1.24	.85	.75	.89	2.91	7.80
MAX	8.0	7.7	3.0	27	16	20	11	10	6.2	20	35	140
MIN	.04	.07	.11	.20	.42	.50	.28	.13	.10	.02	.00	.27
CFSM	.65	.42	.31	2.29	1.72	2.18	.93	.63	.56	.66	2.17	5.82
IN.	.75	.47	.36	2.64	1.80	2.51	1.03	.73	.63	.77	2.51	6.49

e Estimated

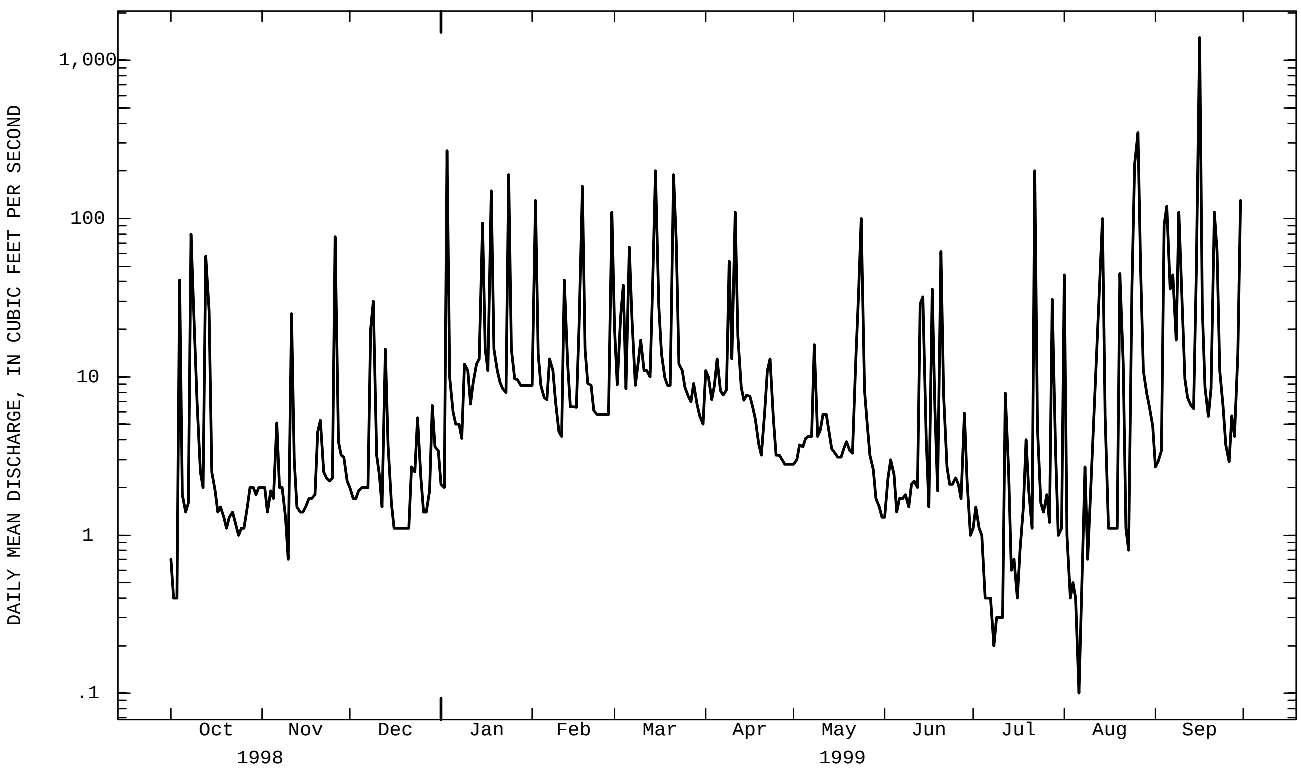
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1992 - 1999, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1.66	2.49	2.66	3.71	2.82	4.51	1.98	1.79	1.55	1.56	1.62	2.39
MAX	4.75	3.46	6.03	5.39	4.74	6.79	3.61	3.11	4.72	3.82	3.67	7.80
(WY)	1996	1998	1997	1996	1998	1993	1996	1996	1996	1996	1994	1999
MIN	.68	.56	.41	2.25	1.53	2.38	.92	.74	.59	.14	.43	.82
(WY)	1998	1999	1999	1993	1995	1996	1995	1997	1994	1997	1992	1997

01585095 NORTH FORK WHITEMARSH RUN NEAR WHITE MARSH, MD--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1992 - 1999	
ANNUAL TOTAL	814.43		744.43			
ANNUAL MEAN	2.23		2.04		2.43	
HIGHEST ANNUAL MEAN					3.39	1996
LOWEST ANNUAL MEAN					1.63	1995
HIGHEST DAILY MEAN	44	Jan 23	140	Sep 16	140	Sep 16 1999
LOWEST DAILY MEAN	.04	(a)	.00	(b)	.00	(b)
ANNUAL SEVEN-DAY MINIMUM	.07	Sep 27	.03	Jul 5	.03	Jul 5 1999
INSTANTANEOUS PEAK FLOW			473	Aug 26	(c)502	Jun 19 1996
INSTANTANEOUS PEAK STAGE			4.84	Aug 26	5.05	Jun 19 1996
INSTANTANEOUS LOW FLOW			.00	(d)	.00	(d)
ANNUAL RUNOFF (CFSM)	1.67		1.52		1.81	
ANNUAL RUNOFF (INCHES)	22.61		20.67		24.62	
10 PERCENT EXCEEDS	5.8		4.1		5.4	
50 PERCENT EXCEEDS	.62		.42		.67	
90 PERCENT EXCEEDS	.13		.11		.16	

a Oct. 2, 3.
b Aug. 7, 10-13, 1999.
c From rating curve extended above 200 ft^3/s.
d Aug. 6-8, 10-14, 1999.



DAILY MEAN DISCHARGE - 1999 WATER YEAR

01585100 WHITEMARSH RUN AT WHITE MARSH, MD

LOCATION.--Lat 39°22'15", long 76°26'46", Baltimore County, Hydrologic Unit 02060003, on left bank at upstream side of bridge on State Highway 7, 1.0 mi southwest of White Marsh, and 3.0 mi upstream from mouth.

DRAINAGE AREA.--7.61 mi^2.

PERIOD OF RECORD.--February 1959 to September 1989, March 1992 to current year.

REVISED RECORDS.--WDR MD-DE-73-1: 1960(M), 1967-68, 1969(M). WDR MD-DE-79-1: 1965-66(M).

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

REMARKS.--Records good except those for estimated daily discharges (backwater from leaves, flow bypassing gage), which are fair. Low flow affected by operations of sand and gravel plant in vicinity of gage. Several measurements of water temperature were made during the year. Water-quality records for some prior periods have been collected at this location.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 750 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jan 3	1030	1,010	5.40	Aug 26	2045	1,930	9.82
Jan 15	0845	969	5.21	Sep 16	1415	*2,450	*12.19
Aug 25	2330	1,190	6.29				

Minimum discharge, UNKNOWN.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.3	1.3	1.6	1.7	3.2	13	21	3.6	1.6	.90	17	1.5
2	.98	2.1	1.6	1.5	44	5.7	9.6	3.0	1.4	1.6	.95	1.5
3	1.1	1.4	1.7	282	9.0	7.3	5.5	2.9	1.3	.98	.77	1.4
4	11	1.2	1.7	13	5.4	19	29	3.1	1.1	.70	1.2	30
5	2.2	1.4	2.2	6.2	4.4	6.2	25	3.6	1.1	.62	.48	65
6	1.5	1.8	2.0	3.5	4.3	18	7.6	3.8	1.1	.53	.29	9.9
7	1.7	e1.5	1.9	3.3	5.7	16	5.7	3.6	1.2	.47	.45	28
8	41	e1.4	5.1	3.1	6.5	5.7	5.4	8.0	e1.2	.45	.57	5.5
9	9.1	e1.3	13	60	4.1	6.4	24	2.6	e.80	.39	1.9	37
10	3.4	e1.5	2.5	17	4.0	8.8	15	2.8	e.95	.38	.78	18
11	2.2	12	1.8	5.5	3.6	6.1	42	2.5	e1.2	.39	.53	4.5
12	2.0	2.3	1.7	9.1	14	4.6	17	3.3	e.90	.56	.44	3.1
13	8.3	e1.5	7.0	15	10	4.2	7.4	2.4	e8.0	2.7	.42	2.5
14	30	e1.2	2.8	15	4.4	12	5.7	1.9	15	.83	59	2.3
15	2.3	e1.3	2.0	233	3.9	60	6.0	1.7	6.4	.53	11	18
16	1.6	e1.4	1.7	15	3.8	23	6.6	1.7	1.8	.47	2.5	980
17	1.2	e1.5	1.7	8.6	8.1	12	5.2	1.9	9.0	.37	1.4	30
18	1.2	e1.6	1.7	79	62	7.9	4.5	1.8	10	.28	1.0	7.8
19	1.2	e1.6	1.7	15	11	5.7	4.3	2.0	1.9	.35	.99	4.5
20	1.1	e3.0	1.7	8.2	6.3	5.3	4.4	1.6	21	.39	9.3	3.9
21	1.1	e3.5	1.7	6.6	4.8	70	5.6	1.5	7.9	.47	13	58
22	.94	2.0	1.9	6.2	4.1	57	11	1.6	2.6	54	1.7	43
23	1.2	2.0	1.8	7.4	3.6	10	8.4	13	1.8	18	1.1	6.6
24	1.2	2.0	3.1	171	3.8	8.2	5.4	35	1.3	6.5	14	5.2
25	1.1	2.0	2.4	13	3.8	6.6	4.0	6.0	1.1	3.0	89	3.6
26	.90	27	2.0	6.6	3.4	5.4	3.6	2.8	1.1	2.0	333	2.6
27	1.1	3.0	1.8	5.1	3.4	5.1	3.7	2.2	.81	.72	36	5.3
28	1.3	2.0	2.2	4.4	33	8.6	3.8	2.1	.86	2.8	6.5	3.5
29	1.6	1.7	3.9	3.8	---	4.9	3.5	1.8	1.3	23	3.4	4.7
30	1.3	1.7	3.2	3.4	---	4.3	3.4	1.6	.78	3.7	2.5	71
31	1.2	---	1.9	3.3	---	4.2	---	1.4	---	.74	2.0	---
TOTAL	137.32	89.2	83.0	1025.5	277.6	431.2	303.3	126.8	106.50	128.82	613.17	1457.9
MEAN	4.43	2.97	2.68	33.1	9.91	13.9	10.1	4.09	3.55	4.16	19.8	48.6
MAX	41	27	13	282	62	70	42	35	21	54	333	980
MIN	.90	1.2	1.6	1.5	3.2	4.2	3.4	1.4	.78	.28	.29	1.4
CFSM	.58	.39	.35	4.35	1.30	1.83	1.33	.54	.47	.55	2.60	6.39
IN.	.67	.44	.41	5.01	1.36	2.11	1.48	.62	.52	.63	3.00	7.13

e Estimated

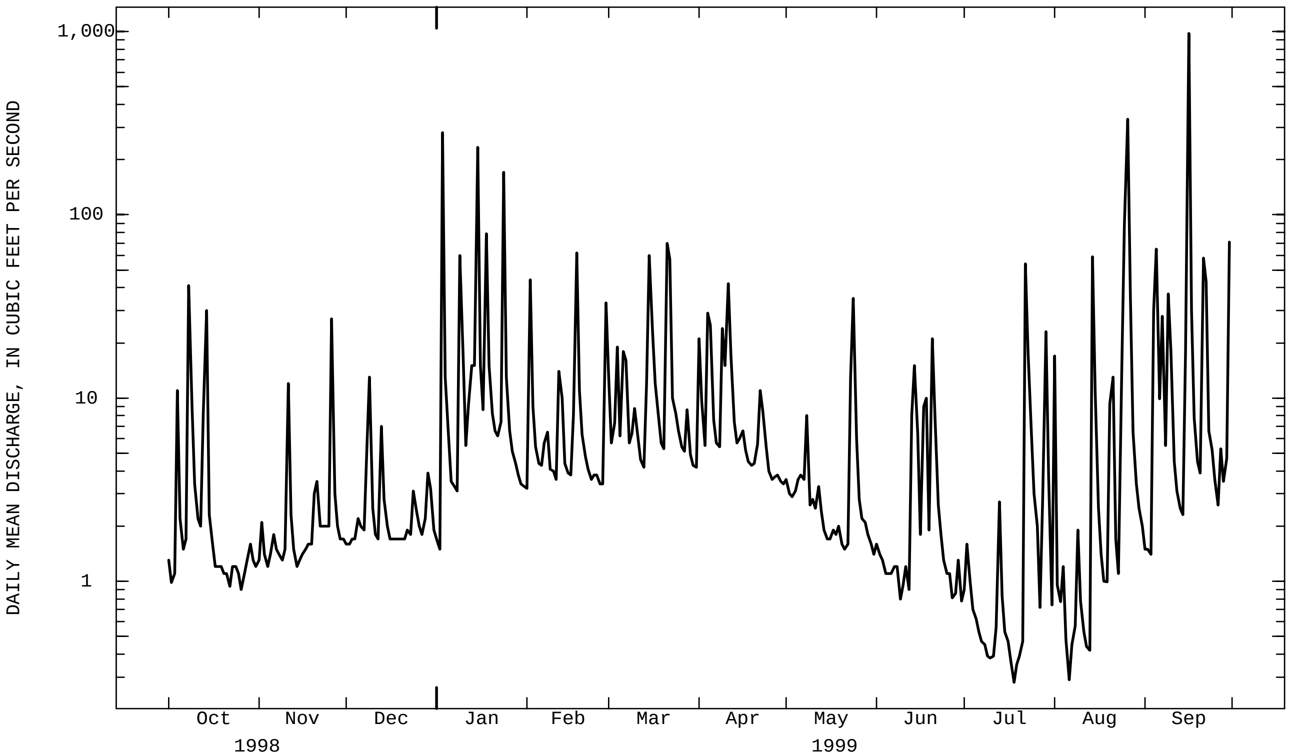
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1959 - 1989, 1992 - 1999, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	7.47	10.6	13.2	15.0	15.8	17.1	12.9	11.3	9.19	8.78	10.3	10.7
MAX	27.2	31.8	41.5	45.2	42.7	43.2	43.5	43.7	44.5	45.4	90.1	48.6
(WY)	1972	1973	1984	1978	1979	1993	1983	1989	1972	1989	1971	1999
MIN	1.92	1.82	1.69	1.82	4.11	4.66	4.35	2.24	2.01	1.34	1.18	1.41
(WY)	1970	1966	1966	1981	1968	1969	1985	1969	1986	1966	1962	1980

01585100 WHITEMARSH RUN AT WHITE MARSH, MD--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1959 - 1989, 1992 - 1999	
ANNUAL TOTAL	4677.17		4780.31			
ANNUAL MEAN	12.8		13.1		12.1	
HIGHEST ANNUAL MEAN					21.0	1971
LOWEST ANNUAL MEAN					4.27	1969
HIGHEST DAILY MEAN	283	Jan 23	980	Sep 16	980	Sep 16 1999
LOWEST DAILY MEAN	.86	Sep 13	.28	Jul 18	.10	Sep 11 1966
ANNUAL SEVEN-DAY MINIMUM	.96	Sep 10	.41	Jul 15	.39	Sep 1 1966
INSTANTANEOUS PEAK FLOW			2450	Sep 16	(a)8000	Aug 1 1971
INSTANTANEOUS PEAK STAGE			12.19	Sep 16	14.05	Aug 1 1971
INSTANTANEOUS LOW FLOW			UNKNOWN		(b).00	Mar 20 1965
ANNUAL RUNOFF (CFSM)	1.68		1.72		1.59	
ANNUAL RUNOFF (INCHES)	22.86		23.37		21.64	
10 PERCENT EXCEEDS	25		21		21	
50 PERCENT EXCEEDS	3.4		3.3		4.1	
90 PERCENT EXCEEDS	1.3		.95		1.4	

a From rating curve extended above 1,300 ft3/s on the basis of a culvert measurement at a gage height of 10.04 ft and on the basis of a culvert and flow-over-road measurement of peak flow.
b Result of constuction work upstream from station.



DAILY MEAN DISCHARGE - 1999 WATER YEAR

01585200 WEST BRANCH HERRING RUN AT IDLEWYLDE, MD

LOCATION.--Lat 39°22'25", long 76°35'05", Baltimore County, Hydrologic Unit 02060003, on left bank 40 ft downstream from bridge on Regester Avenue, at Idlewylde, 0.1 mi north of Baltimore city limits, 1.0 mi upstream from mouth, and 1.3 mi east of State Highway 45.

DRAINAGE AREA.--2.13 mi^2.

PERIOD OF RECORD.--July 1957 to May 1965, January 1966 to September 1987, October 1996 to current year.

GAGE.--Water-stage recorder and concrete control. Elevation of gage is 285 ft above sea level, from topographic map.

Prior to May 31, 1965, at site 40 ft upstream at datum 3.24 ft higher.

REMARKS.--Records good except those for estimated daily discharges (backwater), which are fair. Diurnal fluctuation (occasionally extensive) caused by ready-mixed concrete plant upstream from station. Several measurements of water temperature were made during the year.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 290 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
May 24	1335	438	4.00	Aug 26	1955	464	4.09
Jul 22	0240	322	3.57	Sep 9	1745	*1,660	*6.67
Aug 14	1530	1,250	5.97	Sep 16	1005	335	3.62
Aug 20	2115	584	4.46	Sep 16	1110	644	4.63
Aug 26	1825	1,390	6.23	Sep 16	1240	435	3.99

Minimum discharge, 0.14 ft^3/s, Aug 11.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.69	.43	.71	.41	e.98	e2.5	6.7	e.96	1.0	.98	9.9	.34
2	.61	.43	.63	.44	12	e1.2	1.4	.85	.83	.87	.36	.32
3	.58	.42	.68	30	3.7	9.6	1.1	.86	.86	.91	.32	.33
4	3.6	.47	.60	.99	e1.5	8.3	9.4	1.0	.96	.77	.39	11
5	.99	.54	.72	.69	e1.0	e1.5	2.8	e.95	.81	.82	.34	20
6	1.1	.52	.57	.64	e2.2	10	1.3	e.80	.80	1.0	e.30	2.2
7	1.3	.52	.51	.69	4.5	e3.0	1.2	e1.0	.80	.99	e.27	3.2
8	14	.43	3.5	.72	e2.3	e1.5	1.0	e3.5	.80	.82	e.30	6.4
9	2.4	.42	3.3	8.6	e1.0	e1.7	6.0	e1.0	.78	.69	e.24	81
10	1.9	.45	.66	1.2	e.90	e2.0	1.5	e.90	1.0	.72	e.20	5.4
11	1.2	3.8	.54	.70	e1.8	.97	12	e.90	.85	.67	e.18	1.1
12	1.3	.54	.47	2.1	8.0	.88	1.8	.95	.81	1.8	.23	.72
13	5.6	.50	2.0	3.5	e2.0	1.5	1.3	1.1	4.5	1.1	.26	.56
14	2.6	.47	.58	2.6	e1.0	5.7	1.2	1.1	2.9	.97	24	.49
15	1.1	e.45	.50	20	e.90	15	1.6	1.5	.92	.85	.78	8.4
16	1.1	e.42	.48	2.2	e1.5	8.7	1.8	1.1	.89	.92	.34	115
17	1.0	.40	.49	1.2	6.0	3.4	1.2	1.2	5.4	.82	.28	4.3
18	1.1	.39	.44	19	15	1.4	1.1	1.1	1.5	.65	.24	2.5
19	.96	.42	.40	1.6	3.7	1.1	1.0	.93	1.4	.34	.21	1.5
20	.72	1.4	.41	1.0	e1.5	1.0	1.1	.87	16	2.2	23	1.9
21	.51	.73	.43	.97	e1.2	20	1.6	.87	2.1	.48	2.9	14
22	.55	.43	.64	.81	e1.1	5.0	3.0	1.8	1.1	27	.45	5.3
23	.58	.44	.42	1.1	e1.0	1.6	2.9	5.3	1.0	.47	.36	2.3
24	.49	.41	.81	20	e.98	1.6	1.1	14	.96	.48	3.5	1.7
25	.48	.39	.48	1.6	e.96	1.2	.98	1.3	1.0	.44	8.1	1.3
26	.48	8.4	.43	1.3	e.96	1.1	.99	1.1	1.6	.41	55	1.2
27	.47	.55	.51	e1.2	e2.5	1.1	1.1	1.0	1.2	.31	3.3	1.0
28	.43	.91	.67	e1.1	10	1.9	1.1	1.1	.82	4.8	1.1	1.1
29	.38	.72	1.4	e1.0	---	1.0	1.1	1.1	.64	.37	.81	4.4
30	.41	.65	.62	e1.0	---	.95	.97	1.2	.81	.26	.69	18
31	.41	---	.43	e.98	---	.95	---	1.2	---	.26	.38	---
TOTAL	49.04	27.05	25.03	129.34	90.18	117.35	71.34	52.54	55.04	54.17	138.73	316.96
MEAN	1.58	.90	.81	4.17	3.22	3.79	2.38	1.69	1.83	1.75	4.48	10.6
MAX	14	8.4	3.5	30	15	20	12	14	16	27	55	115
MIN	.38	.39	.40	.41	.90	.88	.97	.80	.64	.26	.18	.32
MED	.96	.46	.57	1.1	1.5	1.6	1.2	1.1	.96	.82	.36	2.2
AC-FT	97	54	50	257	179	233	142	104	109	107	275	629
CFSM	.74	.42	.38	1.96	1.51	1.78	1.12	.80	.86	.82	2.10	4.96
IN.	.86	.47	.44	2.26	1.57	2.05	1.25	.92	.96	.95	2.42	5.54

e Estimated

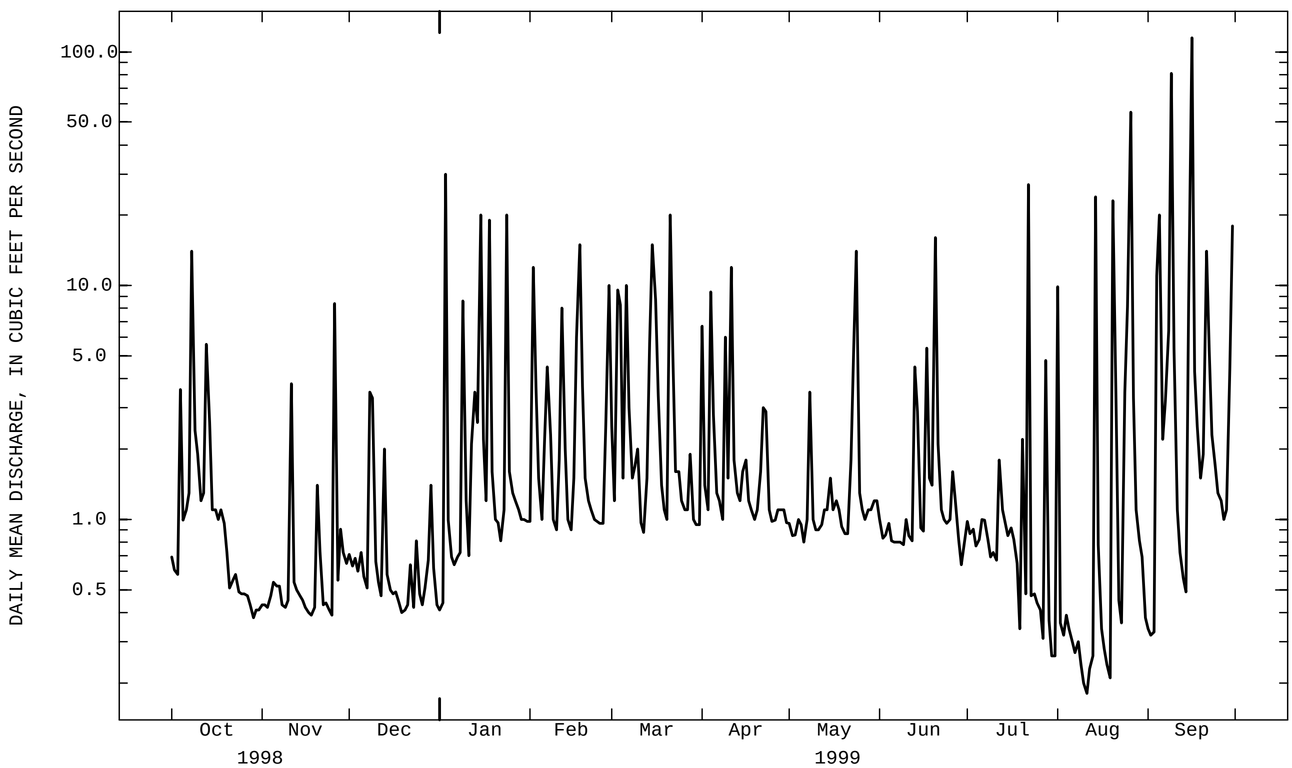
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1957 - 1999, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1.80	2.30	2.74	2.73	3.17	3.36	3.05	2.67	2.46	2.08	2.33	2.65
MAX	5.74	6.59	6.71	9.14	7.41	6.82	7.80	5.06	9.61	5.64	12.2	10.6
(WY)	1972	1973	1997	1979	1979	1998	1983	1984	1972	1975	1971	1999
MIN	.49	.43	.51	.26	1.12	1.06	1.12	.88	.79	.38	.40	.41
(WY)	1964	1982	1981	1981	1968	1981	1985	1963	1966	1966	1966	1970

01585200 WEST BRANCH HERRING RUN AT IDLEWYLDE, MD--Continued

SUMMARY STATISTICS	FOR 1999 WATER YEAR		WATER YEARS 1957 - 1999	
ANNUAL TOTAL	1126.77			
ANNUAL MEAN	3.09		2.66	
HIGHEST ANNUAL MEAN			4.26	1972
LOWEST ANNUAL MEAN			1.42	1959
HIGHEST DAILY MEAN	115	Sep 16	137	Jun 22 1972
LOWEST DAILY MEAN	(e).18	Aug 11	.00	(a)
ANNUAL SEVEN-DAY MINIMUM	.24	Aug 7	.00	Aug 14 1957
INSTANTANEOUS PEAK FLOW	1660	Sep 9	(b)1740	Sep 11 1971
INSTANTANEOUS PEAK STAGE	6.67	Sep 9	6.80	Sep 11 1971
INSTANTANEOUS LOW FLOW	.14	Aug 11	.00	(a)
ANNUAL RUNOFF (AC-FT)	2230		1930	
ANNUAL RUNOFF (CFSM)	1.45		1.25	
ANNUAL RUNOFF (INCHES)	19.68		16.96	
10 PERCENT EXCEEDS	6.2		5.2	
50 PERCENT EXCEEDS	1.0		1.1	
90 PERCENT EXCEEDS	.41		.40	

e Estimated
a Aug. 14-24, 1957.
b From rating curve extended above 90 ft^3/s on basis of slope-area measurement at gage height of 6.37 ft.



DAILY MEAN DISCHARGE - 1999 WATER YEAR

01585225 MOORES RUN TRIBUTARY NEAR TODD AVE AT BALTIMORE, MD

LOCATION.--Lat 39°20'12", long 76°32'27", Baltimore City, Hydrologic Unit 02060003, on left bank at upstream side of culvert inlet off of Todd Ave, at Baltimore, and 20 ft upstream from mouth.

DRAINAGE AREA.--0.21 mi^2.

PERIOD OF RECORD.--July 1996 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 45 ft above sea level, from topographic map.

REMARKS.--Records good between 0.20 and 20 ft^3/s, poor above and below, except those for estimated daily discharges (missing record, backwater), which are fair. Several measurements of water temperature were made during the year.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 50 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jul 22	0256	126	3.03	Aug 26	1850	121	2.92
Jul 22	0334	134	3.17	Sep 4	1655	84	2.23
Aug 1	0136	68	1.94	Sep 16	1052	99	2.51
Aug 14	1539	*153	*3.54				

Minimum discharge, 0.00 ft^3/s, Oct 1-5, Dec 14-22.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.02	.05	.02	.29	.12	.39	e.02	.02	.08	.86	.05
2	.00	.02	.05	.04	.99	.10	.03	e.02	.02	.02	.02	.05
3	.01	.02	.05	1.9	.39	.38	.02	e.02	.02	.02	.02	.05
4	.20	.02	.05	.30	.41	.24	.74	e.02	.02	.02	.02	1.3
5	.01	.02	.06	.39	.39	.08	.09	e.02	.02	.02	.02	2.0
6	.02	.02	.05	.39	.39	.48	.05	e.02	.02	.02	.02	.39
7	.02	.02	.05	.39	.41	.18	.03	.03	.02	e.02	.02	.10
8	.82	.02	.23	.39	.39	.18	.02	.14	.02	e.02	.31	.02
9	.08	.02	.17	.75	.39	.18	.61	.02	.02	e.02	.04	.15
10	.05	.03	.05	.44	.39	.20	.06	.02	.04	e.02	.02	.10
11	.05	.34	.05	.39	.39	.18	.80	.02	.02	e.02	.02	.05
12	.05	.06	.05	.41	.66	.18	.03	.02	.03	e.09	.02	.05
13	.47	.05	.18	.39	.44	.18	.02	.02	.36	e.02	.02	.05
14	.12	.05	.02	.49	.39	.38	.02	.02	.42	e.02	2.0	.03
15	.10	.05	.00	1.4	.39	1.1	.07	.02	.03	.02	.05	.49
16	.07	.05	.00	.44	.39	.20	.03	.02	.02	.02	.03	13
17	.05	.05	.00	.39	.56	.18	.02	.02	.44	.02	.02	.34
18	.05	.05	.00	1.3	1.3	.14	.02	.02	.03	.02	.02	.18
19	.05	.05	.00	.44	.81	.10	.02	.02	.02	.02	.02	.18
20	.03	.11	.00	.39	e.38	.10	.02	.02	.68	.09	.29	.11
21	.02	.07	.00	.39	e.35	1.6	.08	.02	.06	.02	.07	.99
22	.02	.05	.02	.39	e.32	.42	.16	.09	.02	5.3	.02	.36
23	.02	.05	.02	.43	e.32	.25	.16	.32	.02	.04	.02	.14
24	.02	.05	.05	1.9	e.25	.17	.05	e1.2	.02	.02	e.60	.11
25	.02	.05	.02	.50	.13	.07	e.03	e.02	.02	.02	.91	.11
26	.02	.68	.02	.32	.09	.05	e.02	e.02	.02	.02	3.2	.11
27	.02	.10	.02	.28	.05	.05	e.02	.02	.02	.02	.14	.08
28	.02	.10	.02	.28	.65	.10	e.02	.02	.08	.06	.05	.05
29	.02	.10	.06	.28	---	.05	e.02	.02	.02	.03	.05	.31
30	.02	.08	.02	.28	---	.03	e.02	.02	.02	.02	.05	1.0
31	.02	---	.02	.28	---	.02	---	.02	---	.02	.05	---
TOTAL	2.47	2.40	1.38	16.38	12.31	7.69	3.67	2.30	2.57	6.17	9.00	21.95
MEAN	.080	.080	.045	.53	.44	.25	.12	.074	.086	.20	.29	.73
MAX	.82	.68	.23	1.9	1.3	1.6	.80	1.2	.68	5.3	3.2	13
MIN	.00	.02	.00	.02	.05	.02	.02	.02	.02	.02	.02	.02
CFSM	.38	.38	.21	2.52	2.09	1.18	.58	.35	.41	.95	1.38	3.48
IN.	.44	.43	.24	2.90	2.18	1.36	.65	.41	.46	1.09	1.59	3.89

e Estimated

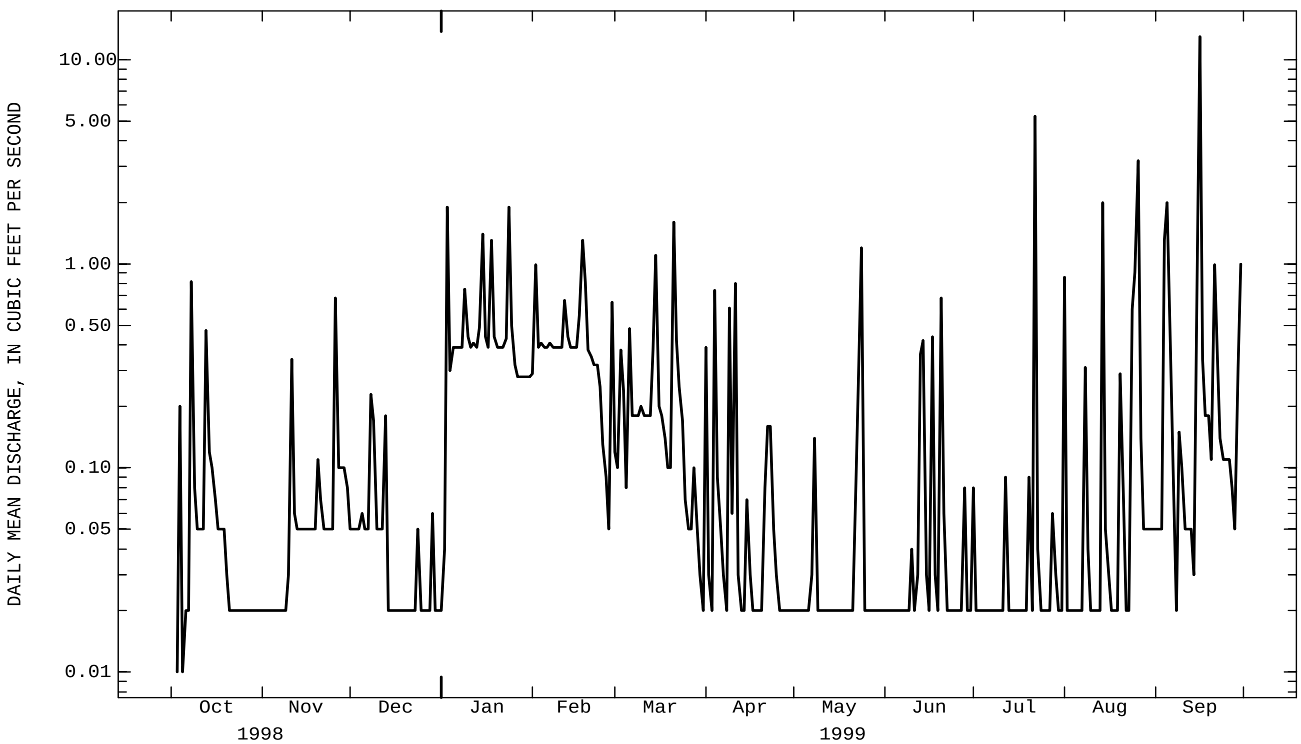
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1996 - 1999, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.13	.24	.20	.39	.41	.34	.17	.15	.14	.12	.19	.30
MAX	.22	.41	.44	.53	.57	.40	.21	.29	.17	.20	.29	.73
(WY)	1997	1998	1997	1999	1998	1997	1998	1998	1998	1999	1999	1999
MIN	.080	.080	.045	.23	.22	.25	.12	.074	.086	.025	.065	.092
(WY)	1999	1999	1999	1997	1997	1999	1999	1999	1999	1997	1998	1997

01585225 MOORES RUN TRIBUTARY NEAR TODD AVE AT BALTIMORE, MD--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1996 - 1999	
ANNUAL TOTAL	77.69		88.29			
ANNUAL MEAN	.21		.24		.23	
HIGHEST ANNUAL MEAN					.25	1998
LOWEST ANNUAL MEAN					.21	1997
HIGHEST DAILY MEAN	4.0	Jan 23	13	Sep 16	13	Sep 16 1999
LOWEST DAILY MEAN	.00	(a)	.00	(b)	.00	(a)
ANNUAL SEVEN-DAY MINIMUM	.00	Dec 15	.00	Dec 15	.00	Dec 15 1998
INSTANTANEOUS PEAK FLOW			153	Aug 14	247	Sep 2 1998
INSTANTANEOUS PEAK STAGE			3.54	Aug 14	5.38	Sep 2 1998
INSTANTANEOUS LOW FLOW			.00	(c)	.00	(d)
ANNUAL RUNOFF (CFSM)	1.01		1.15		1.11	
ANNUAL RUNOFF (INCHES)	13.76		15.64		15.03	
10 PERCENT EXCEEDS	.42		.45		.52	
50 PERCENT EXCEEDS	.07		.05		.08	
90 PERCENT EXCEEDS	.01		.02		.02	

a Many days.
b Oct. 1, 2, Dec. 15-21.
c Oct. 1-5, Dec. 14-22.
d No flow at times during 1997-99.



DAILY MEAN DISCHARGE - 1999 WATER YEAR

01585230 MOORES RUN AT RADECKE AVE AT BALTIMORE, MD

LOCATION.--Lat 39°19'49", long 76°32'07", Baltimore City, Hydrologic Unit 02060003, on right downstream side of bridge on Radecke Avenue, at Baltimore, and 2.0 mi upstream from mouth.

DRAINAGE AREA.--3.52 mi^2.

PERIOD OF RECORD.--July 1996 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 45 ft above sea level, from topographic map.

REMARKS.--Records good except those above 1,000 ft^3/s and those for estimated daily discharges (missing record, backwater), which are fair. Several measurements of water temperature were made during the year.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 600 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jan 3	0640	760	5.31	Sep 4	1656	1,160	5.94
Jul 22	0258	1,260	6.10	Sep 5	1343	659	5.04
Aug 14	1539	*4,160	*8.60	Sep 16	1100	2,200	7.15
Aug 26	1851	2,650	7.55				

Minimum discharge, 0.15 ft^3/s, Aug 12.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.57	.43	.64	.54	1.4	2.1	9.9	.80	.63	1.5	8.9	.72
2	.58	.45	.78	.52	17	1.1	1.5	.82	.55	.68	.27	.69
3	.67	.41	.69	46	2.2	6.9	1.1	1.0	.49	.63	.25	.69
4	4.3	.45	.69	1.2	2.3	6.2	16	.87	.47	.59	.23	21
5	.56	.41	.84	1.1	1.5	1.3	4.4	.88	.46	.52	.21	39
6	.55	.39	.63	1.1	1.5	10	1.5	1.0	.46	.53	.20	6.8
7	.52	.37	.63	1.1	2.0	2.8	1.2	1.1	.48	e.53	.21	2.6
8	16	.35	4.4	1.2	1.8	1.3	1.1	3.7	.60	e.52	3.2	.92
9	.98	.33	3.8	12	1.4	2.3	13	.90	.79	e.52	.24	6.6
10	.69	.33	.73	2.2	1.5	3.4	1.9	.86	.86	e.52	.21	1.9
11	.57	6.0	.70	1.4	1.2	1.4	17	.84	.63	e.52	.21	.83
12	.57	e.60	.70	3.9	7.0	1.2	2.9	.84	.68	e1.8	.21	.80
13	9.5	e.60	3.8	3.3	1.7	1.1	1.5	.98	5.3	e.56	.21	.76
14	1.2	e.58	.59	4.3	1.3	6.7	1.2	1.1	6.4	e.52	87	.74
15	.54	e.58	.49	26	1.3	26	2.4	1.0	.82	.48	.73	8.9
16	.58	e.56	.46	2.3	1.2	5.0	1.2	1.0	.66	.49	.49	310
17	.57	e.56	.55	1.7	4.5	2.6	1.0	1.1	6.7	.48	.48	3.1
18	.55	e.56	.54	21	20	1.6	1.0	.98	.89	.46	.49	1.2
19	.57	e.56	.47	2.5	2.4	1.3	.95	1.2	.67	.44	.50	.89
20	.52	2.1	.46	1.5	1.7	1.1	.95	1.1	11	1.4	7.4	.88
21	.56	.82	.43	1.6	1.5	39	1.8	1.1	1.3	.49	.92	17
22	.54	.77	.60	1.3	1.4	9.2	3.4	2.0	.67	57	.54	5.9
23	.56	.80	.49	1.7	1.4	2.0	3.6	5.2	.63	.60	.51	1.1
24	.53	.91	.88	32	1.2	1.8	1.1	e11	.63	.50	e12	.87
25	.54	.92	.60	2.9	.92	1.3	.94	e.84	.64	.31	28	.77
26	.53	14	.49	1.7	.87	1.2	.92	e.70	.67	.28	94	.74
27	.49	.71	.46	1.4	.84	1.0	.90	.68	.65	.27	2.3	1.1
28	.46	.65	.51	1.4	14	2.8	.84	.63	.98	1.3	.90	.69
29	.50	.63	1.6	1.3	---	1.1	.80	.63	.64	.28	.77	4.5
30	.45	.63	.64	1.3	---	.92	.79	.57	.63	.25	.74	23
31	.43	---	.61	1.3	---	.92	---	.52	---	.25	.74	---
TOTAL	46.18	37.46	29.90	182.76	97.03	146.64	96.79	45.94	46.98	75.22	253.06	464.69
MEAN	1.49	1.25	.96	5.90	3.47	4.73	3.23	1.48	1.57	2.43	8.16	15.5
MAX	16	14	4.4	46	20	39	17	11	11	57	94	310
MIN	.43	.33	.43	.52	.84	.92	.79	.52	.46	.25	.20	.69
CFSM	.42	.35	.27	1.67	.98	1.34	.92	.42	.44	.69	2.32	4.40
IN.	.49	.40	.32	1.93	1.03	1.55	1.02	.49	.50	.79	2.67	4.91

e Estimated

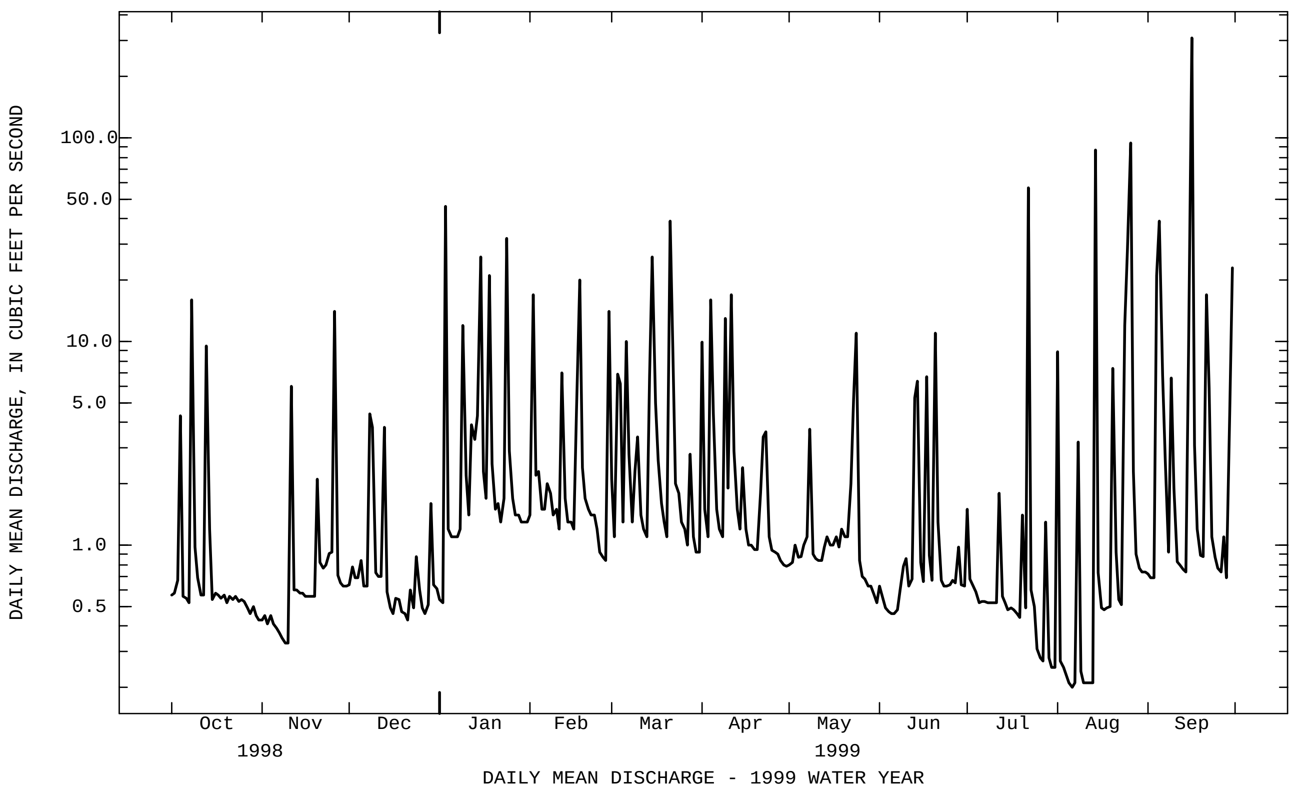
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1996 - 1999, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	2.44	4.33	4.57	6.41	6.29	7.84	2.91	2.28	2.04	1.84	4.36	6.05
MAX	4.16	7.36	10.5	9.43	11.5	11.3	3.23	4.30	2.31	2.74	8.16	15.5
(WY)	1997	1998	1997	1998	1998	1998	1999	1998	1998	1998	1999	1999
MIN	1.49	1.25	.96	3.90	3.47	4.73	2.42	1.06	1.57	.36	1.57	1.56
(WY)	1999	1999	1999	1997	1999	1999	1997	1997	1999	1997	1998	1997

01585230 MOORES RUN AT RADECKE AVE AT BALTIMORE, MD--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1996 - 1999	
ANNUAL TOTAL	1594.32		1522.65			
ANNUAL MEAN	4.37		4.17		4.31	
HIGHEST ANNUAL MEAN					4.99	1998
LOWEST ANNUAL MEAN					3.77	1997
HIGHEST DAILY MEAN	103	Jan 23	310	Sep 16	310	Sep 16 1999
LOWEST DAILY MEAN	.33	(a)	.20	Aug 6	.17	(b)
ANNUAL SEVEN-DAY MINIMUM	.38	Nov 4	.38	Nov 4	.18	Oct 1 1997
INSTANTANEOUS PEAK FLOW			4160	Aug 14	4160	Aug 14 1999
INSTANTANEOUS PEAK STAGE			8.60	Aug 14	8.60	Aug 14 1999
INSTANTANEOUS LOW FLOW			.15	Aug 12	.15	(c)
ANNUAL RUNOFF (CFSM)	1.24		1.19		1.22	
ANNUAL RUNOFF (INCHES)	16.85		16.09		16.64	
10 PERCENT EXCEEDS	8.4		6.8		9.1	
50 PERCENT EXCEEDS	.78		.89		.90	
90 PERCENT EXCEEDS	.49		.46		.33	

a Nov. 9, 10.
b Oct. 1, 2, 1997.
c Oct. 20, 1997, Aug. 12, 1999.



01585500 CRANBERRY BRANCH NEAR WESTMINSTER, MD

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

DRAINAGE AREA.--3.29 mi^2.

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

REVISED RECORDS.--WSP 1432: Drainage area, 1954-55. WDR MD-DE-75-1: 1972(M). WDR MD-DE-79-1: 1973-78(P).

GAGE.--Water-stage recorder and concrete control. Elevation of gage is 670 ft above sea level, from topographic map.

REMARKS.--Records good except those for estimated daily discharges (ice effect), which are poor. Occasional small diversions to and releases from Cranberry Reservoir located offstream 1 mi upstream from station since August 1957, capacity, 113,700,000 gal. Beginning October l972 occasional large diversions past the gaging station from the reservoir through a 30-inch pipe. Several measurements of water temperature were made during the year. Water-quality records for some prior periods have been collected at this location.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 80 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jan 3	0730	115	2.97	Jul 22	0215	*325	*3.80
Jan 18	1500	142	3.11	Sep 16	1400	122	3.01

Minimum discharge, 0.24 ft^3/s, Aug 9-11.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.45	.58	.35	e.66	.57	3.6	3.3	.71	.46	.47	1.7	.29
2	.38	.59	.34	1.1	8.3	1.1	1.1	.85	1.4	.68	.40	.29
3	.35	.46	.34	18	3.4	1.2	1.6	.75	2.2	1.5	.32	.38
4	.99	.46	.34	2.6	1.5	6.5	1.3	.64	.84	1.3	.31	.33
5	.85	.42	.34	e1.0	1.1	3.9	4.4	.60	.71	.77	.30	.51
6	.61	.42	.34	e.60	1.0	4.3	1.1	.60	.63	.58	.29	.43
7	.67	.51	.36	e.40	1.1	4.9	.80	.64	.60	.53	.29	3.3
8	15	.39	.38	.31	2.1	1.7	.77	3.9	.60	.50	.29	.82
9	2.6	.66	1.0	9.9	1.2	.95	3.9	2.2	.58	.46	.27	.39
10	2.1	1.1	.40	3.0	1.0	1.3	3.1	1.1	.60	.47	.27	.37
11	1.5	.90	.81	2.0	.99	.81	6.5	.60	.60	.43	.27	.34
12	.82	.40	1.1	2.4	1.3	.96	4.2	.62	.57	.43	.67	.32
13	.72	.39	.88	3.8	2.1	.73	1.0	.95	.53	.41	.27	.29
14	.64	.39	.32	2.5	.82	.98	.95	.84	1.3	.39	.65	.29
15	.60	.39	.56	4.1	.82	.88	.91	.95	1.8	.37	.70	.61
16	.58	.39	1.3	4.4	.82	2.1	.91	.60	.87	.37	.31	33
17	.56	.39	.36	8.2	.85	3.0	1.0	.60	.65	.37	.27	1.1
18	.57	.36	.72	35	5.5	4.4	1.3	.60	.91	.36	.26	.64
19	.57	.35	.31	3.7	2.1	2.0	.91	.60	.52	.35	.26	.70
20	.56	.38	.34	.94	.91	.94	.78	.60	.48	.35	.38	.88
21	.57	.35	.97	.87	e.80	2.8	.74	.60	1.7	.40	.42	1.5
22	.57	.34	e1.2	.74	e.74	5.9	.74	.60	.62	26	.31	.60
23	.57	.35	e.60	1.2	.74	2.5	1.5	1.9	.49	1.2	.26	.55
24	.84	.37	e.31	15	.78	.93	1.3	3.6	.46	.46	.28	.51
25	.75	.35	e.30	5.3	.82	.91	.73	2.1	.49	.53	.36	.46
26	.53	.48	e.30	2.7	.77	.85	.89	.67	.48	1.4	4.8	.97
27	.53	.40	.30	2.3	.74	.82	.70	.63	.49	.41	1.5	.44
28	.48	.39	.31	.92	4.3	1.5	.67	.57	.53	.37	.47	1.2
29	.61	.36	.34	.67	---	.74	.74	.50	.49	.37	.32	1.4
30	.46	.34	e.40	.65	---	.88	.75	.46	.46	.33	.29	14
31	.46	---	e.50	.60	---	.70	---	.46	---	.32	.29	---
TOTAL	37.49	13.66	16.42	135.56	47.17	64.78	48.59	31.04	23.06	42.88	17.78	66.91
MEAN	1.21	.46	.53	4.37	1.68	2.09	1.62	1.00	.77	1.38	.57	2.23
MAX	15	1.1	1.3	35	8.3	6.5	6.5	3.9	2.2	26	4.8	33
MIN	.35	.34	.30	.31	.57	.70	.67	.46	.46	.32	.26	.29
CFSM	.37	.14	.16	1.33	.51	.64	.49	.30	.23	.42	.17	.68
IN.	.42	.15	.19	1.53	.53	.73	.55	.35	.26	.48	.20	.76

e Estimated

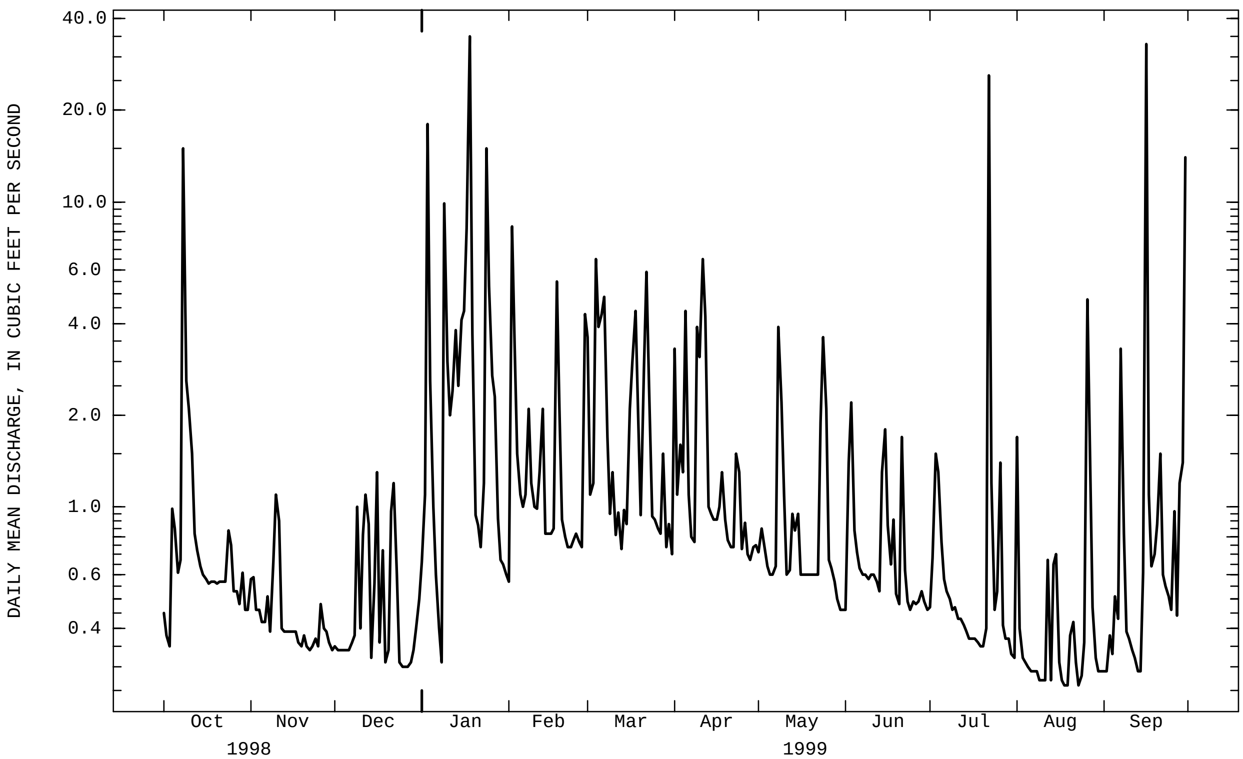
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1950 - 1999, BY WATER YEAR (WY)

MEAN	2.14	2.49	3.12	3.64	4.43	4.75	4.65	4.09	3.58	2.72	2.10	2.32
MAX	9.96	6.66	11.4	13.2	10.7	12.9	12.3	11.3	29.5	11.1	6.91	21.7
(WY)	1980	1953	1997	1996	1974	1994	1993	1952	1972	1972	1955	1975
MIN	.31	.46	.53	.56	.70	.77	.89	.88	.64	.46	.36	.30
(WY)	1998	1999	1999	1992	1992	1981	1992	1986	1986	1997	1986	1977

01585500 CRANBERRY BRANCH NEAR WESTMINSTER, MD--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1950 - 1999	
ANNUAL TOTAL	1226.45		545.34			
ANNUAL MEAN	(a)3.36		(a)1.49		(a)3.33	
HIGHEST ANNUAL MEAN					7.82	1972
LOWEST ANNUAL MEAN					.86	1992
HIGHEST DAILY MEAN	61	Jun 23	35	Jan 18	440	Jun 22 1972
LOWEST DAILY MEAN	.30	Dec 25	.26	Aug 18	.01	(b)
ANNUAL SEVEN-DAY MINIMUM	.32	Dec 24	.28	Aug 5	.01	Sep 6 1995
INSTANTANEOUS PEAK FLOW			325	Jul 22	(c)2220	Sep 26 1975
INSTANTANEOUS PEAK STAGE			3.80	Jul 22	7.47	Sep 26 1975
INSTANTANEOUS LOW FLOW			.24	(d)	(f).00	Sep 5 1995
ANNUAL RUNOFF (CFSM)	1.02		.45		1.01	
ANNUAL RUNOFF (INCHES)	13.87		6.17		13.75	
10 PERCENT EXCEEDS	7.9		3.0		5.9	
50 PERCENT EXCEEDS	1.1		.65		2.2	
90 PERCENT EXCEEDS	.39		.34		.65	

a Unadjusted for storage and diversions.
b Sept. 6-16, 1995.
c From rating curve extended above 200 ft^3/s on basis of culvert measurement at gage heights 5.54 ft and 7.47 ft.
d Aug. 9-11.
f result of regulation.



DAILY MEAN DISCHARGE - 1999 WATER YEAR

01586000 NORTH BRANCH PATAPSCO RIVER AT CEDARHURST, MD

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

DRAINAGE AREA.--56.6 mi^2.

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

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

GAGE.--Water-stage recorder and concrete control. Datum of gage is 420.70 ft above sea level.

REMARKS.--Records good except those for estimated daily discharges (ice effect), which are poor. Slight diurnal fluctuation at low and medium flow caused by mill upstream from station. Low flow affected slightly by Cranberry Reservoir since August 1957, capacity, 113,700,000 gal. Records do not include a mean discharge of 2.93 ft^3/s diverted upstream from station for municipal supply of Westminster; sewage effluent discharged into Little Pipe Creek in Monocacy River basin.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jan 3	1015	1,330	4.79	Aug 26	2100	1,640	5.40
Jan 18	1700	1,700	5.52	Sep 16	1530	*2,320	*6.52
Jul 22	0500	1,100	4.31				

Minimum discharge, 8.2 ft^3/s, Aug 6.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20	21	20	e17	34	58	67	37	20	17	56	14
2	18	20	20	16	123	41	62	36	21	20	22	13
3	19	21	20	324	68	38	50	36	52	33	14	13
4	29	21	21	57	51	106	55	37	26	19	12	14
5	26	23	21	35	46	66	104	35	23	16	12	34
6	24	23	21	e25	42	82	60	34	21	13	11	29
7	23	21	21	e22	48	86	52	35	20	12	11	65
8	300	27	24	20	64	57	49	60	18	11	11	26
9	82	22	41	87	46	54	69	43	17	11	11	19
10	52	22	25	64	41	54	102	34	18	12	10	27
11	40	36	22	31	38	52	127	30	20	12	10	17
12	33	27	21	44	39	48	115	30	19	11	9.7	16
13	30	24	21	80	47	45	78	33	23	12	9.8	14
14	29	24	20	55	36	49	68	30	41	11	23	14
15	28	24	19	107	33	61	64	29	41	11	19	69
16	27	23	19	85	33	64	66	28	23	11	12	935
17	27	23	19	117	38	97	60	27	24	10	10	137
18	27	22	19	661	91	89	54	27	31	9.9	10	54
19	26	21	19	118	58	63	51	27	22	9.6	9.8	42
20	24	23	19	66	46	56	52	24	22	9.5	22	36
21	24	24	19	55	e40	80	49	24	28	10	59	60
22	24	23	20	53	e35	135	51	24	24	227	16	59
23	26	22	e18	57	32	74	54	37	20	29	13	37
24	25	21	e18	241	e31	68	53	74	18	18	14	32
25	25	27	18	104	33	63	45	46	18	15	16	32
26	24	40	19	67	33	55	43	30	18	19	276	24
27	23	29	19	54	32	53	42	27	17	14	101	24
28	24	23	20	49	66	53	39	25	17	18	29	44
29	23	22	22	45	---	50	38	23	26	17	20	40
30	22	21	e20	40	---	47	37	22	17	12	16	242
31	21	---	e18	36	---	44	---	21	---	14	14	---
TOTAL	1145	720	643	2832	1324	1988	1856	1025	705	664.0	879.3	2182
MEAN	36.9	24.0	20.7	91.4	47.3	64.1	61.9	33.1	23.5	21.4	28.4	72.7
MAX	300	40	41	661	123	135	127	74	52	227	276	935
MIN	18	20	18	16	31	38	37	21	17	9.5	9.7	13
CFSM	.65	.42	.37	1.61	.84	1.13	1.09	.58	.42	.38	.50	1.29
IN.	.75	.47	.42	1.86	.87	1.31	1.22	.67	.46	.44	.58	1.43

e Estimated

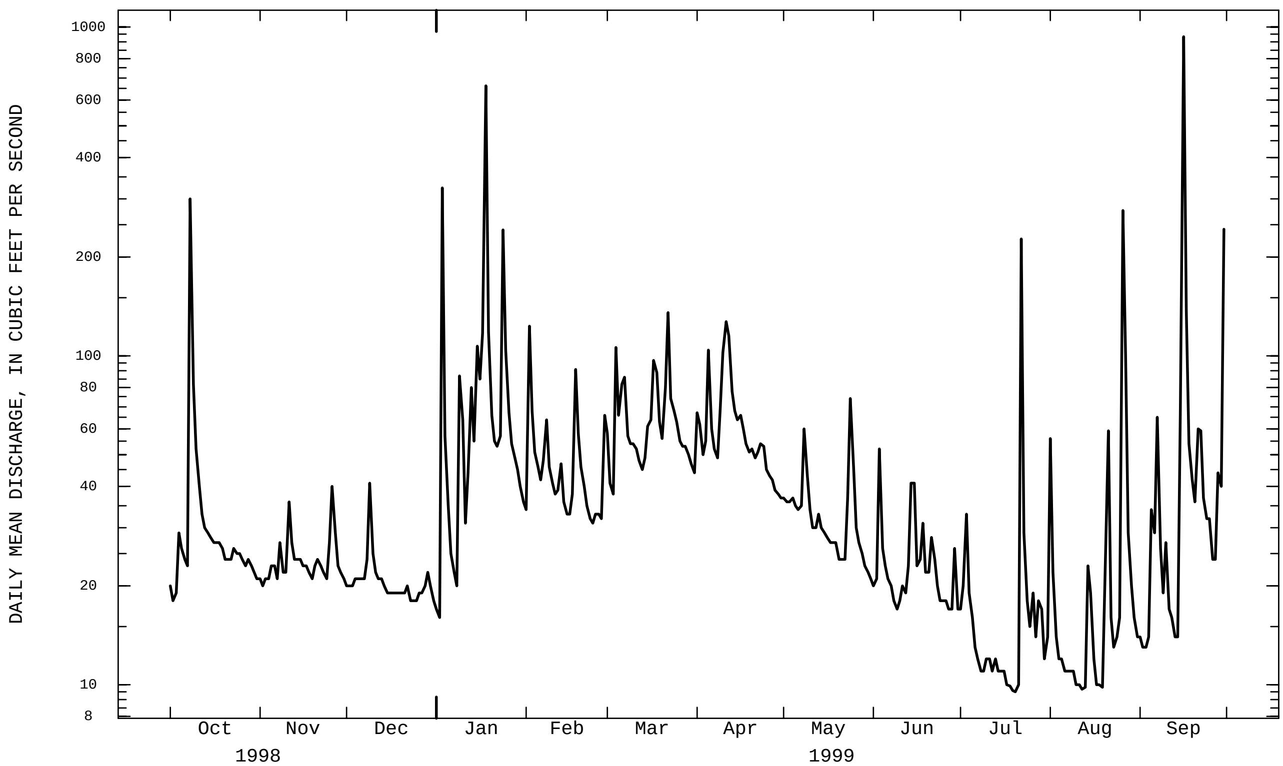
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1945 - 1999, BY WATER YEAR (WY)

MEAN	41.9	51.4	62.8	76.3	86.9	96.2	87.5	76.5	64.2	49.6	42.0	42.6
MAX	214	114	240	225	212	243	213	201	390	149	165	356
(WY)	1980	1953	1997	1996	1979	1994	1993	1952	1972	1972	1955	1975
MIN	11.8	15.8	15.5	17.6	36.4	37.1	36.3	26.3	19.5	9.72	6.91	12.4
(WY)	1964	1966	1966	1966	1992	1959	1969	1969	1969	1966	1966	1964

01586000 NORTH BRANCH PATAPSCO RIVER AT CEDARHURST, MD--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1945 - 1999	
ANNUAL TOTAL	28907		15963.3			
ANNUAL MEAN	79.2		43.7		64.3	
HIGHEST ANNUAL MEAN					121	1972
LOWEST ANNUAL MEAN					30.1	1966
HIGHEST DAILY MEAN	743	Mar 21	935	Sep 16	6000	Jun 22 1972
LOWEST DAILY MEAN	18	Oct 2	9.5	Jul 20	3.1	(a)
ANNUAL SEVEN-DAY MINIMUM	19	Dec 19	10	Jul 15	3.5	Sep 7 1966
INSTANTANEOUS PEAK FLOW			2320	Sep 16	(b)27800	Jun 22 1972
INSTANTANEOUS PEAK STAGE			6.52	Sep 16	(c)20.75	Jun 22 1972
INSTANTANEOUS LOW FLOW			8.2	Aug 6	(d)1.3	(f)
ANNUAL RUNOFF (CFSM)	1.40		.77		1.14	
ANNUAL RUNOFF (INCHES)	19.00		10.49		15.44	
10 PERCENT EXCEEDS	157		68		115	
50 PERCENT EXCEEDS	52		27		44	
90 PERCENT EXCEEDS	21		14		19	

a Sept. 10, 12, 1996.
b From rating curve extended above 4,100 ft^3/s on basis of contracted-opening measurement of peak flow.
c From high-water mark in well.
d Result of regulation.
f Sept. 17, 1983 and Aug. 10, 1985.



DAILY MEAN DISCHARGE - 1999 WATER YEAR

01586210 BEAVER RUN NEAR FINKSBURG, MD

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

DRAINAGE AREA.--14.0 mi^2.

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

GAGE.--Water-stage recorder. Datum of gage is 428.70 ft above sea level.

REMARKS.--Records good except those for estimated daily discharges (ice effect, recorder malfunction), which are fair. Several measurements of water temperature were made during the year. Water-quality records for some prior periods have been collected at this location.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 500 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Sep 16	1445	*534	*3.54	No other peak greater than base discharge.			

Minimum discharge, 1.5 ft^3/s, Aug 12, 13.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.7	5.2	5.1	e4.2	10	12	12	9.4	5.5	4.2	9.1	2.9
2	5.7	5.2	5.0	e4.0	26	10	13	9.2	5.5	4.5	3.7	2.5
3	5.7	5.1	5.0	29	15	10	12	8.8	7.5	5.8	2.9	2.4
4	7.4	4.9	5.0	e11	13	21	12	8.8	5.7	4.3	2.7	3.0
5	7.2	4.8	5.0	e8.6	12	14	14	8.8	5.4	4.0	2.6	8.8
6	6.9	4.8	5.0	e6.8	11	17	14	8.8	5.2	3.6	2.3	6.1
7	6.7	4.8	5.0	e5.9	12	16	13	8.8	5.0	3.4	2.1	e14
8	9.8	4.9	5.5	e5.2	13	13	13	12	4.9	3.2	2.1	5.4
9	10	5.0	8.3	29	11	12	13	9.0	4.5	2.9	2.2	4.1
10	8.9	5.0	5.8	44	11	12	14	8.1	4.5	2.9	1.9	4.0
11	7.1	7.5	5.4	22	10	12	14	7.9	4.8	2.9	1.7	3.5
12	6.4	5.8	5.2	20	10	11	18	7.7	4.5	2.8	1.6	3.1
13	6.2	5.4	5.2	20	11	11	17	7.6	5.1	3.3	1.6	2.9
14	6.0	5.4	5.1	18	9.7	11	15	7.6	6.5	3.2	e6.0	2.8
15	5.9	5.4	4.7	25	9.4	13	14	7.3	6.6	3.0	4.0	e11
16	5.5	5.3	4.6	23	9.3	14	14	7.1	4.9	2.8	2.4	161
17	5.4	5.2	4.5	16	9.9	21	14	7.0	5.4	2.7	2.2	25
18	5.4	5.2	4.5	104	20	18	13	6.9	6.0	2.5	2.0	13
19	5.2	5.2	4.5	26	13	14	13	6.8	5.0	2.4	1.8	10
20	5.2	5.2	4.5	17	e11	13	12	6.7	5.0	2.3	3.7	9.0
21	5.2	5.4	4.5	14	e10	20	12	6.5	5.8	2.4	8.5	15
22	5.3	5.4	4.7	14	e9.0	26	13	6.5	5.4	7.6	3.9	13
23	5.2	5.4	4.5	14	e8.5	16	13	8.4	4.9	4.1	3.1	9.9
24	5.2	5.4	e4.3	49	e8.2	15	13	19	4.5	3.3	4.1	8.7
25	5.2	5.4	e4.4	22	e8.0	14	12	9.7	4.3	2.7	4.6	8.2
26	5.2	8.0	e4.5	15	e8.2	13	11	7.7	4.2	2.7	27	7.9
27	5.2	6.1	e4.6	13	8.9	13	11	7.0	4.0	2.3	11	7.2
28	5.2	5.5	e4.7	12	14	13	10	6.5	4.0	e10	4.8	10
29	5.2	5.3	e4.9	11	---	12	10	6.3	5.5	4.7	3.8	9.9
30	5.2	5.2	e4.7	11	---	11	9.7	6.1	4.1	2.7	3.1	45
31	5.2	---	e4.5	10	---	10	---	5.7	---	2.6	3.0	---
TOTAL	189.6	162.4	153.2	623.7	322.1	438	388.7	253.7	154.2	111.8	135.5	429.3
MEAN	6.12	5.41	4.94	20.1	11.5	14.1	13.0	8.18	5.14	3.61	4.37	14.3
MAX	10	8.0	8.3	104	26	26	18	19	7.5	10	27	161
MIN	5.2	4.8	4.3	4.0	8.0	10	9.7	5.7	4.0	2.3	1.6	2.4
CFSM	.44	.39	.35	1.44	.82	1.01	.93	.58	.37	.26	.31	1.02
IN.	.50	.43	.41	1.66	.86	1.16	1.03	.67	.41	.30	.36	1.14

e Estimated

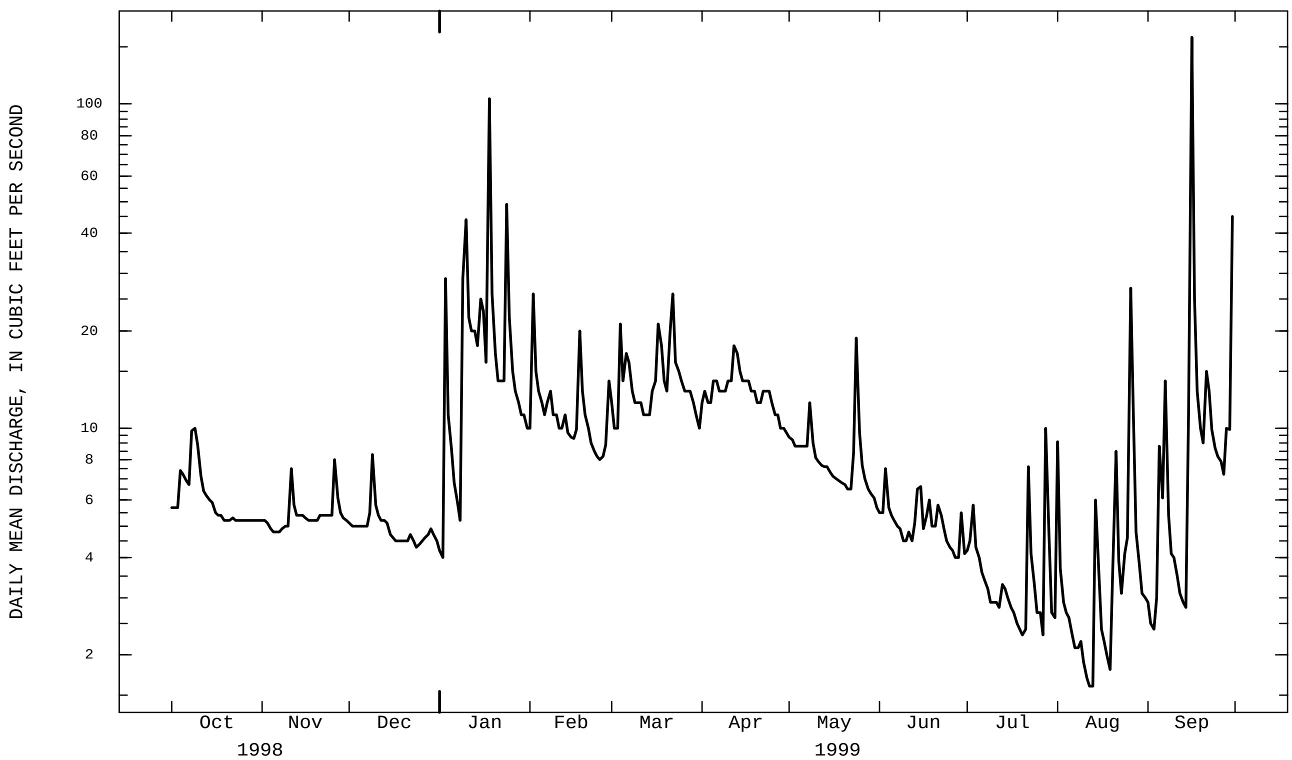
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1983 - 1999, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	9.92	14.3	18.3	20.5	22.2	26.7	25.1	22.4	13.2	10.7	9.64	8.66
MAX	30.0	27.5	56.0	49.6	41.4	62.0	54.7	51.9	25.3	32.4	29.9	25.1
(WY)	1997	1997	1997	1996	1994	1993	1993	1989	1989	1996	1984	1996
MIN	3.73	5.41	4.94	8.41	10.7	13.8	11.9	8.18	5.14	3.61	4.00	2.78
(WY)	1987	1999	1999	1983	1992	1990	1985	1999	1999	1999	1997	1986

01586210 BEAVER RUN NEAR FINKSBURG, MD--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1983 - 1999	
ANNUAL TOTAL	6794.8		3362.2			
ANNUAL MEAN	18.6		9.21		16.8	
HIGHEST ANNUAL MEAN					25.2	1996
LOWEST ANNUAL MEAN					9.21	1999
HIGHEST DAILY MEAN	165	Mar 21	161	Sep 16	528	Jan 19 1996
LOWEST DAILY MEAN	(e)4.3	Dec 24	1.6	(a)	1.6	(a)
ANNUAL SEVEN-DAY MINIMUM	4.5	Dec 19	1.9	Aug 7	1.9	Aug 7 1999
INSTANTANEOUS PEAK FLOW			534	Sep 16	(b)2150	May 6 1989
INSTANTANEOUS PEAK STAGE			3.54	Sep 16	(c)5.70	May 6 1989
INSTANTANEOUS LOW FLOW			1.5	(a)	1.5	(a)
ANNUAL RUNOFF (CFSM)	1.33		.66		1.20	
ANNUAL RUNOFF (INCHES)	18.05		8.93		16.27	
10 PERCENT EXCEEDS	39		15		30	
50 PERCENT EXCEEDS	12		6.4		12	
90 PERCENT EXCEEDS	5.2		3.0		5.0	

e Estimated.
a Aug. 12, 13, 1999.
b From rating curve extended above 600 ft^3/s.
c From floodmarks.



DAILY MEAN DISCHARGE - 1999 WATER YEAR

01586610 MORGAN RUN NEAR LOUISVILLE, MD

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

DRAINAGE AREA.--28.0 mi^2.

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

REVISED RECORDS.--WRD MD-DE-84: 1983(P).

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 430 ft above sea level, from topographic map.

REMARKS.--Records good except those for estimated daily discharges (partially plugged intake and ice effect), which are poor. Several measurements of water temperature were made during the year. Water-quality records for some prior periods have been collected at this location.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 750 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Sep 16	1415	*1,070	*4.92	No other peak greater than base discharge.			

Minimum discharge, 2.2 ft^3/s, Aug 12, 13, 19, 20.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.1	10	9.7	e8.0	16	25	37	21	11	8.5	9.6	5.3
2	6.5	10	9.4	e7.6	43	20	34	20	11	9.2	7.2	5.0
3	6.9	e9.6	9.4	98	28	20	28	20	11	9.4	5.5	4.9
4	10	e9.4	9.4	23	23	38	35	20	11	7.4	4.8	7.4
5	9.5	e9.2	9.4	e15	21	28	62	20	10	6.4	4.6	26
6	9.1	e9.2	9.4	e11	19	33	40	19	10	6.0	4.0	14
7	8.6	e9.2	9.4	e10	21	35	36	19	10	5.4	3.6	41
8	65	e9.4	11	e9.4	24	27	33	33	9.6	4.8	3.8	11
9	23	e9.6	17	50	20	26	38	22	9.4	4.5	4.2	8.8
10	18	9.9	11	35	18	25	41	19	9.4	4.5	3.2	8.5
11	13	16	11	29	17	25	59	18	9.8	4.9	3.1	7.4
12	12	12	10	30	18	24	55	17	9.5	4.4	2.5	6.9
13	12	10	10	38	19	22	44	17	10	6.2	2.4	6.3
14	e12	10	10	24	16	23	39	16	13	4.9	6.2	6.2
15	e11	10	9.3	32	15	29	37	15	12	4.8	5.8	19
16	e11	e9.8	9.3	36	15	32	37	15	9.9	4.5	4.0	330
17	e11	e9.6	9.2	44	17	47	33	15	12	3.8	3.4	44
18	e11	e9.6	9.1	195	39	42	31	15	13	3.6	2.9	20
19	10	e9.6	9.1	48	27	33	29	15	11	3.5	2.4	16
20	10	e9.6	9.1	30	22	29	29	14	11	3.1	8.6	14
21	10	11	8.9	25	e18	40	28	13	13	3.6	14	25
22	e11	10	9.3	23	e16	52	30	13	11	9.7	5.9	23
23	10	10	e8.6	24	e15	36	31	19	9.9	6.3	4.9	15
24	10	10	e8.8	85	e14	34	29	38	8.8	5.0	11	13
25	10	10	e8.8	42	16	32	26	22	8.4	4.7	9.2	12
26	10	15	e9.0	29	16	28	25	17	8.3	4.3	19	11
27	10	12	9.1	24	19	27	24	15	7.7	3.7	18	11
28	10	10	9.2	22	33	26	23	13	7.6	13	8.1	18
29	10	9.9	9.8	19	---	24	22	13	9.0	10	6.8	16
30	10	9.7	e9.4	17	---	23	22	12	7.4	6.8	5.6	89
31	10	---	e8.6	16	---	22	---	12	---	6.0	5.4	---
TOTAL	387.7	309.3	300.7	1099.0	585	927	1037	557	304.7	182.9	199.7	834.7
MEAN	12.5	10.3	9.70	35.5	20.9	29.9	34.6	18.0	10.2	5.90	6.44	27.8
MAX	65	16	17	195	43	52	62	38	13	13	19	330
MIN	6.5	9.2	8.6	7.6	14	20	22	12	7.4	3.1	2.4	4.9
CFSM	.45	.37	.35	1.27	.75	1.07	1.23	.64	.36	.21	.23	.99
IN.	.52	.41	.40	1.46	.78	1.23	1.38	.74	.40	.24	.27	1.11

e Estimated

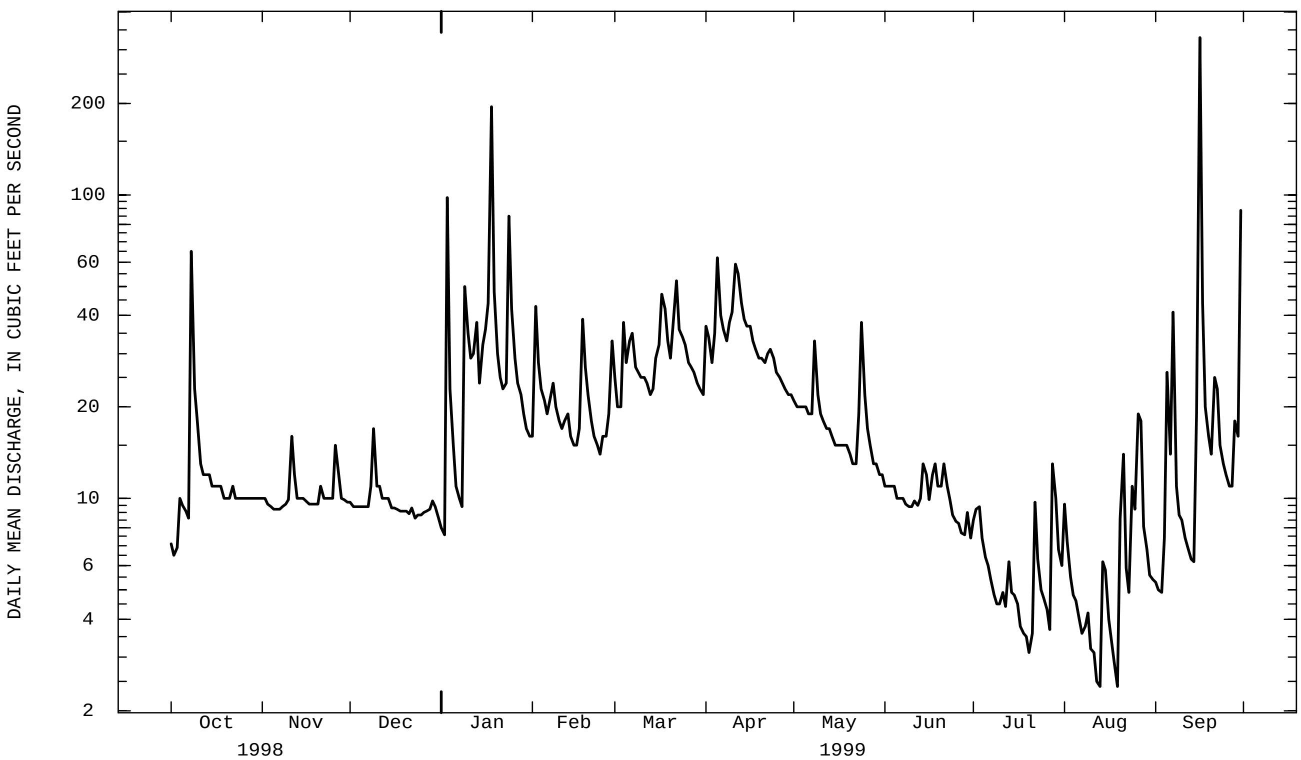
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1983 - 1999, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	19.8	27.6	38.5	43.6	45.4	60.7	56.6	46.3	28.8	21.4	18.4	17.9
MAX	65.7	63.0	132	117	91.2	154	141	111	71.4	71.8	59.0	77.8
(WY)	1997	1997	1997	1996	1984	1993	1993	1989	1996	1996	1996	1996
MIN	5.69	10.3	9.70	17.0	20.6	29.1	27.0	18.0	10.2	5.90	6.44	5.15
(WY)	1987	1999	1999	1992	1992	1985	1985	1999	1999	1999	1999	1986

01586610 MORGAN RUN NEAR LOUISVILLE, MD--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1983 - 1999	
ANNUAL TOTAL	14547.4		6724.7			
ANNUAL MEAN	39.9		18.4		35.4	
HIGHEST ANNUAL MEAN					58.3	1996
LOWEST ANNUAL MEAN					18.4	1999
HIGHEST DAILY MEAN	360	Mar 21	330	Sep 16	1370	Jan 19 1996
LOWEST DAILY MEAN	6.5	Oct 2	2.4	(a)	2.4	(a)
ANNUAL SEVEN-DAY MINIMUM	7.2	Sep 27	3.3	Aug 7	3.3	Aug 7 1999
INSTANTANEOUS PEAK FLOW			1070	Sep 16	(b)3550	Jan 19 1996
INSTANTANEOUS PEAK STAGE			4.92	Sep 16	8.45	Jan 19 1996
INSTANTANEOUS LOW FLOW			2.2	(c)	2.2	(c)
ANNUAL RUNOFF (CFSM)	1.42		.66		1.26	
ANNUAL RUNOFF (INCHES)	19.33		8.93		17.16	
10 PERCENT EXCEEDS	88		35		68	
50 PERCENT EXCEEDS	22		12		24	
90 PERCENT EXCEEDS	9.1		5.4		9.3	

a Aug. 13, 19, 1999.
b From rating curve extended above 1,900 ft^3/s.
c Aug. 12, 13, 19, 20, 1999.



DAILY MEAN DISCHARGE - 1999 WATER YEAR

01589100 EAST BRANCH HERBERT RUN AT ARBUTUS, MD

LOCATION.--Lat 39°14'24", long 76°41'33", Baltimore County, Hydrologic Unit 02060003, on left bank 50 ft upstream from bridge on Tom Day Boulevard at U.S. Route 1 in Arbutus, 0.5 mi upstream from mouth, and 2 mi south of Baltimore city limits.

DRAINAGE AREA.--2.47 mi^2.

PERIOD OF RECORD.--August 1957 to September 1989, October 1998 to September 1999.

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

GAGE.--Water-stage recorder and V-notch sharp crested weir. Elevation of gage is 45 ft above sea level, from topographic map. Prior to August 1981 at site 100 ft downstream at same datum.

REMARKS.--Records good except those for estimated daily discharges (missing record, ice effect, backwater), which are poor. Slight regulation at low flow from unknown source upstream from station. Several measurements of water temperature were made during the year. Water-quality records for some prior periods have been collected at this location.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 400 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jul 22	0345	644	5.46	Sep 5	1300	1,110	7.57
Aug 24	0615	493	4.71	Sep 16	1055	589	4.88
Aug 26	1915	*2,350	*13.25				

Minimum discharge, 0.16 ft^3/s, Aug 7, 10.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e.30	e.56	e.36	e.48	.76	e3.0	8.0	e.56	e.50	1.5	1.3	.49
2	e.23	e.43	e.80	e.45	10	e.80	1.9	e.56	.43	.69	.28	.47
3	.42	e.54	e.35	30	1.2	e2.0	1.3	e.52	.39	.57	.27	.49
4	2.5	e.77	e.37	e2.5	.83	e5.6	7.9	e.52	.36	.58	.29	5.7
5	e.70	e.78	1.4	e.47	.66	e1.0	3.9	e.50	.35	.53	.26	82
6	e.33	e.90	.37	e.50	.63	e3.5	1.6	e.49	.36	.46	.25	5.2
7	e.32	e.70	.36	e.50	.83	e6.0	1.4	e.54	.39	.60	.22	2.5
8	e18	e.85	2.6	e.50	.77	e.82	1.3	e1.8	.40	.72	.28	2.5
9	e1.3	e.60	3.5	e11	.56	e1.5	7.3	e.62	.41	.83	.24	24
10	e1.7	e.66	.42	e2.8	.51	e2.9	1.8	e.63	.68	1.0	.21	9.2
11	e.80	e5.2	.34	e1.6	e.50	1.9	10	e.62	1.4	.94	.23	e2.0
12	e.40	e.46	.31	2.6	e5.4	1.3	2.3	e.62	.62	1.5	.25	e.96
13	e21	e.30	3.9	2.4	e2.0	.99	1.5	e.60	1.2	.71	.28	e.85
14	e17	e.29	.54	e25	e.66	4.8	1.3	e.54	1.3	.33	12	e.78
15	e.82	e.28	.41	e6.0	e.60	18	2.3	e.46	.45	.25	1.6	e45
16	e.65	e.31	e.39	e3.0	e.60	3.6	1.4	e.45	.36	.26	.61	e200
17	e.56	e.35	e.38	1.1	e1.5	2.3	1.1	e.52	4.4	.25	.43	e10
18	e.55	e.41	e.35	e13	e16	1.8	1.0	e.58	.70	.32	.37	3.5
19	e.55	.46	e.33	e2.0	e2.2	1.5	.98	e.60	.37	.38	.31	2.1
20	e.32	.81	e.35	e.90	.93	1.3	1.0	e.47	9.3	.76	6.0	1.7
21	e.38	1.1	e.52	e1.0	.77	24	1.6	e.54	1.5	.27	1.3	17
22	.49	.72	e.74	.86	e.66	7.5	1.1	e.60	.55	43	.28	5.4
23	.51	.75	.47	1.2	e.56	2.5	1.3	e3.5	.46	1.8	.23	1.9
24	.51	.77	1.5	25	e.58	2.0	.86	e7.0	.40	.72	39	1.5
25	e.43	.63	.60	2.3	e.50	1.7	.83	e.85	.41	.57	10	1.3
26	.60	e11	e.52	1.3	e.52	1.5	e.70	e.50	.41	.57	162	1.2
27	e.34	e.70	e.45	1.0	e.45	1.3	e.66	e.50	.39	.35	8.2	1.2
28	e.45	e.50	e.90	.87	e9.8	2.2	e.62	e.55	.49	2.1	2.3	1.2
29	e.60	e.36	e1.5	.74	---	1.2	e.61	e.50	.52	.65	.92	3.0
30	e.76	e.36	e.92	.71	---	1.1	e.58	e.47	.50	.35	.55	21
31	e.70	---	.56	.63	---	1.0	---	e.45	---	.28	.54	---
TOTAL	74.22	32.55	26.51	142.41	60.98	110.61	68.14	27.66	30.00	63.84	251.00	454.14
MEAN	2.39	1.08	.86	4.59	2.18	3.57	2.27	.89	1.00	2.06	8.10	15.1
MAX	21	11	3.9	30	16	24	10	7.0	9.3	43	162	200
MIN	.23	.28	.31	.45	.45	.80	.58	.45	.35	.25	.21	.47
CFSM	.97	.44	.35	1.86	.88	1.44	.92	.36	.40	.83	3.28	6.13
IN.	1.12	.49	.40	2.14	.92	1.67	1.03	.42	.45	.96	3.78	6.84

e Estimated

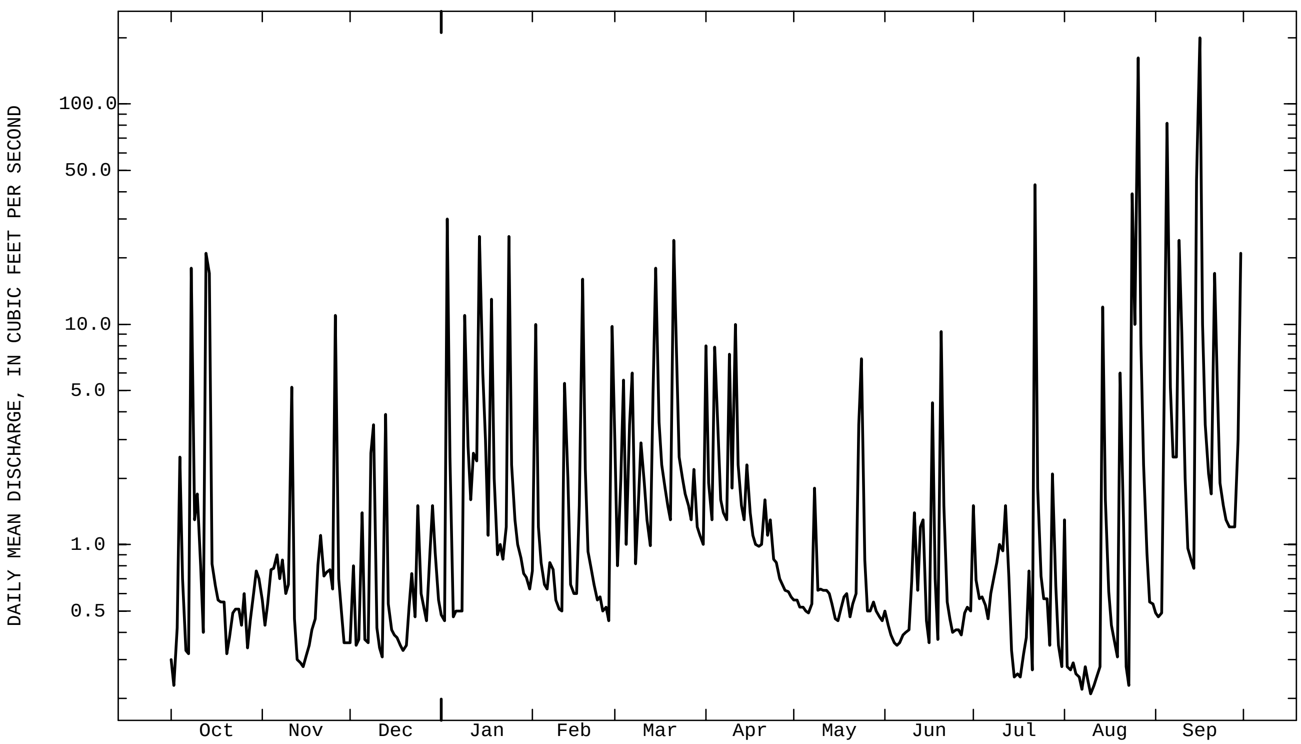
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1957 - 1989, 1999 BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	2.28	2.85	3.28	3.37	4.09	4.14	3.62	3.44	3.03	2.80	3.12	3.61
MAX	7.62	8.39	7.54	13.4	11.0	10.7	11.8	10.6	13.5	10.2	13.5	15.7
(WY)	1972	1973	1984	1979	1979	1958	1983	1989	1972	1975	1979	1979
MIN	.81	.63	.70	.56	1.28	1.41	1.20	.89	.95	.78	.80	.63
(WY)	1964	1982	1981	1981	1977	1981	1985	1986	1986	1966	1982	1986

01589100 EAST BRANCH HERBERT RUN AT ARBUTUS, MD--Continued

SUMMARY STATISTICS	FOR 1999 WATER YEAR		WATER YEARS 1957 - 1989 1999	
ANNUAL TOTAL	1342.06			
ANNUAL MEAN	3.68		3.30	
HIGHEST ANNUAL MEAN			6.85	1979
LOWEST ANNUAL MEAN			2.02	1977
HIGHEST DAILY MEAN	200	Sep 16	200	Jun 22 1972
LOWEST DAILY MEAN	.21	Aug 10	.21	Aug 10 1999
ANNUAL SEVEN-DAY MINIMUM	.24	Aug 6	.24	Aug 6 1999
INSTANTANEOUS PEAK FLOW	2350	Aug 26	(a)2460	Sep 6 1979
INSTANTANEOUS PEAK STAGE	13.25	Aug 26	(b)13.70	Sep 6 1979
INSTANTANEOUS LOW FLOW	.16	(c)	.16	(c)
ANNUAL RUNOFF (CFSM)	1.49		1.34	
ANNUAL RUNOFF (INCHES)	20.21		18.14	
10 PERCENT EXCEEDS	6.0		5.8	
50 PERCENT EXCEEDS	.71		1.5	
90 PERCENT EXCEEDS	.35		.66	

a From rating curve extended above 280 ft^3/s on basis of culvert measurement at gage height 5.0 ft, present site, and culvert and flow-over-road measurement of peak flow at gage height 13.7 ft, present site.
b From floodmarks.
c Aug. 7, 10, 1999.



DAILY MEAN DISCHARGE - 1999 WATER YEAR

01589197 GWYNNS FALLS NEAR DELIGHT, MD

LOCATION.--Lat 39°26'35", long 76°47'02", Baltimore County, Hydrologic Unit 02060003, on downstream side of bridge on Gwynbrook Avenue, 1.2 mi east of Delight, and 1.6 mi north of Owings Mills, and 1.6 miles notheast of Belltown.

DRAINAGE AREA.--4.23 mi^2.

PERIOD OF RECORD.--October 1998 to September 1999.

GAGE.--Water-stage recorder. Datum of gage is 534.20 ft above sea level.

REMARKS.--Records good except those for estimated daily discharges (ice effect, recorder malfunction), which are fair. Several measurements of water temperature were made during the year.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 150 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jan 3	0715	371	4.21	Aug 20	2015	226	3.21
Jan 18	1445	255	3.43	Aug 20	2130	189	2.91
Jul 22	0400	*856	*6.65	Aug 20	2230	164	2.69
Jul 28	1715	243	3.34	Sep 16	1300	619	5.57

Minimum discharge, 0.76 ft^3/s, Jul 9-10, 15-20.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.3	1.7	2.0	e1.9	2.5	4.7	e7.0	2.6	1.7	2.4	11	1.2
2	1.3	1.6	2.0	e1.7	17	3.7	e5.3	2.6	1.7	1.7	1.6	1.1
3	1.3	1.6	2.0	43	4.6	3.8	4.0	2.6	2.0	1.2	1.1	.99
4	2.3	1.6	1.9	4.8	3.4	6.8	e5.6	2.7	1.6	1.1	1.1	e4.0
5	1.8	1.6	1.8	e3.0	3.0	4.0	e8.2	2.4	1.6	1.0	1.1	e40
6	1.7	1.6	1.9	e2.6	2.9	5.0	e5.6	2.4	1.6	.96	1.1	e8.4
7	1.6	1.7	1.9	e2.3	4.0	4.7	4.1	2.4	1.5	.92	1.1	e12
8	9.0	1.6	2.4	e2.1	4.1	3.2	e3.5	2.9	1.4	.86	1.1	e4.5
9	4.6	1.6	2.9	3.5	3.2	3.1	e5.0	2.6	1.4	.84	1.2	2.8
10	3.7	1.7	2.4	3.8	3.2	3.2	e6.4	2.2	1.5	.85	1.1	2.9
11	2.4	7.2	2.1	3.2	2.9	3.2	e9.2	2.2	1.7	.86	.96	2.5
12	2.2	2.3	2.0	3.1	5.0	3.1	e6.2	3.4	1.5	.86	.96	2.3
13	2.1	2.3	2.4	6.2	3.9	3.0	e5.0	2.8	6.3	.96	.96	1.4
14	2.0	2.3	2.3	4.3	2.7	3.4	e3.7	2.2	5.4	.89	6.9	1.4
15	1.8	2.2	2.2	23	2.7	6.3	e3.7	2.1	2.3	.88	1.8	2.5
16	1.8	1.8	2.0	8.4	3.0	5.4	e5.2	2.1	1.6	.85	1.1	151
17	1.7	1.8	2.0	6.0	5.5	5.3	e4.6	2.1	1.6	.83	1.0	10
18	1.7	1.8	1.9	58	25	5.2	e4.0	2.1	1.8	.81	.96	4.9
19	1.7	1.8	1.8	9.3	5.6	4.8	e3.5	2.0	1.8	.79	.96	3.7
20	e1.8	2.0	1.8	5.6	5.2	4.8	e3.5	1.9	2.1	.87	26	3.4
21	1.7	2.4	1.9	4.8	4.7	5.2	e3.5	1.8	2.2	.86	8.9	e16
22	e1.6	2.2	2.1	4.7	4.4	5.5	4.0	1.9	1.8	110	2.4	e9.6
23	1.7	2.1	2.0	4.7	e3.8	4.7	5.6	2.4	1.6	4.1	1.2	3.7
24	1.7	1.8	2.1	12	e3.6	4.2	3.7	11	1.4	2.1	2.9	3.3
25	1.7	1.7	e2.2	6.3	4.0	4.2	3.2	3.0	1.4	1.3	1.5	3.0
26	1.7	1.9	e2.1	3.8	4.0	4.0	3.2	2.2	1.3	2.2	e110	2.7
27	e1.8	2.0	e2.1	3.1	4.0	4.0	2.8	2.0	1.3	.96	e12	2.7
28	e1.8	2.2	2.2	2.9	5.5	4.0	2.7	1.9	1.3	20	3.2	3.3
29	e1.8	2.1	2.3	2.6	---	4.1	2.7	1.8	1.2	4.4	2.5	3.2
30	1.7	2.1	e2.1	2.5	---	3.9	2.6	1.8	1.2	2.0	1.5	e25
31	1.7	---	e2.0	2.4	---	3.4	---	1.7	---	1.4	1.3	---
TOTAL	66.7	62.3	64.8	245.6	143.4	133.9	137.3	79.8	56.8	169.75	210.50	333.49
MEAN	2.15	2.08	2.09	7.92	5.12	4.32	4.58	2.57	1.89	5.48	6.79	11.1
MAX	9.0	7.2	2.9	58	25	6.8	9.2	11	6.3	110	110	151
MIN	1.3	1.6	1.8	1.7	2.5	3.0	2.6	1.7	1.2	.79	.96	.99
CFSM	.51	.49	.49	1.87	1.21	1.02	1.08	.61	.45	1.29	1.61	2.63
IN.	.59	.55	.57	2.16	1.26	1.18	1.21	.70	.50	1.49	1.85	2.93

e Estimated

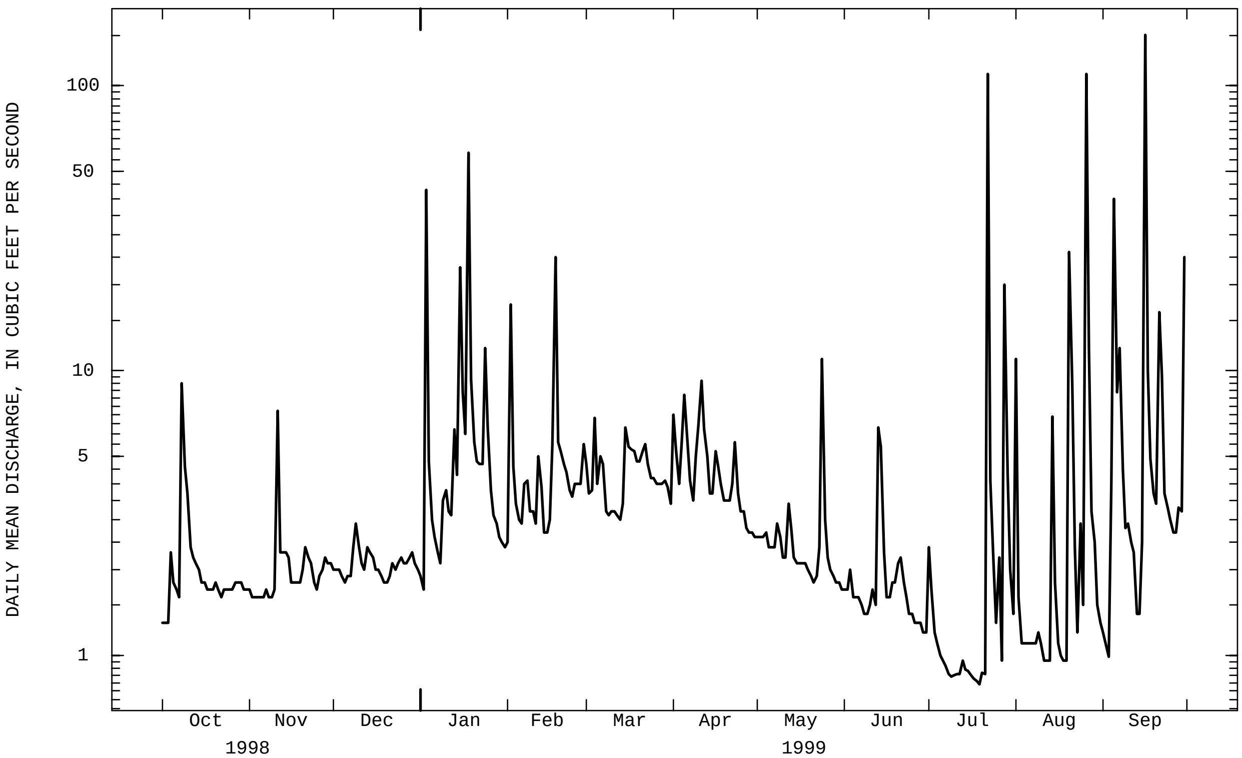
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1999 - 1999, BY WATER YEAR (WY)

MEAN	2.15	2.08	2.09	7.92	5.12	4.32	4.58	2.57	1.89	5.48	6.79	11.1
MAX	2.15	2.08	2.09	7.92	5.12	4.32	4.58	2.57	1.89	5.48	6.79	11.1
(WY)	1999	1999	1999	1999	1999	1999	1999	1999	1999	1999	1999	1999
MIN	2.15	2.08	2.09	7.92	5.12	4.32	4.58	2.57	1.89	5.48	6.79	11.1
(WY)	1999	1999	1999	1999	1999	1999	1999	1999	1999	1999	1999	1999

01589197 GWYNNS FALLS NEAR DELIGHT, MD--Continued

SUMMARY STATISTICS	FOR 1999 WATER YEAR	
ANNUAL TOTAL	1704.34	
ANNUAL MEAN	4.67	
HIGHEST DAILY MEAN	151	Sep 16
LOWEST DAILY MEAN	.79	Jul 19
ANNUAL SEVEN-DAY MINIMUM	.84	Jul 15
INSTANTANEOUS PEAK FLOW	856	Jul 22
INSTANTANEOUS PEAK STAGE	6.65	Jul 22
INSTANTANEOUS LOW FLOW	.76	(a)
ANNUAL RUNOFF (CFSM)	1.10	
ANNUAL RUNOFF (INCHES)	14.99	
10 PERCENT EXCEEDS	6.2	
50 PERCENT EXCEEDS	2.3	
90 PERCENT EXCEEDS	1.2	

a July 9, 10, 15-20.



DAILY MEAN DISCHARGE - 1999 WATER YEAR

01589300 GWYNNS FALLS AT VILLA NOVA, MD

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

DRAINAGE AREA.--32.5 mi^2.

PERIOD OF RECORD.--February 1957 to September 1988, October 1996 to current year.

REVISED RECORDS.--WDR MD-DE-83: 1981-82(P). WDR MD-DE-84: 1981(P).

GAGE.--Water-stage recorder. Datum of gage is 361.32 ft above sea level (Baltimore County bench mark). Prior to Aug. 27, 1963 and Oct. 25, 1972, to Sept. 20, 1973, water-stage recorder, and June 26, 1972 to Oct. 24, 1972, nonrecording gage, at site 300 ft upstream at same datum.

REMARKS.--Records good except those for estimated daily discharges (ice effect), which are fair. Slight diurnal fluctuation at times from unknown source upstream from station. Small diversion for irrigation upstream from station. Several measurements of water temperature were made during the year. Water-quality records for some prior periods have been collected at this location.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of July 21, 1956, reached a stage of 12.6 ft, discharge, 5,270 ft^3/s on basis of contracted-opening measurement.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 900 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jan 3	1000	907	4.87	Sep 5	1430	931	4.94
Jul 22	1015	1,300	5.92	Sep 16	1915	*2,950	*9.37
Aug 26	1845	2,130	7.78				

Minimum discharge, 5.5 ft^3/s, Aug 19.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.6	11	12	19	22	51	110	36	30	27	55	12
2	6.5	12	12	18	104	31	69	35	29	29	16	11
3	6.8	12	13	321	39	39	48	36	28	26	18	11
4	21	12	12	44	29	86	89	36	28	26	10	66
5	11	12	12	e26	26	48	133	35	29	26	10	325
6	9.6	12	11	e22	26	62	55	35	29	25	9.6	61
7	9.2	13	11	20	32	67	48	36	29	25	8.9	94
8	208	13	17	27	35	39	45	39	28	24	17	67
9	47	14	43	96	25	39	62	35	28	24	14	64
10	31	14	17	48	23	43	70	34	29	24	9.0	30
11	18	39	15	29	22	39	147	33	30	24	8.7	20
12	14	16	15	29	33	37	83	33	29	25	8.0	17
13	14	12	20	45	37	35	52	35	52	28	6.7	15
14	14	12	17	47	22	41	46	32	78	26	29	15
15	12	12	15	223	21	94	47	32	48	25	21	71
16	12	12	15	65	21	97	53	32	31	25	9.7	1590
17	12	12	15	51	29	112	46	32	44	24	8.1	127
18	12	11	15	333	188	75	42	32	44	24	7.1	42
19	12	11	15	76	47	49	40	31	32	24	6.1	29
20	11	15	16	39	32	44	40	32	59	24	59	28
21	11	18	17	32	27	146	40	32	43	24	141	129
22	12	13	15	30	24	189	51	33	34	457	19	75
23	15	14	14	30	23	58	52	68	30	49	13	33
24	16	14	17	242	22	53	48	99	29	32	25	25
25	15	14	15	58	22	49	39	44	28	29	23	22
26	15	70	14	34	22	46	38	35	29	28	418	20
27	13	20	17	29	22	45	37	32	29	26	269	20
28	11	14	14	26	86	47	37	33	29	52	36	25
29	12	13	17	24	---	43	37	32	28	42	21	24
30	11	12	e17	23	---	42	36	31	26	17	16	194
31	11	---	15	22	---	41	---	31	---	12	14	---
TOTAL	630.7	479	490	2128	1061	1887	1740	1151	1039	1273	1325.9	3262
MEAN	20.3	16.0	15.8	68.6	37.9	60.9	58.0	37.1	34.6	41.1	42.8	109
MAX	208	70	43	333	188	189	147	99	78	457	418	1590
MIN	6.5	11	11	18	21	31	36	31	26	12	6.1	11
CFSM	.63	.49	.49	2.11	1.17	1.87	1.78	1.14	1.07	1.26	1.32	3.35
IN.	.72	.55	.56	2.44	1.21	2.16	1.99	1.32	1.19	1.46	1.52	3.73

e Estimated

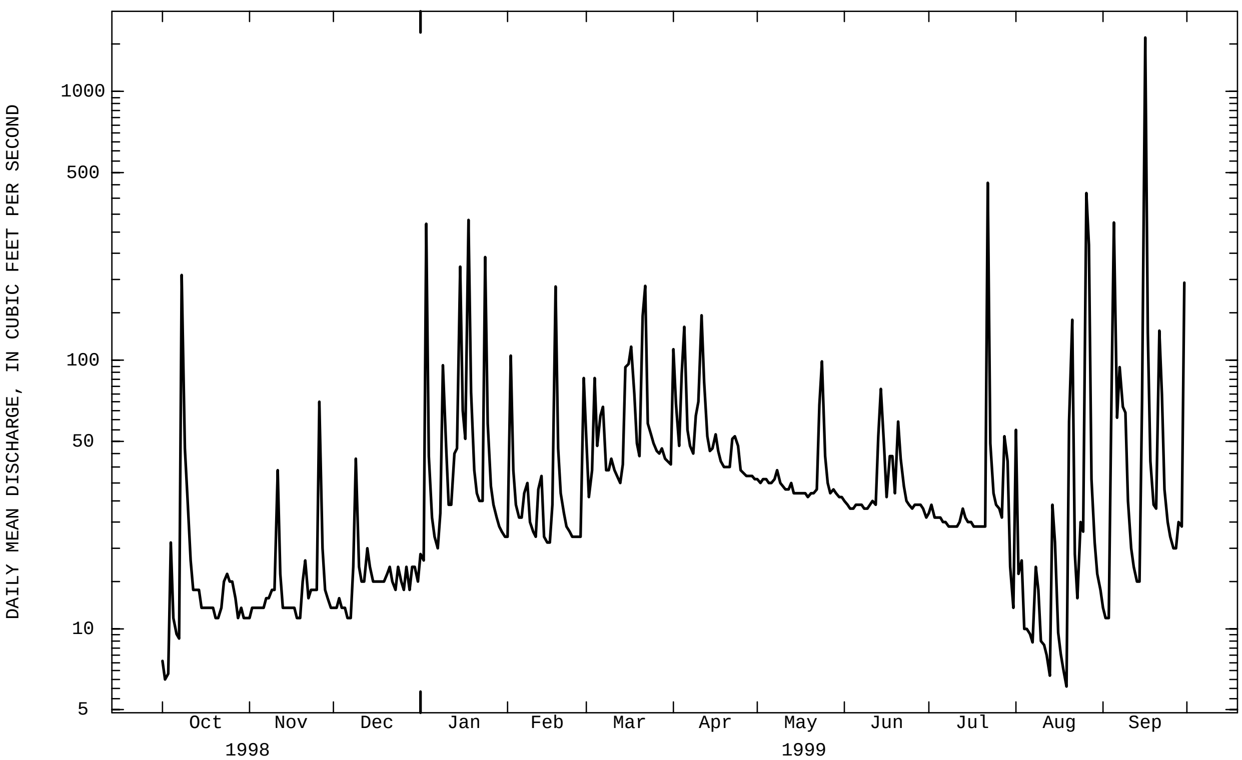
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1957 - 1999, BY WATER YEAR (WY)

MEAN	26.2	34.0	41.7	45.2	53.2	55.7	50.2	42.9	36.3	26.0	29.2	33.5
MAX	111	82.1	135	146	130	107	129	78.9	244	79.5	186	173
(WY)	1980	1997	1997	1979	1979	1998	1973	1983	1972	1975	1984	1979
MIN	7.10	10.4	9.18	10.5	23.0	21.4	20.7	14.4	8.95	6.37	5.02	7.35
(WY)	1964	1966	1966	1981	1969	1981	1963	1969	1986	1966	1966	1986

01589300 GWYNNS FALLS AT VILLA NOVA, MD--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1957 - 1999	
ANNUAL TOTAL	17100.7		16466.6			
ANNUAL MEAN	46.9		45.1		39.7	
HIGHEST ANNUAL MEAN					76.8	1972
LOWEST ANNUAL MEAN					20.5	1959
HIGHEST DAILY MEAN	708	Mar 9	1590	Sep 16	5000	Jun 22 1972
LOWEST DAILY MEAN	6.5	Oct 2	6.1	Aug 19	1.7	(a)
ANNUAL SEVEN-DAY MINIMUM	8.8	Sep 27	10	Oct 1	2.1	Sep 6 1966
INSTANTANEOUS PEAK FLOW			2950	Sep 16	(b)16200	Jun 22 1972
INSTANTANEOUS PEAK STAGE			9.37	Sep 16	(c)21.50	Jun 22 1972
INSTANTANEOUS LOW FLOW			5.5	Aug 19	1.7	Sep 7 1966
ANNUAL RUNOFF (CFSM)	1.44		1.39		1.22	
ANNUAL RUNOFF (INCHES)	19.57		18.85		16.58	
10 PERCENT EXCEEDS	93		70		66	
50 PERCENT EXCEEDS	24		29		22	
90 PERCENT EXCEEDS	11		12		9.6	

a Sept. 7, 8, 1966.
b From rating curve extended above 4,200 ft^3/s on basis of contracted-opening measurement of peak flow.
c From floodmarks.



DAILY MEAN DISCHARGE - 1999 WATER YEAR

01589330 DEAD RUN AT FRANKLINTOWN, MD

LOCATION.--Lat 39°18'40", long 76°43'02", Baltimore County, Hydrologic Unit 02060003, on right bank at downstream side of bridge on Colonial Road at Security Boulevard at Franklintown, 0.3 mi west of Baltimore city limits, and 1.2 mi southwest of Woodlawn, and 2.5 mi upstream from mouth.

DRAINAGE AREA.--5.52 mi^2.

PERIOD OF RECORD.--October 1959 to September 1987, July 1998 to September 1999.

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

GAGE.--Water-stage recorder and concrete control. Elevation of gage is 310 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records good except those for estimated daily discharges (recorder malfunction), which are fair. Occasional regulation at low flow from unknown source upstream from station. Several measurements of water temperature were made during the year.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 650 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jul 30, 1998	2200	1,060	5.33	Peak of 1998 water year unknown.			
Jan 3, 1999	0700	885	4.85	Sep 5, 1999	1415	1,800	7.19
Jul 22, 1999	0415	1,270	5.88	Sep 9, 1999	1815	920	4.95
Aug 26, 1999	1915	*2,590	*8.64	Sep 16, 1999	1200	1,420	6.27

July-September 1998 Minimum discharge, 0.40 ft^3/s, Aug 31, Sep 1, 5, 12, 13, 29.
1999 Water Year Minimum discharge, 0.22 ft^3/s, Aug 7, 8, 10-13.

DISCHARGE, CUBIC FEET PER SECOND, JULY 1998 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	---	---	1.6	.46
2	---	---	---	---	---	---	---	---	---	---	.96	10
3	---	---	---	---	---	---	---	---	---	---	.90	.80
4	---	---	---	---	---	---	---	---	---	---	1.5	.54
5	---	---	---	---	---	---	---	---	---	---	.85	.45
6	---	---	---	---	---	---	---	---	---	---	.79	.47
7	---	---	---	---	---	---	---	---	---	---	.92	6.2
8	---	---	---	---	---	---	---	---	---	---	.83	6.8
9	---	---	---	---	---	---	---	---	---	2.1	.78	.62
10	---	---	---	---	---	---	---	---	---	1.4	9.7	.49
11	---	---	---	---	---	---	---	---	---	1.1	3.3	.48
12	---	---	---	---	---	---	---	---	---	1.0	.97	.44
13	---	---	---	---	---	---	---	---	---	.99	.75	.47
14	---	---	---	---	---	---	---	---	---	.92	.87	.58
15	---	---	---	---	---	---	---	---	---	1.1	.68	.59
16	---	---	---	---	---	---	---	---	---	1.0	.70	.67
17	---	---	---	---	---	---	---	---	---	.99	5.5	.57
18	---	---	---	---	---	---	---	---	---	.85	2.1	.66
19	---	---	---	---	---	---	---	---	---	.84	.90	.51
20	---	---	---	---	---	---	---	---	---	.88	.53	.59
21	---	---	---	---	---	---	---	---	---	.81	.52	.63
22	---	---	---	---	---	---	---	---	---	.74	.50	18
23	---	---	---	---	---	---	---	---	---	14	.57	.80
24	---	---	---	---	---	---	---	---	---	2.9	.53	.53
25	---	---	---	---	---	---	---	---	---	.90	.66	3.6
26	---	---	---	---	---	---	---	---	---	.76	2.9	.88
27	---	---	---	---	---	---	---	---	---	.94	2.8	.57
28	---	---	---	---	---	---	---	---	---	.76	.59	.55
29	---	---	---	---	---	---	---	---	---	.70	.56	.44
30	---	---	---	---	---	---	---	---	---	63	.60	.52
31	---	---	---	---	---	---	---	---	---	19	.50	---
TOTAL	---	---	---	---	---	---	---	---	---	---	45.86	58.91
MEAN	---	---	---	---	---	---	---	---	---	---	1.48	1.96
MAX	---	---	---	---	---	---	---	---	---	---	9.7	18
MIN	---	---	---	---	---	---	---	---	---	---	.50	.44
CFSM	---	---	---	---	---	---	---	---	---	---	.27	.36
IN.	---	---	---	---	---	---	---	---	---	---	.31	.40

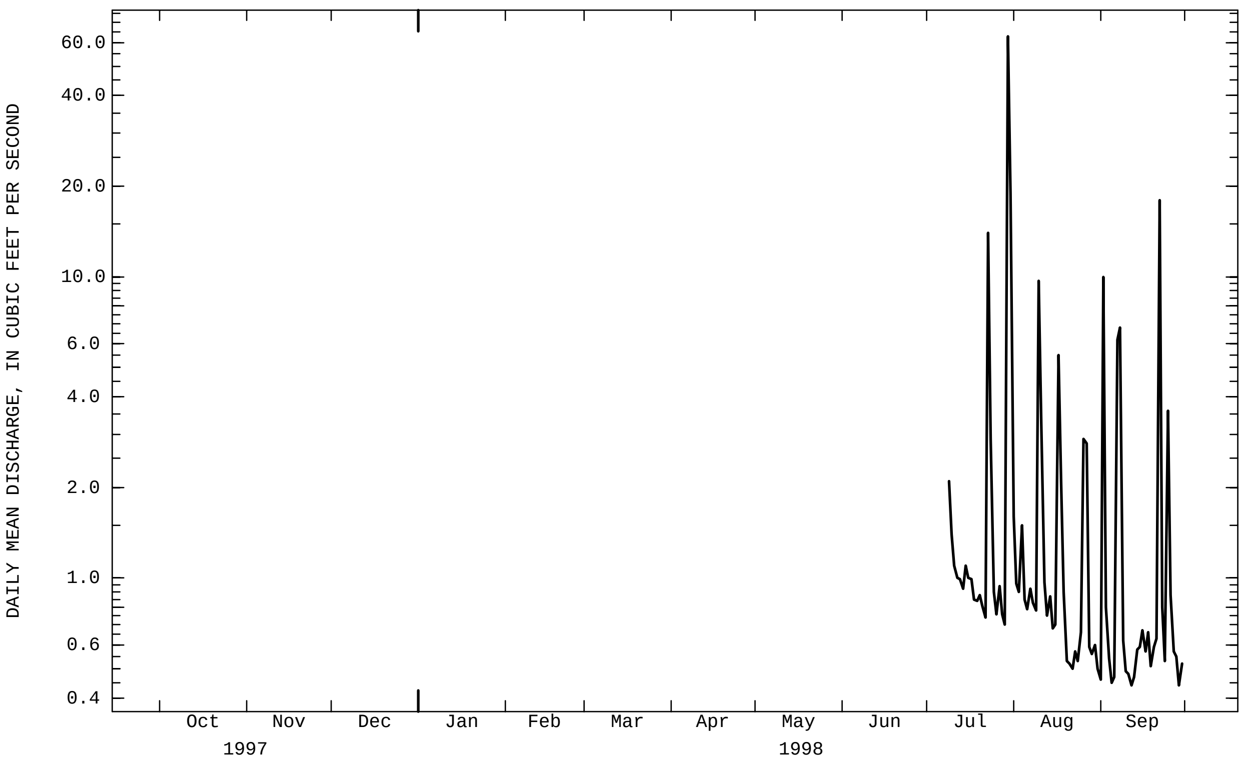
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1960 - 1987, 1998, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	5.57	6.67	8.59	9.30	11.5	10.6	9.11	7.50	6.63	5.04	6.59	7.92
MAX	21.8	20.6	24.0	38.1	31.3	25.9	29.6	16.3	28.4	27.7	33.9	39.5
(WY)	1977	1973	1978	1979	1979	1983	1983	1983	1972	1975	1984	1979
MIN	.33	.69	.57	.67	2.55	3.39	1.27	1.15	1.62	.66	.85	.81
(WY)	1964	1966	1966	1981	1968	1966	1963	1963	1966	1963	1966	1970

01589330 DEAD RUN AT FRANKLINTOWN, MD--Continued

SUMMARY STATISTICS	WATER YEARS 1960 - 1987 1998	
ANNUAL MEAN	7.93	
HIGHEST ANNUAL MEAN	15.5	1979
LOWEST ANNUAL MEAN	3.78	1963
HIGHEST DAILY MEAN	800	Aug 13 1984
LOWEST DAILY MEAN	.20	Aug 5 1963
ANNUAL SEVEN-DAY MINIMUM	.20	Aug 24 1966
INSTANTANEOUS PEAK FLOW	(a)7400	Jun 22 1972
INSTANTANEOUS PEAK STAGE	(b)12.50	Jun 22 1972
INSTANTANEOUS LOW FLOW	.10	(c)
ANNUAL RUNOFF (CFSM)	1.44	
ANNUAL RUNOFF (INCHES)	19.52	
10 PERCENT EXCEEDS	14	
50 PERCENT EXCEEDS	2.0	
90 PERCENT EXCEEDS	.70	

a From rating curve extended above 1,600 ft^3/s on basis of contracted-opening measurement of peak flow at bridge 0.6 mi downstream, adjusted for flow from intervening area.
b From floodmarks.
c Sept. 11, 12, 1966.



DAILY MEAN DISCHARGE - 1998 WATER YEAR

01589330 DEAD RUN AT FRANKLINTOWN, MD--Continued

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.41	1.1	.71	.71	1.3	4.7	26	e1.3	.67	.91	1.1	.91
2	.28	.69	1.1	.85	25	2.0	6.5	e1.3	.72	.89	.49	.82
3	.37	.87	.71	97	3.1	6.3	3.6	e1.2	.65	.49	.33	.81
4	6.9	1.3	.78	3.1	1.9	14	22	e1.2	.61	.45	.33	18
5	.91	1.4	1.7	1.4	1.5	2.5	15	e1.1	.52	.39	.35	203
6	.49	1.6	.87	1.5	1.5	15	3.3	e1.1	.54	.39	.27	9.6
7	.47	1.2	.82	1.3	2.1	5.7	2.9	1.2	.58	.41	.23	23
8	43	1.5	6.5	1.2	2.8	2.2	2.8	3.8	.48	.28	.39	22
9	3.6	1.1	10	28	1.4	3.3	e2.4	.99	.48	.28	.45	80
10	4.4	1.2	1.2	4.6	1.3	7.2	e3.1	1.0	.75	.29	.23	12
11	.83	13	.77	3.9	1.2	3.6	e38	.98	.78	.30	.23	2.6
12	.61	.86	.62	6.3	14	2.4	e16	1.0	.50	1.2	.23	1.7
13	5.8	.54	8.1	7.3	3.7	1.9	e7.2	.95	5.5	4.6	.22	1.4
14	4.6	.49	1.3	12	1.5	8.3	e2.8	.85	13	.44	.50	1.3
15	1.1	.45	.79	62	1.4	30	e3.4	.72	1.7	.37	.36	18
16	1.0	.51	.71	5.4	1.4	20	e7.0	.71	.61	.35	.32	432
17	.93	.62	.70	2.9	5.4	13	e6.8	.80	11	.32	.33	11
18	.90	.71	.63	31	41	6.9	e3.5	.89	2.1	.28	.31	4.1
19	.89	.86	.61	4.0	3.8	4.3	e2.1	.92	.58	.29	.28	2.9
20	.48	2.5	.63	2.1	2.3	3.2	e2.1	.75	24	.43	35	4.6
21	.55	2.1	.82	2.4	1.9	74	e2.5	.82	3.9	.38	4.8	36
22	.60	.61	1.3	1.8	1.6	20	e12	.98	.89	100	.43	11
23	.65	.51	.75	2.6	1.5	5.3	e14	13	.79	1.5	.30	2.5
24	.70	.52	3.1	65	1.5	5.0	e6.2	17	.54	.71	28	1.8
25	.68	.57	1.2	5.0	1.4	3.8	e2.0	1.5	.74	.82	18	1.5
26	.85	28	.90	2.2	1.4	3.2	e1.7	.73	.58	1.6	221	1.3
27	.52	1.1	.73	1.8	1.3	2.9	e1.6	.73	3.2	.60	17	1.6
28	.64	.72	1.2	1.6	26	5.8	e1.5	.84	.95	1.9	2.3	1.7
29	1.1	.63	3.0	1.4	---	3.0	e1.5	.74	.61	1.3	1.4	6.1
30	1.7	.71	1.8	1.4	---	2.8	e1.4	.64	.57	.67	1.0	55
31	1.6	---	.73	1.3	---	2.6	---	.61	---	.55	.87	---
TOTAL	87.56	67.97	54.78	363.06	154.2	284.9	220.9	60.35	78.54	123.39	337.05	968.24
MEAN	2.82	2.27	1.77	11.7	5.51	9.19	7.36	1.95	2.62	3.98	10.9	32.3
MAX	43	28	10	97	41	74	38	17	24	100	221	432
MIN	.28	.45	.61	.71	1.2	1.9	1.4	.61	.48	.28	.22	.81
CFSM	.51	.41	.32	2.12	1.00	1.66	1.33	.35	.47	.72	1.97	5.85
IN.	.59	.46	.37	2.45	1.04	1.92	1.49	.41	.53	.83	2.27	6.53

e Estimated

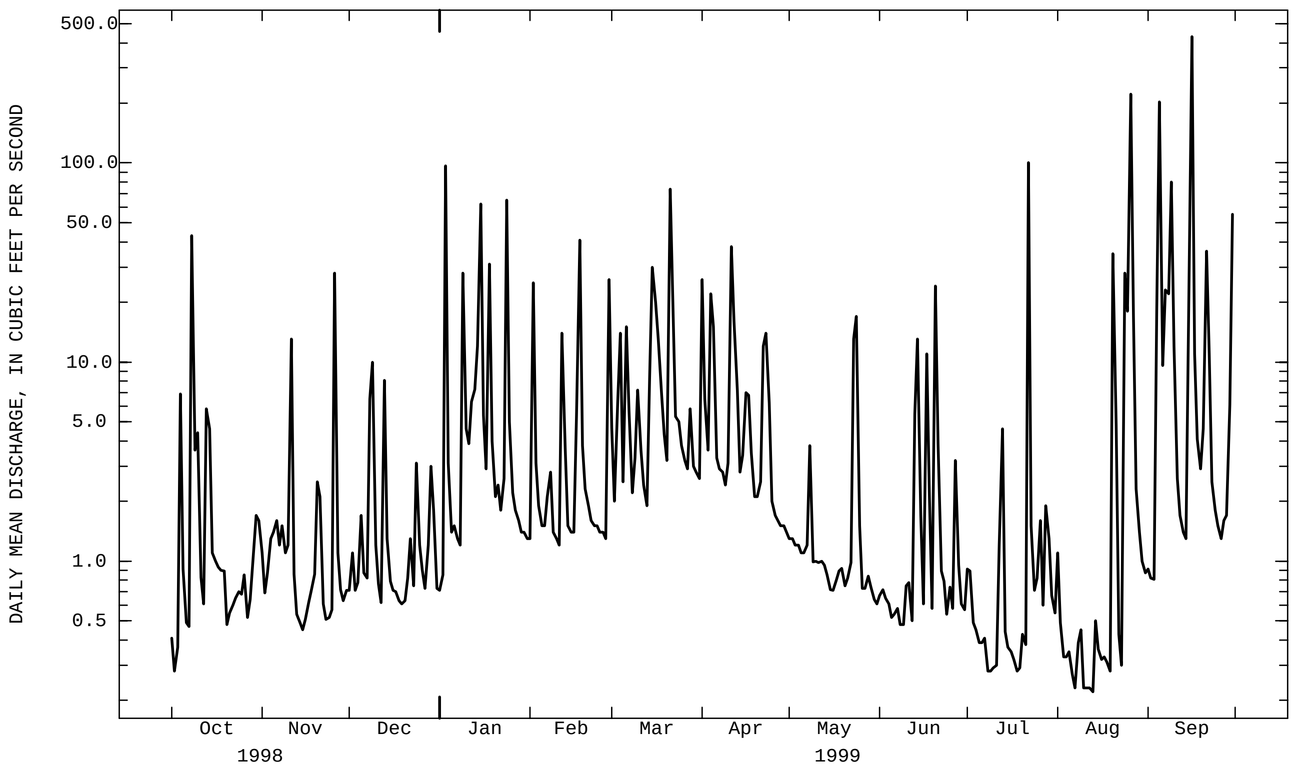
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1960 - 1987, 1998 - 1999 BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	5.47	6.52	8.36	9.38	11.3	10.6	9.05	7.31	6.50	5.01	6.73	8.73
MAX	21.8	20.6	24.0	38.1	31.3	25.9	29.6	16.3	28.4	27.7	33.9	39.5
(WY)	1977	1973	1978	1979	1979	1983	1983	1983	1972	1975	1984	1979
MIN	.33	.69	.57	.67	2.55	3.39	1.27	1.15	1.62	.66	.85	.81
(WY)	1964	1966	1966	1981	1968	1966	1963	1963	1966	1963	1966	1970

01589330 DEAD RUN AT FRANKLINTOWN, MD--Continued

SUMMARY STATISTICS	FOR 1999 WATER YEAR		WATER YEARS 1960 - 1987 1998 - 1999	
ANNUAL TOTAL	2800.94			
ANNUAL MEAN	7.67		7.92	
HIGHEST ANNUAL MEAN			15.5	1979
LOWEST ANNUAL MEAN			3.78	1963
HIGHEST DAILY MEAN	432	Sep 16	800	Aug 13 1984
LOWEST DAILY MEAN	.22	Aug 13	.20	Aug 5 1963
ANNUAL SEVEN-DAY MINIMUM	.28	Aug 7	.20	Aug 24 1966
INSTANTANEOUS PEAK FLOW	2590	Aug 26	(a)7400	Jun 22 1972
INSTANTANEOUS PEAK STAGE	8.64	Aug 26	(b)12.50	Jun 22 1972
INSTANTANEOUS LOW FLOW	.22	(c)	.10	(d)
ANNUAL RUNOFF (CFSM)	1.39		1.43	
ANNUAL RUNOFF (INCHES)	18.88		19.50	
10 PERCENT EXCEEDS	15		14	
50 PERCENT EXCEEDS	1.4		2.0	
90 PERCENT EXCEEDS	.45		.70	

a From rating curve extended above 1,600 ft^3/s on basis of contracted-opening measurement of peak flow at bridge 0.6 mi downstream, adjusted for flow from intervening area.
b From floodmarks.
c Aug. 7, 8, 10-13.
d Sept. 11, 12, 1966.



DAILY MEAN DISCHARGE - 1999 WATER YEAR

01589532 GWYNNS FALLS AT WASHINGTON BOULEVARD AT BALTIMORE, MD

LOCATION.--Lat 39°16'15", long 76°38'54", Baltimore City, Hydrologic Unit 02060003, on left bank at Carroll Park Municipal Golf Course, 350 ft upstream from bridge on Washington Boulevard, 0.9 mi northwest of Morrell Park, and approximately 1.6 mi upstream from mouth..

DRAINAGE AREA.--65.9 mi^2.

PERIOD OF RECORD.--October 1998 to September 1999.

GAGE.--Water-stage recorder. Datum of gage is 10 ft above sea level, from topographic map.

REMARKS.--Records good except those for estimated daily discharges (missing record),which are fair. Several measurements of water temperature were made during the year.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jan 3	0700	2,360	6.97	Sep 5	1345	5,450	10.22
Jul 22	0415	6,390	11.03	Sep 9	1915	4,190	9.03
Aug 24	0645	2,740	7.45	Sep 16	1330	9,200	13.07
Aug 26	1930	*23,900	*20.03				

Minimum discharge, 15 ft^3/s, Aug 19.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e15	27	49	29	45	106	205	59	51	50	102	30
2	e13	25	29	27	229	57	126	58	48	50	38	27
3	e14	28	29	652	80	73	84	66	48	47	34	28
4	e43	26	32	92	55	169	173	57	49	48	28	154
5	e23	27	34	48	51	86	244	54	48	49	23	1120
6	e20	27	30	38	47	140	95	54	49	50	22	164
7	e19	27	28	39	46	132	82	57	55	46	21	194
8	e600	27	44	37	61	72	77	94	56	44	30	164
9	e100	27	111	180	46	70	146	58	55	42	38	697
10	e60	30	38	93	43	89	133	55	50	43	22	162
11	e35	95	34	46	41	72	268	55	52	45	23	55
12	e29	43	40	63	94	64	154	55	49	50	21	46
13	e29	30	67	80	84	61	90	56	77	60	24	40
14	e20	29	42	97	44	101	76	53	129	42	111	37
15	e20	27	33	440	40	257	79	53	105	40	62	157
16	e20	26	33	119	38	188	85	52	53	44	25	3520
17	e20	28	30	86	61	178	77	52	102	41	25	320
18	e20	27	50	456	343	140	67	51	85	41	23	94
19	e20	25	44	148	93	90	66	54	50	40	19	59
20	e18	32	32	71	58	75	63	52	179	42	116	49
21	e20	41	33	61	51	315	71	52	84	46	231	294
22	e26	31	33	58	43	338	95	57	65	964	42	169
23	e30	27	29	58	38	108	e70	144	51	95	28	63
24	e32	27	36	480	41	90	e80	189	49	67	248	49
25	e30	27	34	129	40	85	65	87	46	53	97	44
26	e30	178	28	72	39	76	64	57	48	53	2280	40
27	e25	48	30	60	39	71	63	54	52	52	516	42
28	25	33	32	53	196	87	60	53	52	54	82	45
29	25	30	38	50	---	72	58	54	50	96	48	55
30	28	29	44	45	---	69	58	52	46	47	40	431
31	26	---	32	43	---	67	---	55	---	31	33	---
TOTAL	1435	1104	1198	3950	2086	3598	3074	1999	1933	2472	4452	8349
MEAN	46.3	36.8	38.6	127	74.5	116	102	64.5	64.4	79.7	144	278
MAX	600	178	111	652	343	338	268	189	179	964	2280	3520
MIN	13	25	28	27	38	57	58	51	46	31	19	27
CFSM	.70	.56	.59	1.93	1.13	1.76	1.55	.98	.98	1.21	2.18	4.22
IN.	.81	.62	.68	2.23	1.18	2.03	1.74	1.13	1.09	1.40	2.51	4.71

e Estimated

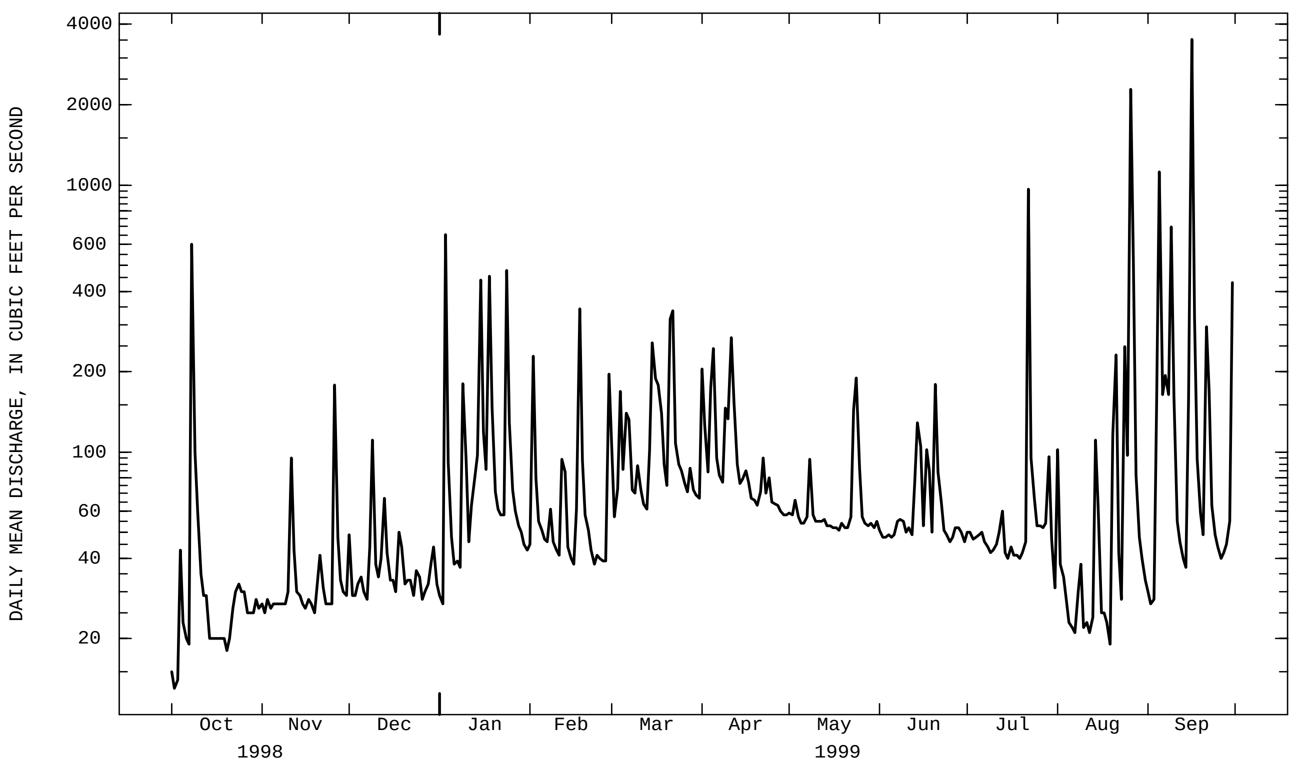
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1999 - 1999, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	46.3	36.8	38.6	127	74.5	116	102	64.5	64.4	79.7	144	278
MAX	46.3	36.8	38.6	127	74.5	116	102	64.5	64.4	79.7	144	278
(WY)	1999	1999	1999	1999	1999	1999	1999	1999	1999	1999	1999	1999
MIN	46.3	36.8	38.6	127	74.5	116	102	64.5	64.4	79.7	144	278
(WY)	1999	1999	1999	1999	1999	1999	1999	1999	1999	1999	1999	1999

01589532 GWYNNS FALLS AT WASHINGTON BOULEVARD AT BALTIMORE, MD--Continued

SUMMARY STATISTICS	FOR 1999 WATER YEAR	
ANNUAL TOTAL	35650	
ANNUAL MEAN	97.7	
HIGHEST DAILY MEAN	3520	Sep 16
LOWEST DAILY MEAN	13	Oct 2
ANNUAL SEVEN-DAY MINIMUM	20	Oct 14
INSTANTANEOUS PEAK FLOW	(a)23900	Aug 26
INSTANTANEOUS PEAK STAGE	20.03	Aug 26
INSTANTANEOUS LOW FLOW	15	Aug 19
ANNUAL RUNOFF (CFSM)	1.48	
ANNUAL RUNOFF (INCHES)	20.12	
10 PERCENT EXCEEDS	164	
50 PERCENT EXCEEDS	51	
90 PERCENT EXCEEDS	27	

a From rating curve extended above 6,200 ft^3/s on basis of slope-area measurement of peak flow.



DAILY MEAN DISCHARGE - 1999 WATER YEAR

01589440 JONES FALLS AT SORRENTO, MD

LOCATION.--Lat 39°23'30", long 76°39'42", Baltimore County, Hydrologic Unit 02060003, on right bank 0.3 mi downstream from bridge on State Highway 25 (Falls Road), 0.4 mi downstream from Slaughterhouse Branch and Sorrento, and 12.5 mi upstream from mouth.

DRAINAGE AREA.--25.2 mi^2.

PERIOD OF RECORD.--Annual maximum, water years 1958-66. April 1966 to September 1988, October 1996 to current year.

GAGE.--Water-stage recorder. Datum of gage is 240 ft above sea level, from topographic map. January 1958 to April 1966, non-recording gage at site 450 ft upstream at same gage datum.

REMARKS.--Records good except those for estimated daily discharges (ice effect), which are fair. Several measurements of water temperature were made during the year.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 600 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jul 22	0430	1,390	8.30	Aug 26	1930	2,210	9.62
Jul 22	0815	824	7.10	Sep 5	1430	732	6.86
Aug 20	0415	844	7.15	Sep 16	1545	*2,720	*10.29
Aug 20	2245	728	6.85				

Minimum discharge, 4.2 ft^3/s, Jul 20.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.1	9.6	11	11	17	31	51	16	8.5	8.7	31	11
2	9.0	9.2	11	12	58	20	41	16	8.4	9.0	9.8	10
3	8.9	9.7	11	181	26	21	30	16	8.0	8.4	8.3	10
4	16	9.6	11	27	21	44	44	16	7.8	7.8	7.8	34
5	10	11	11	21	19	24	61	15	7.6	7.1	7.0	146
6	9.7	11	12	e20	18	34	33	15	7.7	6.6	6.6	31
7	8.8	11	11	e19	19	36	29	16	7.4	6.2	6.5	34
8	91	12	13	19	20	21	27	18	6.8	5.9	7.7	36
9	22	11	23	39	18	21	36	16	6.5	5.7	7.2	26
10	15	11	12	34	17	21	36	14	6.9	5.7	6.3	22
11	12	19	11	e30	16	20	73	13	7.5	6.1	6.1	16
12	10	11	11	e29	24	19	51	13	6.9	6.1	5.8	14
13	9.8	9.4	13	29	25	18	33	13	37	6.7	5.9	12
14	9.9	9.7	11	33	18	23	29	12	28	6.0	48	11
15	9.8	9.8	11	166	17	52	28	12	16	5.7	13	35
16	9.5	9.6	11	53	16	49	31	12	9.9	5.3	8.4	1170
17	9.3	9.5	10	39	19	57	28	12	17	5.0	7.2	91
18	10	9.4	10	176	93	41	25	11	18	4.9	6.3	43
19	10	9.3	9.8	54	32	27	23	11	11	4.8	6.0	36
20	9.6	9.9	11	31	23	22	24	10	23	4.9	195	33
21	9.7	11	11	26	20	74	24	10	17	5.2	80	61
22	9.7	10	10	24	18	122	30	10	14	281	15	50
23	9.6	10	10	24	17	46	30	23	12	17	12	31
24	9.8	9.8	12	123	17	40	26	41	11	11	21	28
25	9.5	9.1	11	42	17	35	22	16	10	9.6	18	26
26	8.9	41	11	26	17	31	21	12	9.6	8.4	385	25
27	8.8	15	11	22	16	30	19	12	9.5	7.7	110	25
28	9.0	12	11	20	48	32	19	11	9.8	14	23	27
29	9.3	11	12	19	---	28	18	9.9	9.3	13	17	26
30	9.8	11	12	18	---	26	18	9.4	8.6	8.9	13	100
31	9.5	---	11	17	---	24	---	9.0	---	9.5	12	---
TOTAL	403.0	351.6	356.8	1384	686	1089	960	440.3	360.7	511.9	1105.9	2220
MEAN	13.0	11.7	11.5	44.6	24.5	35.1	32.0	14.2	12.0	16.5	35.7	74.0
MAX	91	41	23	181	93	122	73	41	37	281	385	1170
MIN	8.8	9.1	9.8	11	16	18	18	9.0	6.5	4.8	5.8	10
CFSM	.52	.47	.46	1.77	.97	1.39	1.27	.56	.48	.66	1.42	2.94
IN.	.59	.52	.53	2.04	1.01	1.61	1.42	.65	.53	.76	1.63	3.28

e Estimated

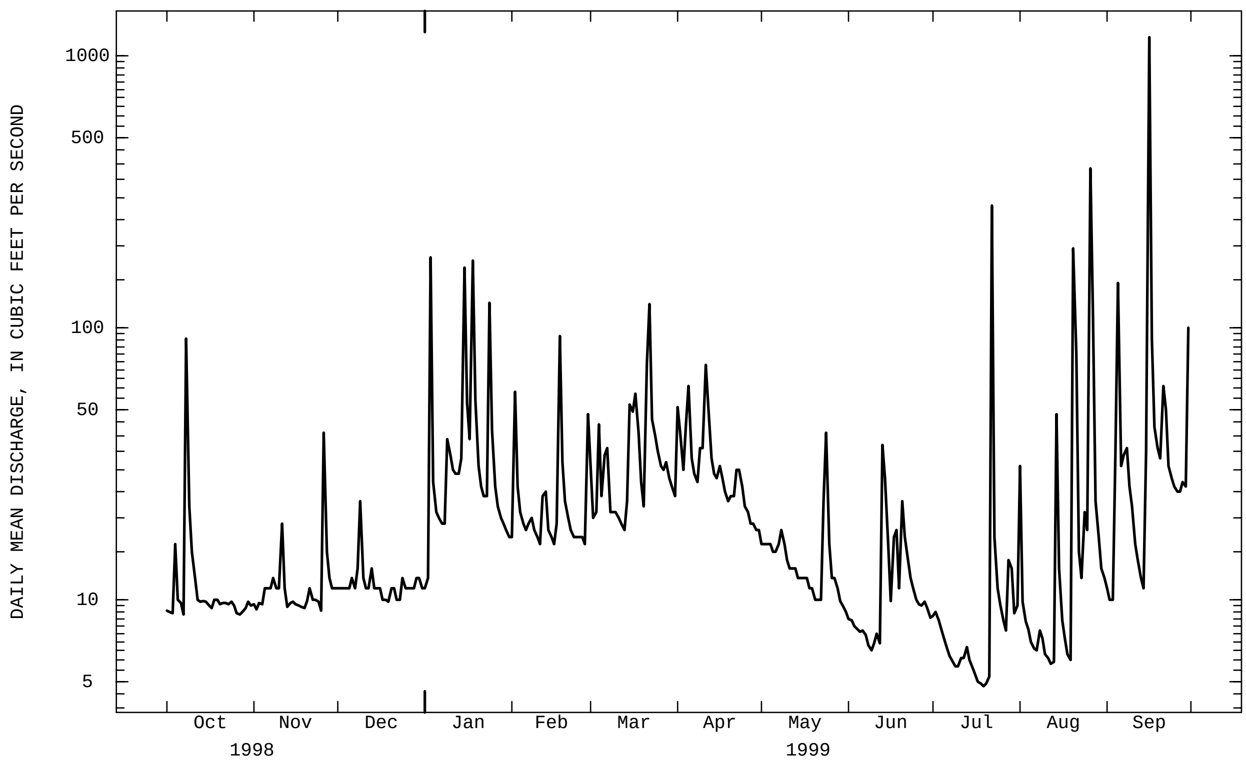
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1966 - 1999, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	24.0	27.4	34.1	36.6	40.8	43.2	40.9	34.6	30.6	24.8	23.4	27.8
MAX	100	60.4	94.9	105	97.9	82.6	95.7	66.7	150	73.0	72.3	132
(WY)	1980	1973	1997	1979	1979	1998	1973	1973	1972	1984	1971	1979
MIN	6.47	10.2	11.3	9.92	18.5	17.5	18.7	13.0	7.98	4.74	3.85	6.26
(WY)	1987	1982	1981	1981	1969	1981	1969	1969	1986	1966	1966	1986

01589440 JONES FALLS AT SORRENTO, MD--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1966 - 1999	
ANNUAL TOTAL	12483.8		9869.2			
ANNUAL MEAN	34.2		27.0		32.6	
HIGHEST ANNUAL MEAN					62.5	1972
LOWEST ANNUAL MEAN					17.0	1986
HIGHEST DAILY MEAN	472	Mar 9	1170	Sep 16	2600	Jun 22 1972
LOWEST DAILY MEAN	8.6	Sep 1	4.8	Jul 19	2.1	(a)
ANNUAL SEVEN-DAY MINIMUM	9.1	Sep 27	5.1	Jul 15	2.2	Aug 28 1966
INSTANTANEOUS PEAK FLOW			2720	Sep 16	(b)13800	Jun 22 1972
INSTANTANEOUS PEAK STAGE			10.29	Sep 16	(c)18.11	Jun 22 1972
INSTANTANEOUS LOW FLOW			4.2	Jul 20	1.8	(d)
ANNUAL RUNOFF (CFSM)	1.36		1.07		1.29	
ANNUAL RUNOFF (INCHES)	18.43		14.57		17.60	
10 PERCENT EXCEEDS	67		41		53	
50 PERCENT EXCEEDS	22		14		22	
90 PERCENT EXCEEDS	9.6		7.7		9.5	

a Sept. 2, 3, 7, 1966.
b From rating curve extended above 1,400 ft^3/s on basis of slope-area measurement of peak flow.
c From floodmarks.
d Sept. 7, 8, 1966.



DAILY MEAN DISCHARGE - 1999 WATER YEAR

01589500 SAWMILL CREEK AT GLEN BURNIE, MD

LOCATION.--Lat 39°10'12", long 76°37'51", Anne Arundel County, Hydrologic Unit 02060003, on left bank 300 ft upstream from bridge on State Highway 648, 0.25 mi southeast of State Highway 3, and 0.5 mi northwest of Glen Burnie.

DRAINAGE AREA.--4.97 mi^2.

PERIOD OF RECORD.--May 1944 to September 1952. Annual maximum, water years 1965-70. September 1983 to current year.

REVISED RECORDS.--WDR MD-DE-89-1: 1984-88.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 26.07 ft above sea level.

REMARKS.--No estimated daily discharges. Records good. Low flow affected by ground-water diversions from Anne Arundel County municipal well fields upstream from station. Several measurements of water temperature were made during the year.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of August 1933 reached a stage of about 14 ft.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 30 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jan 3	1045	43	2.53	Aug 25	2215	60	2.76
Jul 22	0415	55	2.70	Sep 5	1445	71	2.91
Aug 14	1615	107	3.39	Sep 16	1415	*294	*5.74

Minimum discharge, 0.61 ft^3/s, Jul 20.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.7	3.2	3.1	2.9	3.2	5.3	4.6	3.0	2.3	2.4	2.0	2.3
2	2.7	4.7	3.0	2.9	7.0	3.6	4.3	2.8	2.3	2.3	1.9	2.3
3	2.8	2.6	3.1	19	4.3	4.0	3.6	3.0	2.2	2.3	1.8	2.3
4	3.7	2.9	3.1	6.2	3.6	5.4	4.4	3.1	2.1	2.2	1.8	4.0
5	3.4	3.0	3.3	3.6	3.2	3.7	5.9	3.0	2.1	2.0	1.9	27
6	3.3	3.0	3.2	3.2	3.2	4.1	3.9	3.0	2.0	1.9	1.8	9.1
7	3.2	3.0	3.2	3.3	3.2	4.2	3.6	3.2	2.1	1.9	1.8	4.5
8	5.7	3.0	3.5	3.2	3.3	3.3	3.4	3.1	2.3	1.8	1.9	3.2
9	4.7	3.0	4.6	4.4	3.2	3.5	5.1	3.6	2.1	1.8	1.9	3.4
10	3.9	3.1	3.3	4.0	3.2	4.3	5.3	2.4	2.2	1.9	1.8	5.4
11	3.5	4.3	3.1	3.3	3.1	3.9	5.2	2.5	2.4	1.9	1.9	3.1
12	3.2	4.0	3.0	3.5	4.4	3.7	4.7	2.6	1.9	2.0	1.8	2.7
13	3.3	2.9	4.5	3.8	4.7	3.5	3.8	2.6	2.7	2.3	1.8	2.6
14	3.3	3.1	3.5	3.7	3.2	4.6	3.5	2.5	3.3	2.2	15	2.6
15	3.2	3.2	3.1	8.6	3.2	11	3.7	2.5	3.4	2.3	4.4	4.3
16	4.3	3.1	3.2	4.9	3.2	6.8	3.9	2.5	2.6	1.7	2.6	155
17	2.6	3.2	3.2	3.6	3.4	4.7	3.5	2.6	3.2	2.7	2.3	32
18	3.0	3.0	3.0	8.7	8.6	4.0	3.3	2.6	3.3	2.1	2.1	8.1
19	3.1	3.1	3.0	5.5	4.7	3.6	3.3	3.6	2.5	1.9	2.0	5.2
20	3.1	4.3	3.0	3.9	3.6	3.9	3.4	2.3	5.0	1.5	3.5	4.2
21	3.0	2.8	3.0	3.6	3.4	6.9	3.5	2.7	4.5	2.1	7.9	10
22	3.0	3.0	3.2	3.4	3.2	13	3.6	2.4	3.3	12	2.8	11
23	3.1	3.1	2.9	3.3	3.2	5.0	3.5	6.8	2.7	2.9	2.4	4.9
24	3.2	3.2	3.2	13	3.3	4.1	3.2	6.2	2.5	2.3	9.2	3.9
25	3.2	3.9	3.1	6.3	3.4	3.9	3.2	4.4	2.6	2.2	12	3.7
26	3.2	5.1	3.0	4.0	3.2	3.6	3.4	2.8	2.5	2.1	15	3.2
27	3.2	3.3	3.1	3.6	3.2	3.6	3.8	2.6	2.4	2.0	6.6	3.3
28	3.3	3.1	3.2	3.6	6.4	3.9	2.7	2.4	2.5	2.2	3.2	3.4
29	3.3	3.1	3.7	3.2	---	3.5	3.7	2.6	2.5	2.4	2.8	3.5
30	3.2	3.1	3.2	3.2	---	3.3	2.4	2.2	2.4	2.2	2.5	13
31	3.2	---	3.0	3.1	---	3.2	---	2.3	---	2.1	2.4	---
TOTAL	103.6	99.4	100.6	152.5	108.8	145.1	115.4	93.9	79.9	75.6	122.8	343.2
MEAN	3.34	3.31	3.25	4.92	3.89	4.68	3.85	3.03	2.66	2.44	3.96	11.4
MAX	5.7	5.1	4.6	19	8.6	13	5.9	6.8	5.0	12	15	155
MIN	2.6	2.6	2.9	2.9	3.1	3.2	2.4	2.2	1.9	1.5	1.8	2.3
CFSM	.67	.67	.65	.99	.78	.94	.77	.61	.54	.49	.80	2.30
IN.	.78	.74	.75	1.14	.81	1.09	.86	.70	.60	.57	.92	2.57

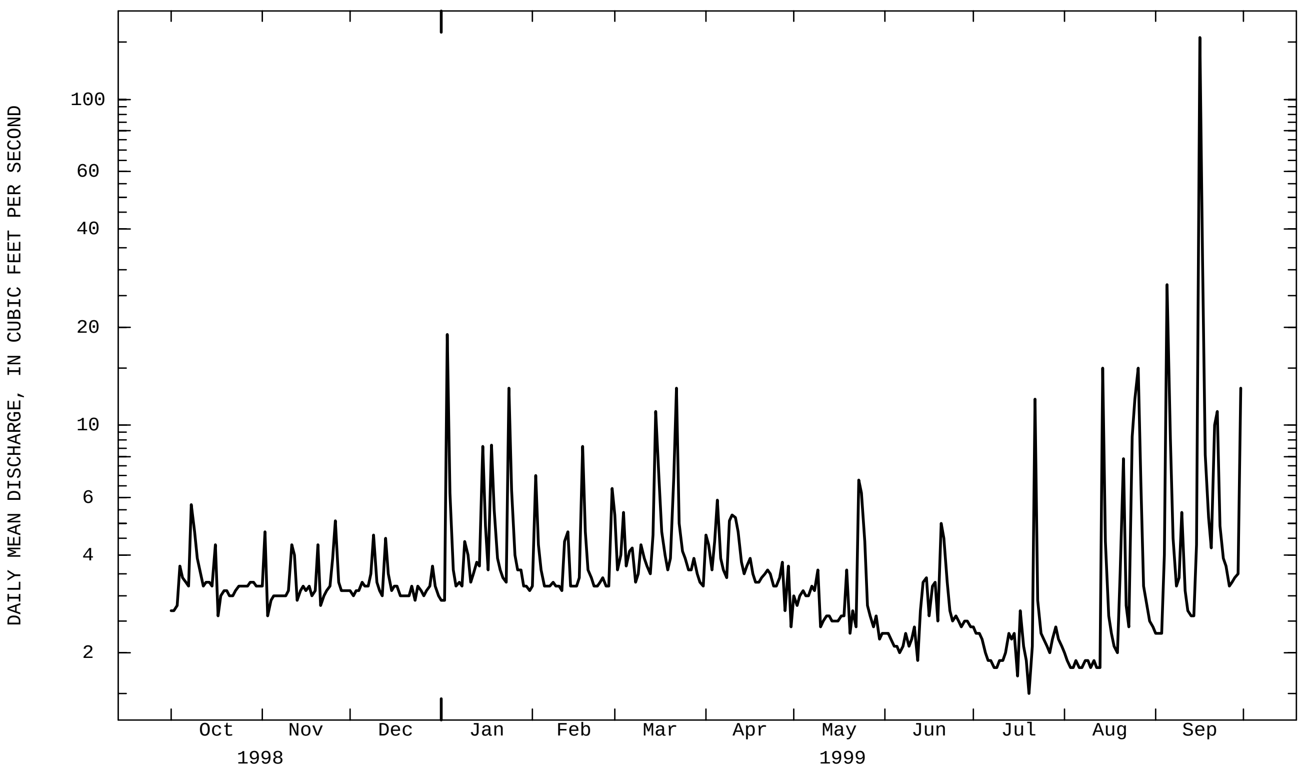
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1944 - 1952, 1983 - 1999, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	3.66	4.29	4.68	5.10	5.22	6.14	5.70	5.69	4.94	4.49	4.47	4.61
MAX	9.03	10.3	13.0	14.4	14.4	13.5	13.8	13.3	11.4	9.45	12.4	13.1
(WY)	1949	1952	1949	1949	1949	1949	1952	1952	1948	1952	1948	1952
MIN	.030	.19	.13	.30	.76	.76	.75	.11	.081	.10	.15	.024
(WY)	1987	1987	1989	1989	1989	1986	1985	1986	1986	1985	1986	1986

01589500 SAWMILL CREEK AT GLEN BURNIE, MD--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1944 - 1952 1983 - 1999	
ANNUAL TOTAL	2192.2		1540.8			
ANNUAL MEAN	6.01		4.22		4.91	
HIGHEST ANNUAL MEAN					11.0	1949
LOWEST ANNUAL MEAN					.43	1986
HIGHEST DAILY MEAN	32	Mar 21	155	Sep 16	155	Sep 16 1999
LOWEST DAILY MEAN	2.6	(a)	1.5	Jul 20	.01	(b)
ANNUAL SEVEN-DAY MINIMUM	2.9	Sep 11	1.8	Aug 2	.01	Jul 25 1986
INSTANTANEOUS PEAK FLOW			294	Sep 16	(c)294	Sep 16 1999
INSTANTANEOUS PEAK STAGE			5.74	Sep 16	5.74	Sep 16 1999
INSTANTANEOUS LOW FLOW			.61	Jul 20	.00	(d)
ANNUAL RUNOFF (CFSM)	1.21		.85		.99	
ANNUAL RUNOFF (INCHES)	16.41		11.53		13.42	
10 PERCENT EXCEEDS	10		5.3		9.4	
50 PERCENT EXCEEDS	4.4		3.2		4.1	
90 PERCENT EXCEEDS	3.0		2.1		.47	

a Oct. 17, Nov. 3.
b Many days in 1985-1987.
c From rating curve extended above 40 ft^3/s on basis of Culvert Type IV measurement of peak flow.
d Part of each day Sept. 6, 7, 1985, July 29, Aug. 2, 1986.



DAILY MEAN DISCHARGE - 1999 WATER YEAR

01589501 SAWMILL CREEK TRIBUTARY AT BWI AIRPORT NEAR FERNDALE, MD

LOCATION.--Lat 39°10'39", long 76°39'05", Anne Arundel County, Hydrologic Unit 02060003, on right bank 2,000 ft upstream from culvert on Hammond Ferry Road, 1.2 mi southwest of Ferndale.

DRAINAGE AREA.--0.58 mi^2.

PERIOD OF RECORD.--November 1994 to September 1995. October 1996 to current year.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 100 ft above sea level, from topographic map.

REMARKS.--Records good below 30 ft^3/s and fair above except those for estimated daily values (backwater), which are fair. Several measurements of water temperature were made during the year.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 50 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Sep 16	1145	*298	*3.38	No other peak greater than base discharge.			

Minimum discharge, 0.09 ft^3/s, Jun 1-10, Jul 9-12, 14-20, Aug 3-13.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.24	.24	.38	.29	.23	.64	2.3	.24	.13	.52	.13	.19
2	.24	.24	.44	.29	4.6	.20	.38	.24	.12	.34	.14	.19
3	.24	.24	.46	14	.35	1.7	.20	.24	.11	.36	.13	.20
4	.76	.24	.34	2.5	.24	1.5	2.2	.26	.11	.17	.10	3.8
5	.21	.24	.42	.30	.22	.24	1.9	.22	.09	.13	.10	15
6	.19	.18	.29	.24	.19	2.3	.22	.22	.09	.13	.09	9.6
7	.22	.14	.29	.24	.23	.96	.19	.20	.10	.13	.09	1.0
8	3.0	.14	1.0	.22	.26	.29	.19	.20	.10	.13	.12	.25
9	.62	.13	1.9	2.6	.19	.32	2.8	.19	.09	.13	.10	3.3
10	.53	.14	.38	.69	.19	1.5	1.5	.19	.12	.12	.09	4.3
11	.29	1.7	.29	.22	.19	.54	2.9	.16	.13	.11	.09	.27
12	.26	.29	.24	.84	2.2	.33	.60	.17	.13	.33	.09	.24
13	.24	.24	2.4	.53	.60	.24	.22	.18	.41	.42	.10	.24
14	.24	.24	.42	.57	.20	2.4	.19	.13	1.7	.12	7.1	.24
15	.24	.26	.29	7.5	.19	8.7	.66	.14	.49	.09	3.6	4.4
16	.24	.29	.24	.52	.19	.88	.54	.22	.14	.09	.20	82
17	.24	.29	.24	.26	.68	.39	.26	.19	1.2	.09	.14	21
18	.22	.32	.24	7.2	6.6	.26	.22	.14	.82	.09	.17	10
19	.24	.35	.24	.54	.55	.24	.19	.18	.14	.09	.14	2.6
20	.25	.40	.24	.24	.24	.24	.19	.17	4.2	1.1	2.3	.25
21	.29	e.65	.27	.36	.19	4.8	.66	.19	1.4	.18	4.0	6.7
22	.26	e.45	.48	.25	.19	6.6	.30	.69	.25	13	.22	2.7
23	.29	e.35	.41	.31	.19	.49	.42	4.1	.14	.76	.13	.31
24	.29	e.35	.70	10	.19	.29	.31	6.7	.13	.15	17	.21
25	.29	e.60	.62	1.2	.19	.25	.19	.60	.13	.15	7.5	.20
26	.26	3.8	.41	.22	.19	.24	.19	.21	.13	.14	15	.19
27	.24	.47	.41	.19	.19	.21	.19	.16	.15	.13	9.5	.26
28	.26	.32	.55	.19	4.5	.60	.23	.13	.15	.37	.40	.24
29	.29	.29	.64	.19	---	.19	.24	.13	.41	.22	.24	.93
30	.26	.29	.39	.19	---	.19	.24	.13	.22	.13	.35	12
31	.24	---	.30	.19	---	.19	---	.13	---	.13	.19	---
TOTAL	11.68	13.88	15.92	53.08	24.17	37.92	20.82	17.05	13.53	20.05	69.55	182.81
MEAN	.38	.46	.51	1.71	.86	1.22	.69	.55	.45	.65	2.24	6.09
MAX	3.0	3.8	2.4	14	6.6	8.7	2.9	6.7	4.2	13	17	82
MIN	.19	.13	.24	.19	.19	.19	.19	.13	.09	.09	.09	.19
CFSM	.65	.80	.89	2.95	1.49	2.11	1.20	.95	.78	1.12	3.87	10.5
IN.	.75	.89	1.02	3.40	1.55	2.43	1.34	1.09	.87	1.29	4.46	11.73

e Estimated

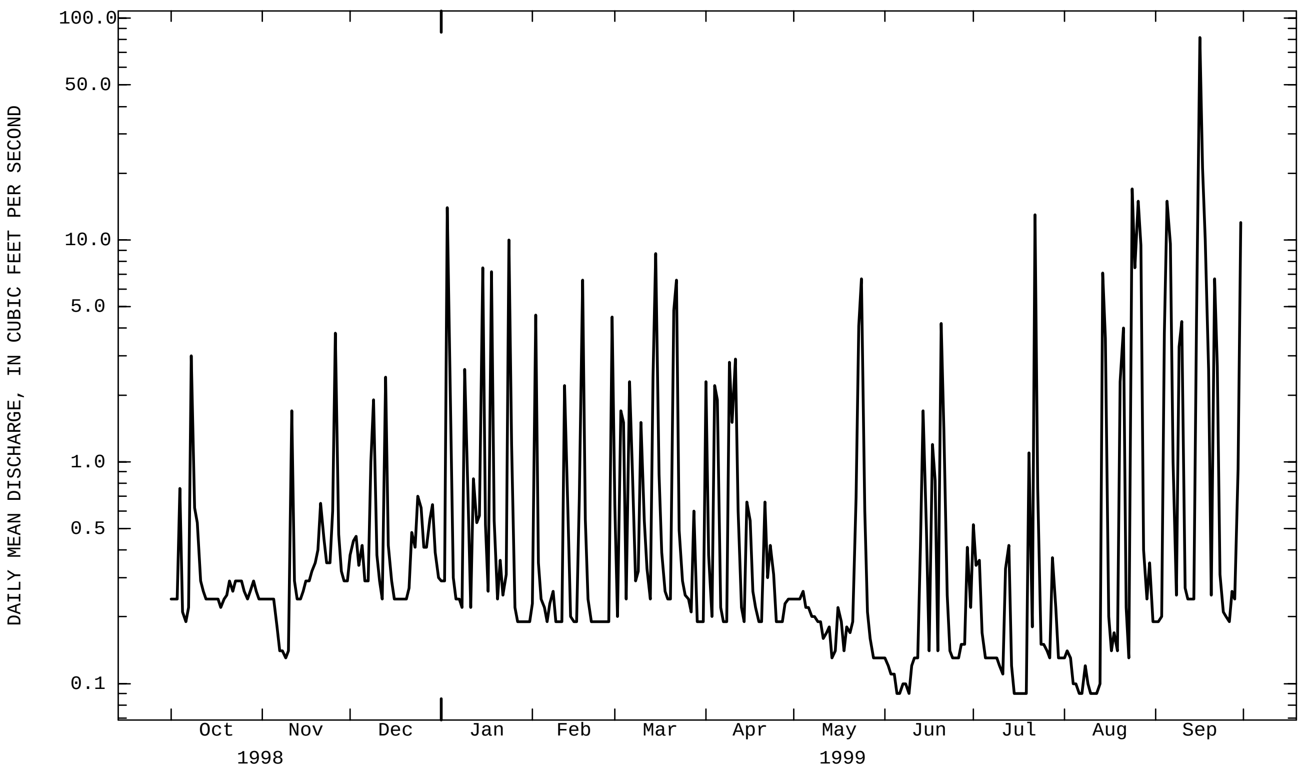
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1995, 1997 - 1999, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1.01	1.44	1.30	1.78	1.51	1.87	.87	.96	.73	.61	1.24	1.99
MAX	1.75	2.45	3.23	2.51	3.41	2.54	1.05	1.27	1.30	.83	2.24	6.09
(WY)	1997	1998	1997	1998	1998	1998	1998	1998	1997	1995	1999	1999
MIN	.38	.46	.51	1.28	.44	1.18	.69	.55	.45	.43	.38	.41
(WY)	1999	1999	1999	1997	1995	1995	1999	1999	1999	1997	1998	1998

01589501 SAWMILL CREEK TRIBUTARY AT BWI AIRPORT NEAR FERNDALE, MD--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1995 1997 - 1999	
ANNUAL TOTAL	426.33		480.46			
ANNUAL MEAN	1.17		1.32		1.38	
HIGHEST ANNUAL MEAN					1.43	1997
LOWEST ANNUAL MEAN					1.32	1999
HIGHEST DAILY MEAN	17	Feb 5	82	Sep 16	82	Sep 16 1999
LOWEST DAILY MEAN	.13	Nov 9	.09	(a)	.06	(b)
ANNUAL SEVEN-DAY MINIMUM	.17	Nov 4	.10	Aug 6	.08	Aug 20 1995
INSTANTANEOUS PEAK FLOW			298	Sep 16	298	Sep 16 1999
INSTANTANEOUS PEAK STAGE			3.38	Sep 16	3.38	Sep 16 1999
INSTANTANEOUS LOW FLOW			.09	(c)	.06	(d)
ANNUAL RUNOFF (CFSM)	2.01		2.27		2.38	
ANNUAL RUNOFF (INCHES)	27.34		30.82		32.36	
10 PERCENT EXCEEDS	2.7		2.7		2.7	
50 PERCENT EXCEEDS	.34		.24		.31	
90 PERCENT EXCEEDS	.24		.13		.17	

a June 5, 6, 9, July 15-19, Aug. 6, 7, 10-12.
b Mar. 4, 5, 1995.
c Jun 1-10, Jul 9-12, 14-20, Aug 3-13
d Mar. 4-6, 1995.



DAILY MEAN DISCHARGE - 1999 WATER YEAR

01589795 SOUTH FORK JABEZ BRANCH AT MILLERSVILLE, MD

LOCATION.--Lat 39°04'05", long 76°39'07", Anne Arundel County, Hydrologic Unit 02060004, on left bank 300 ft upstream from the confluence with the West Branch Jabez Branch, 0.5 mi northwest of Millersville, 1.0 mi west of Gambrills, and 1.6 mi upstream from mouth.

DRAINAGE AREA.--1.0 mi^2.

PERIOD OF RECORD.--August 1989 to September 1990, July 1997 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 60 ft above sea level, from topographic map.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Several measurements of water temperature were made during the year.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 20 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Aug 25	2010	55	5.69	Sep 16	1415	*300	*6.97

Minimum discharge, 0.14 ft^3/s, Aug 11.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.35	.40	.40	.40	.40	.43	e.45	.27	.24	.24	.20	.22
2	.33	.40	.40	.40	.47	.40	e.37	.27	.24	.25	.20	.20
3	.32	.40	.40	1.3	.43	.43	e.35	.27	.24	.25	.20	.20
4	.35	.40	.40	.52	.40	.44	e.40	.27	.24	.24	.20	.49
5	.36	.43	.40	.50	.40	.40	e.35	.27	.24	.23	.20	2.0
6	.36	.43	.40	.47	.40	.37	e.33	.27	.24	.22	.20	.33
7	.36	.40	.41	.45	.40	.36	e.31	.27	.24	.22	.20	.27
8	.44	.41	.47	.45	.40	.36	.33	.27	.24	.22	.20	.27
9	.45	.43	.52	.45	.40	.36	.36	.27	.24	.22	.20	.26
10	.44	.42	e.44	.45	.40	.36	.36	.27	.24	.22	.20	.27
11	.40	.46	e.40	.44	.38	.36	.43	.27	.23	.22	.19	.27
12	.40	.45	e.40	.41	.40	.36	.33	.27	.24	.24	.18	.27
13	.40	.43	e.46	.40	.47	.36	.31	.27	.24	.24	.19	.26
14	.40	.41	e.40	.40	.43	.51	.31	.27	.28	.24	.45	.25
15	.40	.40	e.40	.71	.41	1.0	.32	.27	.25	.24	.26	.29
16	.40	.41	e.40	.47	.40	.45	.29	.27	.24	.24	.22	82
17	.40	.45	e.40	.45	.40	.40	.28	.27	.26	.24	.22	2.9
18	.39	.42	e.40	.98	.62	.40	.30	.27	.26	.22	.22	.41
19	.40	.40	e.40	.51	.45	.40	.31	.27	.25	.22	.20	.36
20	.40	.40	e.40	.50	.42	.40	.31	.27	.30	.20	1.1	.31
21	.40	.40	e.40	.45	.40	1.7	.32	.27	.28	.20	.41	.86
22	.40	.40	e.41	.45	.40	1.6	.29	.28	.27	.28	.29	.98
23	.40	.40	.40	.45	.40	.48	.30	.29	.25	.22	.27	.34
24	.39	.40	.40	1.1	.40	e.40	.29	.32	.24	.22	.60	.29
25	.40	.40	.40	.47	.40	e.38	.29	.28	.24	.22	4.7	.27
26	.41	.52	.40	.45	.40	e.36	.27	.27	.24	.21	1.8	.27
27	.41	.46	.40	.43	.38	e.35	.27	.27	.24	.20	.49	.27
28	.42	.42	.40	.40	.47	e.40	.27	.27	.24	.21	.29	.27
29	.45	.40	.40	.40	---	e.35	.27	.27	.24	.20	.27	.27
30	.45	.40	.40	.40	---	e.35	.27	.25	.24	.20	.25	1.1
31	.43	---	.40	.40	---	e.35	---	.24	---	.20	.24	---
TOTAL	12.31	12.55	12.71	16.06	11.73	15.27	9.64	8.41	7.43	6.97	14.84	96.75
MEAN	.40	.42	.41	.52	.42	.49	.32	.27	.25	.22	.48	3.22
MAX	.45	.52	.52	1.3	.62	1.7	.45	.32	.30	.28	4.7	82
MIN	.32	.40	.40	.40	.38	.35	.27	.24	.23	.20	.18	.20
CFSM	.40	.42	.41	.52	.42	.49	.32	.27	.25	.22	.48	3.22
IN.	.46	.47	.47	.60	.44	.57	.36	.31	.28	.26	.55	3.60

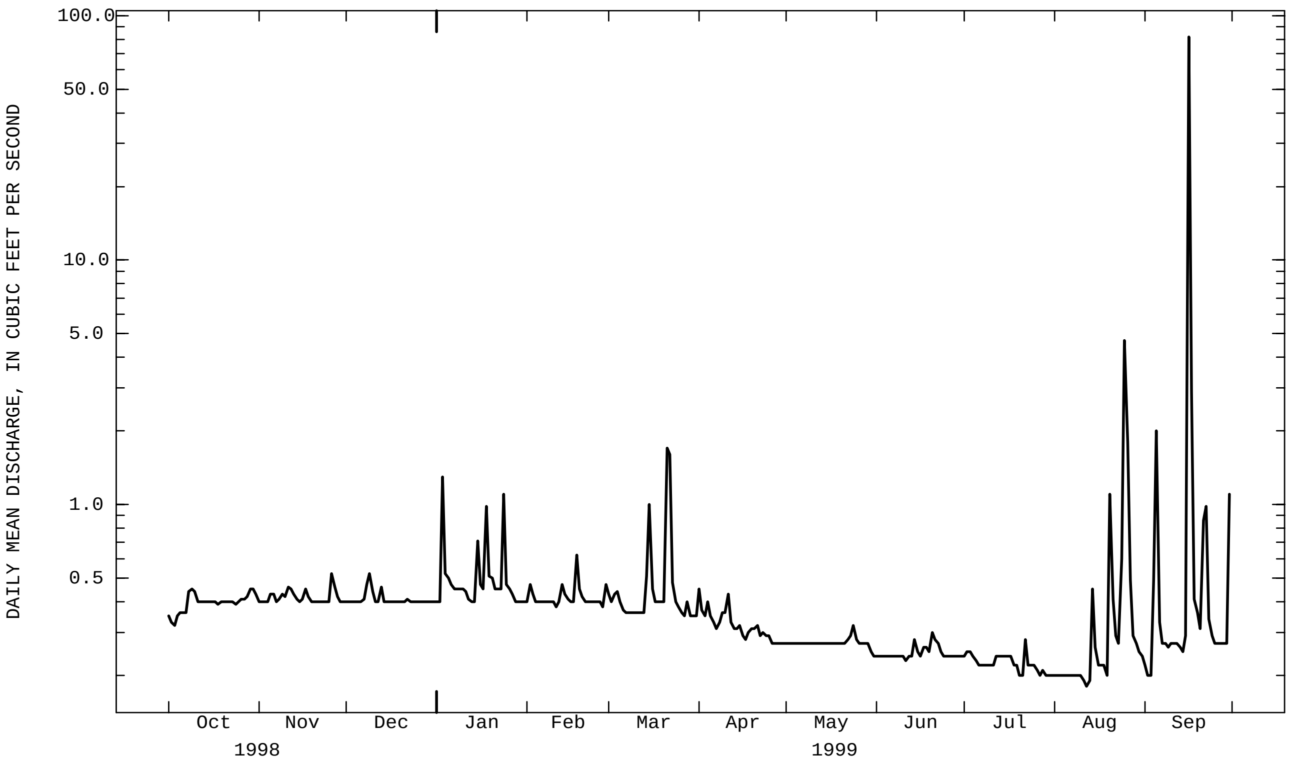
e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1989 - 1999, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.47	.53	.40	.91	.93	.78	.45	.54	.36	.36	.44	.94
MAX	.52	.77	.41	1.60	2.02	1.47	.56	.80	.46	.46	.52	3.22
(WY)	1990	1998	1998	1998	1998	1998	1998	1990	1998	1997	1997	1999
MIN	.40	.40	.38	.52	.35	.37	.32	.27	.25	.22	.36	.32
(WY)	1999	1990	1990	1999	1990	1990	1999	1999	1999	1999	1998	1989

01589795 SOUTH FORK JABEZ BRANCH AT MILLERSVILLE, MD--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1989 - 1999	
ANNUAL TOTAL	270.40		224.67			
ANNUAL MEAN	.74		.62		.62	
HIGHEST ANNUAL MEAN					.78	1998
LOWEST ANNUAL MEAN					.45	1990
HIGHEST DAILY MEAN	27	Jan 28	82	Sep 16	82	Sep 16 1999
LOWEST DAILY MEAN	.28	Mar 1	.18	Aug 12	.18	Aug 12 1999
ANNUAL SEVEN-DAY MINIMUM	.31	Jul 22	.19	Aug 7	.19	Aug 7 1999
INSTANTANEOUS PEAK FLOW			300	Sep 16	300	Sep 16 1999
INSTANTANEOUS PEAK STAGE			6.97	Sep 16	6.97	Sep 16 1999
INSTANTANEOUS LOW FLOW			.14	Aug 11	.14	Aug 11 1999
ANNUAL RUNOFF (CFSM)	.74		.62		.62	
ANNUAL RUNOFF (INCHES)	10.06		8.36		8.37	
10 PERCENT EXCEEDS	.62		.46		.53	
50 PERCENT EXCEEDS	.40		.36		.39	
90 PERCENT EXCEEDS	.36		.22		.27	



DAILY MEAN DISCHARGE - 1999 WATER YEAR

01591000 PATUXENT RIVER NEAR UNITY, MD

LOCATION.--Lat 39°14'18", long 77°03'23", Montgomery County, Hydrologic Unit 02060006, on right bank at downstream side of bridge on State Highway 97, 0.6 mi upstream from Cattail Creek, 0.8 mi upstream from Triadelphia Reservoir, 1.1 mi northeast of Unity, and 97 mi upstream from mouth.

DRAINAGE AREA.--34.8 mi^2.

WATER-DISCHARGE RECORDS

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

REVISED RECORDS.--WSP 1111: 1947. WSP 1432: 1948.

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

REMARKS.--Water-discharge records good except those for estimated daily discharges (ice effect, questionable gage-height record), which are fair.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 770 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Sep 16	1445	*731	*5.32	No peak greater than base discharge.			

Minimum discharge, UNKNOWN.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.4	9.8	10	e8.4	16	32	42	17	7.8	5.5	1.2	3.5
2	3.8	9.8	9.8	8.0	44	24	44	16	7.3	5.7	.99	3.4
3	4.0	9.9	9.9	51	34	22	32	16	7.0	5.5	.75	3.4
4	5.2	9.8	11	e32	26	54	31	17	6.6	4.8	.57	4.7
5	5.7	9.2	10	21	23	37	44	16	6.5	4.2	.51	40
6	6.0	9.4	10	9.5	21	35	34	16	6.4	3.7	e.41	47
7	5.7	9.6	10	9.6	20	38	31	16	6.6	3.3	e.36	44
8	36	9.9	11	8.9	19	29	29	43	6.2	2.9	e.30	57
9	16	10	16	34	17	28	30	25	5.7	2.6	e.26	22
10	11	10	13	33	16	28	34	19	5.8	2.4	e.24	14
11	9.9	16	11	16	15	27	42	17	6.5	2.4	e.22	9.5
12	8.8	13	11	22	16	28	55	17	5.9	2.4	e.22	7.6
13	8.9	10	12	31	18	29	38	16	6.5	3.3	e.22	6.6
14	8.6	9.9	12	27	15	31	33	15	10	3.2	e.22	6.3
15	8.1	9.2	11	40	14	43	31	14	20	2.9	e.22	23
16	8.3	9.0	11	44	14	54	30	13	7.9	2.6	e.30	385
17	7.8	8.9	10	36	16	71	31	14	7.8	2.2	e.60	85
18	7.9	8.6	9.9	137	54	58	29	14	9.8	2.2	e.55	38
19	7.5	8.6	9.8	57	38	42	24	13	7.2	2.3	e.60	28
20	7.1	9.4	9.3	31	28	36	24	12	10	2.1	e.96	25
21	6.9	10	9.6	26	23	44	25	11	11	2.5	2.6	65
22	7.0	9.5	9.7	23	20	66	26	11	9.3	2.5	2.7	60
23	7.6	9.3	9.5	23	20	43	25	15	7.4	2.4	3.4	36
24	7.7	9.3	10	101	19	39	25	26	6.4	1.9	40	30
25	7.7	9.3	e9.6	54	17	35	22	21	6.1	1.5	31	e24
26	7.4	13	e9.4	34	17	31	21	14	5.9	1.5	27	17
27	7.8	12	9.2	27	17	29	20	11	5.6	1.5	14	e13
28	8.0	11	9.9	24	30	28	19	11	5.4	1.3	6.4	e14
29	7.6	11	11	21	---	27	19	10	6.0	1.4	4.3	e15
30	8.5	10	e10	19	---	25	18	9.7	5.3	1.9	3.8	e122
31	9.4	---	e9.2	17	---	23	---	9.0	---	1.5	3.7	---
TOTAL	266.3	304.4	324.8	1025.4	627	1136	908	494.7	225.9	86.1	148.60	1249.0
MEAN	8.59	10.1	10.5	33.1	22.4	36.6	30.3	16.0	7.53	2.78	4.79	41.6
MAX	36	16	16	137	54	71	55	43	20	5.7	40	385
MIN	3.8	8.6	9.2	8.0	14	22	18	9.0	5.3	1.3	.22	3.4
CFSM	.25	.29	.30	.95	.64	1.05	.87	.46	.22	.08	.14	1.20
IN.	.28	.33	.35	1.10	.67	1.21	.97	.53	.24	.09	.16	1.34

e Estimated

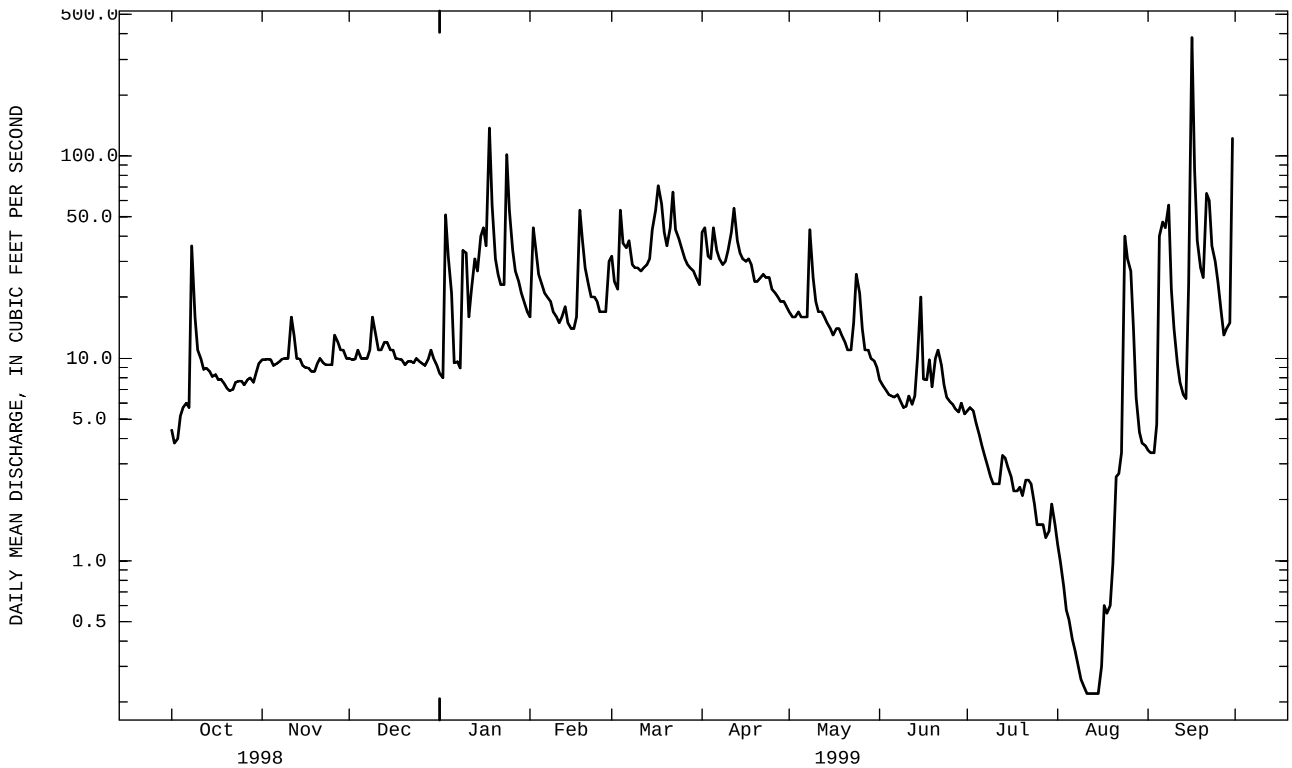
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1944 - 1999, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	21.9	29.1	40.4	47.9	55.0	62.6	58.1	49.4	36.1	25.9	21.8	26.7
MAX	150	82.8	155	139	152	173	158	141	206	102	120	214
(WY)	1980	1953	1997	1996	1979	1993	1993	1952	1972	1956	1971	1971
MIN	4.19	9.09	8.51	10.0	19.6	23.9	21.6	15.2	7.53	2.78	2.79	4.51
(WY)	1987	1966	1966	1966	1947	1981	1963	1963	1999	1999	1966	1986

01591000 PATUXENT RIVER NEAR UNITY, MD--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1944 - 1999	
ANNUAL TOTAL	15791.1		6796.20			
ANNUAL MEAN	43.3		18.6		39.5	
HIGHEST ANNUAL MEAN					82.3	1972
LOWEST ANNUAL MEAN					18.6	1999
HIGHEST DAILY MEAN	764	Mar 21	385	Sep 16	2590	Sep 26 1975
LOWEST DAILY MEAN	3.8	Oct 2	(e).22	(a)	.20	(b)
ANNUAL SEVEN-DAY MINIMUM	4.7	Sep 28	.23	Aug 9	.23	Aug 9 1999
INSTANTANEOUS PEAK FLOW			731	Sep 16	(c)21800	Sep 11 1971
INSTANTANEOUS PEAK STAGE			5.32	Sep 16	18.60	Sep 11 1971
INSTANTANEOUS LOW FLOW			UNKNOWN		.20	(d)
ANNUAL RUNOFF (CFSM)	1.24		.54		1.14	
ANNUAL RUNOFF (INCHES)	16.88		7.26		15.43	
10 PERCENT EXCEEDS	88		38		72	
50 PERCENT EXCEEDS	24		11		25	
90 PERCENT EXCEEDS	7.0		2.5		8.8	

e Estimated.
a Aug. 11-15.
b Sept. 10, 11, 1966.
c From rating curve extended above 1,500 ft^3/s on basis of slope-area measurement at gage height 13.00 ft.
d Sept. 10-12, 1966.



DAILY MEAN DISCHARGE - 1999 WATER YEAR

01591000 PATUXENT RIVER NEAR UNITY, MD--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water year 1985 to current year.

REMARKS.--Nutrient analyses were performed at the Maryland Department of Health and Mental Hygiene laboratory (DHMH), Baltimore, MD.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	TUR-BID-ITY (NTU) (00076)	OXYGEN DEMAND, CHEM-ICAL (LOW LEVEL) (MG/L) (00335)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L) (00310)
OCT 1997									
30...	1400	9.8	121	6.3	18.0	8.0	2.2	<10	<.9
NOV									
07...	2300	375	--	--	--	--	96	28	--
08...	0345	296	--	--	--	--	38	17	--
08...	1645	55	--	--	--	--	9.1	<10	--
19...	0930	18	136	6.1	1.0	1.5	1.9	<10	<1.4
DEC									
17...	1415	14	121	5.8	13.0	2.5	2.1	<10	<1.0
JAN 1998									
13...	1030	22	126	--	6.5	5.0	2.2	<10	<1.7
16...	0745	99	--	--	--	--	29	11	--
23...	1700	533	--	--	--	--	260	53	--
23...	2030	316	--	--	--	--	32	12	--
28...	1430	814	--	--	--	--	83	22	--
28...	1615	873	--	--	--	--	70	18	--
28...	1815	841	--	--	--	--	39	16	--
FEB									
04...	2030	268	--	--	--	--	35	11	--
05...	0145	284	--	--	--	--	--	--	--
05...	0645	381	--	--	--	--	14	<10	--
05...	1000	403	--	--	--	--	14	<10	--
18...	0330	373	--	--	--	--	68	23	--
18...	0800	226	--	--	--	--	30	14	--
23...	1100	55	120	6.2	2.5	6.0	3.4	<10	<.5
24...	0115	252	--	--	--	--	23	<10	--
24...	0645	328	--	--	--	--	20	<10	--
24...	1030	451	--	--	--	--	28	10	--
MAR									
17...	0845	58	119	6.2	2.0	2.0	3.8	<10	<.3
19...	0445	612	--	--	--	--	280	51	--
19...	0730	499	--	--	--	--	63	14	--
APR									
14...	0745	62	108	6.2	11.0	10.0	2.8	<10	<1.8
MAY									
20...	1545	52	111	6.6	31.0	19.5	2.9	<10	--
JUN									
24...	1145	66	--	--	--	--	19	<10	--
26...	0645	36	113	6.6	24.5	19.5	11	<10	1.6
JUL									
15...	1100	19	113	7.0	26.0	20.0	4.2	<10	<.9
AUG									
25...	1200	8.0	111	7.4	30.0	23.0	4.7	<10	<.8
SEP									
16...	0645	5.7	109	6.8	21.0	19.5	7.8	<10	<1.0

01591000 PATUXENT RIVER NEAR UNITY, MD--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	ANC WATER UNFLTRD IT FIELD MG/L AS CACO3 (00419)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (MG/L) (00530)	NITRO-GEN, TOTAL (MG/L AS N) (00600)	NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS N) (00618)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)
OCT 1997									
30...	22	9.3	3	--	1.78	.006	1.79	.012	<.08
NOV									
07...	--	9.5	234	2.8	1.78	.007	1.79	.012	1.0
08...	--	11	63	2.1	1.63	.004	1.63	.008	.49
08...	--	13	12	1.7	1.45	.004	1.46	.008	.24
19...	19	9.7	26	2.5	2.37	.004	2.38	.004	.15
DEC									
17...	16	7.2	<1	3.0	2.85	.004	2.85	<.005	.15
JAN 1998									
13...	--	7.6	1	--	2.38	.005	2.39	.010	<.08
16...	--	10	60	1.8	1.41	.004	1.41	.026	.40
23...	--	8.3	560	3.7	1.57	.008	1.58	.025	2.1
23...	--	11	56	1.8	1.41	.005	1.42	.011	.41
28...	--	9.0	196	1.9	1.44	.006	1.44	.019	.42
28...	--	9.1	132	1.6	1.26	.006	1.27	.017	.37
28...	--	9.5	86	1.5	1.15	.006	1.15	.012	.31
FEB									
04...	--	9.4	67	1.5	1.17	.004	1.17	.161	.30
05...	--	--	--	--	--	--	--	--	--
05...	--	9.6	23	1.2	1.02	.005	1.03	.194	.15
05...	--	9.9	19	.95	.844	.005	.849	.181	.10
18...	--	8.9	180	2.0	1.47	.004	1.48	.014	.51
18...	--	11	46	--	1.09	.003	1.09	.012	--
23...	12	7.1	7	3.3	3.16	.005	3.16	.008	.16
24...	--	10	40	1.4	1.23	.003	1.23	<.007	.20
24...	--	9.9	32	1.2	1.04	.003	1.04	<.005	.18
24...	--	11	53	1.1	1.00	.002	1.00	<.007	.14
MAR									
17...	12	6.6	7	--	3.36	.004	3.36	.010	<.06
19...	--	7.3	500	3.1	1.47	.009	1.48	.050	1.7
19...	--	10	94	1.5	1.12	.006	1.12	.031	.37
APR									
14...	13	6.1	2	2.9	2.73	.003	2.73	<.006	.17
MAY									
20...	13	7.3	4	2.8	2.66	.008	2.67	.009	.17
JUN									
24...	--	12	45	1.7	1.35	.004	1.36	.028	.30
26...	17	8.6	5	2.8	2.56	.007	2.57	.021	.24
JUL									
15...	16	8.3	4	3.0	2.80	.006	2.80	<.003	.22
AUG									
25...	20	7.3	2	2.5	2.26	.007	2.27	.013	.22
SEP									
16...	22	7.7	9	2.3	1.94	.006	1.94	.022	.31

01591000 PATUXENT RIVER NEAR UNITY, MD--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)	CARBON, ORGANIC DIS-SOLVED (MG/L AS C) (00681)	SEDI-MENT, SUS-PENDED (MG/L) (80154)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY) (80155)
OCT 1997								
30...	--	.029	.029	.006	2.3	--	8.9	.24
NOV								
07...	.32	.190	.013	.022	7.3	7.3	386	391
08...	.21	.076	.015	.025	6.0	6.1	121	97
08...	.21	.035	.034	.026	3.8	4.0	23	3.5
19...	.12	.012	.012	.007	6.0	3.2	0.6	.03
DEC								
17...	.12	<.009	.011	<.004	1.7	--	0.3	.01
JAN 1998								
13...	<.10	<.009	<.009	.021	2.4	2.3	0.3	.02
16...	.16	.069	.024	.018	3.8	3.8	95	25
23...	.25	.524	.018	.008	6.3	5.4	669	962
23...	.19	.083	.030	.010	4.4	--	67	57
28...	.15	.114	.034	.026	4.6	--	283	621
28...	.15	.118	.038	.024	5.3	4.6	236	557
28...	.15	.101	.035	.024	4.7	4.5	125	284
FEB								
04...	.10	.084	.029	.017	3.4	3.5	103	75
05...	--	--	--	--	--	--	55	42
05...	.10	.040	.023	.007	3.5	3.8	45	46
05...	.11	.035	.023	.005	3.2	3.5	29	32
18...	.16	.124	.029	.016	4.5	4.5	236	238
18...	<.10	--	.039	.019	3.3	3.3	96	58
23...	.11	.017	.017	.007	1.9	--	4.1	.61
24...	.11	.043	.024	.022	3.0	3.3	62	43
24...	.10	.043	.023	.021	3.8	3.6	54	48
24...	<.00	.045	.023	.022	3.3	3.1	116	141
MAR								
17...	<.10	.055	.037	.006	1.5	1.6	2.7	.42
19...	.24	.579	.033	.031	4.4	--	670	1110
19...	.15	.122	.034	.029	3.2	3.0	131	176
APR								
14...	.12	<.007	<.001	.004	1.8	--	2.0	.33
MAY								
20...	.13	<.009	--	.012	2.0	2.3	3.4	.48
JUN								
24...	.15	.054	.017	.006	3.5	--	55	9.9
26...	.19	.023	.021	.004	3.0	--	14	1.4
JUL								
15...	.13	.013	--	--	2.2	2.5	3.8	.19
AUG								
25...	.16	.021	.013	.004	2.6	--	5.0	.11
SEP								
16...	.26	.012	<.002	.010	2.9	2.3	9.0	.14

01591000 PATUXENT RIVER NEAR UNITY, MD--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	TUR-BID-ITY (NTU) (00076)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)
OCT 1998										
08...	1300	60	--	--	--	--	--	--	--	--
29...	1500	7.2	117	7.1	16.5	12.5	762	2.2	9.8	92
NOV										
17...	1300	8.9	119	7.0	15.5	8.0	759	1.4	11.4	97
DEC										
16...	1445	11	--	6.8	8.5	4.0	--	1.7	13.2	--
JAN 1999										
13...	1300	23	--	6.8	13.0	.5	--	19	13.0	--
17...	0215	55	--	--	--	--	--	--	--	--
18...	1315	150	--	--	--	--	--	--	--	--
18...	1945	287	--	--	--	--	--	--	--	--
24...	1800	160	--	--	--	--	--	29	--	--
FEB										
10...	1445	16	--	6.9	12.5	5.0	--	3.1	--	--
18...	1630	75	--	--	--	--	--	23	--	--
MAR										
23...	1015	42	132	6.8	11.5	5.0	--	5.1	12.4	--
APR										
07...	1100	31	127	7.1	17.5	12.0	--	3.9	10.9	--
MAY										
05...	1245	16	120	6.9	24.0	18.0	--	5.4	10.0	--
JUN										
03...	0830	7.3	120	6.9	23.0	20.0	--	11	8.1	--
JUL										
07...	1545	3.3	119	7.3	32.0	27.0	--	8.5	7.6	--
AUG										
18...	1300	1.6	111	7.0	25.0	24.0	--	6.4	8.5	--
SEP										
09...	0815	16	152	6.6	25.0	20.0	--	22	7.9	--

DATE	OXYGEN DEMAND, CHEM-ICAL (LOW LEVEL) (MG/L) (00335)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L) (00310)	ANC WATER UNFLTRD IT FIELD MG/L AS CACO3 (00419)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (MG/L) (00530)	NITRO-GEN, TOTAL (MG/L AS N) (00600)	NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS N) (00618)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)
OCT 1998										
08...	--	--	--	--	--	--	--	--	--	--
29...	<10	<.9	22	9.2	6	2.2	8.8	.006	1.99	<.004
NOV										
17...	<10	<1.1	22	9.2	3	2.2	8.9	.005	2.02	<.001
DEC										
16...	<10	<.6	20	8.3	<1	2.4	9.8	.003	2.21	<.007
JAN 1999										
13...	20	4.2	16	6.4	13	3.2	9.5	.024	2.18	.180
17...	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--
24...	10	--	--	11	57	2.0	7.1	.004	1.60	.014
FEB										
10...	<10	<.2	16	8.2	3	3.0	12	.007	2.76	.008
18...	14	--	--	9.5	29	2.5	8.8	.006	1.99	.014
MAR										
23...	<10	2.2	14	6.8	<1	2.6	11	.005	2.41	<.006
APR										
07...	<10	2.1	16	6.5	<1	2.3	9.0	.004	2.03	.012
MAY										
05...	<10	<.2	17	6.5	4	2.6	10	.013	2.35	.037
JUN										
03...	<10	<1.6	20	8.2	17	2.6	9.2	.014	2.09	.044
JUL										
07...	<10	<1.2	24	7.5	2	1.3	4.6	.009	1.04	.036
AUG										
18...	16	2.1	29	7.9	7	.53	.47	.002	.109	.016
SEP										
09...	17	2.2	28	8.8	18	1.7	5.1	.007	1.16	.052

01591000 PATUXENT RIVER NEAR UNITY, MD--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)	CARBON, ORGANIC DIS-SOLVED (MG/L AS C) (00681)	SEDI-MENT, SUS-PENDED (MG/L) (80154)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY) (80155)
OCT 1998									
08...	--	--	--	--	--	--	--	83	13
29...	.22	.17	.023	.011	<.002	2.9	3.0	1	.02
NOV									
17...	.18	.16	.011	<.001	<.002	2.4	2.3	1	.02
DEC									
16...	.14	.11	<.003	<.005	<.003	5.4	7.1	1	.03
JAN 1999									
13...	1.1	.85	.220	.202	.157	10	10	16	.99
17...	--	--	--	--	--	--	--	95	14
18...	--	--	--	--	--	--	--	90	36
18...	--	--	--	--	--	--	--	154	119
24...	.37	.32	.059	.033	.021	9.8	9.2	67	29
FEB									
10...	.19	.14	<.004	<.001	<.004	5.3	5.8	2.5	.11
18...	.48	.22	.070	.029	.014	7.9	6.8	36	7.3
MAR									
23...	.21	<.00	.013	<.002	<.003	3.1	3.3	5.0	.57
APR									
07...	.23	.17	<.006	<.003	<.003	4.2	5.9	4.0	.35
MAY									
05...	.30	.18	.022	.014	<.001	3.7	3.5	5.6	.24
JUN									
03...	.48	.36	.038	.015	.007	--	--	15	.29
JUL									
07...	.31	.21	.034	.011	.006	2.5	2.2	8.3	.07
AUG									
18...	.42	.16	.041	<.008	.004	3.0	3.0	3.2	.01
SEP									
09...	.52	.40	.066	.021	.015	4.4	4.7	21	.90

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01591400 CATTAIL CREEK NEAR GLENWOOD, MD

LOCATION.--Lat 39°15'21", long 77°03'05", Howard County, Hydrologic Unit 02060006, on right bank at downstream side of bridge on State Highway 97, 1.2 mi upstream from mouth.

DRAINAGE AREA.--22.9 mi^2.

PERIOD OF RECORD.--June 1978 to September 1983 (published as "at Roxbury Mills Road at Roxbury Mills, MD"), October 1983 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 400 ft above sea level, from topographic map. Prior to Dec. 28, 1983, at site 800 ft upstream at datum 1.76 ft lower.

REMARKS.--Records good except those for estimated daily discharges (ice effect and backwater), which are fair. Several measurements of water temperature were made during the year. Water-quality records for some prior years have been collected at this station.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 500 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jan 3	1015	561	3.99	Sep 16	1600	*1,640	*5.86

Minimum discharge, 0.07 ft^3/s, Aug 14, 19, 20.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.3	8.2	e7.6	7.6	14	24	29	12	6.2	4.2	1.5	2.8
2	4.4	8.2	7.3	6.6	36	17	27	12	6.1	4.7	1.6	2.6
3	4.5	8.2	7.3	108	24	16	21	11	5.9	4.5	1.4	2.6
4	4.6	8.3	7.2	25	19	35	19	11	5.7	4.0	1.1	2.8
5	4.8	8.6	7.1	16	17	23	30	11	5.5	3.5	.78	17
6	4.8	8.6	7.1	e9.0	16	22	21	11	5.5	3.3	.56	14
7	4.8	8.7	7.1	e8.0	16	25	19	11	5.3	3.0	.53	32
8	34	8.9	7.2	e8.0	16	19	17	22	5.2	2.8	.47	20
9	16	9.0	12	e31	16	18	17	14	4.8	2.6	.54	9.3
10	11	9.9	9.2	e29	15	19	21	12	4.7	2.4	.45	9.5
11	10	16	8.2	e17	14	18	29	11	4.9	2.4	.40	6.7
12	9.2	11	7.6	e20	14	19	31	11	4.8	2.3	.34	5.7
13	9.2	10	7.8	e28	17	20	22	10	5.0	2.9	.24	5.6
14	9.2	e9.0	7.9	e25	14	20	19	10	7.3	2.9	.16	4.9
15	8.7	e8.3	7.4	e40	13	32	18	9.2	9.4	2.7	.57	12
16	8.6	e7.8	7.2	e37	13	41	18	8.6	5.7	2.5	.84	504
17	8.3	e7.6	7.1	e32	13	46	18	8.6	5.4	2.1	.66	37
18	8.2	e7.3	7.1	129	48	34	17	8.7	6.2	2.6	.34	15
19	8.2	e7.1	7.1	41	27	25	16	8.7	5.5	5.2	.13	11
20	8.1	e7.6	7.0	26	20	22	16	8.5	6.5	2.8	.18	9.3
21	7.9	e8.2	6.8	22	17	28	16	8.2	7.4	2.7	1.5	23
22	7.9	e7.9	6.5	21	15	43	17	7.7	6.6	2.7	1.4	23
23	7.9	e7.6	6.8	19	14	26	16	9.2	5.9	2.9	1.2	13
24	7.9	e7.6	6.8	73	14	24	16	12	5.2	2.6	23	10
25	7.9	7.6	6.8	35	14	22	15	10	4.8	2.3	13	8.5
26	7.9	11	6.8	24	14	20	14	8.6	4.6	2.0	15	7.7
27	8.2	10	6.8	20	14	19	13	7.9	4.5	1.8	5.3	7.4
28	8.2	e8.9	6.9	18	25	18	13	7.6	4.5	1.8	4.1	9.0
29	8.2	e8.9	7.4	17	---	18	12	7.3	4.5	2.8	3.5	10
30	8.2	e8.2	8.6	15	---	17	12	7.0	4.3	2.3	2.9	66
31	8.2	---	8.6	14	---	16	---	6.6	---	1.8	2.8	---
TOTAL	269.3	264.2	232.3	921.2	509	746	569	313.4	167.9	89.1	86.49	901.4
MEAN	8.69	8.81	7.49	29.7	18.2	24.1	19.0	10.1	5.60	2.87	2.79	30.0
MAX	34	16	12	129	48	46	31	22	9.4	5.2	23	504
MIN	4.3	7.1	6.5	6.6	13	16	12	6.6	4.3	1.8	.13	2.6
CFSM	.38	.38	.33	1.30	.79	1.05	.83	.44	.24	.13	.12	1.31
IN.	.44	.43	.38	1.50	.83	1.21	.92	.51	.27	.14	.14	1.46

e Estimated

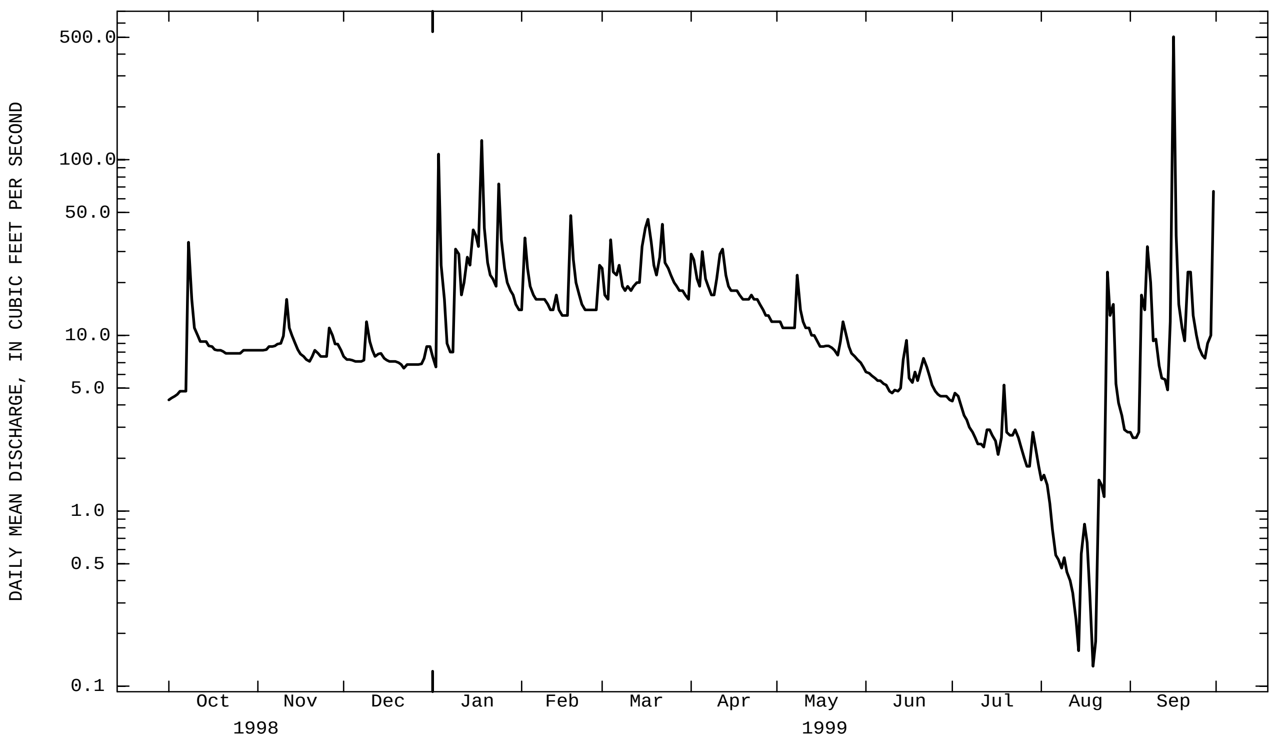
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1978 - 1999, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	18.5	22.6	29.1	34.8	38.5	40.0	36.3	32.3	21.6	16.4	13.0	17.1
MAX	76.6	62.8	103	113	103	109	112	92.5	49.3	55.1	41.5	81.6
(WY)	1980	1994	1997	1996	1979	1993	1993	1989	1996	1996	1996	1979
MIN	3.73	5.96	7.49	8.38	14.6	14.5	14.9	10.1	5.60	2.87	2.79	3.81
(WY)	1987	1982	1999	1981	1992	1981	1985	1999	1999	1999	1999	1995

01591400 CATTAIL CREEK NEAR GLENWOOD, MD--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1978 - 1999	
ANNUAL TOTAL	9738.0		5069.29			
ANNUAL MEAN	26.7		13.9		26.7	
HIGHEST ANNUAL MEAN					45.7	1996
LOWEST ANNUAL MEAN					13.1	1981
HIGHEST DAILY MEAN	723	May 8	504	Sep 16	2100	Jan 19 1996
LOWEST DAILY MEAN	4.3	Oct 1	.13	Aug 19	.13	Aug 19 1999
ANNUAL SEVEN-DAY MINIMUM	4.5	Sep 29	.37	Aug 8	.37	Aug 8 1999
INSTANTANEOUS PEAK FLOW			1640	Sep 16	(a)5210	Jan 19 1996
INSTANTANEOUS PEAK STAGE			5.86	Sep 16	8.96	Jan 19 1996
INSTANTANEOUS LOW FLOW			.07	(b)	.07	(b)
ANNUAL RUNOFF (CFSM)	1.17		.61		1.17	
ANNUAL RUNOFF (INCHES)	15.82		8.23		15.86	
10 PERCENT EXCEEDS	45		25		42	
50 PERCENT EXCEEDS	16		8.6		17	
90 PERCENT EXCEEDS	6.6		2.6		6.2	

a From rating curve extended above 175 ft^3/s on basis of contracted-opening and flow-over-road measurement at gage height of 8.41 ft.
b Aug. 14, 19, 20, 1999.



DAILY MEAN DISCHARGE - 1999 WATER YEAR

01591610 PATUXENT RIVER BELOW BRIGHTON DAM NEAR BRIGHTON, MD

LOCATION.--Lat 39°11'32", long 77°00'17", Montgomery County, Hydrologic Unit 02060006, on right bank at Brighton Dam, 500 ft downstream from Triadelphia Reservoir, 1.3 mi east of Brighton, and 92 mi upstream from mouth.

DRAINAGE AREA.--78.6 mi^2.

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

GAGE.--Water-stage recorder and concrete control. Elevation of gage is 310 ft above sea level, from topographic map. June 1978 to October 1980, nonrecording gage 300 ft upstream on left bank at different datum.

REMARKS.--No estimated daily discharges. Records good. Flow completely regulated by Triadelphia Reservoir, 500 ft upstream, usable capacity, 6,200,000,000 gal; no dead storage. Several measurements of water temperature were made during the year. Water-quality records for some prior years have been collected at this station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 22, 1972, reached a discharge of 17,800 ft^3/s. Data provided by Washington Suburban Sanitary Commission.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 370 ft^3/s, Apr 8, gage height, 2.80 ft; minimum discharge, 4.9 ft^3/s, Feb 21, 26.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14	79	66	11	11	40	118	22	39	29	48	46
2	26	79	65	18	11	40	160	10	39	48	50	46
3	50	79	65	18	9.5	45	157	10	38	48	50	45
4	50	79	65	15	7.9	45	156	11	38	42	50	46
5	74	80	65	10	7.5	71	214	11	38	47	49	46
6	89	81	65	9.3	7.2	126	276	11	38	47	49	46
7	90	77	65	21	7.2	113	259	11	40	47	48	46
8	94	77	65	47	7.1	109	283	11	50	47	48	47
9	96	77	65	51	7.2	111	271	11	50	46	48	47
10	96	77	65	49	6.7	111	244	11	50	46	48	47
11	96	77	65	39	6.6	110	202	10	52	46	48	46
12	95	74	65	18	6.8	70	167	10	54	46	47	45
13	96	71	64	18	6.6	49	132	10	55	46	46	46
14	96	71	64	18	6.2	50	44	10	51	45	47	47
15	93	71	63	18	6.1	48	11	10	49	45	47	26
16	90	70	63	18	6.2	46	11	10	49	46	47	15
17	90	69	63	18	6.2	46	11	10	49	46	46	14
18	90	69	62	19	6.3	47	11	10	48	45	47	14
19	88	69	60	16	5.9	46	11	22	48	45	47	14
20	88	68	60	16	5.6	46	20	49	49	45	47	14
21	123	68	59	16	5.5	46	49	48	48	44	46	15
22	140	63	59	14	5.4	45	49	48	48	43	47	15
23	135	62	61	14	5.4	43	48	48	48	43	47	14
24	129	67	62	14	5.4	34	49	48	49	42	47	15
25	125	65	61	13	5.4	17	48	48	48	37	44	14
26	119	66	53	13	15	27	48	47	47	43	44	14
27	113	65	61	13	40	25	48	45	47	43	45	14
28	98	64	62	13	41	24	48	39	47	43	45	14
29	84	65	61	12	---	30	48	40	47	42	40	15
30	82	65	56	12	---	52	48	39	47	42	37	16
31	80	---	20	12	---	51	---	40	---	32	46	---
TOTAL	2829	2144	1895	593.3	267.9	1763	3241	760	1400	1356	1445	889
MEAN	91.3	71.5	61.1	19.1	9.57	56.9	108	24.5	46.7	43.7	46.6	29.6
MAX	140	81	66	51	41	126	283	49	55	48	50	47
MIN	14	62	20	9.3	5.4	17	11	10	38	29	37	14
(†)	3200	2360	1670	3310	4220	4675	3700	4050	3450	2610	1900	3130

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1981 - 1999, BY WATER YEAR (WY)

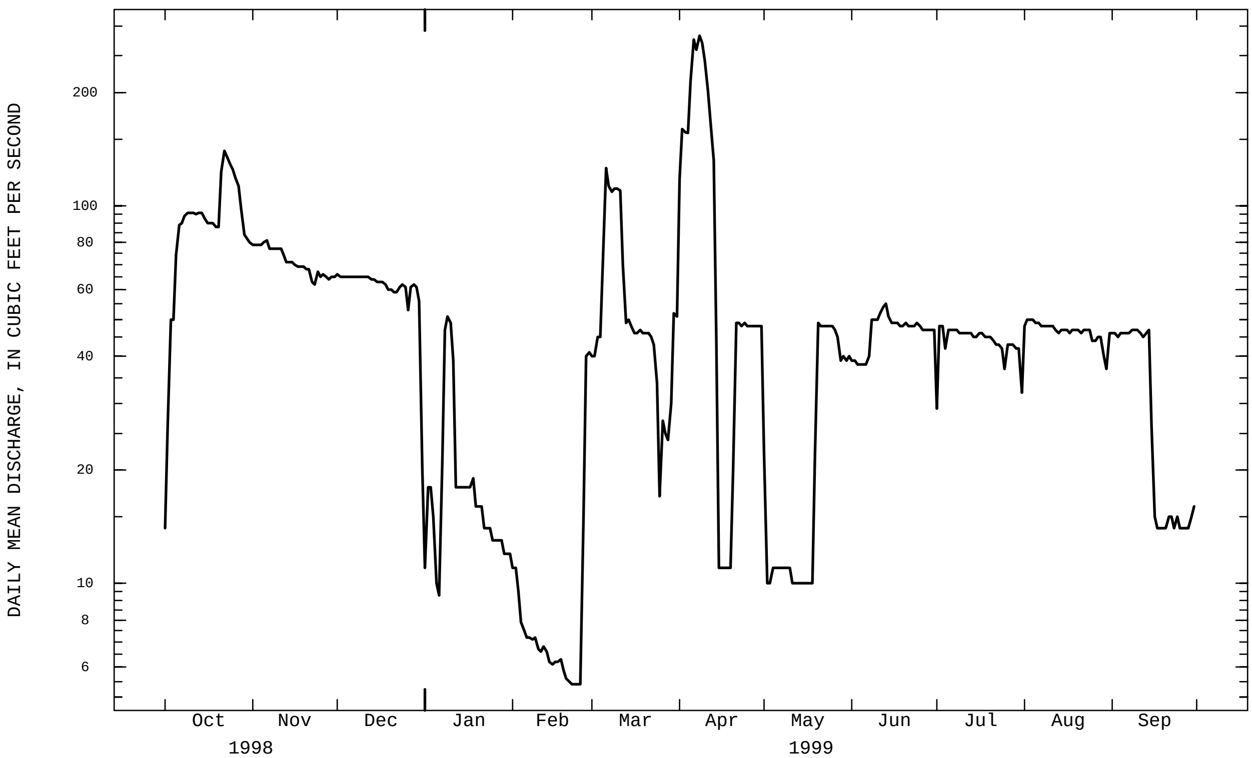
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	65.2	59.0	87.9	77.2	82.9	121	129	96.5	74.6	61.2	67.1	76.9
MAX	138	166	373	183	256	320	304	229	170	135	143	219
(WY)	1997	1997	1984	1991	1994	1993	1993	1989	1989	1996	1996	1996
MIN	7.87	17.1	14.9	9.33	9.57	8.90	8.49	8.63	22.4	30.3	18.1	26.1
(WY)	1987	1989	1992	1982	1999	1981	1981	1981	1981	1995	1987	1991

† Monthend contents, in millions of gallons, in Triadelphia Reservoir (contents on Sept. 30, 1998, 4,550,000,000 gal). Records provided by Washington Suburban Sanitary Commission.

01591610 PATUXENT RIVER BELOW BRIGHTON DAM NEAR BRIGHTON, MD--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1981 - 1999	
ANNUAL TOTAL	34819		18583.2			
ANNUAL MEAN	95.4		50.9		83.2	
ANNUAL MEAN≠	91.6		44.9		81.2	
HIGHEST ANNUAL MEAN					134	1984
LOWEST ANNUAL MEAN					47.5	1992
HIGHEST DAILY MEAN	528	May 9	283	Apr 8	1730	May 6 1989
LOWEST DAILY MEAN	13	(a)	5.4	(b)	2.1	(c)
ANNUAL SEVEN-DAY MINIMUM	14	Sep 22	5.5	Feb 19	4.0	Oct 16 1980
INSTANTANEOUS PEAK FLOW			370	Apr 8	2650	May 6 1989
INSTANTANEOUS PEAK STAGE			2.80	Apr 8	10.26	May 6 1985
INSTANTANEOUS LOW FLOW			4.9	(d)	1.2	Dec 3 1985
ANNUAL RUNOFF (CFSM)	1.21		.65		1.06	
ANNUAL RUNOFF (CFSM)≠	1.17		.57		1.03	
ANNUAL RUNOFF (INCHES)	16.48		8.80		14.39	
ANNUAL RUNOFF (INCHES)≠	15.83		7.76		14.03	
10 PERCENT EXCEEDS	170		90		178	
50 PERCENT EXCEEDS	87		47		54	
90 PERCENT EXCEEDS	39		11		9.5	

≠ Adjusted for change in reservoir contents.
a Sept. 24-26.
b Feb. 22-25.
c Jan. 27, 28, 1983
d Feb. 21, 26.



DAILY MEAN DISCHARGE - 1999 WATER YEAR

01591700 HAWLINGS RIVER NEAR SANDY SPRING, MD

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

DRAINAGE AREA.--27.0 mi^2.

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

REMARKS--Records good except those for estimated daily discharges (backwater and missing record), which are poor. Several measurements of water temperature were made during the year. Water-quality records for some prior periods have been collected at this location.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 700 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Sep 16	1630	*1,050	*5.43	No other peak greater than base discharge.			

Minimum discharge, 0.23 ft^3/s, Aug 13, 14.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.3	e4.5	7.4	e10	e16	43	34	15	4.3	3.3	1.0	2.0
2	3.9	e4.5	7.2	e9.2	51	31	38	15	4.3	4.1	.97	2.3
3	3.7	e4.5	7.0	106	40	28	31	15	4.0	5.0	.80	2.4
4	3.9	e4.5	6.9	e45	30	62	29	15	4.0	3.6	.61	6.7
5	4.0	e4.5	7.2	e22	27	43	41	14	4.0	3.1	.51	83
6	3.8	e4.6	7.2	e14	24	36	32	14	3.7	2.8	.43	111
7	3.8	e4.8	7.5	e12	22	41	29	14	3.5	2.6	.32	81
8	35	e5.0	8.6	e12	22	29	26	27	3.5	2.4	.32	107
9	21	e5.4	21	e35	20	28	27	19	3.2	2.2	.41	30
10	9.4	e12	14	e34	18	29	33	14	3.1	2.2	.39	33
11	6.7	26	8.5	e25	17	28	38	12	3.3	2.1	.34	14
12	5.6	13	6.8	e21	19	29	43	11	3.3	2.0	.32	7.4
13	5.3	10	9.5	36	27	31	32	11	4.8	2.3	.29	5.9
14	e5.2	8.0	9.7	30	22	34	28	10	6.6	2.3	.32	5.8
15	e5.0	7.3	9.4	79	19	61	26	9.4	14	2.1	.44	15
16	e5.0	7.8	8.7	53	18	73	28	8.5	4.0	2.1	.60	597
17	e4.9	6.5	8.2	47	19	86	25	8.5	3.8	2.0	.50	107
18	e4.9	6.4	7.5	100	75	66	23	8.5	4.3	1.8	.44	37
19	e4.9	5.8	8.0	59	48	43	22	8.5	3.7	1.7	.33	22
20	e4.8	6.0	7.8	34	33	34	22	8.4	13	2.0	6.1	16
21	e4.8	7.4	7.8	27	28	48	22	7.4	9.1	2.0	2.4	52
22	e4.8	6.8	7.7	25	24	75	25	7.2	5.4	1.8	1.8	55
23	e4.8	5.8	7.9	23	21	44	24	13	4.2	1.7	1.5	28
24	e4.7	6.0	8.5	118	20	38	24	27	3.8	1.6	11	19
25	e4.7	6.1	e8.0	64	21	35	21	20	3.6	1.5	29	14
26	e4.6	20	e7.8	38	21	32	20	11	3.5	1.2	37	11
27	e4.6	17	e7.6	30	20	30	18	8.2	3.1	1.2	14	10
28	e4.5	9.4	8.5	26	38	29	16	6.9	3.3	1.1	3.8	12
29	e4.5	8.3	9.7	23	---	28	16	5.8	4.0	1.1	2.7	15
30	e4.5	7.8	12	e19	---	26	16	5.2	3.0	1.1	2.1	108
31	e4.5	---	e11	e17	---	25	---	4.6	---	.91	1.8	---
TOTAL	196.1	245.7	274.6	1193.2	760	1265	809	374.1	141.4	66.91	122.54	1609.5
MEAN	6.33	8.19	8.86	38.5	27.1	40.8	27.0	12.1	4.71	2.16	3.95	53.7
MAX	35	26	21	118	75	86	43	27	14	5.0	37	597
MIN	3.7	4.5	6.8	9.2	16	25	16	4.6	3.0	.91	.29	2.0
CFSM	.23	.30	.33	1.43	1.01	1.51	1.00	.45	.17	.08	.15	1.99
IN.	.27	.34	.38	1.64	1.05	1.74	1.11	.52	.19	.09	.17	2.22

e Estimated

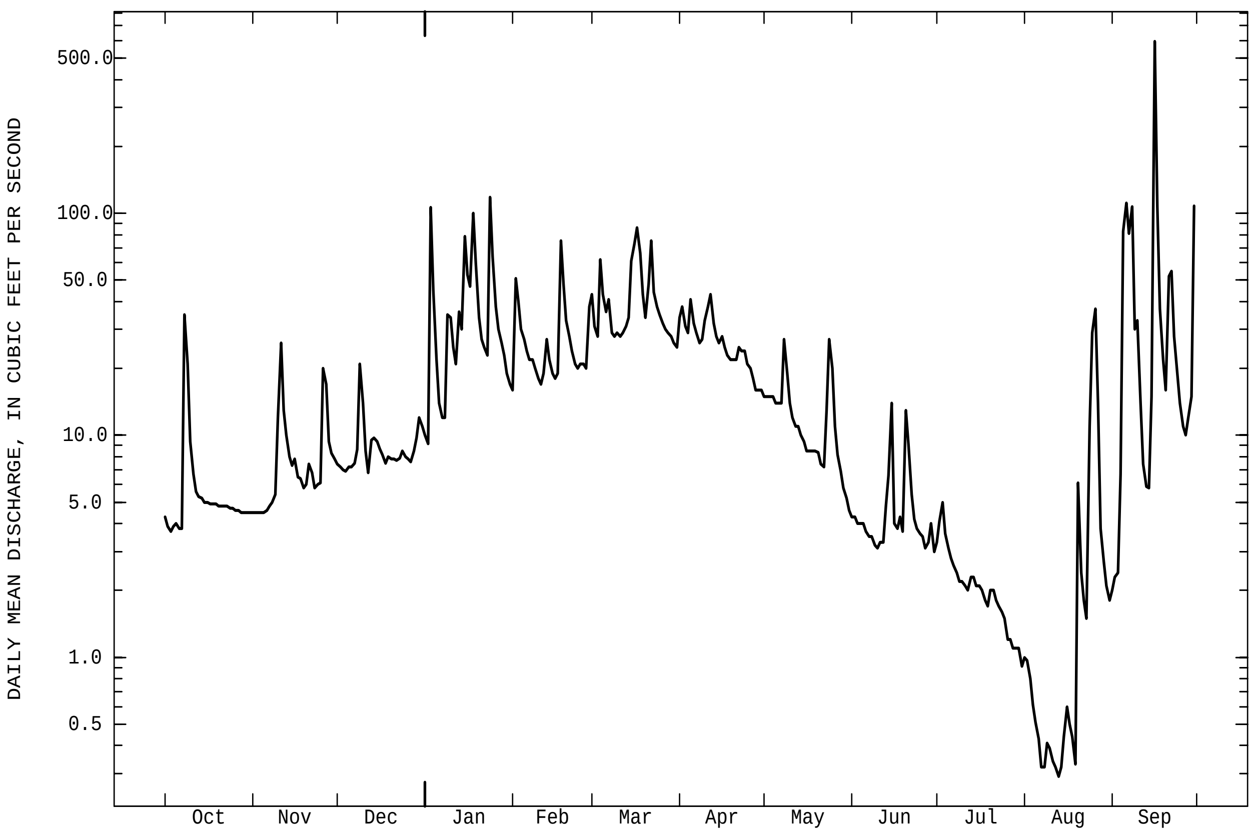
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1978 - 1999, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	21.4	28.8	33.3	39.8	44.3	49.7	41.0	36.5	28.0	16.6	12.8	18.6
MAX	129	68.8	104	115	112	116	90.7	94.3	73.0	52.4	36.6	90.2
(WY)	1980	1994	1997	1996	1979	1993	1993	1989	1998	1996	1996	1996
MIN	2.68	7.27	8.86	9.31	20.3	18.8	18.5	12.1	4.71	2.16	3.95	3.11
(WY)	1987	1982	1999	1981	1992	1981	1995	1999	1999	1999	1999	1986

01591700 HAWLINGS RIVER NEAR SANDY SPRING, MD--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1978 - 1999	
ANNUAL TOTAL	12925.8		7058.05			
ANNUAL MEAN	35.4		19.3		30.7	
HIGHEST ANNUAL MEAN					52.9	1996
LOWEST ANNUAL MEAN					16.0	1986
HIGHEST DAILY MEAN	727	Jun 24	597	Sep 16	1840	Jan 19 1996
LOWEST DAILY MEAN	3.7	Oct 3	.29	Aug 13	.29	Aug 13 1999
ANNUAL SEVEN-DAY MINIMUM	3.9	Oct 1	.34	Aug 7	.34	Aug 7 1999
INSTANTANEOUS PEAK FLOW			1050	Sep 16	(a)5180	Jan 19 1996
INSTANTANEOUS PEAK STAGE			5.43	Sep 16	9.24	Jan 19 1996
INSTANTANEOUS LOW FLOW			.23	(b)	.23	(b)
ANNUAL RUNOFF (CFSM)	1.31		.72		1.14	
ANNUAL RUNOFF (INCHES)	17.81		9.72		15.47	
10 PERCENT EXCEEDS	70		39		52	
50 PERCENT EXCEEDS	20		9.4		19	
90 PERCENT EXCEEDS	5.0		2.0		5.4	

a From rating curve extended above 1,300 ft^3/s on basis of contracted-opening and flow-over-road measurement of peak flow.
b Aug. 13, 14, 1999.



01592500 PATUXENT RIVER NEAR LAUREL, MD

LOCATION.--Lat 39°06'56", long 76°52'27", Prince Georges County, Hydrologic Unit 02060006, on right bank at Rocky Gorge pumping station, 600 ft downstream from T. Howard Duckett Reservoir, 0.7 mi upstream from Walker Branch, 1.3 mi northwest of Laurel, and 81 mi upstream from mouth.

DRAINAGE AREA.--132 mi^2.

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

REVISED RECORDS.--WDR MD-DE-78-1: 1976(M). WDR MD-DE-89-1: 1978(M), 1979(M).

GAGE.--Water-stage recorder. Datum of gage is 153.5 ft above sea level (levels by Washington Suburban Sanitary Commission). Prior to Oct. 1, 1955, water-stage recorder and concrete control at site 0.3 mi downstream at different datum. Oct. 1, 1955 to Sept. 30, 1956, nonrecording gage at present site at datum 1.2 ft lower. Oct. 1, 1956 to Jan. 27, 1957, nonrecording gage at present site and datum. Jan. 28, 1957 to May 3, 1972, water-stage recorder and concrete control at present site and datum. May 4, 1972 to Sept. 4, 1973, nonrecording gage at present site and datum.

REMARKS.--No estimated daily discharges. Records good. Records do not include diversion at Patuxent (formerly Willis School) filtration plant for supply of Washington Suburban Sanitary District. Flow regulated by Triadelphia Reservoir, and since March 1954 by T. Howard Duckett Reservoir, combined usable capacity, 11,800,000,000 gal; dead storage, 80,000,000 gal. Several measurements of water temperature were made during the year.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 201 ft^3/s, Sep 16, gage height, 5.71 ft; minimum discharge, 4.6 ft^3/s, Dec 22.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	19	20	20	19	19	19	19	20	21	18	19	20
2	19	19	20	19	19	18	19	20	21	20	20	20
3	19	19	18	19	19	18	19	20	21	22	20	20
4	19	19	18	19	18	18	19	20	20	29	20	20
5	19	19	18	19	19	18	18	19	20	22	20	20
6	19	19	18	19	19	18	18	19	20	21	19	19
7	19	19	18	19	19	18	18	19	20	21	19	20
8	19	19	18	19	19	18	18	19	21	21	19	20
9	19	19	18	19	19	18	20	19	20	21	20	20
10	19	17	19	19	19	18	18	20	21	21	19	20
11	19	18	19	19	19	18	19	20	21	21	19	20
12	20	18	19	19	19	18	18	20	20	21	19	20
13	20	18	19	19	19	18	19	21	19	20	19	20
14	19	18	19	19	19	18	19	21	21	20	19	22
15	19	18	19	18	19	18	19	21	24	20	19	27
16	19	19	19	18	19	18	19	21	21	20	19	104
17	19	19	19	18	19	18	19	21	20	20	19	73
18	19	19	19	18	19	18	19	21	22	20	19	20
19	19	19	19	18	19	19	19	20	19	19	19	20
20	19	19	19	18	19	18	19	20	21	19	19	20
21	19	19	19	18	19	18	19	21	20	19	19	20
22	19	19	16	18	19	17	18	21	20	19	19	21
23	19	19	19	19	19	18	18	21	20	19	19	20
24	19	19	19	19	19	19	18	21	20	19	20	20
25	19	19	19	19	19	18	18	21	20	19	20	20
26	19	20	19	19	19	19	19	21	22	19	20	20
27	19	20	19	19	19	19	19	21	23	19	20	20
28	19	20	18	19	19	18	20	21	26	19	20	20
29	19	20	18	19	---	18	21	21	24	19	20	20
30	20	20	18	19	---	18	21	21	20	19	21	20
31	20	---	19	19	---	19	---	21	---	20	20	---
TOTAL	593	569	578	581	531	563	566	632	628	626	603	746
MEAN	19.1	19.0	18.6	18.7	19.0	18.2	18.9	20.4	20.9	20.2	19.5	24.9
MAX	20	20	20	19	19	19	21	21	26	29	21	104
MIN	19	17	16	18	18	17	18	19	19	18	19	19
(†)	5750	4660	4320	5860	6320	7780	8740	8890	8470	6800	5950	8250
(≠)	89.7	82.1	68.9	68.4	82.3	77.3	83.6	89.2	85.2	92.8	93.4	89.5

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1945 - 1999, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	44.6	49.6	78.2	105	117	138	139	113	85.7	59.2	49.3	64.3
MAX	379	272	457	480	462	557	444	397	822	280	226	587
(WY)	1980	1953	1997	1978	1979	1993	1952	1989	1972	1945	1971	1979
MIN	7.76	7.21	8.45	7.84	7.92	7.88	7.47	9.04	7.88	7.81	5.72	4.91
(WY)	1968	1985	1966	1966	1966	1966	1966	1985	1967	1967	1966	1966

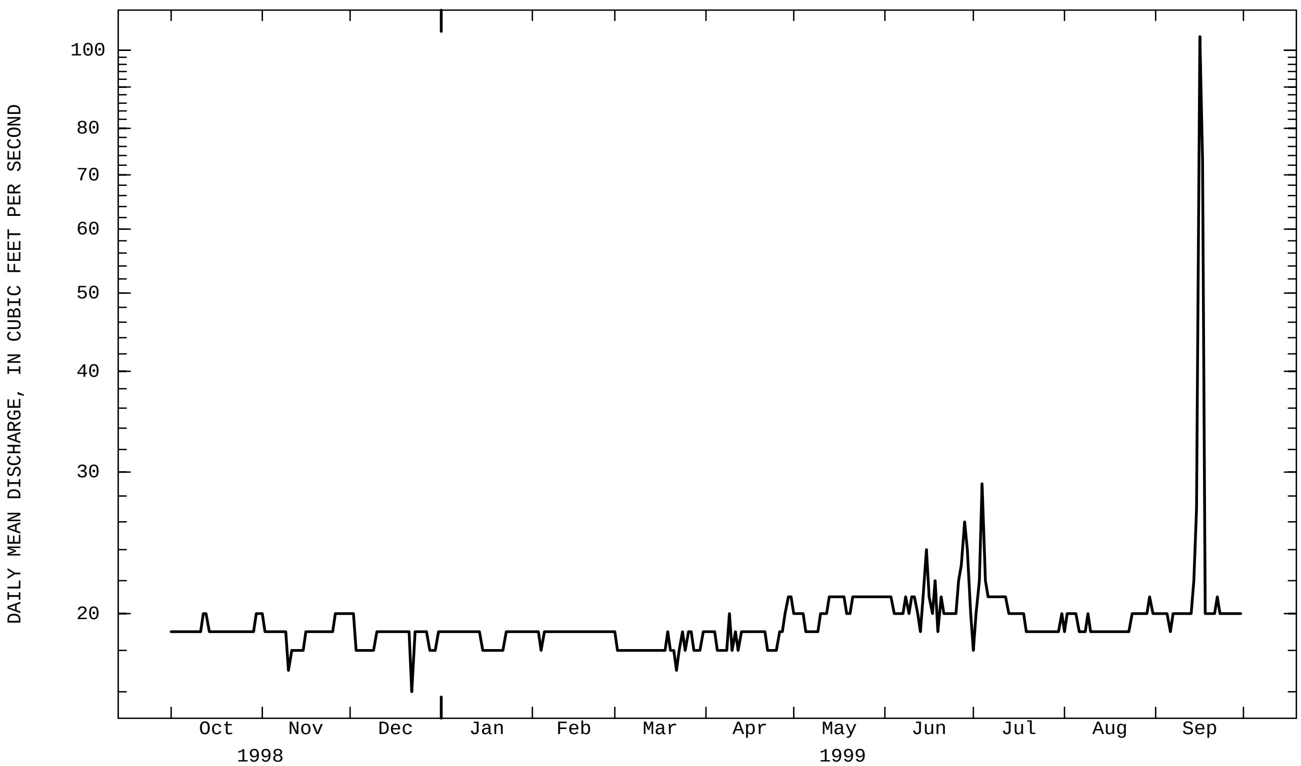
† Combined month-end total contents, in millions of gallons, in Tridelphia and T. Howard Duckett Reservoirs (contents on Sept. 30, 1998, 7,350,000,000 gal). Records provided by Washington Suburban Sanitary Commission.

≠ Diversions, in cubic feet per second, upstream from station at Patuxent (formerly Willis School) filtration plant for supply of Washington Suburban Sanitary District. Records provided by Washington Suburban Sanitary Commission.

01592500 PATUXENT RIVER NEAR LAUREL, MD--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1945 - 1999	
ANNUAL TOTAL	31476		7216			
ANNUAL MEAN	86.2		19.8		86.7	
ANNUAL MEAN≠	168		76.9			
HIGHEST ANNUAL MEAN					241	1972
LOWEST ANNUAL MEAN					9.09	1966
HIGHEST DAILY MEAN	1820	Mar 22	104	Sep 16	13000	Jun 22 1972
LOWEST DAILY MEAN	15	(a)	16	Dec 22	1.1	Jun 26 1956
ANNUAL SEVEN-DAY MINIMUM	17	Sep 3	18	Nov 9	3.7	Aug 29 1966
INSTANTANEOUS PEAK FLOW			201	Sep 16	(b)26000	Jun 22 1972
INSTANTANEOUS PEAK STAGE			5.71	Sep 16	(c)25.00	Jun 22 1972
INSTANTANEOUS LOW FLOW			4.6	Dec 22	(d).05	Jul 18 1985
ANNUAL RUNOFF (CFSM)	.65		.15		.66	
ANNUAL RUNOFF (INCHES)	8.87		2.03		8.92	
10 PERCENT EXCEEDS	214		21		192	
50 PERCENT EXCEEDS	20		19		22	
90 PERCENT EXCEEDS	19		18		12	

≠ Adjusted for diversions.
a Sept. 6, 8.
b From ratinmg curve extended above 6,600 ft^3/s on basis of contracted-opening measurement of peak flow.
c From floodmarks.
d Valve closed for repair.



DAILY MEAN DISCHARGE - 1999 WATER YEAR

01593500 LITTLE PATUXENT RIVER AT GUILFORD, MD

LOCATION.--Lat 39°10'04", long 76°51'07", Howard County, Hydrologic Unit 02060006, on left bank 25 ft downstream from bridge on Guilford Road (formerly State Highway 32), 1 mi west of Guilford, 3 mi upstream from Middle Patuxent River, 4 mi north of Laurel, and 20.1 mi upstream from mouth.

DRAINAGE AREA.--38.0 mi^2.

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

REVISED RECORDS.--WSP 1502: 1933, 1934(M), 1939(M), 1945(M), 1948(P).

GAGE.--Water-stage recorder. Concrete control since June 20, 1946. Datum of gage is 259.26 ft above sea level. Prior to June 25, 1946, nonrecording gage at same site and datum.

REMARKS.--Records good except those for estimated daily discharges (backwater, ice effect), which are fair. Low flow affected by regulation from unknown source. Several measurements of water temperature were made during the year. Water-quality records for some prior periods have been collected at this location.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 800 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Sep 9	2230	987	6.94	Sep 16	1630	*2,520	*10.60

Minimum discharge, 1.7 ft^3/s, Aug 5.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e6.0	8.4	11	15	18	62	60	17	e9.3	e11	6.5	e6.3
2	e5.6	8.3	11	11	74	32	56	17	e9.0	e14	4.8	e5.8
3	e5.3	7.6	9.8	273	45	28	35	17	7.5	e10	3.6	e5.4
4	e6.3	7.7	10	59	30	66	35	18	6.7	e7.6	2.7	e12
5	e8.9	8.1	11	38	25	38	73	17	6.1	e5.8	1.8	245
6	e7.4	7.7	12	27	22	43	38	16	6.1	e5.3	e1.7	83
7	6.6	8.0	11	15	21	62	32	17	e6.1	e4.3	e1.5	126
8	79	7.7	13	14	21	32	29	18	e6.1	e4.0	e1.4	75
9	45	8.1	36	52	19	29	36	18	e5.7	e3.7	e1.5	196
10	e16	7.9	16	55	19	37	58	16	e5.1	e3.4	e1.6	245
11	e12	27	13	56	18	35	59	15	e6.6	e3.2	e1.5	36
12	e9.2	17	12	21	24	33	63	15	e6.0	e3.2	e1.5	18
13	e8.7	13	24	40	37	30	38	14	e12	e4.5	e1.7	14
14	e9.1	e11	18	49	22	38	31	14	e25	e4.3	e1.6	13
15	e8.5	e11	13	218	19	107	29	13	e30	e4.0	e1.8	25
16	e8.0	e10	13	78	18	100	35	12	e14	e3.7	e1.7	1320
17	e8.0	e10	12	50	22	87	29	13	e13	e3.2	e1.4	384
18	e8.0	e10	12	131	115	68	26	13	e20	e3.0	e1.3	50
19	e8.0	e11	11	78	60	43	25	13	e11	e2.7	e1.1	30
20	e7.5	e11	11	37	34	34	24	12	e33	e2.9	e5.0	23
21	e7.2	e13	11	29	26	86	26	11	e24	4.2	e38	92
22	e7.2	e12	12	28	23	232	30	12	e16	37	e12	77
23	e7.0	e11	12	25	20	59	28	36	e13	12	e10	36
24	e7.2	e10	12	183	19	44	27	71	e8.8	6.8	e43	25
25	e7.2	10	13	84	19	39	23	40	e7.2	4.8	e39	19
26	e7.2	40	e11	39	19	33	22	17	e7.0	3.7	177	17
27	e7.2	19	11	30	18	31	21	14	e6.7	3.1	277	16
28	e7.2	13	12	27	64	34	20	13	e6.1	2.9	27	17
29	e7.2	12	13	24	---	30	19	12	e6.4	8.3	14	20
30	e7.2	11	14	20	---	27	18	11	e6.0	12	9.1	189
31	7.1	---	13	18	---	26	---	10	---	10	7.4	---
TOTAL	352.0	361.5	413.8	1824	871	1645	1045	552	339.5	208.6	699.2	3420.5
MEAN	11.4	12.1	13.3	58.8	31.1	53.1	34.8	17.8	11.3	6.73	22.6	114
MAX	79	40	36	273	115	232	73	71	33	37	277	1320
MIN	5.3	7.6	9.8	11	18	26	18	10	5.1	2.7	1.1	5.4
CFSM	.30	.32	.35	1.55	.82	1.40	.92	.47	.30	.18	.59	3.00
IN.	.34	.35	.41	1.79	.85	1.61	1.02	.54	.33	.20	.68	3.35

e Estimated

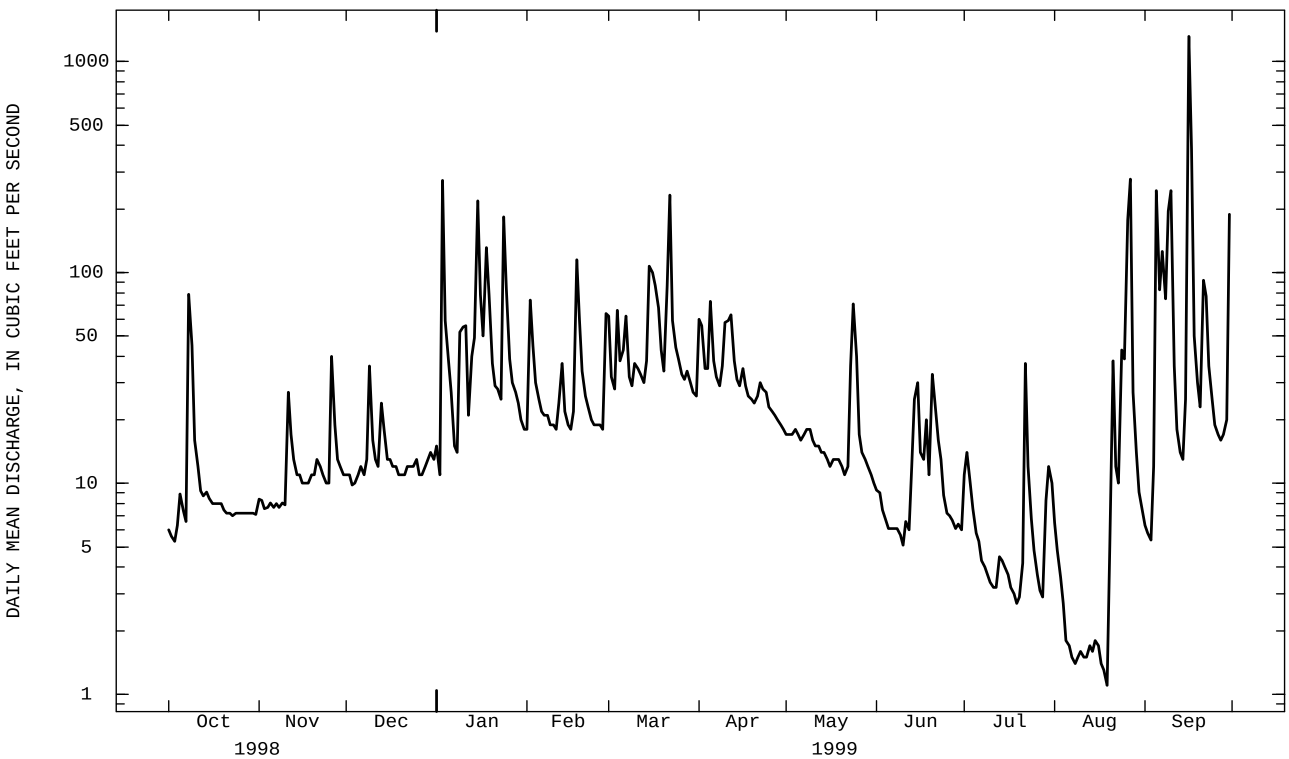
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1932 - 1999, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	26.4	38.0	45.0	53.8	61.0	66.4	58.5	49.5	38.6	29.6	27.7	31.8
MAX	107	108	130	145	147	181	160	197	265	119	130	214
(WY)	1980	1973	1997	1978	1979	1993	1973	1989	1972	1945	1955	1975
MIN	5.90	9.31	11.6	12.9	19.7	24.9	21.0	15.7	9.32	6.66	4.91	3.88
(WY)	1942	1942	1966	1955	1947	1981	1947	1955	1986	1966	1957	1932

01593500 LITTLE PATUXENT RIVER AT GUILFORD, MD--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1932 - 1999	
ANNUAL TOTAL	17663.2		11732.1			
ANNUAL MEAN	48.4		32.1		43.7	
HIGHEST ANNUAL MEAN					93.7	1972
LOWEST ANNUAL MEAN					17.7	1932
HIGHEST DAILY MEAN	843	Mar 9	1320	Sep 16	4680	Jun 22 1972
LOWEST DAILY MEAN	(e)5.3	Oct 3	(e)1.1	Aug 19	.00	Sep 8 1966
ANNUAL SEVEN-DAY MINIMUM	5.5	Sep 14	1.5	Aug 13	.73	Sep 6 1966
INSTANTANEOUS PEAK FLOW			2520	Sep 16	(a)12400	Jun 22 1972
INSTANTANEOUS PEAK STAGE			10.60	Sep 16	(b)18.38	Jun 22 1972
INSTANTANEOUS LOW FLOW			(e)1.1	Aug 19	.00	(c)
ANNUAL RUNOFF (CFSM)	1.27		.85		1.15	
ANNUAL RUNOFF (INCHES)	17.29		11.49		15.64	
10 PERCENT EXCEEDS	97		61		72	
50 PERCENT EXCEEDS	25		14		26	
90 PERCENT EXCEEDS	7.5		4.8		10	

e Estimated.
a From rating curve extended above 1,800 ft^3/s on basis of contracted-opening measurement at gage height 13.26 ft and contracted-opening and flow-over-embankment measurement at gage height 18.38 ft.
b From high-water mark in well.
c Sept. 6-12, 1966.



DAILY MEAN DISCHARGE - 1999 WATER YEAR

01594000 LITTLE PATUXENT RIVER AT SAVAGE, MD

LOCATION.--Lat 39°08'06", long 76°48'58", Howard County, Hydrologic Unit 02060006, on left bank 20 ft downstream from bridge on southbound lanes of U.S. Highway 1, 0.4 mi southeast of Savage, 0.9 mi downstream from Middle Patuxent River, and 16.2 mi upstream from mouth.

DRAINAGE AREA.--98.4 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1939 to September 1958. Annual maximums, water years 1959-66, 68, 72, 75. October 1975 to September 1980. May 1985 to current year. Prior to December 1939 monthly discharge only, published in WSP 1302.

REVISED RECORDS.--WRD MD-DE-89: 1985, 1987-88(P).

GAGE.--Water-stage recorder. Elevation of gage is 125 ft above sea level, from topographic maps. Prior to October 1958, water-stage recorder at site 400 ft downstream at same datum. October 1958 to September 1972, crest-stage gage at site 400 ft downstream on right bank at same datum. October 1975 to September 1980, water-stage recorder at site 500 ft downstream at same datum.

REMARKS.--Water-discharge records good except those for estimated daily discharges (ice effect), which are fair. Some diurnal fluctuation at low flow caused by plant 0.5 mi upstream.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,500 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Sep 16	1800	*6,580	*13.27	No other peak greater than base discharge.			

Minimum discharge, 2.4 ft^3/s, Aug 19, 20.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15	23	29	e29	59	145	119	56	28	24	13	13
2	14	23	27	e29	161	83	129	56	26	31	9.2	12
3	13	24	29	555	115	74	87	55	25	23	8.8	11
4	16	24	28	142	79	141	82	57	23	19	6.8	24
5	22	24	29	67	71	101	146	56	21	15	5.5	364
6	21	24	31	e58	66	95	93	54	21	14	4.8	177
7	20	25	29	e54	64	140	82	56	22	11	4.1	300
8	150	25	32	e52	65	84	77	59	21	9.9	3.9	157
9	107	26	81	108	61	78	84	58	19	9.4	4.1	268
10	46	26	52	159	60	87	124	51	16	8.7	4.5	415
11	34	62	37	85	58	84	117	49	20	8.2	4.2	73
12	26	53	33	75	63	83	149	47	19	8.3	4.0	46
13	25	31	53	102	88	80	92	46	23	12	4.8	35
14	26	27	56	118	64	88	82	44	57	12	4.6	30
15	24	27	38	494	59	228	78	42	61	11	5.0	43
16	23	26	34	209	58	234	86	40	30	9.3	4.4	3230
17	23	27	33	142	61	227	77	41	28	8.0	3.8	728
18	23	26	31	364	262	190	71	41	43	7.5	3.4	120
19	23	27	29	231	145	107	69	41	27	6.7	2.9	79
20	21	27	29	98	86	88	69	39	70	6.8	9.5	70
21	21	32	29	81	73	155	70	35	69	10	90	199
22	21	31	30	77	67	477	77	35	41	39	21	178
23	20	27	29	72	63	139	73	72	31	25	12	91
24	21	26	32	446	62	108	72	111	26	14	85	68
25	21	26	34	220	61	97	66	89	22	9.9	122	62
26	21	92	42	101	60	86	65	49	22	8.2	406	55
27	21	66	35	82	59	81	63	40	21	7.4	388	51
28	21	39	33	75	126	85	62	37	19	6.8	53	53
29	22	33	e32	70	---	80	61	34	21	10	30	59
30	22	30	e31	64	---	75	58	32	19	19	19	453
31	24	---	e30	61	---	71	---	30	---	25	15	---
TOTAL	907	979	1097	4520	2316	3891	2580	1552	891	429.1	1352.3	7464
MEAN	29.3	32.6	35.4	146	82.7	126	86.0	50.1	29.7	13.8	43.6	249
MAX	150	92	81	555	262	477	149	111	70	39	406	3230
MIN	13	23	27	29	58	71	58	30	16	6.7	2.9	11
CFSM	.30	.33	.36	1.48	.84	1.28	.87	.51	.30	.14	.44	2.53
IN.	.34	.37	.41	1.71	.88	1.47	.98	.59	.34	.16	.51	2.82

e Estimated

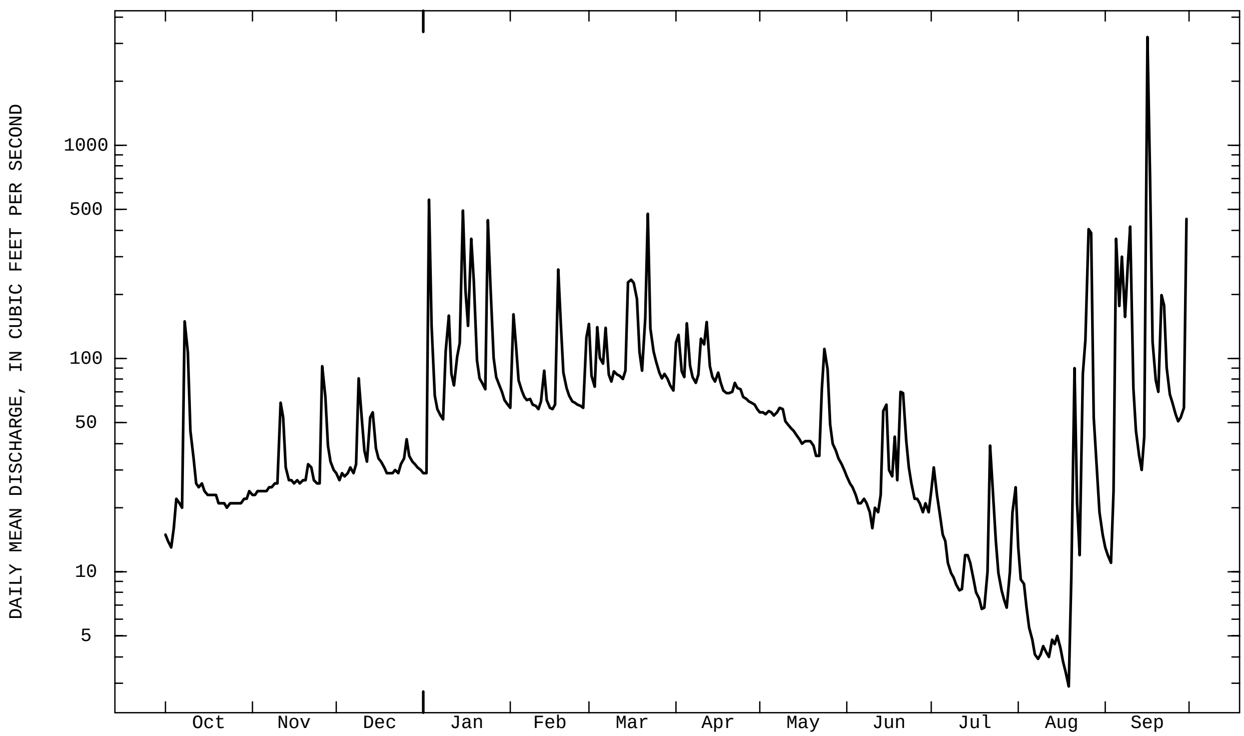
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1940 - 1999, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	71.9	100	119	150	144	170	140	127	93.8	75.2	63.7	71.2
MAX	336	260	386	386	375	368	351	367	294	312	315	432
(WY)	1980	1997	1997	1979	1979	1994	1952	1989	1951	1945	1955	1979
MIN	14.7	22.5	35.4	34.0	57.7	85.3	60.0	39.5	25.5	13.8	15.1	12.8
(WY)	1942	1942	1999	1942	1942	1947	1947	1955	1986	1999	1957	1986

01594000 LITTLE PATUXENT RIVER AT SAVAGE, MD--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1940 - 1999	
ANNUAL TOTAL	46060		27978.4			
ANNUAL MEAN	126		76.7		111	
HIGHEST ANNUAL MEAN					196	1979
LOWEST ANNUAL MEAN					59.3	1942
HIGHEST DAILY MEAN	2270	Mar 9	3230	Sep 16	5250	Sep 6 1979
LOWEST DAILY MEAN	13	Oct 3	2.9	Aug 19	2.9	Aug 19 1999
ANNUAL SEVEN-DAY MINIMUM	15	Sep 28	4.1	Aug 13	4.1	Aug 13 1999
INSTANTANEOUS PEAK FLOW			6580	Sep 16	(a)35400	Jun 22 1972
INSTANTANEOUS PEAK STAGE			13.27	Sep 16	(b)25.40	Jun 22 1972
INSTANTANEOUS LOW FLOW			2.4	(c)	1.6	Aug 26 1944
ANNUAL RUNOFF (CFSM)	1.28		.78		1.12	
ANNUAL RUNOFF (INCHES)	17.41		10.58		15.26	
10 PERCENT EXCEEDS	237		141		188	
50 PERCENT EXCEEDS	68		42		72	
90 PERCENT EXCEEDS	21		11		27	

a From rating curve extended above 11,000 ft^3/s on basis of contracted-opening measurement of peak flow.
b From floodmarks.
c Aug. 19, 20.



01594000 LITTLE PATUXENT RIVER AT SAVAGE, MD--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1969, 1985-92, October 1992 to current year.

REMARKS.--Nutrient analyses were performed at the Maryland Department of Health and Mental Hygiene laboratory (DHMH), Baltimore, MD.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	TIME	AGENCY ANA- LYZING SAMPLE (CODE NUMBER) (00028)	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	TUR- BID- ITY (NTU) (00076)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN DEMAND, CHEM- ICAL (LOW LEVEL) (MG/L) (00335)
OCT 1997										
30...	0745	9724	32	268	6.8	3.0	7.0	1.7	--	<10
NOV										
15...	0100	1028	240	--	--	--	--	--	--	--
19...	1100	9724	55	287	6.4	6.0	2.0	1.4	--	<10
22...	0915	1028	424	--	--	--	--	--	--	--
DEC										
17...	1245	9724	48	285	6.7	10.5	2.5	1.9	--	<10
JAN 1998										
13...	1130	9724	63	298	--	8.0	5.0	2.5	--	<10
23...	1500	9724	1220	--	--	--	--	270	--	63
23...	1745	9724	1650	--	--	--	--	320	--	47
23...	2030	9724	1490	--	--	--	--	300	--	65
24...	0001	1028	1070	--	--	--	--	--	--	--
28...	1515	1028	2920	--	--	--	--	--	--	--
28...	1645	1028	3130	--	--	--	--	--	--	--
28...	1830	1028	3040	--	--	--	--	--	--	--
FEB										
04...	2145	9724	1170	--	--	--	--	140	--	38
05...	0200	1028	1360	--	--	--	--	--	--	--
05...	0600	9724	1490	--	--	--	--	98	--	22
05...	1000	9724	1350	--	--	--	--	91	--	22
18...	0215	9724	998	--	--	--	--	160	--	38
18...	0615	9724	1640	--	--	--	--	460	--	85
23...	0945	9724	130	255	6.6	4.0	7.0	5.3	--	<10
23...	2330	9724	1040	--	--	--	--	170	--	36
24...	0500	9724	1030	--	--	--	--	120	--	24
24...	1045	9724	1050	--	--	--	--	95	--	26
MAR										
17...	1030	9724	149	254	6.5	3.0	3.5	4.5	--	<10
19...	1000	9724	1230	--	--	--	--	240	--	52
APR										
09...	2215	1028	947	--	--	--	--	--	--	--
10...	0900	1028	303	--	--	--	--	--	--	--
14...	0900	9724	136	248	6.9	13.5	11.0	1.6	--	<10
19...	2245	9724	636	--	--	--	--	120	--	31
20...	0730	9724	485	--	--	--	--	120	--	32
MAY										
20...	1430	9724	114	255	7.5	32.0	23.0	1.7	--	<10
JUN										
14...	0001	9724	896	--	--	--	--	580	--	84
14...	0615	9724	440	--	--	--	--	200	--	37
20...	0900	1028	229	--	--	--	--	--	--	--
24...	1045	9724	216	--	--	--	--	64	--	21
26...	0500	9724	75	246	7.1	25.0	23.0	3.5	--	<10
JUL										
08...	1015	9724	280	--	--	--	--	82	--	22
08...	1245	9724	365	--	--	--	--	140	--	38
08...	2315	9724	175	--	--	--	--	44	--	22
15...	0845	9724	43	263	7.7	24.0	21.5	.90	--	<10
AUG										
25...	1045	9724	19	274	8.4	27.5	23.5	.80	8.4	<10
SEP										
16...	0815	9724	17	265	7.8	23.0	22.0	1.0	--	<10

01594000 LITTLE PATUXENT RIVER AT SAVAGE, MD--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L) (00310)	ANC WATER UNFLTRD IT FIELD MG/L AS CACO3 (00419)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (MG/L) (00530)	NITRO-GEN, TOTAL (MG/L AS N) (00600)	NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS N) (00618)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)
OCT 1997									
30...	<.6	58	12	2	1.5	1.27	.007	1.27	.015
NOV									
15...	--	--	--	--	--	--	--	--	--
19...	<1.2	56	16	1	2.1	1.97	.006	1.98	.003
22...	--	--	--	--	--	--	--	--	--
DEC									
17...	1.8	54	12	1	2.4	2.18	.005	2.18	<.005
JAN 1998									
13...	<1.2	--	13	2	--	2.04	.008	2.04	<.006
23...	--	--	5.8	587	3.1	.981	.010	.991	.038
23...	--	--	5.5	640	3.1	.881	.012	.893	.035
23...	--	--	5.9	640	3.4	.955	.012	.967	.037
24...	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--
FEB									
04...	--	--	6.3	410	1.6	.962	.017	.979	.098
05...	--	--	--	--	--	--	--	--	--
05...	--	--	5.3	148	1.4	.764	.011	.775	.089
05...	--	--	5.5	136	1.4	.786	.012	.798	.089
18...	--	--	7.2	348	2.6	1.13	.010	1.14	.038
18...	--	--	5.6	780	4.0	.890	.010	.900	.055
23...	<.9	75	14	6	2.3	2.16	.007	2.17	<.004
23...	--	--	7.2	368	1.9	1.07	.008	1.08	.025
24...	--	--	6.2	192	1.6	.857	.007	.864	.040
24...	--	--	6.7	132	1.6	.870	.008	.878	.058
MAR									
17...	<.6	46	14	7	--	2.37	.006	2.38	<.007
19...	--	--	6.2	476	2.1	.987	.009	.996	.066
APR									
09...	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--
14...	1.2	50	9.6	2	1.7	1.53	.006	1.53	<.005
19...	--	--	7.8	192	2.6	1.25	.009	1.26	.021
20...	--	--	7.6	156	2.3	1.12	.009	1.13	.056
MAY									
20...	--	52	13	3	2.1	1.89	.009	1.90	<.004
JUN									
14...	--	--	6.2	764	4.8	1.20	.021	1.22	.185
14...	--	--	7.1	295	2.8	1.07	.020	1.09	.195
20...	--	--	--	--	--	--	--	--	--
24...	--	--	12	84	2.6	2.01	.013	2.02	.017
26...	1.7	52	12	3	2.1	1.71	.009	1.72	.010
JUL									
08...	--	--	8.3	192	2.5	1.37	.019	1.39	.098
08...	--	--	8.2	288	2.9	1.50	.021	1.52	.079
08...	--	--	9.3	94	2.4	1.64	.017	1.66	.045
15...	<1.0	56	12	3	2.2	1.91	.007	1.92	<.002
AUG									
25...	<.9	64	9.8	<1	1.9	1.57	.007	1.58	<.006
SEP									
16...	<.9	65	8.0	4	1.8	1.44	.008	1.45	<.006

01594000 LITTLE PATUXENT RIVER AT SAVAGE, MD--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)	CARBON, ORGANIC DIS-SOLVED (MG/L AS C) (00681)	SEDI-MENT, SUS-PENDED (MG/L) (80154)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY) (80155)
OCT 1997									
30...	.26	.21	.029	.029	.010	3.6	3.5	3	.29
NOV									
15...	--	--	--	--	--	--	--	23	15
19...	.15	.14	.015	.012	.009	4.3	4.0	0	.06
22...	--	--	--	--	--	--	--	101	115
DEC									
17...	.17	.11	.014	<.002	<.004	2.3	2.7	0	.04
JAN 1998									
13...	<.09	<.10	.010	<.009	.014	2.9	3.0	2	.27
23...	2.1	.27	.530	.031	.008	5.1	5.1	904	2980
23...	2.2	.33	.587	.015	.010	5.8	5.5	933	4150
23...	2.4	.40	.664	.015	.009	6.4	5.6	829	3340
24...	--	--	--	--	--	--	--	567	1640
28...	--	--	--	--	--	--	--	1480	11700
28...	--	--	--	--	--	--	--	1200	10100
28...	--	--	--	--	--	--	--	1110	9120
FEB									
04...	.64	.20	.251	.044	.014	4.8	4.4	893	2820
05...	--	--	--	--	--	--	--	470	1730
05...	.67	.28	.195	.041	.031	5.5	4.9	226	908
05...	.62	.25	.178	.044	.028	5.4	5.2	226	824
18...	1.5	.25	.399	.038	.016	4.7	4.3	586	1580
18...	3.1	.34	1.30	.040	.026	6.2	5.2	1160	5150
23...	.16	<.10	.026	.021	.007	2.7	--	4	1.3
23...	.86	.21	.258	.030	.018	5.5	4.8	532	1490
24...	.76	.29	.214	.035	.022	5.7	5.0	248	689
24...	.73	.30	.178	.037	.026	5.9	5.1	202	573
MAR									
17...	<.05	<.00	.048	.030	.008	2.0	2.4	3	1.1
19...	1.1	.26	.435	.033	.026	5.2	4.7	848	2810
APR									
09...	--	--	--	--	--	--	--	597	1530
10...	--	--	--	--	--	--	--	180	148
14...	.21	.17	<.009	<.001	<.003	2.7	--	2	.81
19...	1.4	.25	.250	<.003	.006	4.9	4.2	209	359
20...	1.2	.40	.246	.012	.012	6.3	5.5	225	295
MAY									
20...	.20	.15	<.001	<.000	.012	2.6	--	3	.92
JUN									
14...	3.6	.65	1.20	.044	.043	9.0	8.0	852	2060
14...	1.7	.59	.410	.046	--	8.6	8.6	266	316
20...	--	--	--	--	--	--	--	118	73
24...	.62	.24	.135	.024	.006	5.3	--	88	52
26...	.43	.35	.027	.017	.007	4.2	4.2	5	.99
JUL									
08...	1.1	.37	.224	.017	.016	5.6	--	149	113
08...	1.4	.25	.392	.038	.018	6.0	--	233	230
08...	.72	.22	.160	.033	.013	5.7	--	68	32
15...	.23	.23	<.009	<.006	.006	2.7	--	1	.15
AUG									
25...	.30	.25	<.010	<.010	.004	3.3	3.1	2	.10
SEP									
16...	.35	.29	<.007	<.008	.010	2.9	--	3	.14

01594000 LITTLE PATUXENT RIVER AT SAVAGE, MD--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	TUR-BID-ITY (NTU) (00076)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)
OCT 1998										
08...	1400	220	--	--	--	--	--	--	--	--
09...	0430	149	--	--	--	--	--	--	--	--
29...	1215	23	275	8.2	16.5	13.0	762	.60	11.2	106
NOV										
17...	1100	28	273	8.1	17.0	8.0	759	.50	12.7	108
DEC										
16...	1100	34	--	7.6	9.0	3.5	--	1.8	13.9	--
JAN 1999										
13...	1100	112	--	7.2	9.0	.0	--	18	14.3	--
15...	0515	217	--	--	--	--	--	--	--	--
15...	1315	766	--	--	--	--	--	--	--	--
15...	1945	606	--	--	--	--	--	--	--	--
24...	0715	130	--	--	--	--	--	--	--	--
24...	1615	860	--	--	--	--	--	220	--	--
FEB										
10...	1300	60	--	7.8	11.0	5.5	--	3.4	--	--
18...	1045	298	--	--	--	--	--	31	--	--
18...	1730	446	--	--	--	--	--	73	--	--
MAR										
21...	2000	225	--	--	--	--	--	66	--	--
22...	0300	781	--	--	--	--	--	200	--	--
22...	0845	595	--	--	--	--	--	190	--	--
23...	1145	134	403	6.2	11.5	7.5	--	11	12.1	--
APR										
07...	0900	82	371	8.1	16.0	12.0	--	2.0	11.4	--
MAY										
05...	1100	56	319	8.2	21.0	17.5	--	1.3	10.4	--
24...	1730	175	--	--	--	--	--	--	--	--
JUN										
03...	1030	25	315	8.0	27.5	22.5	--	1.2	9.2	--
JUL										
07...	1330	12	307	8.5	33.0	30.0	--	1.0	8.9	--
AUG										
18...	1015	3.6	330	7.6	27.0	25.5	--	.80	8.4	--
21...	0330	173	--	--	--	--	--	--	--	--
24...	1315	182	--	--	--	--	--	110	--	--
25...	2015	204	--	--	--	--	--	--	--	--
26...	0345	509	--	--	--	--	--	--	--	--
26...	2000	971	--	--	--	--	--	--	--	--
27...	0130	762	--	--	--	--	--	--	--	--
SEP										
05...	1045	235	--	--	--	--	--	--	--	--
05...	1845	762	--	--	--	--	--	300	--	--
06...	0130	421	--	--	--	--	--	190	--	--
07...	0130	275	--	--	--	--	--	88	--	--
09...	1015	64	240	7.9	27.0	22.5	--	11	6.9	--
09...	1945	192	--	--	--	--	--	150	--	--
09...	2315	1300	--	--	--	--	--	480	--	--
10...	0315	920	--	--	--	--	--	280	--	--
16...	0515	519	--	--	--	--	--	100	--	--
16...	0745	1510	--	--	--	--	--	280	--	--
16...	1730	6490	--	--	--	--	--	410	--	--
30...	0930	770	--	--	--	--	--	200	--	--

01594000 LITTLE PATUXENT RIVER AT SAVAGE, MD--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	OXYGEN DEMAND, CHEM-ICAL (LOW LEVEL) (MG/L) (00335)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L) (00310)	ANC WATER UNFLTRD IT FIELD MG/L AS CACO3 (00419)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (MG/L) (00530)	NITRO-GEN, TOTAL (MG/L AS N) (00600)	NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS N) (00618)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)
OCT 1998										
08...	--	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--	--
29...	<10	<1.1	64	11	1	2.0	1.69	.006	1.69	<.005
NOV										
17...	<10	<1.2	65	11	3	1.7	1.44	.005	1.45	<.001
DEC										
16...	<10	<.9	58	9.5	<1	1.8	1.66	.003	1.66	<.006
JAN 1999										
13...	14	<1.8	--	12	20	3.0	2.24	.012	2.25	.113
15...	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--
24...	37	--	--	7.9	362	2.3	1.17	.011	1.19	.059
FEB										
10...	<10	<1.3	53	13	1	2.6	2.44	.008	2.44	<.005
18...	17	--	--	6.9	57	1.9	1.51	.015	1.53	.016
18...	18	--	--	7.2	98	2.2	1.38	.011	1.39	.009
MAR										
21...	32	--	--	5.3	86	2.6	1.28	.053	1.34	.266
22...	40	--	--	6.2	354	2.8	1.06	.012	1.07	.057
22...	35	--	--	6.8	243	2.5	1.08	.011	1.09	.061
23...	10	3.2	--	10	8	1.8	1.45	.007	1.46	<.007
APR										
07...	<10	<1.9	54	8.6	<1	1.6	1.29	.005	1.30	.008
MAY										
05...	<10	<.2	59	8.4	<1	1.9	1.60	.019	1.61	.009
24...	--	--	--	--	--	--	--	--	--	--
JUN										
03...	<10	<1.1	62	14	<1	1.6	1.24	.014	1.26	.013
JUL										
07...	<10	<1.3	68	12	<1	.86	.558	.006	.564	.011
AUG										
18...	12	<.7	74	26	1	.44	.161	.004	.165	.017
21...	--	--	--	--	--	--	--	--	--	--
24...	32	--	--	9.7	122	2.0	.775	.013	.788	.069
25...	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--
27...	--	--	--	--	--	--	--	--	--	--
SEP										
05...	--	--	--	--	--	--	--	--	--	--
05...	51	--	--	6.4	414	2.4	.471	.006	.477	.041
06...	38	--	--	7.4	220	2.2	.693	.009	.702	.047
07...	32	--	--	8.6	125	1.7	.624	.009	.633	.033
09...	17	2.5	48	12	12	1.3	.705	.006	.711	.032
09...	46	--	--	5.0	302	2.9	1.15	.017	1.17	.090
09...	69	--	--	4.5	605	3.3	.714	.017	.731	.076
10...	43	--	--	6.0	328	2.4	.744	.017	.761	.091
16...	33	--	--	7.2	160	2.1	.854	.011	.865	.047
16...	50	--	--	5.4	410	2.4	.569	.008	.577	.038
16...	63	--	--	4.9	626	3.0	.640	.010	.650	.075
30...	31	--	--	7.9	232	2.0	.790	.010	.800	.033

01594000 LITTLE PATUXENT RIVER AT SAVAGE, MD--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N) (00623)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C) (00681)	SEDI- MENT, SUS- PENDED (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY) (80155)
OCT 1998									
08...	--	--	--	--	--	--	--	123	73
09...	--	--	--	--	--	--	--	67	27
29...	.28	.21	.014	.010	<.002	3.1	3.8	1	.06
NOV									
17...	.29	.22	.008	<.007	<.002	3.0	3.9	1	.08
DEC									
16...	.17	.17	<.006	<.006	<.003	11	11	1	.09
JAN 1999									
13...	.79	.57	.065	.027	.019	13	12	26	7.9
15...	--	--	--	--	--	--	--	109	64
15...	--	--	--	--	--	--	--	566	1170
15...	--	--	--	--	--	--	--	280	458
24...	--	--	--	--	--	--	--	33	12
24...	1.2	.60	.265	.036	.027	11	11	423	982
FEB									
10...	.18	.17	<.004	<.001	<.004	12	12	2	.36
18...	.37	.27	<.008	<.001	<.002	11	11	57	46
18...	.77	.59	.125	.065	<.003	10	9.8	104	125
MAR									
21...	1.2	.69	.143	.017	.016	7.7	7.0	91	55
22...	1.8	.39	.356	<.005	.006	7.7	6.4	397	838
22...	1.4	.57	.281	.020	.018	8.3	8.1	291	467
23...	.37	.24	.035	<.002	<.003	7.0	7.0	10	3.5
APR									
07...	.31	.24	<.009	<.001	<.002	11	11	1	.31
MAY									
05...	.27	.22	.017	.015	<.001	16	16	2	.26
24...	--	--	--	--	--	--	--	54	26
JUN									
03...	.33	.30	.025	.024	.010	--	--	4	.24
JUL									
07...	.30	.22	.033	.033	.011	3.6	3.1	1	.04
AUG									
18...	.27	.24	.023	.015	.016	3.8	3.7	1	.01
21...	--	--	--	--	--	--	--	169	79
24...	1.2	.48	.252	.026	.017	6.8	5.8	145	71
25...	--	--	--	--	--	--	--	147	81
26...	--	--	--	--	--	--	--	524	721
26...	--	--	--	--	--	--	--	698	1830
27...	--	--	--	--	--	--	--	636	1310
SEP									
05...	--	--	--	--	--	--	--	243	154
05...	1.9	.34	.534	.034	.024	6.2	5.5	457	940
06...	1.5	.51	.371	.051	.038	7.4	6.3	239	272
07...	1.0	.45	.203	.034	.024	7.2	6.2	124	92
09...	.55	.37	.057	.021	.010	5.2	5.2	9	1.5
09...	1.7	.87	.368	.103	.041	8.7	8.6	314	163
09...	2.6	.58	.697	.033	.018	8.2	7.9	788	2760
10...	1.6	.46	.499	.059	.057	7.0	6.5	342	850
16...	1.2	.41	.260	.090	.056	8.3	8.1	174	244
16...	1.8	.30	.571	.134	.049	5.5	6.1	--	--
16...	2.3	.55	.873	.200	.039	9.1	8.3	--	--
30...	1.2	.40	.393	.047	.030	5.5	5.1	--	--

01594440 PATUXENT RIVER NEAR BOWIE, MD

LOCATION.--Lat 38°57'21", long 76°41'36", Anne Arundel County, Hydrologic Unit 02060006, on left bank 45 ft upstream from bridge on U.S. Highway 50 (John Hanson Highway), 3.0 mi east of Bowie City Hall, 3.1 mi downstream from mouth of Little Patuxent River, 4.2 mi northwest of Davidsonville, and 60 mi upstream from mouth.

DRAINAGE AREA.--348 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1955 to June 1977 (gage heights and discharge measurements only), June 1977 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 13.10 ft above sea level. Prior to June 27, 1977, nonrecording gage at same site and datum.

REMARKS.--Water-discharge records good except those for estimated daily discharges (missing record), which are fair. Flow regulated by T. Howard Duckett Reservoir, usable capacity 5,600,000,000 gal, 21 mi upstream from station.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 8,200 ft^3/s, Sep 17, gage height, 16.07 ft; minimum discharge, UNKNOWN.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	97	109	120	113	185	503	226	182	121	114	107	107
2	94	107	119	115	293	288	384	174	118	144	97	102
3	93	109	118	484	423	226	274	176	115	162	82	100
4	96	112	117	1050	258	314	248	179	112	122	e83	115
5	104	109	115	288	225	327	400	178	109	108	e80	464
6	106	108	119	182	202	248	325	173	110	104	e78	1120
7	104	107	122	178	196	345	253	172	111	101	e70	649
8	117	110	126	166	195	269	231	181	111	96	e70	451
9	312	113	183	173	187	221	228	184	108	90	e70	253
10	156	111	172	363	178	247	367	173	105	86	e73	1240
11	126	136	132	239	173	278	316	165	105	83	73	682
12	116	180	121	193	178	258	493	162	105	85	73	205
13	113	130	149	222	278	250	320	161	108	94	74	158
14	113	121	186	287	217	263	257	156	133	90	91	139
15	111	115	142	492	185	749	235	153	178	87	124	163
16	108	114	128	904	177	965	265	152	136	85	83	2740
17	106	113	123	385	175	603	243	153	115	84	78	7110
18	107	118	120	478	417	467	224	153	151	83	77	1840
19	108	114	118	957	642	333	214	153	125	82	74	387
20	105	116	120	380	298	266	210	149	141	83	91	271
21	103	115	120	265	233	316	209	144	278	87	255	322
22	103	117	120	239	206	1360	229	140	158	100	138	830
23	102	117	116	217	186	843	228	198	129	129	99	393
24	106	116	115	553	181	401	229	247	117	99	161	258
25	106	113	115	1210	183	328	206	341	113	91	277	211
26	107	161	114	436	178	280	199	185	110	86	1030	190
27	105	222	114	281	176	254	193	151	110	82	1560	180
28	108	142	123	241	226	255	185	140	113	83	614	179
29	106	126	126	222	---	252	182	133	116	83	175	182
30	107	122	133	202	---	228	184	127	135	89	130	645
31	107	---	125	191	---	216	---	123	---	103	115	---
TOTAL	3552	3703	3971	11706	6651	12153	7757	5258	3796	3015	6202	21686
MEAN	115	123	128	378	238	392	259	170	127	97.3	200	723
MAX	312	222	186	1210	642	1360	493	341	278	162	1560	7110
MIN	93	107	114	113	173	216	182	123	105	82	70	100
CFSM	.33	.35	.37	1.09	.68	1.13	.74	.49	.36	.28	.57	2.08
IN.	.38	.40	.42	1.25	.71	1.30	.83	.56	.41	.32	.66	2.32

e Estimated

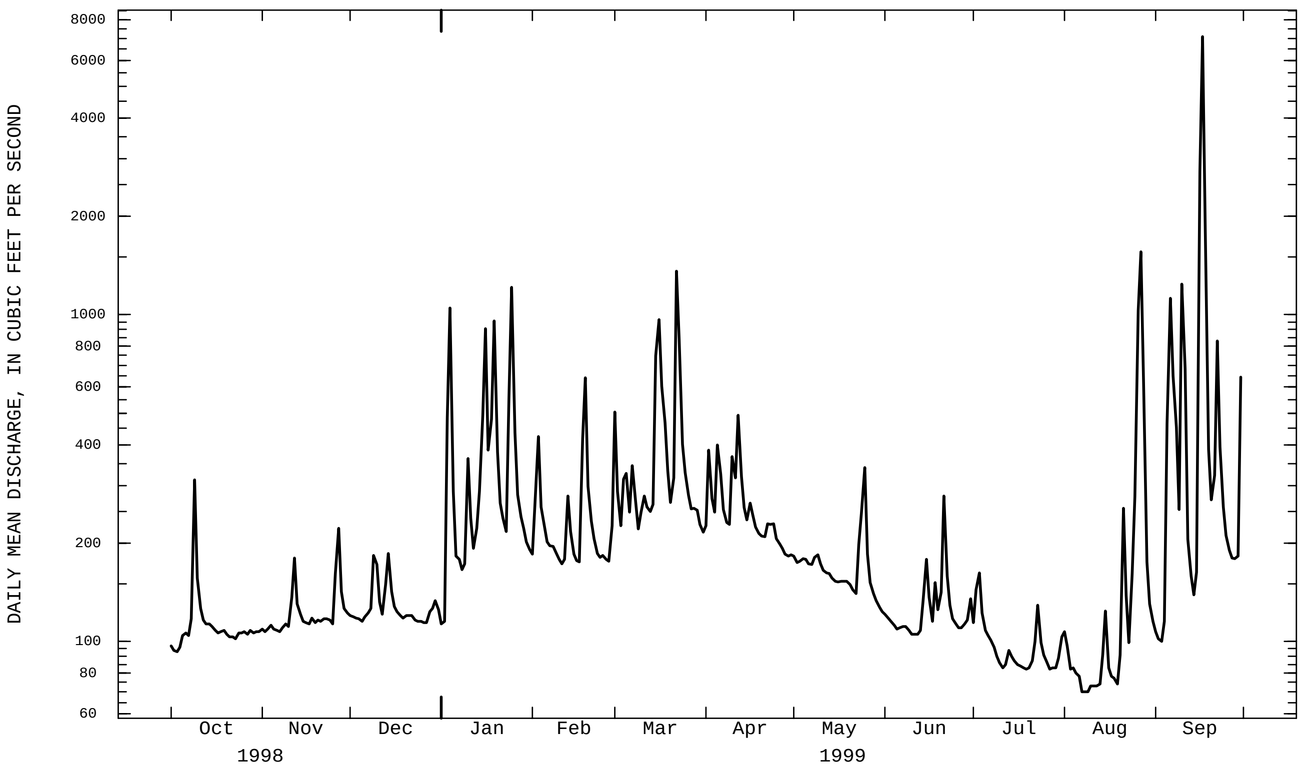
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1977 - 1999, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	248	307	403	508	479	618	510	474	324	210	205	254
MAX	1093	747	1357	1316	1232	1358	1247	1291	846	579	532	1358
(WY)	1980	1997	1997	1978	1979	1993	1983	1989	1989	1996	1979	1979
MIN	80.4	108	128	119	228	173	167	154	115	97.3	86.1	65.2
(WY)	1987	1982	1999	1981	1995	1981	1985	1986	1991	1999	1987	1986

01594440 PATUXENT RIVER NEAR BOWIE, MD--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1977 - 1999	
ANNUAL TOTAL	153103		89450			
ANNUAL MEAN	419		245		379	
HIGHEST ANNUAL MEAN					637	1979
LOWEST ANNUAL MEAN					175	1981
HIGHEST DAILY MEAN	4110	Jan 29	7110	Sep 17	8860	Jan 27 1978
LOWEST DAILY MEAN	93	Oct 3	(e)70	(a)	56	(b)
ANNUAL SEVEN-DAY MINIMUM	98	Sep 29	72	Aug 7	57	Sep 15 1986
INSTANTANEOUS PEAK FLOW			8200	Sep 17	(c)31100	Jun 22 1972
INSTANTANEOUS PEAK STAGE			16.07	Sep 17	(d)27.90	Jun 22 1972
INSTANTANEOUS LOW FLOW			UNKNOWN		32	Aug 9 1966
ANNUAL RUNOFF (CFSM)	1.21		.70		1.09	
ANNUAL RUNOFF (INCHES)	16.37		9.56		14.80	
10 PERCENT EXCEEDS	881		396		787	
50 PERCENT EXCEEDS	202		153		220	
90 PERCENT EXCEEDS	106		94		101	

e Estimated.
b Aug. 7-9.
b Sept. 17-19, 1986.
c On basis of contracted-opening measurement of peak flow.
d From floodmarks.



DAILY MEAN DISCHARGE - 1999 WATER YEAR

01594440 PATUXENT RIVER NEAR BOWIE, MD--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1978-80, 1985 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: December 1977 to September 1980, October 1984 to September 1991.
WATER TEMPERATURE: December 1977 to September 1980, October 1984 to September 1991.
SUSPENDED-SEDIMENT DISCHARGE: October 1985 to September 1991.

REMARKS.--Water-quality samples are collected from bridge on Governor Bridge Road located 0.3 mi downstream from U.S. Highway 50 (John Hanson Highway). On May 6 and Nov. 16, 1994 samples were collected and analyzed using ultraclean methodologies. Data on trace metals for these dates are available from the University of Delaware. Data on organics for these dates are available from George Mason University.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE (water years 1985-91): Maximum daily, 954 microsiemens, Dec. 15, 1989; minimum daily, 100 microsiemens, May 7, 1989.
WATER TEMPERATURE (water years 1985-91): Maximum daily, 29.0°C, July 25, 1987; minimum daily, 0.0°C, on many days during winter periods.
SEDIMENT CONCENTRATION: Maximun daily mean, 700 mg/L, June 3, 1985; minimum daily mean, 1 mg/L, Jan. 22,1990.
SEDIMENT LOAD: Maximum daily, 4,050 tons, May 7, 1989; minimum daily, 0.55 ton, Jan. 22, 1990.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)
OCT 1998									
07...	1200	102	313	7.2	22.0	18.0	769	7.6	80
NOV									
03...	1345	109	313	7.5	7.5	11.5	760	8.5	78
DEC									
08...	1100	118	301	7.4	13.5	15.0	763	7.3	72
JAN 1999									
06...	1000	167	428	7.0	-1.0	.5	770	12.5	86
15...	1745	708	746	6.6	2.0	4.0	762	11.6	89
19...	1130	1100	485	7.3	8.5	5.5	762	10.9	87
FEB									
10...	1400	180	344	7.6	9.0	8.0	766	11.0	93
MAR									
05...	1345	311	306	7.5	9.5	7.5	770	11.2	92
22...	1115	1380	380	6.4	10.0	7.0	756	10.4	86
APR									
07...	0900	252	372	7.4	18.5	13.5	765	8.7	83
MAY									
06...	0845	170	324	7.4	18.5	18.0	760	7.3	77
JUN									
03...	0800	113	356	7.4	26.0	23.0	759	5.8	68
JUL									
06...	0900	99	361	7.4	32.5	26.0	760	5.2	64
AUG									
04...	0815	81	371	7.6	24.5	23.0	761	5.6	65
26...	0900	908	160	6.7	26.0	23.5	758	5.3	63
27...	1145	1520	163	6.6	27.5	23.5	759	5.1	61
SEP									
09...	0845	260	259	7.2	24.5	23.5	756	6.4	76
10...	1045	1140	153	7.4	24.5	22.5	756	--	--
16...	1530	4100	--	--	--	--	--	--	--
17...	1230	8200	95	6.2	21.5	18.0	762	6.7	71

01594440 PATUXENT RIVER NEAR BOWIE, MD--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	ALKA-LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	BICAR-BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	NITRO-GEN, TOTAL (MG/L AS N) (00600)	NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS N) (00618)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)
OCT 1998									
07...	55	67	7.4	2.6	1.74	.049	1.79	.303	.76
NOV									
03...	48	58	7.9	2.1	1.54	.024	1.57	.081	.51
DEC									
08...	52	64	5.9	2.0	1.58	.017	1.60	.059	.38
JAN 1999									
06...	39	48	8.4	2.7	1.45	.089	1.54	.671	1.2
15...	41	50	7.9	3.0	1.64	.052	1.69	.274	1.3
19...	--	--	6.7	2.3	1.18	.030	1.21	.177	1.1
FEB									
10...	--	--	9.6	2.5	1.96	.019	1.98	.144	.47
MAR									
05...	42	51	7.2	1.6	1.22	.010	1.23	.039	.39
22...	28	34	5.5	1.9	.800	.017	.817	.091	1.1
APR									
07...	46	56	7.0	1.4	.962	.010	.972	.066	.47
MAY									
06...	54	65	6.3	2.0	1.33	.026	1.36	.169	.60
JUN									
03...	60	73	8.9	2.0	1.31	.033	1.34	.140	.65
JUL									
06...	57	70	7.8	1.6	.989	.016	1.00	.059	.57
AUG									
04...	56	69	8.3	1.9	1.40	.011	1.41	.055	.51
26...	27	33	4.6	1.2	--	<.010	.649	.083	.55
27...	24	29	5.9	1.3	.822	.011	.833	.059	.49
SEP									
09...	44	54	9.4	1.5	--	<.010	.871	.055	.59
10...	27	33	5.6	2.2	.809	.019	.828	.074	1.4
16...	--	--	5.0	1.5	.507	.011	.518	.039	1.0
17...	--	--	5.1	1.3	--	<.010	.447	.039	.90

DATE	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)	SEDI-MENT, SUS-PENDED (MG/L) (80154)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
OCT 1998								
07...	.93	.077	.164	.047	4.0	8	2.2	--
NOV								
03...	.42	.108	E.046	.053	4.4	3	.88	--
DEC								
08...	.37	.096	E.049	.048	4.2	8	2.5	--
JAN 1999								
06...	1.2	.174	.076	.116	6.1	13	5.9	--
15...	.86	.300	.037	.025	9.8	137	262	--
19...	.64	.222	.038	.027	8.7	103	306	94
FEB								
10...	.42	.068	.030	.020	3.6	4	1.9	--
MAR								
05...	<.10	.100	.046	.037	4.6	7	5.9	--
22...	.42	.359	.023	.013	9.1	250	930	--
APR								
07...	.39	.074	.032	.018	5.0	10	6.6	--
MAY								
06...	.48	.080	.028	.022	4.6	12	5.5	--
JUN								
03...	.52	.152	.061	.052	4.2	--	--	--
JUL								
06...	.40	.152	.076	.074	4.6	14	3.9	--
AUG								
04...	<.10	.160	.070	.053	5.5	15	3.3	--
26...	.34	.050	<.050	.025	25	454	1110	--
27...	.44	.050	<.050	.022	6.0	228	937	--
SEP								
09...	.43	.129	.045	.040	6.7	36	25	--
10...	.47	.466	.041	.023	16	323	994	--
16...	.43	.316	.057	.044	--	135	1490	99
17...	.40	.206	.040	.024	9.5	120	2660	91

E Estimated

01594526 WESTERN BRANCH AT UPPER MARLBORO, MD

LOCATION.--Lat 38°48'50", long 76°44'50", Prince Georges County, Hydrologic Unit 02060006, on left bank 1000 ft upstream from bridge on Water street, 0.2 mi south of Upper Marlboro, and 4.7 mi upstream from mouth.

DRAINAGE AREA.--89.7 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1985 to April 1989, April 1992 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 5 ft above sea level, from topographic map.

REMARKS.--Water-discharge records good except those for estimated daily discharges (backwater from debris,ice effect, plugged intake), which are fair.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Aug 27	0615	1,060	9.20	Sep 16	2145	*10,400	*15.39

Minimum discharge, 1.1 ft^3/s, Aug 7, 10, 11, 14.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.4	e4.7	14	e14	34	149	66	26	7.9	14	2.6	16
2	5.8	e4.7	14	17	94	74	79	23	7.4	12	1.7	13
3	e4.0	e5.0	13	260	86	53	59	23	6.8	10	2.1	11
4	e3.6	11	13	215	58	120	57	26	6.5	8.7	1.5	72
5	e3.4	e6.0	13	e45	61	74	163	24	6.2	5.7	1.5	183
6	e5.5	e5.2	13	e35	46	63	89	24	5.7	4.7	1.4	154
7	e4.6	e5.0	13	e30	41	72	65	24	5.8	3.9	1.2	176
8	e10	e4.9	28	26	38	48	55	24	5.8	2.9	1.3	59
9	25	e4.8	127	46	34	44	53	31	5.6	2.4	1.5	50
10	13	e4.8	49	68	32	71	95	22	e5.4	2.4	1.3	44
11	9.7	24	29	46	30	85	104	19	e10	7.9	1.5	28
12	7.7	26	21	31	33	84	107	18	e9.0	4.7	1.9	18
13	e7.0	13	68	35	110	88	71	17	e17	12	1.5	14
14	e6.5	10	60	33	52	121	54	16	e35	6.3	5.8	12
15	e6.2	9.1	30	158	40	628	49	16	e45	5.5	97	96
16	e6.0	8.2	23	131	35	422	63	13	e24	5.3	15	4090
17	e5.8	e7.7	19	63	35	161	48	13	e19	5.2	7.3	e2800
18	e5.8	e7.3	17	180	203	112	42	14	32	4.6	4.6	e420
19	e5.5	e7.1	15	228	154	84	40	13	16	4.5	3.2	136
20	e5.5	e7.0	14	88	83	69	39	13	30	4.8	4.5	86
21	e5.3	e7.0	14	73	56	116	43	11	73	3.3	21	122
22	e5.3	e6.7	14	122	44	730	53	10	30	11	8.2	277
23	e5.1	e6.6	14	65	38	253	52	31	18	9.0	4.7	125
24	e5.0	e6.5	15	349	37	132	95	92	12	4.9	27	69
25	e5.0	e6.5	18	453	35	102	49	47	9.7	4.0	117	50
26	e4.9	e34	16	128	35	83	39	21	9.0	3.4	466	42
27	e4.9	36	e16	82	33	73	35	15	7.6	2.4	748	37
28	e4.8	19	e15	63	75	71	31	11	7.0	2.0	112	36
29	e4.8	16	e15	50	---	65	29	10	15	2.0	49	36
30	4.8	15	e14	41	---	56	27	8.8	27	2.0	28	380
31	e4.8	---	e14	36	---	52	---	8.5	---	2.4	19	---
TOTAL	202.7	328.8	758	3211	1652	4355	1851	664.3	508.4	173.9	1758.3	9652
MEAN	6.54	11.0	24.5	104	59.0	140	61.7	21.4	16.9	5.61	56.7	322
MAX	25	36	127	453	203	730	163	92	73	14	748	4090
MIN	3.4	4.7	13	14	30	44	27	8.5	5.4	2.0	1.2	11
CFSM	.07	.12	.27	1.15	.66	1.57	.69	.24	.19	.06	.63	3.59
IN.	.08	.14	.31	1.33	.69	1.81	.77	.28	.21	.07	.73	4.00

e Estimated

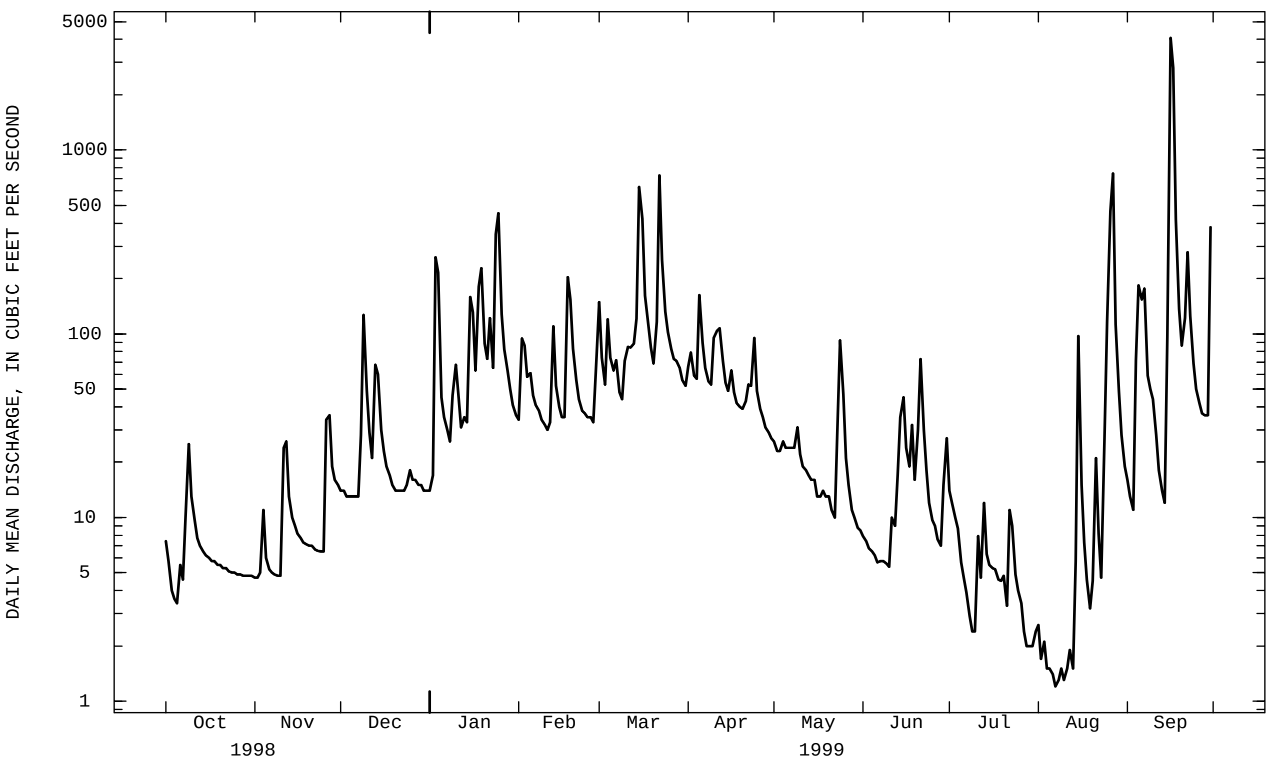
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1986 - 1989, 1992 - 1999, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	48.6	90.1	96.0	132	141	193	111	88.1	49.3	42.7	41.7	61.6
MAX	145	178	261	260	333	445	191	164	118	108	95.5	322
(WY)	1996	1998	1997	1996	1998	1994	1993	1996	1996	1996	1994	1999
MIN	6.54	11.0	24.5	54.5	59.0	76.8	49.1	21.4	9.42	5.61	9.74	9.35
(WY)	1999	1999	1999	1986	1999	1986	1995	1999	1986	1999	1995	1986

01594526 WESTERN BRANCH AT UPPER MARLBORO, MD--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1986 - 1989, 1992 - 1999	
ANNUAL TOTAL	40408.0		25115.4			
ANNUAL MEAN	111		68.8		93.5	
HIGHEST ANNUAL MEAN					133	1996
LOWEST ANNUAL MEAN					54.8	1986
HIGHEST DAILY MEAN	2090	Feb 5	4090	Sep 16	4090	Sep 16 1999
LOWEST DAILY MEAN	3.1	(a)	1.2	Aug 7	1.2	Aug 7 1999
ANNUAL SEVEN-DAY MINIMUM	3.8	Sep 11	1.4	Aug 4	1.4	Aug 4 1999
INSTANTANEOUS PEAK FLOW			10400	Sep 16	10400	Sep 16 1999
INSTANTANEOUS PEAK STAGE			15.39	Sep 16	15.39	Sep 16 1999
INSTANTANEOUS LOW FLOW			1.1	(b)	1.1	(b)
ANNUAL RUNOFF (CFSM)	1.23		.77		1.04	
ANNUAL RUNOFF (INCHES)	16.76		10.42		14.17	
10 PERCENT EXCEEDS	251		118		187	
50 PERCENT EXCEEDS	36		23		49	
90 PERCENT EXCEEDS	5.2		4.7		9.1	

a Sept. 15, 16.
b Aug. 7, 10, 11, 14, 1999.



DAILY MEAN DISCHARGE - 1999 WATER YEAR

01594526 WESTERN BRANCH AT UPPER MARLBORO, MD--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1986 to current year.

REMARKS.--Nutrient analyses were performed at the Maryland Department of Health and Mental Hygiene laboratory (DHMH), Baltimore, MD.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	TUR- BID- ITY (NTU) (00076)	OXYGEN DEMAND, CHEM- ICAL (LOW LEVEL) (MG/L) (00335)	OXYGEN DEMAND, BIO- CHEM- ICAL, 5 DAY (MG/L) (00310)
OCT									
18...	0800	537	--	--	--	--	--	--	--
18...	1400	575	--	--	--	--	--	--	--
18...	1945	530	--	--	--	--	--	--	--
19...	0500	214	--	--	--	--	--	--	--
29...	1230	42	245	6.7	13.0	9.0	21	11	<1.2
NOV									
14...	1615	239	--	--	--	--	--	--	--
15...	0545	218	--	--	--	--	--	--	--
19...	1300	56	271	6.2	7.0	4.0	8.9	<10	2.5
DEC									
17...	1030	35	280	6.3	7.0	2.5	9.1	<10	1.3
JAN									
13...	1415	45	274	--	11.5	6.5	7.9	<10	<1.1
23...	1515	740	--	--	--	.0	390	85	--
28...	1815	1440	--	--	--	--	--	--	--
28...	2045	1770	--	--	--	--	140	27	--
28...	2330	2050	--	--	--	--	130	20	--
29...	0215	2160	--	--	--	--	--	--	--
FEB									
04...	2300	1090	--	--	--	--	170	30	--
05...	0430	1690	--	--	--	--	120	21	--
05...	1000	2360	--	--	--	--	94	19	--
18...	0345	620	--	--	--	--	88	22	--
18...	1430	655	--	--	--	--	89	22	--
19...	0300	408	--	--	--	--	56	17	--
23...	0730	115	218	6.6	4.5	7.5	10	<10	<1.6
24...	0415	755	--	--	--	--	110	29	--
24...	1230	910	--	--	--	--	78	23	--
24...	2030	805	--	--	--	--	63	19	--
MAR									
17...	1300	106	219	6.3	8.0	5.5	7.8	<10	1.5
19...	1115	706	--	--	--	--	100	31	--
APR									
14...	1030	107	206	6.5	17.0	13.0	8.2	12	<1.4
MAY									
20...	1230	68	226	6.9	30.0	20.0	7.7	12	--
JUN									
24...	0900	50	241	7.0	26.0	22.5	10	12	2.4
JUL									
08...	1415	182	--	--	--	--	130	40	--
15...	0645	16	280	7.2	22.0	21.0	8.5	14	<1.2
AUG									
25...	0845	7.2	313	7.6	26.0	23.0	9.5	<10	<1.3
SEP									
15...	1045	3.0	388	7.5	25.5	22.5	8.3	<10	<1.2

01594526 WESTERN BRANCH AT UPPER MARLBORO, MD--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	ANC WATER UNFLTRD IT FIELD MG/L AS CACO3 (00419)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (MG/L) (00530)	NITRO-GEN, TOTAL (MG/L AS N) (00600)	NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS N) (00618)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)
OCT									
18...	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--
29...	43	10	17	.55	.229	.007	.236	.039	.31
NOV									
14...	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--
19...	44	15	7	.72	.412	.005	.417	.039	.30
DEC									
17...	46	15	7	.62	.374	.005	.379	.050	.24
JAN									
13...	--	13	8	.52	.335	.007	.342	.035	.18
23...	--	6.4	613	3.0	.482	.011	.493	.048	2.5
28...	--	--	--	--	--	--	--	--	--
28...	--	4.6	140	.99	.325	.009	.334	.040	.66
28...	--	4.5	144	.93	.321	.008	.329	.034	.60
29...	--	--	--	--	--	--	--	--	--
FEB									
04...	--	5.2	392	1.3	.384	.011	.395	.088	.86
05...	--	4.6	168	1.0	.344	.010	.354	.073	.68
05...	--	4.5	102	.95	.366	.010	.376	.081	.57
18...	--	7.4	132	1.3	.386	.009	.395	.048	.86
18...	--	6.8	110	1.2	.413	.009	.422	.047	.73
19...	--	8.6	54	1.0	.491	.008	.499	.041	.55
23...	46	13	5	.90	.673	.009	.682	.030	.22
24...	--	6.7	212	1.1	.375	.007	.382	.052	.73
24...	--	6.4	112	.95	.383	.007	.390	.040	.56
24...	--	6.8	68	.91	.422	.007	.429	.042	.48
MAR									
17...	28	14	14	.87	.736	.005	.741	.040	.13
19...	--	6.3	180	1.0	.396	.009	.405	.058	.63
APR									
14...	32	13	9	.80	.426	.004	.430	.027	.37
MAY									
20...	40	17	10	.85	.530	.018	.548	.035	.30
JUN									
24...	49	15	3	.89	.513	.006	.519	.027	.37
JUL									
08...	--	13	324	1.7	.568	.014	.582	.076	1.1
15...	67	14	6	.67	.244	.006	.250	.070	.42
AUG									
25...	86	14	6	.60	.133	.005	.138	.029	.46
SEP									
15...	113	16	2	.58	.073	.004	.077	.045	.50

01594526 WESTERN BRANCH AT UPPER MARLBORO, MD--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)	CARBON, ORGANIC DIS-SOLVED (MG/L AS C) (00681)	SEDI-MENT, SUS-PENDED (MG/L) (80154)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY) (80155)
OCT								
18...	--	--	--	--	--	--	683	990
18...	--	--	--	--	--	--	507	787
18...	--	--	--	--	--	--	125	178
19...	--	--	--	--	--	--	37	21
29...	.14	.068	.029	.019	5.2	--	14	1.6
NOV								
14...	--	--	--	--	--	--	84	54
15...	--	--	--	--	--	--	100	59
19...	.19	.048	.018	.013	6.1	5.9	7	1.1
DEC								
17...	.18	.041	.016	.014	3.6	3.6	5	.48
JAN								
13...	.12	.034	.011	.010	4.1	4.3	5	.61
23...	.31	1.50	.028	.011	6.7	5.1	1050	2100
28...	--	--	--	--	--	--	497	1930
28...	.17	.429	.036	.022	5.4	--	380	1810
28...	.15	.376	.038	.020	5.8	5.4	358	1980
29...	--	--	--	--	--	--	194	1130
FEB								
04...	.24	.700	.042	.017	6.2	5.3	1040	3070
05...	.25	.433	.044	.020	6.1	5.4	349	1590
05...	.20	.305	.046	.019	5.9	5.4	320	2040
18...	.26	.422	.025	.017	5.6	5.2	471	789
18...	.31	.321	.019	.013	5.6	5.5	456	806
19...	.27	.177	.020	.012	5.5	5.4	278	307
23...	.18	.054	.029	.011	3.7	4.1	13	4.0
24...	.33	.436	.039	.018	6.8	6.6	714	1460
24...	.24	.215	.035	.018	6.7	5.5	551	1350
24...	.25	.163	.030	.018	6.3	6.0	268	583
MAR								
17...	<.10	.060	.038	.015	2.8	3.0	7	1.9
19...	.25	.307	.027	.017	5.5	5.1	342	653
APR								
14...	.27	.047	.013	.014	4.2	4.1	12	3.6
MAY								
20...	.23	.055	.015	.043	4.5	4.8	19	3.5
JUN								
24...	.28	.080	.029	.008	5.7	5.7	6	.86
JUL								
08...	.28	.427	.032	.031	6.9	6.1	320	157
15...	.30	.061	.016	.015	5.4	5.6	6	.26
AUG								
25...	.32	.063	.010	.009	5.3	5.1	9	.17
SEP								
15...	.50	.037	<.006	.006	5.2	4.9	4	.03

01594526 WESTERN BRANCH AT UPPER MARLBORO, MD--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	TUR-BID-ITY (NTU) (00076)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)	OXYGEN DEMAND, CHEM-ICAL (LOW LEVEL) (MG/L) (00335)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L) (00310)
OCT 1998												
29...	0915	23	347	7.2	14.0	12.0	762	9.4	7.4	69	<10	<1.1
NOV												
17...	0930	7.9	319	7.2	11.0	8.0	759	6.8	9.2	78	11	<.4
DEC												
09...	1000	194	--	--	--	--	--	70	--	--	34	--
16...	0900	23	--	6.9	4.0	4.0	--	8.3	11.3	--	13	<1.1
JAN 1999												
03...	1930	461	--	--	--	--	--	210	--	--	46	--
04...	0545	294	--	--	--	--	--	120	--	--	27	--
13...	0915	36	1080	7.0	11.0	2.0	--	12	12.7	--	13	<1.2
18...	2315	384	--	--	--	--	--	--	--	--	--	--
24...	1515	565	--	--	--	--	--	380	--	--	67	--
24...	2200	634	--	--	--	--	--	170	--	--	34	--
25...	0415	662	--	--	--	--	--	130	--	--	30	--
FEB												
09...	1030	34	--	--	--	--	--	--	--	--	--	--
11...	1100	29	399	7.1	14.0	5.5	771	8.6	11.9	93	<10	<.4
18...	0945	156	--	--	--	--	--	33	--	--	17	--
23...	1130	36	344	7.1	.0	1.0	774	--	12.6	87	--	--
MAR												
11...	1200	77	2330	6.7	2.5	3.5	759	--	13.8	105	--	--
14...	2030	187	--	--	--	--	--	25	--	--	24	--
15...	1130	655	--	--	--	--	--	90	--	--	30	--
22...	0915	791	301	5.6	6.5	6.9	756	--	9.8	81	--	--
APR												
07...	0715	68	374	7.3	14.5	12.5	--	8.2	9.4	--	14	2.9
15...	0845	47	346	7.3	17.0	12.5	757	--	9.9	94	--	--
28...	1015	31	330	7.4	16.0	15.0	767	--	10.2	101	--	--
MAY												
05...	0915	24	357	7.5	17.0	16.0	--	7.2	10.3	--	<10	<.3
14...	0830	15	352	7.4	16.0	16.5	765	--	9.5	97	--	--
24...	1115	31	307	7.4	26.0	19.5	749	--	6.2	68	--	--
JUN												
03...	1315	6.8	379	7.7	29.0	25.0	--	7.3	11.6	--	13	<1.4
10...	0930	5.4	381	7.4	21.0	22.0	768	--	4.8	55	--	--
24...	0945	13	334	7.5	24.5	19.5	764	--	8.7	95	--	--
JUL												
07...	1200	4.0	374	7.2	32.5	29.5	--	8.7	7.8	--	16	2.7
14...	0830	6.7	410	7.4	21.5	20.0	767	--	6.8	75	--	--
28...	1200	2.0	385	7.6	37.0	27.0	757	--	7.8	99	--	--
AUG												
10...	1115	1.1	398	7.5	32.0	25.0	758	--	9.0	110	--	--
18...	0730	4.8	292	7.0	27.0	23.0	--	8.8	5.8	--	21	<1.0
24...	1030	5.4	307	7.4	27.0	22.5	763	--	6.3	73	--	--
27...	0900	1050	161	6.6	26.0	23.0	759	--	--	--	--	--
SEP												
07...	0900	232	--	--	--	--	--	130	--	--	39	--
09...	1215	72	301	6.9	29.0	23.0	--	18	7.3	--	22	2.9
13...	1030	15	316	7.5	24.5	20.0	760	--	7.9	87	--	--
16...	0845	1120	--	--	--	--	--	500	--	--	72	--
16...	1600	6310	--	--	--	--	--	190	--	--	35	--
16...	1830	9340	--	--	--	--	--	--	--	--	--	--
16...	2245	10200	--	--	--	--	--	--	--	--	--	--
17...	0315	8460	--	--	--	--	--	--	--	--	--	--
17...	1300	2350	--	--	--	--	--	--	--	--	--	--
17...	1915	1540	--	--	--	--	--	--	--	--	--	--
18...	0415	1220	--	--	--	--	--	--	--	--	--	--
27...	0815	38	292	6.3	21.0	19.0	769	--	7.8	83	--	--
30...	1045	531	--	--	--	--	--	160	--	--	33	--

01594526 WESTERN BRANCH AT UPPER MARLBORO, MD--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	ANC WATER UNFLTRD IT FIELD MG/L AS CACO3 (00419)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	ALKA- LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2) (00405)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)
OCT 1998											
29...	100	--	--	--	--	--	--	--	--	--	--
NOV											
17...	85	--	--	--	--	--	--	--	--	--	--
DEC											
09...	--	--	--	--	--	--	--	--	--	--	--
16...	53	--	--	--	--	--	--	--	--	--	--
JAN 1999											
03...	--	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--	--
13...	48	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--
FEB											
09...	--	110	34	5.1	32	3.4	--	--	--	40	64
11...	51	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--	--
23...	--	98	31	4.7	28	3.3	44	54	7.1	39	55
MAR											
11...	--	140	44	6.6	481	6.5	39	48	--	30	800
14...	--	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--	--
APR											
07...	40	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	44	54	--	--	--
28...	--	98	31	4.6	25	3.2	--	--	--	28	49
MAY											
05...	59	--	--	--	--	--	--	--	--	--	--
14...	--	110	38	4.8	22	3.9	68	82	--	27	48
24...	--	98	32	4.0	23	4.2	59	72	--	21	47
JUN											
03...	87	--	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	102	125	--	--	--
24...	--	--	--	--	--	--	61	74	--	--	--
JUL											
07...	93	--	--	--	--	--	--	--	--	--	--
14...	--	120	39	4.7	29	4.5	82	99	--	17	57
28...	--	--	--	--	--	--	112	137	--	--	--
AUG											
10...	--	--	--	--	--	--	123	150	--	--	--
18...	54	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	54	65	--	--	--
27...	--	--	--	--	--	--	17	21	--	--	--
SEP											
07...	--	--	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--	--	--
13...	--	99	32	4.6	20	4.5	64	78	--	25	34
16...	--	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--	--
27...	--	--	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--	--	--

01594526 WESTERN BRANCH AT UPPER MARLBORO, MD--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (MG/L) (00530)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	NITRO-GEN, TOTAL (MG/L AS N) (00600)	NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS N) (00618)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)
OCT 1998											
29...	--	14	6	--	.34	.016	.002	.018	.010	.32	.23
NOV											
17...	--	15	7	--	.34	.015	.002	.017	.011	.32	.22
DEC											
09...	--	8.3	98	--	1.2	.201	.007	.208	<.002	1.0	.38
16...	--	10	4	--	.59	.217	.003	.220	.033	.37	.28
JAN 1999											
03...	--	5.0	298	--	2.1	.659	.012	.671	.180	1.4	.52
04...	--	5.4	160	--	1.8	.889	.011	.900	.180	.89	.52
13...	--	11	6	--	1.3	.260	.009	.269	.282	1.0	.97
18...	--	--	--	--	--	--	--	--	--	--	--
24...	--	6.4	574	--	2.2	.298	.012	.310	.073	1.9	.45
24...	--	6.4	258	--	1.6	.420	.012	.432	.076	1.1	.54
25...	--	6.8	183	--	1.5	.492	.013	.505	.077	.98	.57
FEB											
09...	.14	13	--	245	.59	--	<.010	.329	.068	.26	.22
11...	--	13	4	--	.71	.326	.011	.337	.056	.37	.29
18...	--	9.0	52	--	.91	.345	.008	.353	.046	.56	.32
23...	.11	11	--	222	.56	--	<.010	.275	.036	.29	.21
MAR											
11...	<.10	8.4	--	1450	.84	.361	.014	.375	.088	.47	.41
14...	--	8.0	29	--	1.1	.329	.012	.341	.074	.78	.53
15...	--	5.9	182	--	1.4	.416	.011	.427	.131	.94	.58
22...	--	--	--	--	1.4	.363	.013	.376	.110	1.1	.47
APR											
07...	--	8.6	<1	--	.53	.137	.004	.141	.021	.39	.31
15...	--	--	--	--	.36	--	<.010	.085	.021	.28	.22
28...	.17	7.4	--	208	.41	--	<.010	.121	.028	.29	.17
MAY											
05...	--	10	1	--	.40	.084	.006	.090	.032	.31	.24
14...	.20	12	--	21	.93	.404	.026	.430	.140	.50	.37
24...	.16	11	--	212	1.4	.429	.029	.458	.165	.95	.48
JUN											
03...	--	15	<1	--	.78	.204	.033	.237	.081	.54	.49
10...	--	--	--	--	.72	.220	.016	.236	.128	.48	.36
24...	--	--	--	--	.66	.220	.014	.234	.060	.43	.34
JUL											
07...	--	14	2	--	.72	.173	.014	.187	.127	.53	.46
14...	.23	13	--	256	.64	--	<.010	.228	.053	.41	.29
28...	--	--	--	--	.47	--	<.010	.168	.065	.30	.32
AUG											
10...	--	--	--	--	.43	--	<.010	.081	.040	.35	.18
18...	--	12	5	--	.94	.362	.020	.382	.106	.56	.49
24...	--	--	--	--	.72	--	<.010	.273	.077	.45	.32
27...	--	--	--	--	1.2	.689	.014	.703	.091	.52	.51
SEP											
07...	--	7.4	160	--	1.4	.269	.009	.278	.048	1.2	.41
09...	--	11	16	--	.85	.158	.006	.164	.035	.69	.52
13...	.15	13	--	190	.61	--	<.010	.178	.037	.43	.37
16...	--	4.7	780	--	2.8	.317	.008	.325	.076	2.5	.45
16...	--	4.4	150	--	1.5	.328	.008	.336	.073	1.1	.50
16...	--	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--	--
27...	--	--	--	--	.76	--	<.010	.332	.058	.43	.28
30...	--	6.5	202	--	1.6	.320	.010	.330	.055	1.2	.43

01594526 WESTERN BRANCH AT UPPER MARLBORO, MD--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C) (00681)	ACETO- CHLOR, WATER FLTRD REC (UG/L) (49260)	ALA- CHLOR, WATER, DISS, REC, (UG/L) (46342)	ATRA- ZINE, WATER, DISS, REC (UG/L) (39632)	BEN- FLUR- ALIN WAT FLD 0.7 U GF, REC (UG/L) (82673)
OCT 1998											
29...	.066	.017	.005	--	--	4.4	4.7	--	--	--	--
NOV											
17...	.071	.013	.004	--	--	5.2	5.6	--	--	--	--
DEC											
09...	.395	.025	.014	--	--	6.4	6.4	--	--	--	--
16...	.056	.015	.014	--	--	8.6	8.5	--	--	--	--
JAN 1999											
03...	.559	.027	.007	--	--	6.8	7.3	--	--	--	--
04...	.280	.044	.008	--	--	6.9	6.8	--	--	--	--
13...	.049	<.004	<.003	--	--	12	11	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--	--
24...	.989	.041	.022	--	--	9.6	9.2	--	--	--	--
24...	.411	.027	.015	--	--	11	10	--	--	--	--
25...	.248	.021	.014	--	--	11	11	--	--	--	--
FEB											
09...	.045	.008	<.010	240	225	--	--	<.0020	<.002	.007	<.0020
11...	.045	<.001	.006	--	--	13	12	--	--	--	--
18...	.124	.023	.009	--	--	11	9.3	--	--	--	--
23...	.049	.006	<.010	280	198	--	--	<.0020	<.002	.006	<.0020
MAR											
11...	.045	.006	.021	170	250	--	--	<.0020	<.002	.005	<.0020
14...	.097	<.002	<.003	--	--	11	12	--	--	--	--
15...	.197	.006	.006	--	--	11	10	--	--	--	--
22...	.452	.015	.010	--	--	--	--	<.0020	.007	.009	E.0033
APR											
07...	.048	.022	.009	--	--	11	9.2	--	--	--	--
15...	.049	.014	<.010	--	--	--	--	<.0020	<.002	.007	<.0020
28...	.049	.016	.021	380	100	--	--	<.0020	<.002	.009	<.0020
MAY											
05...	.055	.022	.008	--	--	14	14	--	--	--	--
14...	.062	.013	.015	220	173	--	--	<.0020	<.002	.020	<.0020
24...	.166	.016	.016	41	138	--	--	<.0020	.036	.069	<.0020
JUN											
03...	.056	.048	.010	--	--	--	--	--	--	--	--
10...	.052	.013	.012	--	--	--	--	--	--	--	--
24...	.093	.022	.019	--	--	--	--	<.0020	<.002	.028	<.0020
JUL											
07...	.089	.027	.010	--	--	8.6	6.1	--	--	--	--
14...	.083	.019	.013	200	122	--	--	<.0020	<.002	.020	<.0020
28...	.075	.020	.010	--	--	--	--	<.0020	<.002	.013	<.0020
AUG											
10...	.064	.014	.010	--	--	--	--	<.0020	<.002	.006	<.0020
18...	.085	.038	.030	--	--	7.2	6.6	--	--	--	--
24...	.083	.011	<.010	--	--	--	--	<.0020	<.002	<.001	<.0020
27...	E.037	<.050	.013	--	--	--	--	<.0020	<.002	.023	<.0020
SEP											
07...	.361	.029	.018	--	--	6.8	7.7	--	--	--	--
09...	.117	.018	.008	--	--	7.8	7.4	--	--	--	--
13...	.082	.020	<.010	320	102	--	--	<.0020	<.002	.006	<.0020
16...	1.87	.237	.029	--	--	9.1	8.4	--	--	--	--
16...	.810	.271	.023	--	--	8.8	8.4	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--	--
27...	.063	.011	.010	--	--	--	--	<.0020	<.002	.008	<.0020
30...	.587	.027	.019	--	--	6.3	6.1	--	--	--	--

E Estimated

01594526 WESTERN BRANCH AT UPPER MARLBORO, MD--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	BUTYL-ATE, WATER, DISS, REC (UG/L) (04028)	CAR-BARYL WATER FLTRD 0.7 U GF, REC (UG/L) (82680)	CARBO-FURAN WATER FLTRD 0.7 U GF, REC (UG/L) (82674)	CHLOR-PYRIFOS DIS-SOLVED (UG/L) (38933)	CYANA-ZINE, WATER, DISS, REC (UG/L) (04041)	DCPA WATER FLTRD 0.7 U GF, REC (UG/L) (82682)	DEETHYL ATRA-ZINE, WATER, DISS, REC (UG/L) (04040)	DI-AZINON, DIS-SOLVED (UG/L) (39572)	DI-ELDRIN DIS-SOLVED (UG/L) (39381)	2,6-DI-ETHYL ANILINE WAT FLT 0.7 U GF, REC (UG/L) (82660)	DISUL-FOTON WATER FLTRD 0.7 U GF, REC (UG/L) (82677)
OCT 1998											
29...	--	--	--	--	--	--	--	--	--	--	--
NOV											
17...	--	--	--	--	--	--	--	--	--	--	--
DEC											
09...	--	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--	--
JAN 1999											
03...	--	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--
FEB											
09...	<.0020	<.0030	<.0030	<.0040	<.0040	<.0020	E.0026	E.002	<.001	<.0030	<.0170
11...	--	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--	--
23...	<.0020	<.0030	<.0030	<.0040	<.0040	<.0020	E.0033	E.003	<.001	<.0030	<.0170
MAR											
11...	<.0020	E.0063	<.0030	.0049	<.0040	<.0020	<.0020	.005	<.001	<.0030	<.0170
14...	--	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--	--
22...	<.0020	E.0451	<.0030	<.0040	<.0040	<.0020	E.0022	.065	<.001	<.0030	<.0170
APR											
07...	--	--	--	--	--	--	--	--	--	--	--
15...	<.0020	E.0071	<.0030	<.0040	<.0040	<.0020	E.0066	.019	<.001	<.0030	<.0170
28...	<.0020	E.0061	<.0030	<.0040	<.0040	<.0020	E.0052	.009	<.001	<.0030	<.0170
MAY											
05...	--	--	--	--	--	--	--	--	--	--	--
14...	<.0020	E.0223	<.0030	<.0040	<.0040	<.0020	E.0062	.019	<.001	<.0030	<.0170
24...	<.0020	E.0778	<.0030	<.0040	.0138	<.0020	E.0221	.072	<.001	<.0030	<.0170
JUN											
03...	--	--	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--	<.0030	--
24...	<.0020	E.0584	<.0030	.0217	<.0040	<.0020	E.0106	.043	<.001	<.0030	<.0170
JUL											
07...	--	--	--	--	--	--	--	--	--	--	--
14...	<.0020	E.0290	<.0030	<.0100	<.0040	<.0020	E.0113	.021	<.001	<.0030	<.0170
28...	<.0020	E.0528	<.0030	<.0040	<.0040	<.0020	E.0083	.008	<.001	<.0030	<.0170
AUG											
10...	<.0020	<.0030	<.0030	<.0040	<.0040	<.0020	E.0028	<.002	<.001	<.0030	<.0170
18...	--	--	--	--	--	--	--	--	--	--	--
24...	<.0020	E.129	<.0030	<.0040	<.0040	<.0020	<.0020	.041	<.001	<.0030	<.0170
27...	<.0020	E.243	<.0030	.0070	<.0040	<.0020	E.0050	.103	<.001	<.0030	<.0170
SEP											
07...	--	--	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--	--	--
13...	<.0020	E.0098	<.0030	<.0040	<.0040	E.0024	--	.031	<.001	<.0030	<.0170
16...	--	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--	--
27...	<.0020	E.0350	<.0030	.0056	<.0040	<.0020	E.0052	.021	<.001	<.0030	<.0170
30...	--	--	--	--	--	--	--	--	--	--	--

E Estimated

01594526 WESTERN BRANCH AT UPPER MARLBORO, MD--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	EPTC WATER FLTRD 0.7 U GF, REC (UG/L) (82668)	ETHAL-FLUR-ALIN WAT FLT 0.7 U GF, REC (UG/L) (82663)	ETHO-PROP WATER FLTRD 0.7 U GF, REC (UG/L) (82672)	FONOFOS WATER DISS REC (UG/L) (04095)	LINDANE DIS-SOLVED (UG/L) (39341)	LIN-URON WATER FLTRD 0.7 U GF, REC (UG/L) (82666)	MALA-THION, DIS-SOLVED (UG/L) (39532)	METHYL AZIN-PHOS WAT FLT 0.7 U GF, REC (UG/L) (82686)	METHYL PARA-THION WAT FLT 0.7 U GF, REC (UG/L) (82667)	METO-LACHLOR WATER DISSOLV (UG/L) (39415)	METRI-BUZIN SENCOR WATER DISSOLV (UG/L) (82630)
OCT 1998											
29...	--	--	--	--	--	--	--	--	--	--	--
NOV											
17...	--	--	--	--	--	--	--	--	--	--	--
DEC											
09...	--	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--	--
JAN 1999											
03...	--	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--
FEB											
09...	<.0020	<.0040	<.0030	<.0030	<.004	<.0020	<.005	<.0010	<.0060	.005	<.004
11...	--	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--	--
23...	<.0020	<.0040	<.0030	<.0030	<.004	<.0020	<.005	<.0010	<.0060	.005	<.004
MAR											
11...	<.0020	<.0040	<.0030	<.0030	<.004	<.0020	<.005	<.0010	<.0060	.006	<.004
14...	--	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--	--
22...	<.0020	<.0040	<.0030	<.0030	<.004	<.0020	<.005	<.0010	<.0060	.006	<.004
APR											
07...	--	--	--	--	--	--	--	--	--	--	--
15...	<.0020	<.0040	<.0030	<.0030	<.004	<.0020	<.005	<.0010	<.0060	.005	<.004
28...	<.0020	<.0040	<.0030	<.0030	<.004	<.0020	<.005	<.0010	<.0060	.007	<.004
MAY											
05...	--	--	--	--	--	--	--	--	--	--	--
14...	<.0020	<.0040	<.0030	<.0030	<.004	<.0020	<.005	<.0010	<.0060	.012	<.004
24...	<.0020	<.0040	<.0030	<.0030	<.004	<.0020	.009	<.0010	<.0060	.036	<.004
JUN											
03...	--	--	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	<.0010	--	--	--
24...	<.0020	<.0040	<.0030	<.0030	<.004	<.0020	<.005	<.0010	<.0060	.013	<.004
JUL											
07...	--	--	--	--	--	--	--	--	--	--	--
14...	<.0020	<.0040	<.0030	<.0030	<.004	<.0020	<.005	<.0010	<.0060	.026	<.004
28...	<.0020	<.0040	<.0030	<.0030	<.004	<.0020	<.005	<.0010	<.0060	.008	<.004
AUG											
10...	<.0020	<.0040	<.0030	<.0030	<.004	<.0020	<.005	<.0010	<.0060	E.002	<.004
18...	--	--	--	--	--	--	--	--	--	--	--
24...	<.0020	<.0040	<.0030	<.0030	<.004	<.0020	<.005	<.0010	<.0060	.004	<.004
27...	<.0020	<.0040	<.0030	<.0030	<.004	<.0020	<.005	<.0010	<.0060	.019	<.004
SEP											
07...	--	--	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--	--	--
13...	<.0020	<.0040	<.0030	<.0030	<.004	<.0020	<.005	<.0010	<.0060	E.004	<.004
16...	--	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--	--
27...	<.0020	<.0040	<.0030	<.0030	<.004	<.0020	<.005	<.0010	<.0060	.005	<.004
30...	--	--	--	--	--	--	--	--	--	--	--

E Estimated

01594526 WESTERN BRANCH AT UPPER MARLBORO, MD--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	MOLINATE WATER FLTRD 0.7 U GF, REC (UG/L) (82671)	NAPROPAMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82684)	PARATHION, DISSOLVED (UG/L) (39542)	PEBULATE WATER FILTRD 0.7 U GF, REC (UG/L) (82669)	PENDIMETHALIN WAT FLT 0.7 U GF, REC (UG/L) (82683)	PERMETHRIN CIS WAT FLT 0.7 U GF, REC (UG/L) (82687)	PHORATE WATER FLTRD 0.7 U GF, REC (UG/L) (82664)	PROMETON, WATER, DISS, REC (UG/L) (04037)	PRONAMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82676)	PROPCHLOR, WATER, DISS, REC (UG/L) (04024)	PROPARGITE WATER FLTRD 0.7 U GF, REC (UG/L) (82685)
OCT 1998											
29...	--	--	--	--	--	--	--	--	--	--	--
NOV											
17...	--	--	--	--	--	--	--	--	--	--	--
DEC											
09...	--	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--	--
JAN 1999											
03...	--	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--
FEB											
09...	<.0040	<.0030	<.004	<.0040	<.0040	<.0050	<.0020	E.0057	<.0030	<.0070	<.0130
11...	--	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--	--
23...	<.0040	<.0030	<.004	<.0040	<.0040	<.0050	<.0020	E.0049	<.0030	<.0070	<.0130
MAR											
11...	<.0040	<.0030	<.004	<.0040	<.0040	<.0050	<.0020	E.0075	<.0030	<.0070	<.0130
14...	--	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--	--
22...	<.0040	<.0030	<.004	<.0040	.0420	<.0050	<.0020	E.0039	<.0030	<.0070	<.0130
APR											
07...	--	--	--	--	--	--	--	--	--	--	--
15...	<.0040	<.0030	<.004	<.0040	<.0040	<.0050	<.0020	E.0092	<.0030	<.0070	<.0130
28...	<.0040	<.0030	<.004	<.0040	<.0040	<.0050	<.0020	E.0117	<.0030	<.0070	<.0130
MAY											
05...	--	--	--	--	--	--	--	--	--	--	--
14...	<.0040	<.0030	<.004	<.0040	<.0040	<.0050	<.0020	E.0092	<.0030	<.0070	<.0130
24...	<.0040	<.0030	<.004	<.0040	.0083	<.0050	<.0020	.0237	<.0030	<.0070	<.0130
JUN											
03...	--	--	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--	--	--
24...	<.0040	<.0030	<.004	<.0040	<.0040	<.0050	<.0020	.0229	<.0030	<.0070	<.0130
JUL											
07...	--	--	--	--	--	--	--	--	--	--	--
14...	<.0040	<.0030	<.004	<.0040	<.0040	<.0050	<.0020	.0183	<.0030	<.0070	<.0130
28...	<.0040	<.0030	<.004	<.0040	<.0040	<.0050	<.0020	E.0116	<.0030	<.0070	<.0130
AUG											
10...	<.0040	<.0030	<.004	<.0040	<.0040	<.0050	<.0020	E.0118	<.0030	<.0070	<.0130
18...	--	--	--	--	--	--	--	--	--	--	--
24...	<.0040	<.0030	<.004	<.0040	<.0040	<.0050	<.0020	.0214	<.0030	<.0070	<.0130
27...	<.0040	<.0030	<.004	<.0040	<.0040	<.0050	<.0020	E.0162	<.0030	<.0070	<.0130
SEP											
07...	--	--	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--	--	--
13...	<.0040	<.0030	<.004	<.0040	<.0040	<.0050	<.0020	.0369	<.0030	<.0070	<.0130
16...	--	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--	--
27...	<.0040	<.0030	<.004	<.0040	<.0040	<.0050	<.0020	E.0086	<.0030	<.0070	<.0130
30...	--	--	--	--	--	--	--	--	--	--	--

E Estimated

01594526 WESTERN BRANCH AT UPPER MARLBORO, MD--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	PRO-PANIL WATER FLTRD 0.7 U GF, REC (UG/L) (82679)	SI-MAZINE, WATER, DISS, REC (UG/L) (04035)	TEBU-THIURON WATER FLTRD 0.7 U GF, REC (UG/L) (82670)	TER-BACIL WATER FLTRD 0.7 U GF, REC (UG/L) (82665)	TER-BUFOS WATER FLTRD 0.7 U GF, REC (UG/L) (82675)	THIO-BENCARB WATER FLTRD 0.7 U GF, REC (UG/L) (82681)	TRIAL-LATE WATER FLTRD 0.7 U GF, REC (UG/L) (82678)	TRI-FLUR-ALIN WAT FLT 0.7 U GF, REC (UG/L) (82661)	ALPHA BHC DIS-SOLVED (UG/L) (34253)	SEDI-MENT, SUS-PENDED (MG/L) (80154)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY) (80155)
OCT 1998											
29...	--	--	--	--	--	--	--	--	--	6	.37
NOV											
17...	--	--	--	--	--	--	--	--	--	4	.09
DEC											
09...	--	--	--	--	--	--	--	--	--	111	58
16...	--	--	--	--	--	--	--	--	--	5	.31
JAN 1999											
03...	--	--	--	--	--	--	--	--	--	598	744
04...	--	--	--	--	--	--	--	--	--	216	171
13...	--	--	--	--	--	--	--	--	--	6	.59
18...	--	--	--	--	--	--	--	--	--	618	641
24...	--	--	--	--	--	--	--	--	--	785	1200
24...	--	--	--	--	--	--	--	--	--	384	656
25...	--	--	--	--	--	--	--	--	--	331	592
FEB											
09...	<.0040	E.0049	E.0038	<.0070	<.0130	<.0020	<.0010	<.0020	<.0020	--	--
11...	--	--	--	--	--	--	--	--	--	6	.43
18...	--	--	--	--	--	--	--	--	--	90	38
23...	<.0040	.0050	E.0065	<.0070	<.0130	<.0020	<.0010	<.0020	<.0020	--	--
MAR											
11...	<.0040	E.0042	<.0100	<.0070	<.0130	<.0020	<.0010	<.0020	<.0020	--	--
14...	--	--	--	--	--	--	--	--	--	52	26
15...	--	--	--	--	--	--	--	--	--	510	902
22...	<.0040	<.0050	E.0070	<.0070	<.0130	<.0020	<.0010	E.0032	<.0020	--	--
APR											
07...	--	--	--	--	--	--	--	--	--	7	1.2
15...	<.0040	<.0050	<.0100	<.0070	<.0130	<.0020	<.0010	.0048	<.0020	--	--
28...	<.0040	<.0050	<.0100	<.0070	<.0130	<.0020	<.0010	.0057	<.0020	--	--
MAY											
05...	--	--	--	--	--	--	--	--	--	7	.44
14...	<.0040	.0087	<.0100	<.0070	<.0130	<.0020	<.0010	.0067	<.0020	--	--
24...	<.0040	.0175	<.0100	<.0070	<.0130	<.0020	<.0010	.0041	<.0020	--	--
JUN											
03...	--	--	--	--	--	--	--	--	--	5	.10
10...	--	--	--	--	--	--	--	--	--	--	--
24...	<.0040	.0140	E.0076	<.0070	<.0130	<.0020	<.0010	<.0020	<.0020	--	--
JUL											
07...	--	--	--	--	--	--	--	--	--	5	.05
14...	<.0040	.0092	<.0100	<.0070	<.0130	<.0020	<.0010	<.0020	<.0020	--	--
28...	<.0040	<.0080	E.0053	<.0070	<.0130	<.0020	<.0010	E.0014	<.0020	--	--
AUG											
10...	<.0040	<.0050	<.0100	<.0070	<.0130	<.0020	<.0010	<.0020	<.0020	9	.03
18...	--	--	--	--	--	--	--	--	--	7	.09
24...	<.0040	<.0050	E.0029	<.0070	<.0130	<.0020	<.0010	<.0020	<.0020	--	--
27...	<.0040	<.0050	<.0200	<.0070	<.0130	<.0020	<.0010	<.0020	<.0020	--	--
SEP											
07...	--	--	--	--	--	--	--	--	--	184	115
09...	--	--	--	--	--	--	--	--	--	24	4.8
13...	<.0040	E.0033	E.0091	<.0070	<.0130	<.0020	<.0010	<.0020	<.0020	--	--
16...	--	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--	--
27...	<.0040	E.0043	.0104	<.0070	<.0130	<.0020	<.0010	E.0012	<.0020	--	--
30...	--	--	--	--	--	--	--	--	--	--	--

E Estimated

THIS IS A BLANK PAGE

01594670 HUNTING CREEK NEAR HUNTINGTOWN, MD

LOCATION.--Lat 38°35'02", long 76°36'20", Calvert County, Hydrologic Unit 02060006, on right bank at downstream side of bridge on MD Rte. 263, 200 ft east of intersection of MD Rte. 4, 2.4 mi south of Huntingtown, and 0.1 mi upstream from Sewell Branch.

DRAINAGE AREA.--9.38 mi^2.

PERIOD OF RECORD.--Water years 1986, 1988 to January 1998 (Discontinued)

REMARKS.--Nutrient analyses were performed at the Maryland Department of Health and Mental Hygiene laboratory (DHMH), Baltimore, MD.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	TUR-BID-ITY (NTU) (00076)	OXYGEN DEMAND, CHEM-ICAL (LOW LEVEL) (MG/L) (00335)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L) (00310)
OCT 1997									
29...	1030	2.8	155	6.4	9.0	6.5	15	11	<.7
NOV									
07...	1600	86	--	--	--	--	--	--	--
07...	1800	145	--	--	--	--	--	--	--
07...	1945	180	--	--	--	--	--	--	--
07...	2100	204	--	--	--	--	66	27	--
07...	2215	222	--	--	--	--	--	--	--
07...	2330	232	--	--	--	--	--	--	--
08...	0030	232	--	--	--	--	51	30	--
08...	0145	226	--	--	--	--	--	--	--
18...	1415	9.2	144	--	9.0	4.0	4.3	<10	<1.2
DEC									
17...	0845	7.7	163	6.1	.0	.5	8.0	<10	<.9
JAN 1998									
13...	1330	8.3	153	--	11.0	6.0	8.4	<10	<1.0
23...	1830	92	--	--	--	--	23	14	--
23...	2330	113	--	--	--	--	29	15	--
24...	0430	95	--	--	--	--	26	20	--

DATE	ANC WATER UNFLTRD IT FIELD MG/L AS CACO3 (00419)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (MG/L) (00530)	NITRO-GEN, TOTAL (MG/L AS N) (00600)	NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS N) (00618)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)
OCT 1997									
29...	29	14	8	.28	.016	.004	.020	.036	.26
NOV									
07...	--	--	--	--	--	--	--	--	--
07...	--	--	--	--	--	--	--	--	--
07...	--	--	--	--	--	--	--	--	--
07...	--	6.6	54	.66	.017	.003	.020	.014	.64
07...	--	--	--	--	--	--	--	--	--
07...	--	--	--	--	--	--	--	--	--
08...	--	6.4	40	--	--	.003	<.007	.014	.64
08...	--	--	--	--	--	--	--	--	--
18...	--	16	2	.28	.058	.003	.061	.018	.22
DEC									
17...	32	15	7	.31	.128	.004	.132	.027	.18
JAN 1998									
13...	--	14	3	.31	.149	.006	.155	.026	.15
23...	--	10	24	.60	.214	.006	.220	.024	.38
23...	--	8.5	12	.48	.146	.005	.151	.014	.33
24...	--	9.2	4	.51	.155	.005	.160	.015	.35

01594670 HUNTING CREEK NEAR HUNTINGTOWN, MD--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)	CARBON, ORGANIC DIS-SOLVED (MG/L AS C) (00681)	SEDI-MENT, SUS-PENDED (MG/L) (80154)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY) (80155)
OCT 1997								
29...	.27	.063	.034	.014	6.0	6.0	10	.08
NOV								
07...	--	--	--	--	--	--	135	31
07...	--	--	--	--	--	--	139	54
07...	--	--	--	--	--	--	139	68
07...	.21	.207	.024	.028	10	10	139	77
07...	--	--	--	--	--	--	142	85
07...	--	--	--	--	--	--	190	119
08...	.31	.161	.023	.032	11	10	180	113
08...	--	--	--	--	--	--	151	92
18...	.22	.031	.025	.015	8.7	6.6	4	.10
DEC								
17...	.15	.034	.019	.019	4.0	--	3	.06
JAN 1998								
13...	.10	.033	.019	.012	4.6	4.8	2	.05
23...	.16	.093	.021	.011	5.6	5.3	69	17
23...	.24	.090	.067	.010	6.8	6.2	32	9.9
24...	.19	.078	.026	.009	7.6	6.8	34	8.7

01594930 LAUREL RUN AT DOBBIN ROAD NEAR WILSON, MD

LOCATION.--Lat 39°14'37", long 79°25'43", Garrett County, Hydrologic Unit 02070002, on left bank at downstream side of bridge (abandoned) on Dobbin Road, 0.6 mi south of intersection of Kempton Road, 1.2 mi from mouth, and 3.0 mi southwest of Wilson.

DRAINAGE AREA.--8.23 mi^2.

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

GAGE.--Water-stage recorder and concrete control. Elevation of gage is 2,600 ft above sea level, from topographic map.

REMARKS.--Records good except those for estimated daily discharges (beaver dam), which are poor. Natural flow of stream affected by inflow from deep coal mine dewatering process. Several measurements of water temperature were made during the year. Water-quality records for some prior years have been collected at this location.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 170 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jan 24	0945	*188	*3.91	No other peak greater than base discharge.			

Minimum discharge, 1.7 ft^3/s, Aug 6, 7.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e3.5	e2.5	e2.3	e4.5	23	33	62	17	e3.0	e1.8	e1.8	e1.3
2	e2.7	e2.4	e2.2	e4.1	26	25	60	16	e2.8	e2.0	e1.4	e1.0
3	e2.5	e2.3	e2.1	e3.9	22	43	45	14	e6.0	e1.2	e1.2	e.80
4	e7.0	e2.6	e2.0	e8.0	22	60	39	14	e4.6	e1.0	e1.1	e.75
5	e3.5	e2.5	e1.9	e6.4	20	39	36	13	e3.8	e1.0	e3.5	e.73
6	e3.0	e2.4	e1.8	e5.6	29	46	30	13	e3.0	e1.7	e2.3	e20
7	e2.9	e2.3	e1.8	e5.2	51	55	25	12	e2.5	e1.4	e2.0	e4.5
8	e10	e2.3	e15	e5.0	87	40	23	12	e3.0	e1.5	e1.9	e2.5
9	e6.0	e2.2	e8.0	e60	50	35	29	11	e3.7	e1.2	e3.2	e2.2
10	e4.2	e2.2	e6.0	e35	39	33	39	10	e3.5	e1.0	e2.5	e2.0
11	e3.5	e2.2	e5.0	e25	32	25	42	10	e4.5	e9.5	e2.0	e2.2
12	e2.6	e2.5	e4.0	e20	29	23	50	e9.8	e3.0	e9.0	e1.6	e1.3
13	e2.5	e2.4	e3.8	e50	25	21	42	e14	e2.2	e2.0	e1.4	e.90
14	e3.5	e2.3	e3.4	60	22	20	35	e11	e1.6	e2.5	e2.5	e.80
15	e2.7	e2.2	e3.0	82	20	21	33	e9.0	e1.4	e2.3	e1.0	e.74
16	e2.6	e2.1	e2.8	52	20	18	46	e7.4	e1.3	e2.0	e.72	e3.4
17	e3.4	e2.0	e3.3	45	22	25	36	e6.4	e5.0	e3.6	e.65	e3.6
18	e2.5	e1.9	e3.0	72	22	78	40	e6.2	e3.0	e3.0	e.62	e2.3
19	e2.4	e1.8	e2.7	64	19	72	46	e8.0	e3.2	e2.5	e2.2	e1.7
20	e2.9	e1.8	e2.5	43	17	54	45	e7.2	e1.9	e2.2	e1.7	e1.5
21	e2.5	e2.1	e17	39	16	72	50	e7.0	e1.4	e1.8	e1.4	e1.3
22	e5.0	e2.0	e12	40	15	86	47	e6.8	e1.2	e1.6	e1.1	e1.2
23	e3.5	e1.9	e9.0	66	14	52	44	e12	e2.0	e3.0	e1.0	e1.4
24	e3.0	e1.8	e7.0	128	14	48	46	e10	e3.0	e2.3	e.94	e1.6
25	e3.2	e1.7	e6.0	66	13	53	36	e8.2	e2.5	e2.5	e2.5	e2.0
26	e2.9	e1.7	e5.4	45	13	52	32	e7.0	e3.5	e1.5	e2.2	e3.2
27	e2.7	e3.0	e5.0	39	13	48	27	6.4	e2.1	e1.0	e3.5	e2.5
28	e2.6	e2.5	e4.7	37	30	47	24	e5.8	e1.5	e.76	e2.0	e2.0
29	e2.8	e2.3	e4.5	33	---	58	21	e5.0	e1.7	e15	e1.3	e1.8
30	e2.6	e2.1	e5.6	28	---	62	19	e4.1	e1.5	e3.0	e1.0	e8.0
31	e2.4	---	e5.0	24	---	57	---	e3.4	---	e3.3	e.90	---
TOTAL	107.1	66.0	157.8	1195.7	725	1401	1149	296.7	83.4	88.16	53.13	79.22
MEAN	3.45	2.20	5.09	38.6	25.9	45.2	38.3	9.57	2.78	2.84	1.71	2.64
MAX	10	3.0	17	128	87	86	62	17	6.0	15	3.5	20
MIN	2.4	1.7	1.8	3.9	13	18	19	3.4	1.2	.76	.62	.73
CFSM	.42	.27	.62	4.69	3.15	5.49	4.65	1.16	.34	.35	.21	.32
IN.	.48	.30	.71	5.40	3.28	6.33	5.19	1.34	.38	.40	.24	.36

e Estimated

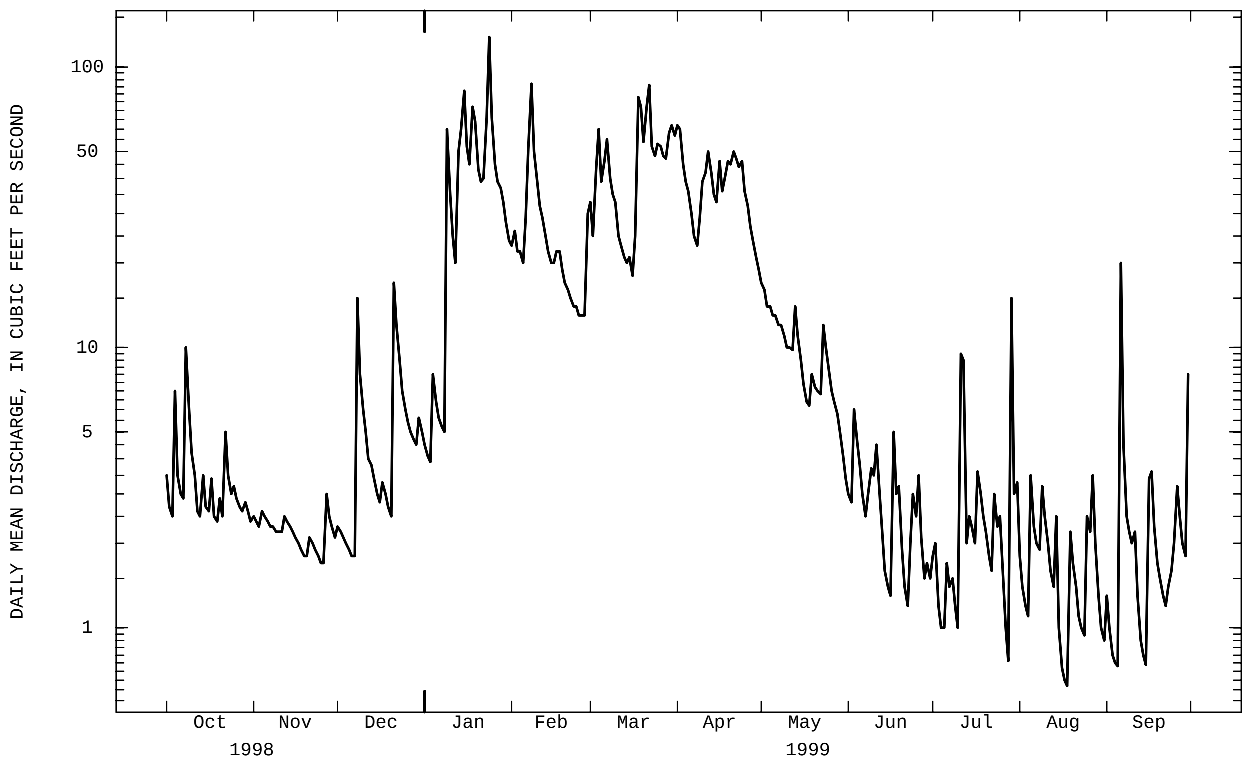
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1980 - 1999, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	9.79	19.9	29.4	28.1	36.1	41.1	32.0	28.8	18.2	17.0	11.9	8.15
MAX	26.2	42.8	51.9	51.2	68.5	71.6	61.0	69.8	62.8	42.8	40.2	41.3
(WY)	1997	1987	1985	1996	1994	1994	1984	1996	1981	1992	1980	1996
MIN	3.27	2.20	5.09	8.85	7.24	13.9	9.60	9.35	2.78	2.84	1.71	2.64
(WY)	1992	1999	1999	1981	1993	1990	1995	1991	1999	1999	1999	1999

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

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1980 - 1999	
ANNUAL TOTAL	7295.8		5402.21			
ANNUAL MEAN	20.0		14.8		23.0	
HIGHEST ANNUAL MEAN					35.6	1996
LOWEST ANNUAL MEAN					14.8	1999
HIGHEST DAILY MEAN	158	Apr 19	128	Jan 24	492	Feb 9 1994
LOWEST DAILY MEAN	(e)1.7	(a)	(e).62	Aug 18	(e).62	Aug 18 1999
ANNUAL SEVEN-DAY MINIMUM	1.9	Nov 20	.93	Aug 30	.93	Aug 30 1999
INSTANTANEOUS PEAK FLOW			188	Jan 24	(b)863	Nov 5 1985
INSTANTANEOUS PEAK STAGE			3.91	Jan 24	10.10	Nov 5 1985
INSTANTANEOUS LOW FLOW			UNKNOWN		UNKNOWN	
ANNUAL RUNOFF (CFSM)	2.43		1.80		2.80	
ANNUAL RUNOFF (INCHES)	32.98		24.42		38.04	
10 PERCENT EXCEEDS	47		46		49	
50 PERCENT EXCEEDS	10		3.8		15	
90 PERCENT EXCEEDS	2.4		1.4		3.6	

e Estimated
a Nov. 25, 26.
b From rating curve extended above 450 ft^3/s on basis of runoff comparisons with nearby stations.



DAILY MEAN DISCHARGE - 1999 WATER YEAR

01594936 NORTH FORK SAND RUN NEAR WILSON, MD

LOCATION.--Lat 39°15'36", long 79°24'36", Garrett County, Hydrologic Unit 02070002, on right bank, 0.1 mi north-west of Wilson-Corona Road, 0.1 mi upstream from mouth and 0.8 mi northwest of Wilson.

DRAINAGE AREA.--1.91 mi^2.

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

GAGE.--Water-stage recorder and steel weir plate. Elevation of gage is 2,515 ft above sea level, from topographic map.

REMARKS.-- Records good above 0.5 ft^3/s and fair below except those for estimated daily discharges (missing record), which are fair. Several measurements of water temperature were made during the year. Water-quality records for some prior years have been collected at this location.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 40 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jan 24	0745	40	3.24	Mar 18	1600	*45	*3.32

Minimum discharge, 0.09 ft^3/s, Aug 16, 17.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.45	e.27	e.26	e.64	3.4	5.4	7.6	2.7	.45	.19	.39	.22
2	.31	e.24	e.25	e.60	4.0	4.3	6.6	2.1	.52	.21	.21	.18
3	.30	e.26	e.24	e.58	3.5	11	4.9	1.9	.82	.18	.23	.13
4	.96	e.30	e.23	e.95	3.5	11	4.6	1.9	.60	.18	.30	.44
5	.44	e.28	e.23	.76	3.3	6.8	4.4	1.8	.54	.16	.52	2.0
6	.35	e.27	e.22	.70	5.9	10	3.8	1.7	.47	.27	.44	4.1
7	.34	e.26	e.22	.74	12	11	3.4	1.6	.35	.22	.29	1.9
8	1.5	e.25	e2.3	.68	19	6.7	3.1	1.5	.51	.24	.30	.59
9	.81	e.25	e1.1	11	9.9	6.0	7.1	1.1	.55	.22	.50	.39
10	.73	e.25	e.85	4.7	6.8	5.1	9.1	1.1	.54	.20	.40	.37
11	.47	e.28	e.70	3.1	5.4	4.4	10	1.0	.67	.18	.36	.41
12	.33	e.33	e.60	3.0	4.8	4.0	11	.98	.54	.15	.23	.26
13	.34	e.28	e.54	10	4.3	3.7	7.5	2.1	.29	.16	.21	.14
14	.43	e.26	e.48	11	3.5	3.5	6.0	1.7	.25	.39	.41	.14
15	.34	e.25	e.45	13	3.4	3.5	6.1	1.3	.27	.39	.23	.30
16	.34	e.24	e.41	8.9	3.4	3.4	9.8	.94	.36	.33	.10	.52
17	.42	e.23	e.47	8.0	3.6	9.2	6.3	.82	.70	.60	.11	.56
18	.30	e.22	e.48	17	3.4	28	9.8	.81	.44	.59	.20	.37
19	.29	e.21	e.45	12	3.0	19	11	1.1	.46	.50	.36	.25
20	.34	e.21	e.43	7.7	2.9	16	9.6	.91	.27	.47	.25	.14
21	.29	e.24	e2.5	6.8	2.4	20	12	.83	.19	.36	.25	.20
22	.65	e.23	e2.3	8.0	2.0	18	9.4	1.2	.18	.38	.20	.23
23	.44	e.21	e1.7	19	1.9	11	8.8	1.7	.36	.50	.18	.25
24	.35	e.20	e1.3	27	1.9	11	7.7	1.6	.43	.28	.16	.28
25	.38	e.19	e1.0	14	1.9	12	5.4	1.3	.40	.36	.38	.39
26	.29	e.19	e.88	9.1	1.7	10	4.8	1.1	.53	.17	.70	.48
27	.29	e.45	e.78	7.2	2.0	9.3	4.4	1.2	.40	.14	1.7	.42
28	e.27	e.35	e.70	6.4	6.5	8.6	3.8	.92	.22	.48	1.3	.28
29	e.28	e.27	e.66	5.1	---	9.9	3.4	.79	.23	2.4	.33	.40
30	e.27	e.25	e.80	4.2	---	9.5	3.1	.61	.24	.53	.17	1.5
31	e.25	---	e.70	3.5	---	7.9	---	.50	---	.54	.14	---
TOTAL	13.55	7.72	24.23	225.35	129.3	299.2	204.5	40.81	12.78	11.97	11.55	17.84
MEAN	.44	.26	.78	7.27	4.62	9.65	6.82	1.32	.43	.39	.37	.59
MAX	1.5	.45	2.5	27	19	28	12	2.7	.82	2.4	1.7	4.1
MIN	.25	.19	.22	.58	1.7	3.4	3.1	.50	.18	.14	.10	.13
CFSM	.23	.13	.41	3.81	2.42	5.05	3.57	.69	.22	.20	.20	.31
IN.	.26	.15	.47	4.39	2.52	5.83	3.98	.79	.25	.23	.22	.35

e Estimated

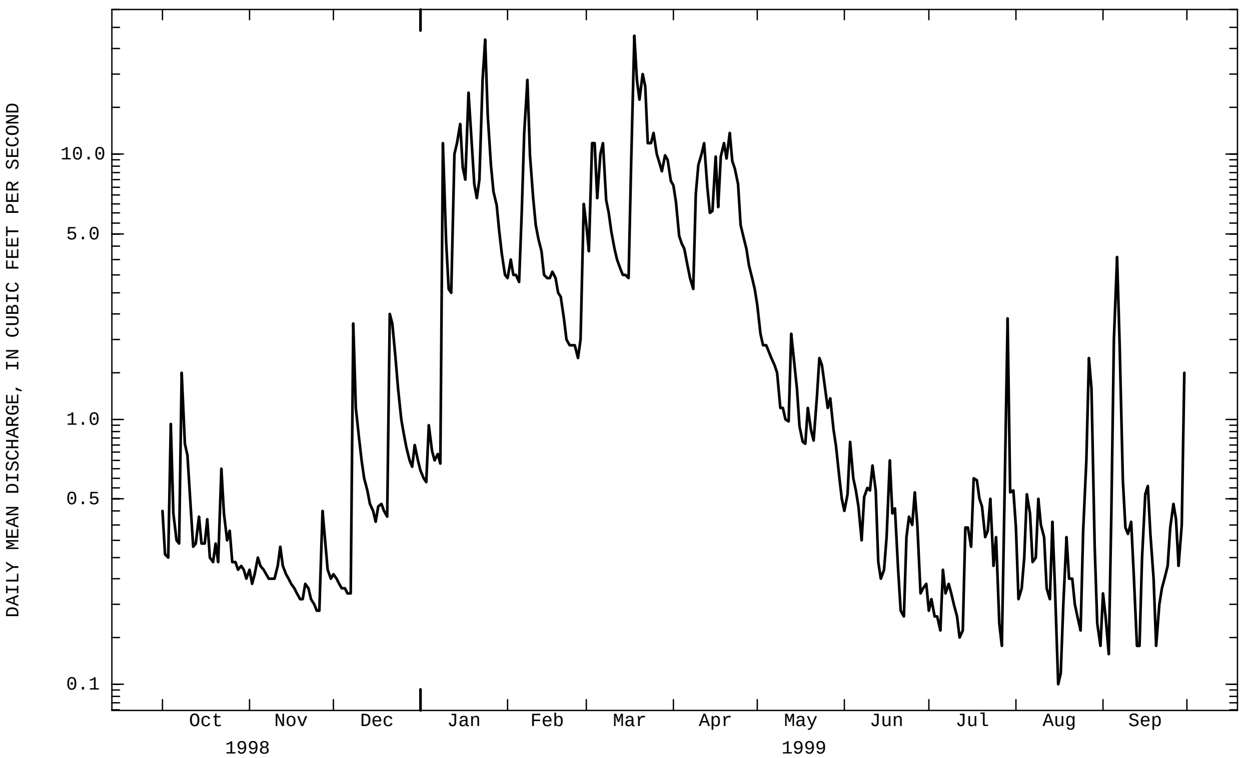
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1980 - 1999, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1.49	4.29	5.53	5.75	7.47	8.73	6.56	5.65	3.28	3.08	2.05	1.50
MAX	4.43	17.5	8.67	12.9	15.9	16.1	13.4	13.5	12.7	8.97	8.09	9.38
(WY)	1997	1986	1991	1996	1986	1994	1984	1996	1981	1996	1996	1996
MIN	.21	.26	.78	1.29	1.37	2.52	2.22	1.32	.43	.28	.30	.19
(WY)	1992	1999	1999	1981	1993	1990	1995	1999	1999	1988	1983	1991

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

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1980 - 1999	
ANNUAL TOTAL	1406.72		998.80			
ANNUAL MEAN	3.85		2.74		4.55	
HIGHEST ANNUAL MEAN					7.72	1996
LOWEST ANNUAL MEAN					2.74	1999
HIGHEST DAILY MEAN	43	Apr 19	28	Mar 18	141	Feb 9 1994
LOWEST DAILY MEAN	(e).19	(a)	.10	Aug 16	.09	(b)
ANNUAL SEVEN-DAY MINIMUM	.21	Nov 20	.20	Jul 7	.12	Aug 12 1988
INSTANTANEOUS PEAK FLOW			45	Mar 18	(c)895	May 31 1985
INSTANTANEOUS PEAK STAGE			3.32	Mar 18	10.47	May 31 1985
INSTANTANEOUS LOW FLOW			.09	(d)	.01	(f)
ANNUAL RUNOFF (CFSM)	2.02		1.43		2.38	
ANNUAL RUNOFF (INCHES)	27.40		19.45		32.40	
10 PERCENT EXCEEDS	9.6		9.2		10	
50 PERCENT EXCEEDS	1.9		.60		2.8	
90 PERCENT EXCEEDS	.28		.22		.41	

e Estimated.
a Nov. 25, 26.
b Aug. 22, 1985, Aug. 24, 1993.
c From rating curve extended above 90 ft^3/s on basis of contracted-opening measurement of peak-flow.
d Aug. 16, 17.
f July 18 and Aug. 9, 1988, result of beaver activity upstream.



DAILY MEAN DISCHARGE - 1999 WATER YEAR

01594950 MCMILLAN FORK NEAR FORT PENDLETON, MD

LOCATION.--Lat 39°16'36", long 79°23'26", Garrett County, Hydrologic Unit 02070002, on left bank upstream side of culvert on private driveway off Wilson-Corona Road, 1.7 mi southwest of Fort Pendleton, 1.0 mi south of Bayard, WV, and 200 ft upstream from mouth.

DRAINAGE AREA.--2.30 mi^2.

PERIOD OF RECORD.--October 1986 to current year.

REVISED RECORDS.--WDR MD-DE-95-1: 1988, 1991-93 (M).

GAGE.--Water-stage recorder and sacrete bag control. Datum of gage is 2,441.94 ft above sea level (Garrett County bench mark).

REMARKS.--Records good above 0.2 ft^3/s and poor below except those for estimated daily discharges (ice effect, beaverdams), which are fair.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 40 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jan 10	----	ICE JAM	*2.82	Jan 24	0700	49	2.45
Jan 23	1845	*51	2.51	Mar 18	1545	42	2.27

Minimum discharge, 0.00 ft^3/s, Jul 7-10, 12-28, 31, Aug 1-24, 30, 31, Sep 1-4, 13-16, 19-29.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.05	.02	.04	e.41	3.7	5.8	13	3.0	e.17	.02	.05	.00
2	.03	.02	.03	e.35	4.1	4.3	11	2.6	e.20	.03	.01	.00
3	.04	.04	.03	e.60	3.8	8.8	7.9	2.3	e.50	.02	.00	.00
4	.17	.03	.04	e1.5	3.6	12	6.5	2.1	e.25	.02	.00	.00
5	.07	.02	.05	e1.1	3.2	7.4	5.5	1.9	e.15	.02	.00	.43
6	.04	.03	.05	e1.0	5.1	9.0	4.6	1.7	e.12	.01	.00	1.7
7	.03	.02	.12	e.95	12	10	3.8	1.6	e.11	.00	.00	.64
8	.35	.02	.29	e.90	19	11	3.3	1.5	e.10	.00	.02	.13
9	.26	.02	.34	e2.0	12	6.3	7.8	1.3	e.11	.00	.02	.03
10	.16	.02	.19	e8.5	8.5	5.7	11	1.1	e.35	.01	.00	.02
11	.11	.05	.12	e5.0	6.6	4.7	11	.93	e.20	.02	.00	.02
12	.05	.03	.07	e4.0	5.8	4.0	11	.83	e.13	.00	.00	.01
13	.04	.03	.05	e4.5	4.9	3.5	8.8	1.5	e.09	.00	.00	.00
14	.04	.03	.04	e18	4.0	3.9	7.2	1.3	e.07	.00	.00	.00
15	.04	.03	.03	11	3.5	5.7	7.0	.87	e.06	.00	.00	.00
16	.04	.02	.03	8.3	3.3	3.0	10	.69	e.08	.00	.00	.02
17	.04	.02	.03	7.4	3.4	5.8	7.8	.58	e.40	.01	.00	.02
18	.03	.02	.03	16	3.3	24	9.3	.54	e.25	.02	.00	.01
19	.09	.02	.03	12	2.9	18	12	.69	e.28	.00	.00	.00
20	.05	.02	.07	8.2	2.5	14	11	.51	e.10	.00	.00	.00
21	.03	.02	.13	6.6	2.3	19	12	.41	e.05	.00	.00	.01
22	.11	.02	1.5	7.6	2.8	20	11	.70	e.03	.00	.00	.00
23	.05	.02	.83	24	2.1	13	11	1.1	e.04	.00	.00	.00
24	.03	.02	.33	34	1.5	11	10	1.1	e.25	.00	.06	.00
25	.03	.02	.22	17	1.5	12	8.2	.93	e.18	.01	.32	.00
26	.03	.14	.20	11	1.4	12	6.8	e.55	e.30	.00	.14	.00
27	.02	.10	.21	8.6	1.5	11	5.7	e.75	e.10	.00	.24	.00
28	.02	.08	.16	8.3	5.9	12	4.8	e.50	e.04	.03	.09	.00
29	.02	.06	.17	6.2	---	15	4.0	e.35	e.02	.31	.02	.08
30	.02	.05	.28	5.0	---	15	3.4	e.25	.03	.02	.00	.14
31	.02	---	.51	4.2	---	13	---	e.20	---	.00	.00	---
TOTAL	2.11	1.04	6.22	244.21	134.2	319.9	246.4	34.38	4.76	0.55	0.97	3.26
MEAN	.068	.035	.20	7.88	4.79	10.3	8.21	1.11	.16	.018	.031	.11
MAX	.35	.14	1.5	34	19	24	13	3.0	.50	.31	.32	1.7
MIN	.02	.02	.03	.35	1.4	3.0	3.3	.20	.02	.00	.00	.00
CFSM	.03	.02	.09	3.43	2.08	4.49	3.57	.48	.07	.01	.01	.05
IN.	.03	.02	.10	3.95	2.17	5.17	3.99	.56	.08	.01	.02	.05

e Estimated

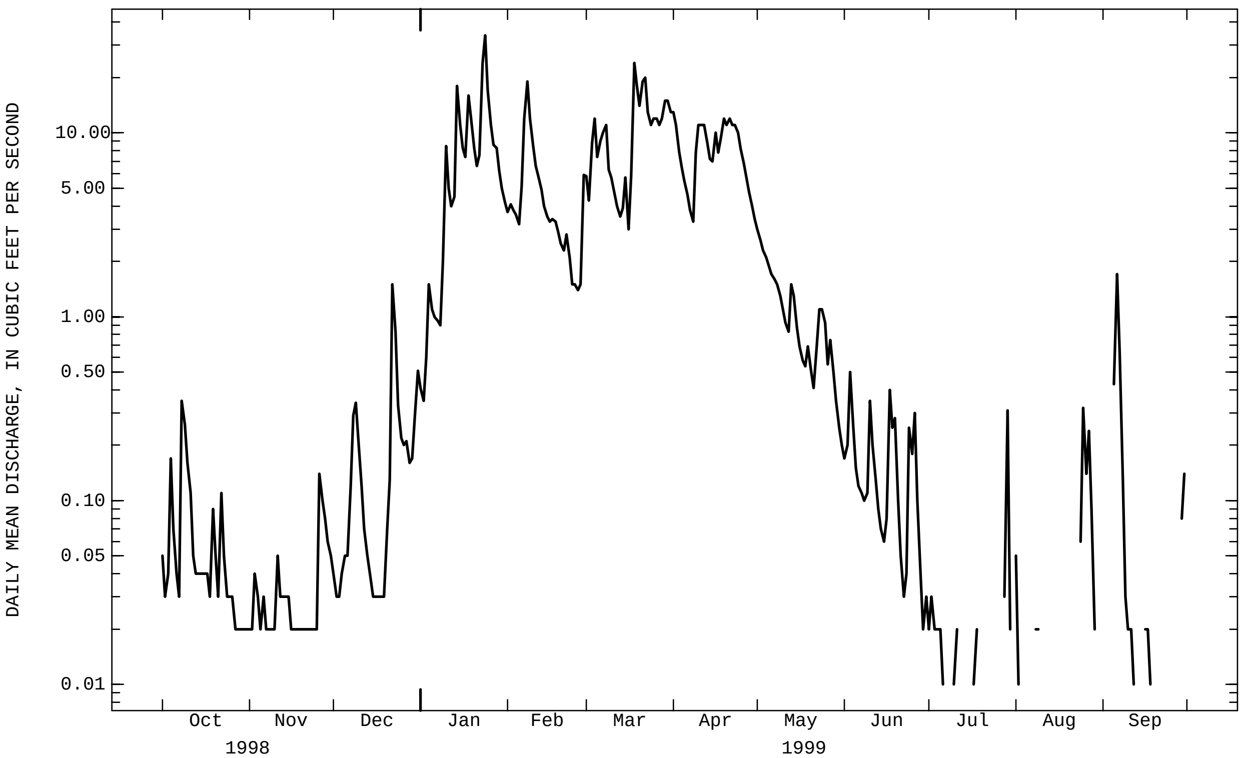
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1987 - 1999, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1.31	3.45	5.51	7.31	7.31	9.54	6.45	6.11	2.09	2.46	1.79	1.46
MAX	4.57	10.2	10.0	11.5	14.7	17.6	11.3	13.9	5.29	8.23	9.26	9.25
(WY)	1990	1987	1991	1990	1994	1994	1987	1996	1989	1996	1996	1996
MIN	.060	.035	.20	4.05	1.27	3.34	1.27	1.11	.16	.018	.031	.064
(WY)	1995	1999	1999	1992	1993	1990	1995	1999	1999	1999	1999	1998

01594950 MCMILLAN FORK NEAR FORT PENDLETON, MD--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1987 - 1999	
ANNUAL TOTAL	1467.44		998.00			
ANNUAL MEAN	4.02		2.73		4.56	
HIGHEST ANNUAL MEAN					7.49	1996
LOWEST ANNUAL MEAN					2.73	1999
HIGHEST DAILY MEAN	44	Apr 19	34	Jan 24	110	May 26 1990
LOWEST DAILY MEAN	.02	(a)	.00	(b)	.00	(b)
ANNUAL SEVEN-DAY MINIMUM	.02	Oct 27	.00	Aug 10	.00	Aug 10 1999
INSTANTANEOUS PEAK FLOW			51	Jan 23	340	Feb 9 1994
INSTANTANEOUS PEAK STAGE			2.82	Jan 10	7.23	Feb 9 1994
INSTANTANEOUS LOW FLOW			.00	(c)	.00	(c)
ANNUAL RUNOFF (CFSM)	1.75		1.19		1.98	
ANNUAL RUNOFF (INCHES)	23.73		16.14		26.91	
10 PERCENT EXCEEDS	11		11		11	
50 PERCENT EXCEEDS	1.3		.17		2.8	
90 PERCENT EXCEEDS	.03		.00		.11	

a Oct. 27-31, Nov. 1, 2, 5, 7-10, 16-25.
b Jul 7-9, 12-16, 19-24, 26, 27, 31, Aug. 3-7, 10-23, 30, 31, Sep 1-4, 13-15, 19, 20, 22-28, 1999.
c Jul 7-10, 12-28, 31, Aug 1-24, 30, 31, Sep 1-4, 13-16, 19-29, 1999.



DAILY MEAN DISCHARGE - 1999 WATER YEAR

01595000 NORTH BRANCH POTOMAC RIVER AT STEYER, MD

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

DRAINAGE AREA.--73.1 mi^2.

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

REVISED RECORDS.--WDR MD-DE-98-1: Drainage area.

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

REMARKS.--Records fair except those for estimated daily discharges (ice effect, instrument malfunction), which are poor. Several measurements of water temperature were made during the year. Water-quality records for some prior periods have been collected at this location.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Oct. 15, 1954, reached a stage of 13.0 ft, from floodmarks; discharge, 11,300 ft^3/s, from rating curve extended above 3,000 ft^3/s on basis of slope-area measurement at gage height of 10.30 ft.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,200 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jan 9	----	ICE JAM	*5.21	No peak greater than base discharge.			
Mar 21	2200	*1,010	4.51				

Minimum discharge, 2.7 ft^3/s, Aug 18.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	31	19	37	42	138	248	418	118	47	29	30	e15
2	34	22	35	30	173	183	375	115	50	27	26	e20
3	21	35	38	e50	158	323	285	105	45	24	13	e16
4	27	35	35	e80	145	469	256	102	42	14	9.6	e13
5	33	40	27	e70	145	305	249	93	26	14	12	68
6	23	36	24	e64	185	326	201	86	26	23	10	135
7	16	34	33	e60	374	443	172	87	44	27	8.9	e95
8	42	35	57	e58	665	290	152	95	37	25	14	e40
9	62	38	90	e275	384	253	293	85	37	15	25	e26
10	38	32	67	277	286	238	434	76	33	13	15	24
11	31	25	60	185	232	192	430	73	34	14	9.1	16
12	34	31	41	150	206	171	485	67	22	14	9.0	15
13	36	26	35	294	183	159	364	76	22	13	25	13
14	31	25	42	492	163	154	281	91	34	9.3	18	12
15	30	27	45	552	142	155	264	72	36	13	12	e10
16	30	27	43	337	137	133	388	68	25	8.9	12	13
17	23	36	43	283	150	213	293	63	39	8.0	5.2	e15
18	17	35	43	494	145	771	321	57	37	15	3.2	e12
19	23	35	31	436	133	646	370	68	21	15	5.7	12
20	25	36	28	294	120	475	359	60	22	14	5.2	12
21	21	36	58	264	113	590	398	54	16	12	4.8	23
22	26	37	103	308	107	680	380	62	31	16	7.0	e23
23	26	35	e65	586	97	425	339	117	33	18	7.7	e22
24	25	36	e50	929	97	396	350	98	29	24	7.5	e20
25	24	34	e40	508	96	456	261	99	27	25	13	e18
26	24	25	e43	341	94	419	210	77	19	19	28	e15
27	26	31	e48	283	98	378	199	63	14	28	33	e11
28	38	25	e45	266	228	360	174	56	26	33	35	7.9
29	36	25	e43	222	---	436	145	36	31	81	20	8.5
30	32	31	41	173	---	453	131	35	28	48	20	31
31	21	---	38	150	---	405	---	33	---	34	7.2	---
TOTAL	906	944	1428	8553	5194	11145	8977	2387	933	673.2	451.1	761.4
MEAN	29.2	31.5	46.1	276	186	360	299	77.0	31.1	21.7	14.6	25.4
MAX	62	40	103	929	665	771	485	118	50	81	35	135
MIN	16	19	24	30	94	133	131	33	14	8.0	3.2	7.9
CFSM	.40	.43	.63	3.77	2.54	4.92	4.09	1.05	.43	.30	.20	.35
IN.	.46	.48	.73	4.35	2.64	5.67	4.57	1.21	.47	.34	.23	.39

e Estimated

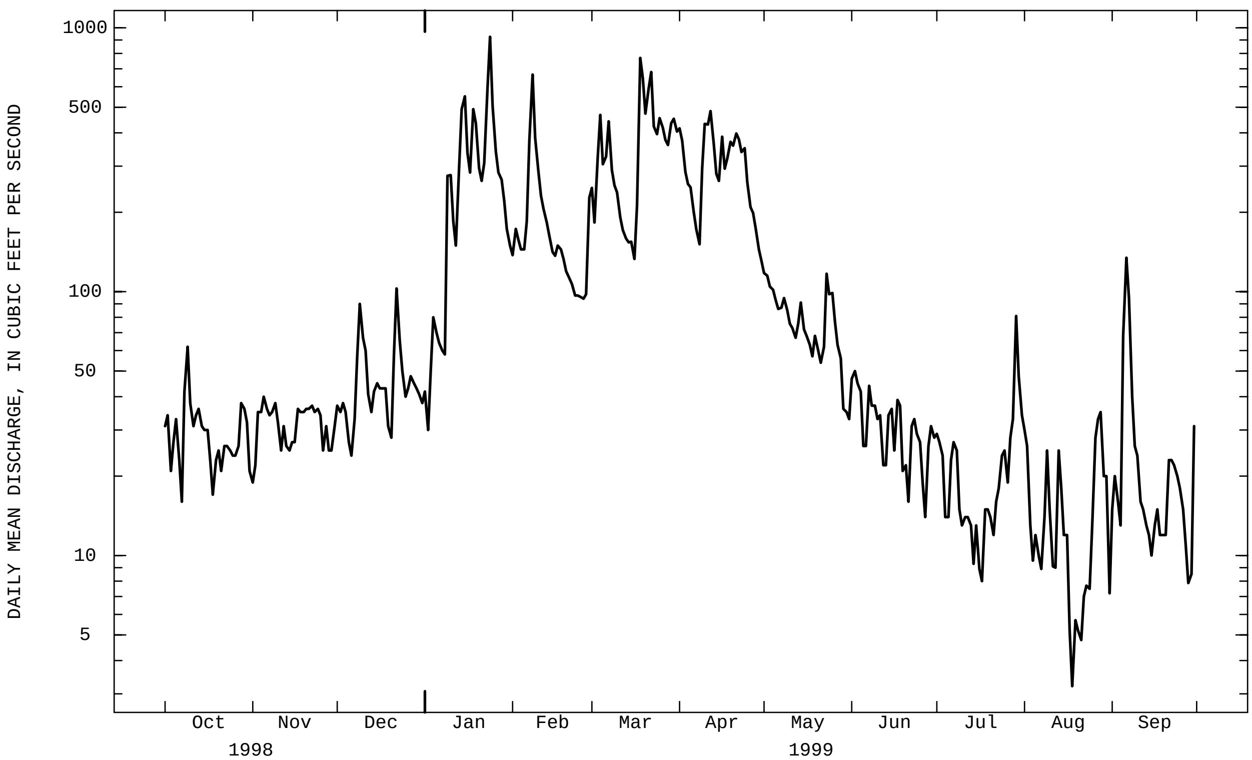
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1956 - 1999, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	71.6	138	226	240	263	345	276	199	118	91.5	77.8	54.8
MAX	316	588	527	569	604	885	573	540	442	340	355	340
(WY)	1977	1986	1973	1974	1994	1963	1958	1996	1981	1978	1996	1996
MIN	12.8	26.2	46.1	41.8	65.9	112	78.2	62.5	15.5	14.3	6.72	5.99
(WY)	1964	1966	1999	1977	1993	1990	1995	1965	1965	1965	1965	1959

01595000 NORTH BRANCH POTOMAC RIVER AT STEYER, MD--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1956 - 1999	
ANNUAL TOTAL	61899		42352.7			
ANNUAL MEAN	170		116		174	
HIGHEST ANNUAL MEAN					297	1996
LOWEST ANNUAL MEAN					115	1959
HIGHEST DAILY MEAN	1160	Apr 19	929	Jan 24	4530	Feb 9 1994
LOWEST DAILY MEAN	15	Sep 28	3.2	Aug 18	3.1	Sep 9 1965
ANNUAL SEVEN-DAY MINIMUM	23	Oct 17	5.5	Aug 17	3.6	Sep 23 1959
INSTANTANEOUS PEAK FLOW			1010	Mar 21	(a)11500	Nov 5 1985
INSTANTANEOUS PEAK STAGE			(b)5.21	Jan 9	13.14	Nov 5 1985
INSTANTANEOUS LOW FLOW			2.7	Aug 18	2.7	Aug 18 1999
ANNUAL RUNOFF (CFSM)	2.32		1.59		2.38	
ANNUAL RUNOFF (INCHES)	31.50		21.55		32.37	
10 PERCENT EXCEEDS	387		359		386	
50 PERCENT EXCEEDS	91		38		105	
90 PERCENT EXCEEDS	27		13		21	

a From rating curve extended above 3,000 ft^3/s on basis of slope-area measurement at gage height of 10.30 ft.
b Backwater from ice.



DAILY MEAN DISCHARGE - 1999 WATER YEAR

01595200 STONY RIVER NEAR MOUNT STORM, WV

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

DRAINAGE AREA.--48.7 mi^2.

WATER-DISCHARGE RECORDS

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

REVISED RECORDS.--OFR 95-292: Drainage area.

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

REMARKS.--No estimated daily discharges. Water-discharge records good. Prior to June 1987, flow regulated by Stony River Reservoir, 14.0 mi upstream from station. Regulation since 1963 by Virginia Electric and Power Company dam (Mount Storm Lake), 4.0 mi upstream from station.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,310 ft^3/s, Mar 15, gage height, 6.07 ft; minimum discharge, 1.9 ft^3/s, Aug 23, 24.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17	5.9	7.5	9.0	31	38	649	61	28	9.7	3.6	2.2
2	16	5.3	7.3	9.0	40	42	350	54	30	10	3.8	4.1
3	14	5.5	7.8	8.8	39	83	230	50	30	6.6	5.6	4.2
4	12	6.0	8.1	9.3	36	170	249	49	26	5.3	5.2	4.5
5	12	6.0	8.4	11	36	233	245	47	20	4.9	2.8	61
6	11	5.7	8.5	11	30	149	210	47	18	5.2	2.4	87
7	11	5.5	8.1	11	56	106	173	43	18	7.6	2.3	44
8	11	5.1	7.9	11	134	78	50	43	19	7.9	2.6	19
9	13	5.0	7.8	39	164	78	107	49	18	6.8	4.2	15
10	13	4.7	7.8	89	265	83	186	74	16	5.7	2.9	12
11	12	5.0	7.8	91	231	80	209	86	12	5.0	2.6	7.3
12	10	4.7	8.1	72	202	82	272	77	10	4.9	2.4	5.8
13	9.8	4.8	8.4	95	156	111	228	73	9.3	6.6	3.7	5.8
14	9.6	4.8	8.3	98	133	165	198	71	9.0	4.8	3.3	12
15	9.5	4.6	8.1	65	109	455	193	57	12	4.6	2.4	10
16	9.1	4.4	8.1	42	32	33	236	49	12	4.3	2.3	13
17	8.6	4.3	8.5	40	33	46	202	45	11	4.2	2.9	12
18	7.9	4.3	8.6	93	32	185	193	44	8.2	4.9	3.7	6.8
19	7.4	4.4	8.4	73	29	139	195	43	6.9	4.5	3.7	5.7
20	7.6	4.5	8.3	45	27	105	189	37	6.8	4.3	3.6	5.3
21	8.3	4.5	8.1	48	25	166	119	33	6.3	6.7	2.7	5.3
22	8.3	4.5	8.1	85	26	227	128	33	5.8	7.4	2.1	5.0
23	7.8	4.5	8.2	162	31	325	131	48	6.4	7.9	2.0	6.9
24	7.2	5.2	9.1	202	24	132	184	45	6.8	6.0	2.0	7.4
25	6.8	7.1	9.3	98	24	256	168	41	5.5	5.7	3.8	5.2
26	6.5	8.3	9.3	66	24	320	92	34	5.9	6.1	5.4	4.6
27	6.1	8.3	9.2	57	25	382	87	31	5.3	8.5	5.5	4.6
28	5.8	8.0	9.0	58	34	120	85	30	5.4	9.2	4.7	5.1
29	6.1	7.8	9.0	50	---	143	82	25	8.1	23	2.9	5.1
30	6.4	7.2	9.0	35	---	152	73	25	9.7	8.1	2.4	10
31	6.2	---	9.0	30	---	222	---	26	---	4.3	2.3	---
TOTAL	297.0	165.9	259.1	1813.1	2028	4906	5713	1470	385.4	210.7	101.8	395.9
MEAN	9.58	5.53	8.36	58.5	72.4	158	190	47.4	12.8	6.80	3.28	13.2
MAX	17	8.3	9.3	202	265	455	649	86	30	23	5.6	87
MIN	5.8	4.3	7.3	8.8	24	33	50	25	5.3	4.2	2.0	2.2

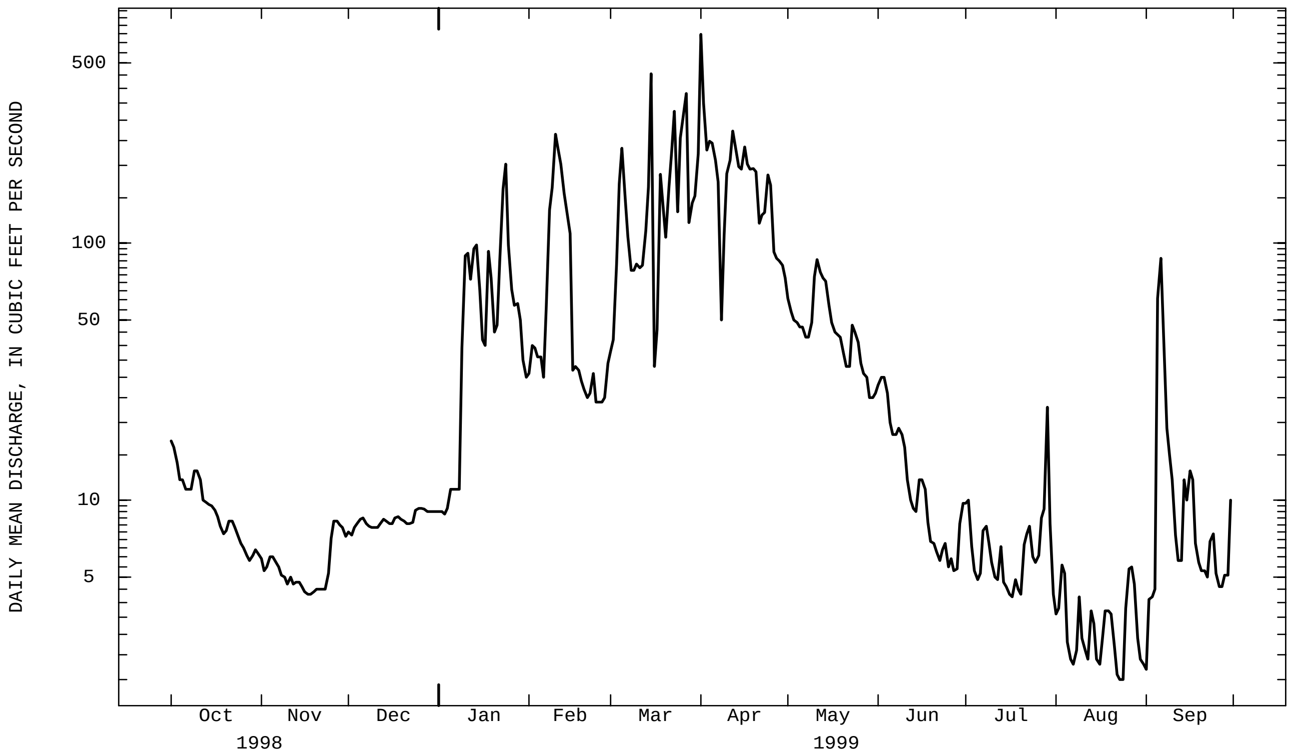
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1962 - 1999, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	47.2	87.4	109	119	142	222	156	120	70.1	46.7	34.1	35.3
MAX	234	669	301	267	361	537	371	271	237	205	200	314
(WY)	1977	1986	1973	1996	1994	1963	1987	1988	1981	1978	1996	1996
MIN	3.36	5.53	8.36	20.9	21.3	46.9	51.8	28.3	9.91	4.36	3.28	3.89
(WY)	1992	1999	1999	1981	1978	1990	1995	1964	1964	1968	1999	1985

01595200 STONY RIVER NEAR MOUNT STORM, WV--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1962 - 1999	
ANNUAL TOTAL	37151.9		17745.9			
ANNUAL MEAN	102		48.6		(a)98.9	
HIGHEST ANNUAL MEAN					166	1996
LOWEST ANNUAL MEAN					42.0	1964
HIGHEST DAILY MEAN	866	Apr 20	649	Apr 1	9880	Nov 5 1985
LOWEST DAILY MEAN	4.3	(b)	2.0	(c)	1.3	Aug 28 1988
ANNUAL SEVEN-DAY MINIMUM	4.4	Nov 16	2.8	Aug 6	1.7	Aug 28 1988
INSTANTANEOUS PEAK FLOW			1310	Mar 15	(d)14000	Nov 5 1985
INSTANTANEOUS PEAK STAGE			6.07	Mar 15	(f)16.41	Nov 5 1985
INSTANTANEOUS LOW FLOW			1.9	(c)	1.3	(g)
10 PERCENT EXCEEDS	272		164		232	
50 PERCENT EXCEEDS	41		10		48	
90 PERCENT EXCEEDS	6.3		4.4		8.2	

a Unadjusted
b Nov. 17, 18.
c Aug. 23, 24.
d From rating curve extended above 7,500 ft^3/s on basis of slope-area measurement of peak flow.
f From floodmarks.
g Aug. 22, 23, 28, 29, 1988.



DAILY MEAN DISCHARGE - 1999 WATER YEAR

01595200 STONY RIVER NEAR MOUNT STORM, WV--Continued

WATER-QUALITY RECORDS

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

PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: December 1961 to March 1974, September 1974 to September 1995, October 1996 to current year.

INSTRUMENTATION.--Temperature recorder (continuous ethyl alcohol-actuated thermograph) since December 1961.

REMARKS.--Upstream reservoir regulation defined on the discharge manuscript. No temperature record Oct. 2 to Nov. 19, due to equipment malfunction.

EXTREMES FOR PERIOD OF DAILY RECORD--
WATER TEMPERATURE: Maximum, 27.5°C, Aug. 14, 1984, July 19, 1990; minimum, -0.5°C, Jan. 16-20, 1999.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURE: Maximum, 25.5°C, Aug. 12; minimum, -0.5°C, Jan. 16-20.

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

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

01595200 STONY RIVER NEAR MOUNT STORM, WV--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

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

01596500 SAVAGE RIVER NEAR BARTON, MD

LOCATION.--Lat 39°34'05", long 79°06'10", Garrett County, Hydrologic Unit 02070002, on right bank 0.9 mi upstream from Bear Pen Run, 1.5 mi downstream from Poplar Lick Run, 5.4 mi northwest of Barton, and 10 mi upstream from mouth.

DRAINAGE AREA.--49.1 mi^2.

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

GAGE.--Water-stage recorder and concrete control. Datum of gage is 1,603.88 ft above sea level.

REMARKS.--Records good except those for estimated daily discharges (ice effect and periods of lagging intake), which are fair. U.S. Army Corps of Engineers satellite telemeter at station. Several measurements of water temperature were made during the year. Water-quality records for some prior periods have been collected at this location.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 800 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jan 24	0900	*819	*3.35	No other peak greater than base discharge.			

Minimum discharge, 0.90 ft^3/s, Sep 4.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.1	2.5	2.3	2.2	58	51	169	51	20	4.3	e1.5	e1.2
2	2.6	2.5	2.3	2.1	67	47	150	45	22	4.3	e1.5	1.1
3	2.4	2.4	2.2	e2.5	68	64	116	41	24	4.2	e1.4	1.0
4	4.7	2.3	2.2	e3.0	62	140	103	37	18	3.5	e1.3	.94
5	5.9	2.3	2.0	e2.8	58	133	105	34	15	3.0	e1.2	3.0
6	5.1	2.3	2.0	e2.3	54	115	93	32	13	2.9	e1.2	16
7	4.0	2.2	2.0	1.9	61	111	86	36	12	2.2	e1.3	21
8	5.4	2.2	2.1	1.9	195	96	77	60	11	1.8	e1.4	8.7
9	11	2.2	2.7	1.9	180	92	391	49	11	1.6	e1.9	6.6
10	7.7	2.2	3.0	e6.0	134	87	612	42	10	1.5	e1.6	5.3
11	5.9	2.2	3.0	e10	100	78	573	39	9.4	1.7	e1.4	3.9
12	4.7	2.2	2.9	e8.0	84	63	606	35	8.9	1.8	e1.3	2.9
13	4.0	2.2	2.8	e15	69	55	402	36	8.5	1.7	e1.2	2.4
14	3.4	2.2	2.6	e40	54	50	239	56	8.1	1.5	e1.2	2.1
15	3.1	2.2	2.5	e25	50	52	177	43	7.6	1.5	e1.1	2.0
16	2.9	2.2	2.5	e20	44	48	160	37	7.6	1.4	e1.1	1.9
17	2.7	2.4	2.3	e20	41	82	130	34	11	1.3	e1.1	2.6
18	2.6	2.4	2.3	e70	38	427	118	32	13	1.5	e1.0	3.0
19	2.7	2.3	2.3	e60	34	499	108	32	10	1.5	e1.0	2.7
20	2.7	2.2	2.2	e52	31	293	111	29	6.6	1.4	e1.0	2.3
21	2.7	2.2	2.3	49	27	286	118	25	5.8	1.3	e1.0	2.2
22	2.9	2.2	2.4	48	52	437	123	30	5.7	1.3	e1.0	2.0
23	3.5	2.2	2.5	279	74	286	184	66	5.0	1.3	e1.0	1.8
24	3.3	2.2	2.4	726	47	208	322	58	4.4	1.2	e1.4	1.6
25	3.0	2.2	2.3	332	30	200	226	54	4.2	1.6	e2.4	1.4
26	2.8	2.2	2.3	172	24	197	162	46	4.0	1.8	4.9	1.3
27	2.7	2.4	2.3	119	22	178	122	39	3.6	1.6	4.5	1.2
28	2.6	2.5	2.3	149	37	166	93	34	3.4	4.5	e2.2	1.3
29	2.5	2.5	2.2	152	---	188	74	29	4.2	14	e1.7	1.6
30	2.5	2.4	2.2	101	---	212	60	24	4.3	e6.0	e1.5	1.9
31	2.5	---	2.2	72	---	183	---	22	---	e1.3	e1.3	---
TOTAL	117.6	68.6	73.6	2545.6	1795	5124	6010	1227	291.3	80.5	48.6	106.94
MEAN	3.79	2.29	2.37	82.1	64.1	165	200	39.6	9.71	2.60	1.57	3.56
MAX	11	2.5	3.0	726	195	499	612	66	24	14	4.9	21
MIN	2.4	2.2	2.0	1.9	22	47	60	22	3.4	1.2	1.0	.94
CFSM	.08	.05	.05	1.67	1.31	3.37	4.08	.81	.20	.05	.03	.07
IN.	.09	.05	.06	1.93	1.36	3.88	4.55	.93	.22	.06	.04	.08

e Estimated

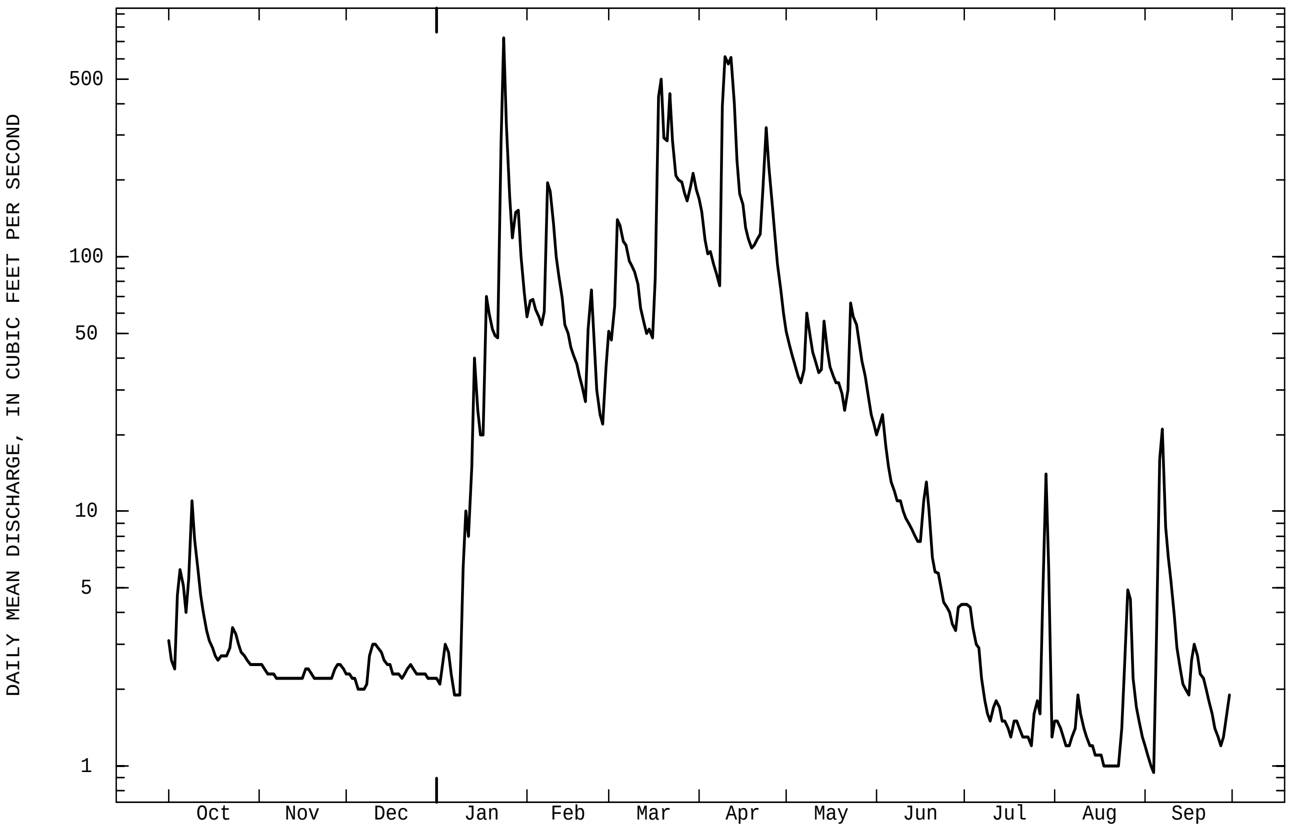
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1948 - 1999, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	26.9	52.3	90.3	97.1	128	183	142	94.1	46.7	20.5	17.5	18.6
MAX	157	336	256	251	307	362	343	235	154	111	116	233
(WY)	1955	1986	1973	1952	1956	1994	1993	1996	1981	1989	1956	1996
MIN	1.52	2.29	2.37	13.7	19.4	30.8	33.0	21.8	5.48	2.60	1.57	1.78
(WY)	1964	1999	1999	1977	1954	1990	1968	1991	1965	1999	1999	1991

01596500 SAVAGE RIVER NEAR BARTON, MD--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1948 - 1999	
ANNUAL TOTAL	31046.4		17488.74			
ANNUAL MEAN	85.1		47.9		76.2	
HIGHEST ANNUAL MEAN					138	1996
LOWEST ANNUAL MEAN					34.9	1954
HIGHEST DAILY MEAN	1010	Feb 18	726	Jan 24	2180	Nov 5 1985
LOWEST DAILY MEAN	2.0	Dec 5	.94	Sep 4	.50	(a)
ANNUAL SEVEN-DAY MINIMUM	2.1	Dec 2	1.0	Aug 17	.63	Aug 29 1966
INSTANTANEOUS PEAK FLOW			819	Jan 24	(b)7510	Oct 15 1954
INSTANTANEOUS PEAK STAGE			3.35	Jan 24	8.45	Oct 15 1954
INSTANTANEOUS LOW FLOW			.90	Sep 4	.40	(c)
ANNUAL RUNOFF (CFSM)	1.73		.98		1.55	
ANNUAL RUNOFF (INCHES)	23.52		13.25		21.09	
10 PERCENT EXCEEDS	218		144		188	
50 PERCENT EXCEEDS	22		4.5		34	
90 PERCENT EXCEEDS	2.3		1.4		3.8	

a Sept. 2, 3, 12, 1966.
b From rating curve extended above 1,600 ft^3/s on basis of slope-area measurement of peak flow.
c Sept. 3, 4, 1966.



01597500 SAVAGE RIVER, BELOW SAVAGE RIVER DAM, NEAR BLOOMINGTON, MD

LOCATION.--Lat 39°30'05", long 79°07'25", Garrett County, Hydrologic Unit 02070002, on left bank 0.7 mi downstream from Savage River Dam, 1.1 mi downstream from Crabtree Creek, 3.2 mi northwest of Bloomington, and 3.7 mi up- stream from mouth.

DRAINAGE AREA.--106 mi^2.

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

REVISED RECORDS.--WSP 1432: 1955. WDR MD-DE-96-1: 1996(P).

GAGE.--Water-stage recorder and combination rock riffle and concrete control. Datum of gage is 1,276.40 ft above sea level.

REMARKS.--No estimated daily discharges. Records good. Diversions upstream from station by cities of Frostburg and Westernport for municipal supply. Flow regulated by Savage River Reservoir beginning December 1950, capacity 20,000 acre-ft. U.S. Army Corps of Engineers satellite telemeter at station. Upper Potomac River Commission gage-height telemeter at station. Several measurements of water temperature were made during the year. Water-quality records for some prior periods have been collected at this location.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,970 ft^3/s, Apr 10, gage height, 4.26 ft; minimum discharge, 3.8 ft^3/s, Dec 4.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	64	43	22	16	277	69	326	132	72	49	46	43
2	64	43	18	15	274	69	326	126	71	49	46	43
3	259	43	17	15	220	70	216	100	71	49	45	43
4	180	43	20	15	190	70	161	88	70	49	45	43
5	56	43	24	15	189	71	162	88	70	49	45	44
6	56	43	24	15	188	72	137	88	70	49	45	45
7	55	43	24	16	189	73	126	129	70	49	45	44
8	55	43	24	16	191	73	126	286	70	49	45	44
9	55	43	24	16	192	73	249	222	58	44	42	44
10	55	43	24	16	194	73	1570	168	57	42	41	44
11	55	43	24	16	194	73	1210	127	57	92	41	43
12	55	43	24	16	139	73	1350	113	57	112	42	43
13	55	43	24	16	109	74	997	112	57	76	44	43
14	47	43	24	24	109	74	607	122	57	54	44	43
15	43	43	24	28	109	74	399	115	57	47	44	43
16	43	36	24	28	91	74	347	104	52	58	44	43
17	43	31	24	28	81	101	271	83	50	62	44	43
18	44	31	24	29	80	123	246	74	50	51	43	43
19	44	31	24	35	80	307	230	75	50	47	43	43
20	44	31	24	38	80	407	230	74	49	47	43	43
21	44	31	24	39	80	411	247	73	49	47	43	43
22	44	30	24	39	73	704	275	73	49	47	43	43
23	43	30	24	41	69	859	443	74	49	47	43	43
24	43	30	24	88	69	795	1030	112	49	47	44	43
25	43	30	24	440	69	555	661	129	49	47	44	43
26	43	30	23	401	69	432	407	108	49	47	44	43
27	43	30	23	278	68	403	280	99	49	47	44	43
28	43	30	23	280	69	403	217	81	49	47	44	43
29	43	30	23	281	---	404	171	72	49	47	43	43
30	43	28	21	278	---	405	149	72	49	46	43	43
31	43	---	16	278	---	354	---	72	---	46	43	---
TOTAL	1847	1104	710	2856	3742	7818	13166	3391	1705	1639	1355	1297
MEAN	59.6	36.8	22.9	92.1	134	252	439	109	56.8	52.9	43.7	43.2
MAX	259	43	24	440	277	859	1570	286	72	112	46	45
MIN	43	28	16	15	68	69	126	72	49	42	41	43
(†)	7200	5450	4560	9800	9780	18490	20000	19640	17320	14460	11950	9840

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1951 - 1999, BY WATER YEAR (WY)

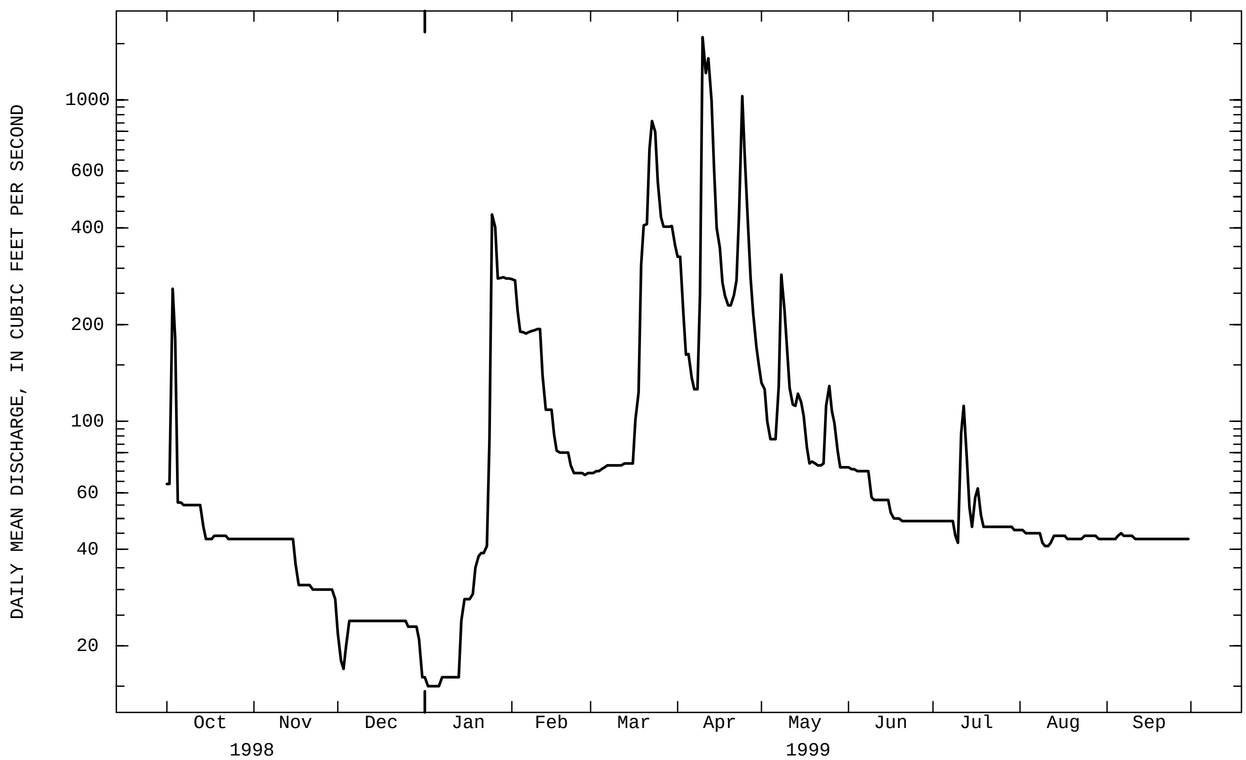
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	107	122	213	219	279	339	222	203	114	69.7	72.4	92.4
MAX	446	641	655	713	633	842	813	563	329	329	262	472
(WY)	1955	1986	1973	1952	1998	1994	1993	1996	1996	1990	1956	1996
MIN	8.14	8.88	12.7	23.7	38.7	105	11.9	18.0	15.8	23.4	6.37	11.7
(WY)	1952	1952	1954	1954	1954	1976	1954	1976	1977	1951	1951	1951

† Monthend contents, in acre-feet, in Savage River Reservoir (contents on Sept. 30, 1998, 10,380 acre-feet). Records furnished by U.S. Army Corps of Engineers.

01597500 SAVAGE RIVER, BELOW SAVAGE RIVER DAM, NEAR BLOOMINGTON, MD--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1951 - 1999	
ANNUAL TOTAL	71588		40630			
ANNUAL MEAN	196		111		171	
ANNUAL MEAN≠	187		110		171	
HIGHEST ANNUAL MEAN					300	1996
LOWEST ANNUAL MEAN					69.7	1954
HIGHEST DAILY MEAN	2030	Apr 20	1570	Apr 10	4320	Sep 7 1996
LOWEST DAILY MEAN	16	Dec 31	15	(a)	.60	(b)
ANNUAL SEVEN-DAY MINIMUM	21	Dec 1	15	Dec 31	.64	Aug 4 1951
INSTANTANEOUS PEAK FLOW			1970	Apr 10	9190	Sep 7 1996
INSTANTANEOUS PEAK STAGE			4.26	Apr 10	10.09	Sep 7 1996
INSTANTANEOUS LOW FLOW			3.8	Dec 4	.35	Oct 27 1966
ANNUAL RUNOFF (CFSM)	1.85		1.05		1.61	
ANNUAL RUNOFF (INCHES)	25.12		14.26		21.87	
10 PERCENT EXCEEDS	542		276		419	
50 PERCENT EXCEEDS	80		49		84	
90 PERCENT EXCEEDS	30		24		23	

≠ Adjusted for change in reservoir contents since December 1950.
a Jan. 2-6.
b July 27-31, Aug. 5, 6, 9, 10, 1951.



DAILY MEAN DISCHARGE - 1999 WATER YEAR

01598500 NORTH BRANCH POTOMAC RIVER AT LUKE, MD

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

DRAINAGE AREA.--406 mi^2.

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

REVISED RECORDS.--WSP 192: 1899-1904. WSP 1432: 1905-6, drainage area at former site. OFR 95-292: Drainage area.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 944.22 ft above sea level. June 27, 1899, to July 15, 1906, nonrecording gage at bridge 1.1 mi downstream at datum about 35 ft lower.

REMARKS.--No estimated daily discharges. Records good. Flow regulated prior to July 1981 by Stony River Reservoir 45 mi upstream from station, since December 1950 by Savage River Reservoir, 5 mi upstream from station (see station 01597500), and since July 1981 by Jennings Randolph Lake, 9 mi upstream from station. Some regulation at low flow by West Virginia Pulp and Paper Company at site used 1899-1906. U.S. Army Corps of Engineers satellite telemeter at station. Upper Potomac River Commission gage height telemeter at station. Several measurements of water temperature were made during the year. Water-quality records for some prior periods have been collected at this location.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,550 ft^3/s, Apr 11, gage height, 6.39 ft; minimum discharge, 109 ft^3/s, Jan 1, 2.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	292	248	133	113	853	364	1270	781	273	193	170	163
2	290	248	133	113	855	358	1270	757	276	193	169	163
3	947	237	131	119	749	370	1040	519	272	193	168	163
4	975	218	119	114	655	396	834	465	269	192	167	165
5	282	218	124	113	650	382	834	432	268	192	165	172
6	281	300	124	135	649	392	751	430	266	193	165	196
7	279	302	124	116	665	400	614	469	265	193	165	178
8	283	211	126	116	799	388	610	694	269	193	166	168
9	280	212	124	116	813	391	978	603	247	178	164	168
10	277	211	123	117	802	387	2900	523	233	160	160	167
11	277	210	123	115	795	381	3040	476	234	445	257	165
12	275	208	124	116	687	380	3390	458	234	698	384	165
13	273	208	124	123	581	379	2760	462	234	543	384	165
14	265	209	124	181	576	386	1850	470	234	369	342	165
15	258	212	124	235	573	437	1590	713	239	288	342	165
16	261	193	122	231	517	548	1710	696	216	366	328	169
17	266	168	120	233	471	920	1540	392	198	459	261	167
18	264	168	120	249	469	1410	1330	357	196	369	184	629
19	263	168	120	279	440	1510	1300	358	196	287	175	647
20	262	167	120	350	383	1570	1430	352	196	283	164	168
21	262	165	120	357	356	1610	1450	325	196	243	163	163
22	263	168	122	359	348	1820	1470	309	196	200	163	162
23	262	173	120	445	343	2020	1640	309	196	198	163	160
24	262	173	120	583	342	2120	1980	330	196	202	166	160
25	262	173	120	992	342	1970	1600	341	195	198	173	160
26	262	174	119	1190	342	1870	1200	321	193	195	170	160
27	261	173	120	927	343	1840	886	309	193	184	168	161
28	385	173	121	902	361	1680	795	290	193	167	166	161
29	525	172	122	880	---	1560	726	578	194	169	164	163
30	248	154	120	865	---	1560	657	579	193	163	163	164
31	248	---	114	856	---	1400	---	276	---	165	163	---
TOTAL	10090	6014	3800	11640	15759	31199	43445	14374	6760	8071	6302	5922
MEAN	325	200	123	375	563	1006	1448	464	225	260	203	197
MAX	975	302	133	1190	855	2120	3390	781	276	698	384	647
MIN	248	154	114	113	342	358	610	276	193	160	160	160
CFSM	.80	.49	.30	.92	1.39	2.48	3.57	1.14	.56	.64	.50	.49
IN.	.92	.55	.35	1.07	1.44	2.86	3.98	1.32	.62	.74	.58	.54

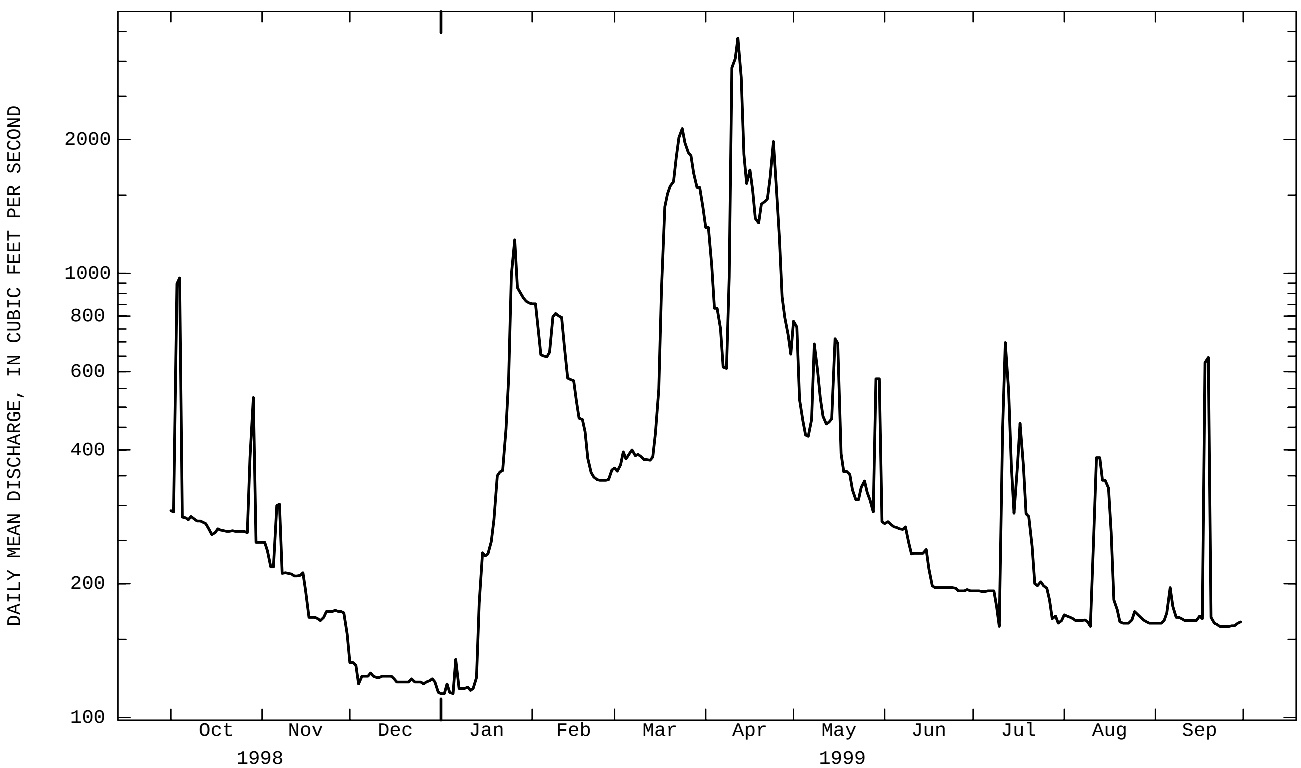
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1899 - 1906, 1950 - 1999, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	335	457	821	921	1094	1562	1205	903	532	342	319	284
MAX	1423	2806	2536	2368	2487	3414	3098	2484	1493	1294	1525	1998
(WY)	1955	1986	1973	1996	1994	1963	1993	1996	1981	1990	1996	1996
MIN	27.6	33.5	123	166	99.8	467	278	165	108	91.4	37.0	17.1
(WY)	1905	1905	1999	1977	1905	1988	1995	1982	1969	1953	1904	1904

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

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1899 - 1906 1950 - 1999	
ANNUAL TOTAL	288952		163376			
ANNUAL MEAN	792		448		732	
ANNUAL MEAN≠	751		427		733	
HIGHEST ANNUAL MEAN					1342	1996
LOWEST ANNUAL MEAN					412	1969
HIGHEST DAILY MEAN	7220	Apr 20	3390	Apr 12	18400	Aug 18 1955
LOWEST DAILY MEAN	114	Dec 31	113	(a)	6.0	Sep 4 1904
ANNUAL SEVEN-DAY MINIMUM	119	Dec 25	115	Dec 30	11	Aug 29 1904
INSTANTANEOUS PEAK FLOW			3550	Apr 11	(b)39400	Oct 15 1954
INSTANTANEOUS PEAK STAGE			6.39	Apr 11	17.15	Oct 15 1954
INSTANTANEOUS LOW FLOW			109	(c)	UNKNOWN	
ANNUAL RUNOFF (CFSM)	1.95		1.10		1.80	
ANNUAL RUNOFF (CFSM)≠	1.85		1.05		1.81	
ANNUAL RUNOFF (INCHES)	26.48		14.97		24.49	
ANNUAL RUNOFF (INCHES)≠	25.12		14.29		24.52	
10 PERCENT EXCEEDS	1780		984		1640	
50 PERCENT EXCEEDS	408		262		410	
90 PERCENT EXCEEDS	168		124		111	

≠ Adjusted for change in reservoir contents since October 1949.
a Jan. 1, 2, 5.
b From rating curve extended above 25,000 ft^3/s on basis of slope-area measurement of peak flow.
c Jan. 1, 2.



DAILY MEAN DISCHARGE - 1999 WATER YEAR

01599000 GEORGES CREEK AT FRANKLIN, MD

LOCATION.--Lat 39°29'38", long 79°02'42", Allegany County, Hydrologic Unit 02070002, on right bank at Franklin, and 1.2 mi upstream from Westernport and mouth.

DRAINAGE AREA.--72.4 mi^2.

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

REVISED RECORDS.--WSP 726: Drainage area. WSP 1502: 1940. WDR MD-DE-86-1: 1984(M).

GAGE.--Water-stage recorder. Datum of gage is 958.18 ft above sea level. May 4, 1905, to July 15, 1906, nonrecording gage at bridge 0.8 mi downstream at different datum. Oct. 16, 1929, to Oct. 1, 1937, water-stage recorder at site 95 ft downstream at present datum.

REMARKS.--Records good. Records include about 0.5 ft^3/s of sewage from city of Frostburg, which obtains its water supply from Big Piney Run (Monongahela River basin) and Savage River. A negligible discharge is diverted upstream from station by Frostburg Water Co. for municipal supplies of Eckhart and Welsh Hill. An undetermined amount of water is diverted from the upper third of basin into the Wills Creek basin by the Hoffman drainage tunnel (see station 01601500). National Weather Service gage height telemeter at station. Several measurements of water temperature were made during the year. Water-quality records for some prior periods have been collected at this location.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Mar. 29, 1924, reached a stage of about 10 ft, from floodmarks, at site 95 ft downstream.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,200 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Apr 9	1845	*931	*5.81	No peak greater than base discharge.			

Minimum discharge, 4.1 ft^3/s, Aug 19.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.8	7.4	6.7	e6.3	40	46	110	81	26	10	7.9	4.9
2	8.0	7.5	6.9	e5.9	49	38	103	74	49	11	7.9	4.8
3	8.1	7.5	6.8	7.4	57	37	88	69	54	9.8	6.6	4.7
4	11	7.6	7.0	7.8	51	71	90	67	34	8.8	6.0	5.3
5	10	7.4	7.1	e7.3	45	56	105	65	27	8.2	5.7	14
6	10	7.6	7.0	e7.0	39	62	87	63	24	7.7	5.6	23
7	11	7.4	7.1	6.9	40	70	78	119	22	7.5	5.4	18
8	14	7.3	9.0	7.2	119	56	73	218	19	6.9	6.1	9.0
9	12	7.5	10	8.1	79	52	492	110	18	6.8	6.2	6.9
10	10	7.6	8.1	e9.0	65	56	561	90	17	7.4	5.5	6.2
11	9.3	7.3	7.6	e9.8	58	51	663	77	16	7.2	5.2	5.5
12	8.9	7.2	7.3	11	54	47	621	70	16	6.9	4.8	5.3
13	8.7	7.4	7.3	17	49	44	414	74	15	7.0	4.6	5.2
14	8.4	7.4	7.4	26	42	46	288	89	15	7.3	4.7	5.2
15	8.1	7.4	7.2	17	35	49	251	66	15	7.0	4.6	5.2
16	7.8	7.3	7.1	15	33	52	240	59	14	6.4	4.7	8.6
17	7.8	7.3	7.3	15	31	114	176	55	19	6.1	4.4	7.0
18	7.7	7.2	7.4	32	29	497	149	52	17	6.5	4.3	5.5
19	7.8	6.7	7.4	36	26	412	133	54	14	7.9	4.2	5.3
20	7.5	6.9	7.6	24	24	275	132	48	14	6.3	4.2	5.6
21	7.5	6.7	7.6	23	22	392	129	42	14	5.9	4.3	6.2
22	8.3	6.6	8.0	24	18	461	125	60	14	5.8	4.3	5.6
23	8.1	6.7	7.3	144	17	308	192	85	12	5.6	4.3	5.3
24	7.8	6.5	7.1	354	17	250	225	70	12	7.5	6.2	5.0
25	7.9	6.7	e6.9	141	16	245	170	60	11	8.1	15	4.9
26	7.9	7.2	6.7	82	16	205	148	51	11	5.8	14	4.7
27	7.9	6.9	6.7	64	15	173	129	46	10	5.5	7.6	5.0
28	7.7	6.8	7.3	83	27	155	113	40	12	12	6.5	5.7
29	7.7	6.6	7.9	79	---	144	100	35	12	16	5.6	6.2
30	7.8	6.6	7.8	59	---	131	89	31	11	8.5	5.2	17
31	7.4	---	6.9	51	---	117	---	28	---	6.7	4.9	---
TOTAL	270.9	214.2	229.5	1379.7	1113	4712	6274	2148	564	240.1	186.5	220.8
MEAN	8.74	7.14	7.40	44.5	39.8	152	209	69.3	18.8	7.75	6.02	7.36
MAX	14	7.6	10	354	119	497	663	218	54	16	15	23
MIN	7.4	6.5	6.7	5.9	15	37	73	28	10	5.5	4.2	4.7
CFSM	.12	.10	.10	.61	.55	2.10	2.89	.96	.26	.11	.08	.10
IN.	.14	.11	.12	.71	.57	2.42	3.22	1.10	.29	.12	.10	.11

e Estimated

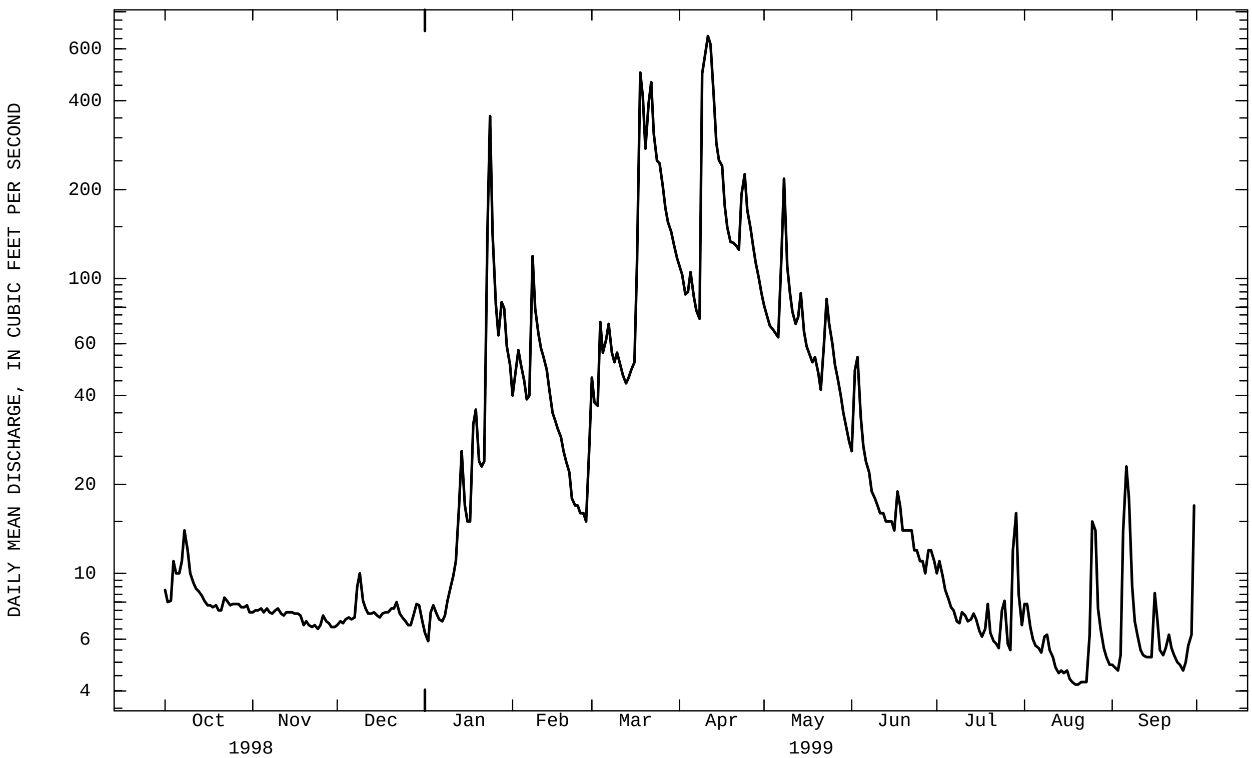
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1905 - 1906, 1930 - 1999, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	32.4	43.2	74.8	94.3	127	208	173	122	58.2	30.6	22.7	22.6
MAX	270	355	314	371	355	682	420	294	171	185	120	277
(WY)	1943	1986	1973	1937	1998	1936	1993	1989	1995	1989	1955	1996
MIN	1.78	3.40	3.42	10.9	8.77	43.2	40.0	27.7	12.5	5.19	3.97	2.65
(WY)	1931	1931	1944	1940	1954	1990	1954	1934	1969	1930	1930	1932

01599000 GEORGES CREEK AT FRANKLIN, MD--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1905 - 1906 1930 - 1999	
ANNUAL TOTAL	42276.3		17552.7			
ANNUAL MEAN	116		48.1		83.0	
HIGHEST ANNUAL MEAN					136	1996
LOWEST ANNUAL MEAN					30.7	1969
HIGHEST DAILY MEAN	1010	Feb 18	663	Apr 11	4130	Mar 17 1936
LOWEST DAILY MEAN	6.5	Nov 24	4.2	(a)	1.6	(b)
ANNUAL SEVEN-DAY MINIMUM	6.7	Nov 19	4.3	Aug 17	1.6	Sep 29 1930
INSTANTANEOUS PEAK FLOW			931	Apr 9	(c)8500	Mar 17 1936
INSTANTANEOUS PEAK STAGE			5.81	Apr 9	(d)9.60	Mar 17 1936
INSTANTANEOUS LOW FLOW			4.1	Aug 19	1.6	(f)
ANNUAL RUNOFF (CFSM)	1.60		.66		1.15	
ANNUAL RUNOFF (INCHES)	21.72		9.02		15.57	
10 PERCENT EXCEEDS	328		121		200	
50 PERCENT EXCEEDS	31		10		38	
90 PERCENT EXCEEDS	7.3		5.6		7.2	

a Aug. 18, 19..
b Sept. 29, 30, 1930.
c From rating curve extended above 2,000 ft^3/s on basis of slope-area measurement of peak flow.
d At site then in use.
f Sept. 29 to Oct. 13, 1930.



DAILY MEAN DISCHARGE - 1999 WATER YEAR

01601500 WILLS CREEK NEAR CUMBERLAND, MD

LOCATION.--Lat 39°40'07", long 78°47'18", Allegany County, Hydrologic Unit 02070002, on right bank at downstream side of railway bridge, 0.15 mi downstream from Braddock Run, 2.0 mi upstream from Cumberland, and mouth.

DRAINAGE AREA.--247 mi^2.

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

REVISED RECORDS.--WSP 726: Drainage area. WSP 1432: 1906, 1930(M), 1933-34(M), 1936-37, 1945(M).

GAGE.--Water-stage recorder. Datum of gage is 640.89 ft above sea level. May 6, 1905, to July 14, 1906, nonrecording gage at highway bridge 700 ft upstream at different datum. Oct. 18, 1929, to Mar. 17, 1936, water-stage recorder, and Apr. 1, 1936, to Mar. 19, 1937, nonrecording gage at site 200 ft upstream at present datum.

REMARKS.--Records good except those for estimated daily discharges (ice effect, missing record), which are fair. Records include drainage from numerous active and abandoned coal mines. An undetermined amount of water is diverted into the basin from Georges Creek basin by Hoffman drainage tunnel. Miscellaneous measurements of discharge from the Hoffman drainage tunnel have been made in the water years 1944, 1964-65, 1967-82, and 1984 by the U.S. Geological Survey, and in the water years 1958 and 1959 by the Maryland Geological Survey. Slight diurnal fluctuation at low flow caused by quarry upstream. U.S. Army Corps of Engineers satellite telemeter at station. Several measurements of water temperature were made during the year. Water-quality records for some prior periods have been collected at this location.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 3,500 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar 18	2115	*3,010	*6.21	No peak greater than base discharge.			

Minimum discharge, 15 ft^3/s, Aug 23, 24.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	26	24	27	e23	210	142	465	258	79	46	36	21
2	24	24	26	e22	256	121	421	237	125	58	32	e20
3	24	24	26	43	266	125	351	217	113	47	28	e19
4	36	24	26	31	245	321	323	203	89	38	26	e18
5	33	24	27	e30	237	326	360	191	76	34	24	e22
6	33	25	27	e29	210	325	314	183	68	31	22	e120
7	33	25	27	e28	221	332	306	250	63	28	21	e140
8	44	25	31	45	372	269	292	337	58	27	22	61
9	54	25	32	53	334	280	945	242	53	26	21	38
10	45	26	31	e48	316	272	2360	205	49	26	20	31
11	37	27	30	e45	271	235	2330	185	47	26	19	26
12	34	27	29	43	247	224	2350	172	45	25	19	24
13	31	27	28	43	223	216	1510	188	44	25	19	22
14	29	28	28	62	188	233	1030	217	42	25	18	22
15	27	28	27	72	163	234	814	182	42	24	18	21
16	26	28	26	63	160	258	740	160	41	23	17	28
17	25	27	26	61	146	460	572	149	51	23	17	26
18	25	28	26	90	135	1780	492	142	76	23	16	26
19	24	27	26	138	123	2060	439	142	54	23	16	25
20	24	27	26	135	112	1200	461	132	45	22	16	24
21	23	27	26	109	100	1310	434	116	41	21	16	24
22	23	27	26	109	78	1730	431	121	40	21	16	23
23	24	26	26	270	73	1200	490	188	38	21	16	21
24	24	26	26	1730	86	936	565	166	36	22	21	21
25	24	26	e25	957	79	882	543	158	34	21	58	20
26	24	27	e24	520	81	782	508	139	33	21	47	19
27	24	28	23	351	74	678	445	126	32	21	43	19
28	24	28	24	499	106	602	380	112	38	23	33	20
29	23	27	26	603	---	591	326	102	41	30	28	26
30	23	27	26	388	---	600	290	92	40	38	24	36
31	24	---	24	270	---	516	---	86	---	31	22	---
TOTAL	894	789	828	6910	5112	19240	21287	5398	1633	870	751	963
MEAN	28.8	26.3	26.7	223	183	621	710	174	54.4	28.1	24.2	32.1
MAX	54	28	32	1730	372	2060	2360	337	125	58	58	140
MIN	23	24	23	22	73	121	290	86	32	21	16	18
CFSM	.12	.11	.11	.90	.74	2.51	2.87	.70	.22	.11	.10	.13
IN.	.13	.12	.12	1.04	.77	2.90	3.21	.81	.25	.13	.11	.15

e Estimated

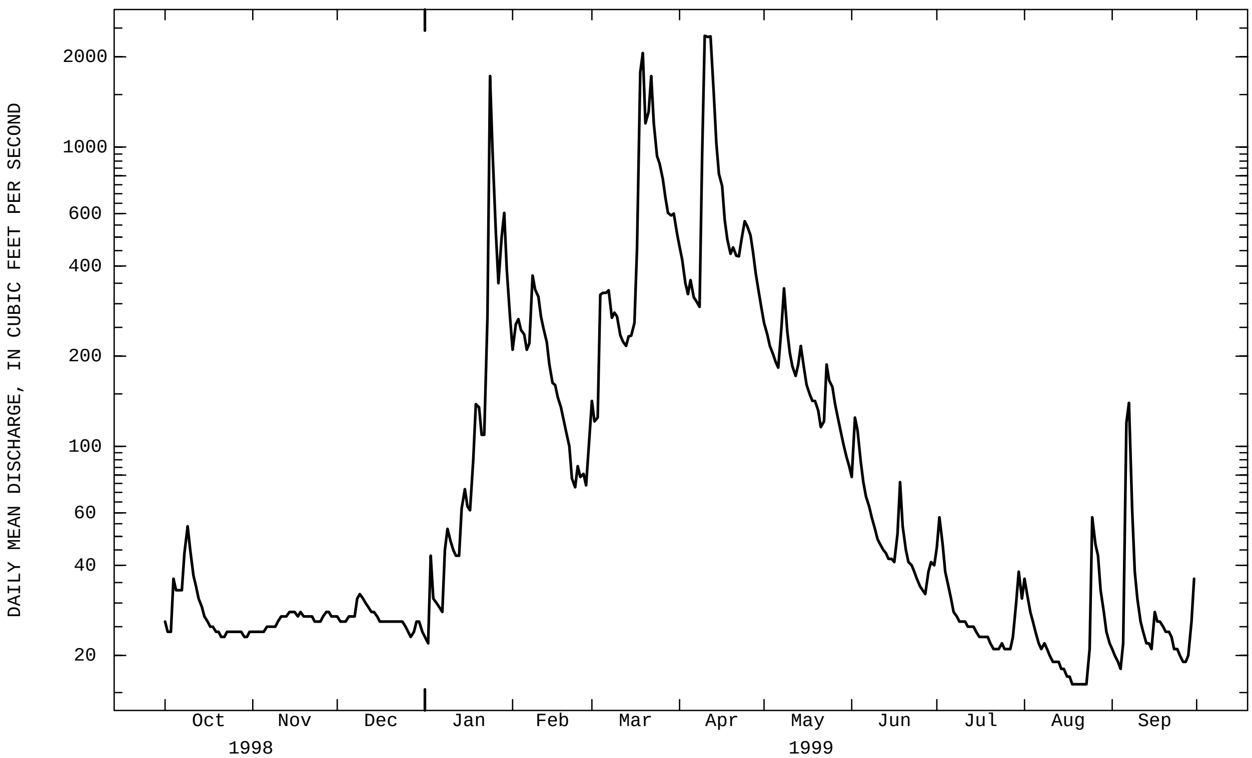
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1905 - 1906, 1930 - 1999, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	137	205	330	396	516	817	678	458	230	114	89.0	85.4
MAX	1130	1520	1113	1481	1255	2410	1910	1109	967	641	674	1083
(WY)	1943	1986	1973	1996	1971	1936	1993	1989	1972	1989	1984	1996
MIN	11.9	15.5	18.4	54.2	65.8	182	184	101	51.1	24.3	16.6	12.1
(WY)	1931	1931	1944	1940	1954	1990	1968	1934	1965	1965	1930	1932

01601500 WILLS CREEK NEAR CUMBERLAND, MD--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1905 - 1906 1930 - 1999	
ANNUAL TOTAL	147819		64675			
ANNUAL MEAN	405		177		337	
HIGHEST ANNUAL MEAN					599	1996
LOWEST ANNUAL MEAN					122	1954
HIGHEST DAILY MEAN	3590	Apr 20	2360	Apr 10	19200	Jan 19 1996
LOWEST DAILY MEAN	21	(a)	16	(b)	10	(c)
ANNUAL SEVEN-DAY MINIMUM	22	Sep 14	16	Aug 17	10	Oct 8 1930
INSTANTANEOUS PEAK FLOW			3010	Mar 18	(d)45900	Jan 19 1996
INSTANTANEOUS PEAK STAGE			6.21	Mar 18	(f)23.11	Jan 19 1996
INSTANTANEOUS LOW FLOW			15	(g)	9.0	Oct 14 1930
ANNUAL RUNOFF (CFSM)	1.64		.72		1.37	
ANNUAL RUNOFF (INCHES)	22.26		9.74		18.56	
10 PERCENT EXCEEDS	1150		451		800	
50 PERCENT EXCEEDS	130		38		149	
90 PERCENT EXCEEDS	25		22		29	

a Sept. 16-18.
b Aug. 18-23.
c Oct. 8-10, 1930.
d From rating curve extended above 11,000 ft^3/s on basis of slope-area measurement at gage heights of 13.45 and 20.2 ft.
f From floodmarks at present site.
g Aug. 23, 24.



DAILY MEAN DISCHARGE - 1999 WATER YEAR

01603000 NORTH BRANCH POTOMAC RIVER NEAR CUMBERLAND, MD

LOCATION.--Lat 39°37'16", long 78°46'24", Allegany County, Hydrologic Unit 02070002, on left bank at downstream side of Wiley Ford Bridge, 2.0 mi south of Cumberland, 2.1 mi downstream from Wills Creek, and at mile 19.6.

DRAINAGE AREA.--877 mi^2.

PERIOD OF RECORD.--May 1929 to current year. Gage-height records collected at various sites about 2.0 mi upstream from September 1901 to December 1932 and thereafter at present site, are contained in reports of the National Weather Service.

REVISED RECORDS.--WSP 726: Drainage area. WSP 781: 1932(M). WDR MD-DE-98-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 585.22 ft above sea level. Prior to June 18, 1929, nonrecording gage at same site and datum.

REMARKS.--Records good except those for estimated daily discharges (ice effect), which are fair. Prior to July 1981 some regulation at low flow by Stony River Reservoir, 79 mi upstream from station. Low-flow regulation since December 1950 by Savage River Reservoir, 39 mi upstream from station (see station 01597500). Flow regulated by Jennings Randolph Lake, 43 mi upstream from station since July 1981. Prior to July 1957, small amount of inflow from industrial wastes and sewage from city of Cumberland from water diverted from Evitts Creek, mouth of which is downstream from station. Diversion to Chesapeake and Ohio Canal prior to 1935. National Weather Service gage height telemeter at station. U.S. Army Corps of Engineers satellite telemeter at station. Several measurements of water temperature were made during the year. Water-quality records for some prior periods have been collected at this location.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known, 29.2 ft, June 1, 1889, discharge, about 89,000 ft^3/s. Flood of Mar. 29, 1924, reached a stage of 28.4 ft, discharge, about 82,000 ft^3/s.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 8,900 ft^3/s, Apr 11, gage height, 9.40 ft; minimum discharge, 133 ft^3/s, Jan 3.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	336	302	206	171	1220	605	2130	1260	429	284	255	197
2	335	302	176	158	1320	569	2060	1290	527	304	254	195
3	429	303	176	181	1330	574	1920	1170	530	291	234	191
4	1510	288	177	e210	1060	973	1500	934	450	274	222	202
5	575	270	167	e200	1020	962	1590	830	417	265	216	269
6	351	272	171	e200	969	965	1480	802	401	262	211	374
7	348	389	177	e195	1000	1090	1250	928	390	258	207	480
8	377	318	192	193	1490	914	1160	1510	388	255	215	328
9	382	268	199	191	1530	950	2350	1270	379	255	215	266
10	363	267	188	e190	1420	888	6900	1050	349	237	204	244
11	346	266	183	e195	1320	800	7100	920	341	214	198	224
12	339	261	182	203	1250	786	8090	823	338	631	328	214
13	336	262	180	192	963	777	6180	837	335	698	425	209
14	330	263	178	253	875	841	4210	920	331	499	398	208
15	317	264	184	364	818	859	3220	917	330	367	368	208
16	312	267	189	370	816	1090	3260	1030	328	329	366	241
17	315	245	189	351	692	1700	2960	916	333	444	351	245
18	318	217	189	402	673	4950	2380	630	345	494	276	221
19	317	215	188	521	651	5260	2190	628	312	360	218	979
20	315	215	186	537	587	3870	2350	605	302	324	204	389
21	314	215	187	551	520	3860	2340	569	296	319	196	230
22	318	213	191	545	478	4970	2400	535	295	277	193	210
23	317	216	188	776	455	4180	2510	696	289	250	191	199
24	314	223	187	3300	475	3970	3560	627	277	247	219	194
25	313	219	184	2280	466	3740	2980	638	278	273	306	191
26	313	225	178	2300	468	3400	2510	587	272	254	329	191
27	314	225	179	1650	459	3150	1920	534	269	247	296	194
28	315	224	185	1690	517	2950	1700	505	285	240	245	215
29	557	224	193	1860	---	2650	1500	502	289	256	220	224
30	436	224	192	1530	---	2630	1360	755	285	265	204	276
31	304	---	183	1330	---	2460	---	699	---	237	197	---
TOTAL	12066	7662	5724	23089	24842	67383	87060	25917	10390	9910	7961	8008
MEAN	389	255	185	745	887	2174	2902	836	346	320	257	267
MAX	1510	389	206	3300	1530	5260	8090	1510	530	698	425	979
MIN	304	213	167	158	455	569	1160	502	269	214	191	191
CFSM	.44	.29	.21	.85	1.01	2.48	3.31	.95	.39	.36	.29	.30
IN.	.51	.33	.24	.98	1.05	2.86	3.69	1.10	.44	.42	.34	.34

e Estimated

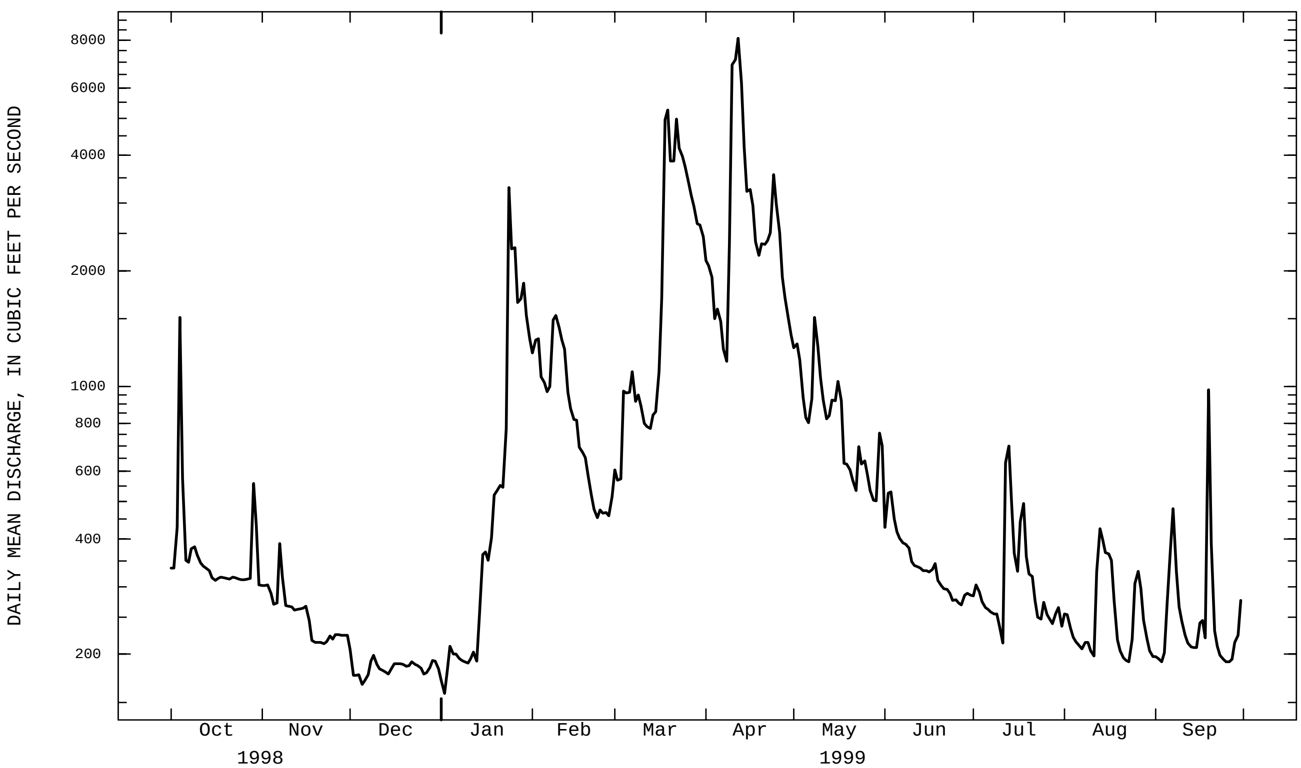
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1929 - 1999, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	599	788	1308	1592	2013	2919	2358	1736	902	528	460	441
MAX	3791	5350	4652	5115	4410	8763	5866	4070	2375	2270	2152	4117
(WY)	1943	1986	1973	1937	1998	1936	1993	1996	1981	1989	1996	1996
MIN	28.9	44.8	134	269	393	789	705	374	209	89.7	57.7	40.3
(WY)	1931	1931	1931	1940	1934	1990	1995	1934	1965	1930	1930	1932

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

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1929 - 1999	
ANNUAL TOTAL	592266		290012			
ANNUAL MEAN	1623		795		1301	
ANNUAL MEAN≠	1582		774		1302	
HIGHEST ANNUAL MEAN					2390	1996
LOWEST ANNUAL MEAN					632	1969
HIGHEST DAILY MEAN	13400	Apr 20	8090	Apr 12	47400	Mar 18 1936
LOWEST DAILY MEAN	167	Dec 5	158	Jan 2	13	(a)
ANNUAL SEVEN-DAY MINIMUM	177	Dec 2	177	Dec 2	16	Sep 20 1932
INSTANTANEOUS PEAK FLOW			8900	Apr 11	(b)88200	Mar 17 1936
INSTANTANEOUS PEAK STAGE			9.40	Apr 11	29.10	Mar 17 1936
INSTANTANEOUS LOW FLOW			133	Jan 3	12	Sep 22 1932
ANNUAL RUNOFF (CFSM)	1.85		.91		1.48	
ANNUAL RUNOFF (CFSM)≠	1.80		.87		1.48	
ANNUAL RUNOFF (INCHES)	25.12		12.30		20.16	
ANNUAL RUNOFF (INCHES)≠	24.50		11.99		20.21	
10 PERCENT EXCEEDS	4250		2090		3010	
50 PERCENT EXCEEDS	743		335		684	
90 PERCENT EXCEEDS	217		192		170	

≠ Adjusted for change in reservoir contents since October 1949.
a Sept. 21-24, 1932.
b From rating curve extended above 33,000 ft^3/s on basis of slope-area measurement of peak flow.



DAILY MEAN DISCHARGE - 1999 WATER YEAR

01604500 PATTERSON CREEK NEAR HEADSVILLE, WV

LOCATION.--Lat 39°26'35", long 78°49'20", Mineral County, Hydrologic Unit 02070002, on right bank 100 ft downstream from Hazel Run, 1.0 mi downstream from Cabin Run, 4.0 mi northeast of Headsville, 8.0 mi east of Keyser, and at mile 13.0.

DRAINAGE AREA.--211 mi^2.

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

REVISED RECORDS.--WSP 951: 1939-40. OFR 95-292: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 624.90 ft above sea level (levels by U.S. Army Corps of Engineers). Prior to Oct. 11, 1946, nonrecording gage on bridge 1.0 mi upstream at datum 6.14 ft higher. Oct. 11-23, 1946, nonrecording gage at present site and datum.

REMARKS.--Records good except those for estimated daily discharges (doubtful gage heights, ice effect), which are poor. The flow from 115 mi^2 upstream from station is partially controlled, but not diverted, by several floodwater detention reservoirs with a total combined detention capacity of 19,887 acre-ft. Several measurements of water temperature were made during the year. Water-quality records for some prior periods have been collected at this location.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,300 ft^3/s, Mar 18, gage height, 6.70 ft; minimum discharge, 0.45 ft^3/s, Aug 23, 24.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	13	13	e10	38	30	135	120	15	4.9	3.9	10
2	11	14	13	e11	45	30	121	107	14	5.0	4.6	8.7
3	11	15	13	12	42	36	104	98	15	5.0	5.1	6.8
4	13	15	13	13	41	68	93	94	14	4.7	4.0	6.0
5	14	16	13	13	39	102	94	87	13	4.1	3.2	30
6	14	16	13	11	38	123	90	83	12	3.6	2.7	291
7	14	16	13	11	45	206	83	77	11	3.2	2.2	357
8	17	16	14	12	120	208	77	96	9.9	2.7	1.8	210
9	18	15	15	12	147	164	180	122	9.0	2.4	1.6	140
10	17	15	14	13	129	146	489	108	8.1	2.3	1.3	95
11	16	16	14	14	107	129	706	90	7.7	2.2	1.5	62
12	15	15	13	15	91	124	857	77	7.0	1.9	1.5	43
13	14	15	13	18	79	157	565	69	6.7	2.0	1.3	32
14	13	16	12	23	65	171	482	65	6.5	2.2	e1.1	26
15	12	16	12	26	53	199	432	57	6.7	2.4	e.90	22
16	11	16	12	27	46	251	396	51	6.5	2.4	e.75	26
17	11	15	12	43	42	590	302	46	7.6	2.3	e.67	28
18	11	15	12	75	38	1240	237	42	8.9	2.1	1.3	24
19	12	15	12	115	34	861	204	41	8.2	2.0	1.2	21
20	11	15	12	123	31	578	184	39	7.8	1.9	1.0	19
21	11	15	12	118	27	542	171	35	7.3	2.2	.82	19
22	11	15	e12	105	24	665	177	39	7.3	3.0	.65	17
23	11	14	e11	184	22	518	246	68	6.7	3.1	.48	15
24	11	14	e11	331	22	474	434	50	5.9	3.6	1.4	13
25	12	14	e11	233	21	422	307	39	5.4	3.7	9.7	12
26	12	14	e11	161	21	348	249	31	5.0	4.7	38	12
27	12	14	e11	121	20	283	216	26	4.6	3.9	26	11
28	12	14	e10	94	27	239	184	23	4.6	3.1	22	12
29	12	13	e10	72	---	203	156	21	4.9	3.4	19	13
30	12	13	e10	54	---	174	136	19	5.0	3.0	15	18
31	13	---	e10	43	---	149	---	16	---	4.4	13	---
TOTAL	396	445	377	2113	1454	9430	8107	1936	251.3	97.4	187.67	1599.5
MEAN	12.8	14.8	12.2	68.2	51.9	304	270	62.5	8.38	3.14	6.05	53.3
MAX	18	16	15	331	147	1240	857	122	15	5.0	38	357
MIN	11	13	10	10	20	30	77	16	4.6	1.9	.48	6.0
CFSM	.06	.07	.06	.32	.25	1.44	1.28	.30	.04	.01	.03	.25
IN.	.07	.08	.07	.37	.26	1.66	1.43	.34	.04	.02	.03	.28

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1938 - 1999, BY WATER YEAR (WY)

MEAN	73.7	84.5	164	213	312	434	317	224	107	59.0	57.4	49.5
MAX	745	901	825	908	893	1346	1085	763	379	415	586	767
(WY)	1943	1986	1973	1996	1994	1963	1993	1988	1940	1989	1996	1996
MIN	2.24	4.39	9.70	22.0	30.8	58.3	54.1	21.2	8.38	3.14	5.20	2.80
(WY)	1992	1992	1944	1981	1954	1990	1969	1969	1999	1999	1966	1991

01604500 PATTERSON CREEK NEAR HEADSVILLE, WV--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1938 - 1999	
ANNUAL TOTAL	91778.7		26393.87			
ANNUAL MEAN	251		72.3		174	
HIGHEST ANNUAL MEAN					387	1996
LOWEST ANNUAL MEAN					35.1	1969
HIGHEST DAILY MEAN	2830	Mar 21	1240	Mar 18	11100	Oct 15 1942
LOWEST DAILY MEAN	5.0	(a)	.48	Aug 23	.48	Aug 23 1999
ANNUAL SEVEN-DAY MINIMUM	5.2	Sep 12	.87	Aug 17	.87	Aug 17 1999
INSTANTANEOUS PEAK FLOW			1300	Mar 18	(b)16000	Aug 19 1955
INSTANTANEOUS PEAK STAGE			6.70	Mar 18	12.20	Aug 19 1955
INSTANTANEOUS LOW FLOW			.45	(c)	.45	(c)
ANNUAL RUNOFF (CFSM)	1.19		.34		.82	
ANNUAL RUNOFF (INCHES)	16.18		4.65		11.20	
10 PERCENT EXCEEDS	741		201		448	
50 PERCENT EXCEEDS	44		15		60	
90 PERCENT EXCEEDS	8.3		3.1		9.9	

a Sept. 7, 14-17.
b From rating curve extended above 4,900 ft^3/s on basis of contracted-opening measurement of peak flow.
c Aug. 23, 24, 1999.

DAILY MEAN DISCHARGE - 1999 WATER YEAR

01606500 SOUTH BRANCH POTOMAC RIVER NEAR PETERSBURG, WV

LOCATION.--Lat 38°59'28", long 79°10'34", Grant County, Hydrologic Unit 02070001, on right bank 1.1 mi downstream from North Fork South Branch Potomac River, 2.6 mi west of Petersburg, and at mile 74.7.

DRAINAGE AREA.--676 mi^2.

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

REVISED RECORDS.--WSP 951: 1939-41. WSP 1141: 1932, 1933(M), 1936-38. OFR 95-292: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 968.34 ft above sea level. Prior to Dec. 4, 1928, nonrecording gage and June 1928 to Nov. 5, 1985, water-stage recorder at site 1,125 ft downstream at datum 6.34 ft lower. Nov. 5, 1985, to June 22, 1994, and October 23, 1996 to current year, water-stage recorder at present site and datum. June 22, 1994, to October 23, 1996, water-stage recorder at site 325 ft downstream at datum 2.34 ft lower.

REMARKS.--Records good except those for estimated daily discharges (ice effect), which are poor. National Weather Service gage-height telemeter at station. Several measurements of water temperature were made during the year. Water-quality records for some prior periods have been collected at this location.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in 1877 reached a stage of 21.2 ft, from floodmarks at previous site and datum.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 6,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar 18	2300	*5,820	*6.35	No peak greater than base discharge.			

Minimum discharge, 47 ft^3/s, Aug. 19.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	88	85	96	e92	467	376	1090	354	227	78	65	63
2	85	86	92	e90	494	379	1390	326	212	80	62	61
3	85	92	91	106	636	410	1190	302	201	79	58	58
4	94	99	92	203	593	1370	990	287	185	75	55	58
5	95	104	92	235	569	1220	842	273	170	72	51	91
6	96	101	92	153	522	1110	682	265	156	65	50	1680
7	95	100	92	165	543	1600	584	253	144	61	50	2390
8	102	98	95	166	968	1300	513	245	133	57	51	829
9	111	96	101	177	1010	1150	484	243	124	54	54	462
10	135	96	114	657	864	981	564	223	117	53	52	312
11	121	96	133	425	723	803	565	206	138	55	52	231
12	111	100	118	351	633	699	618	195	174	55	50	189
13	104	103	115	401	590	645	625	199	137	58	49	162
14	98	110	125	757	510	680	578	852	120	58	51	140
15	94	105	150	2000	446	679	538	879	113	58	54	127
16	92	102	143	1590	420	659	528	661	106	56	65	132
17	91	99	128	990	401	1390	477	532	115	59	56	136
18	90	95	122	905	404	4780	437	452	126	58	51	126
19	88	95	117	1340	403	4580	408	430	122	59	49	112
20	86	94	113	952	377	2950	398	387	106	67	59	103
21	84	92	111	1190	347	2460	400	334	98	67	80	108
22	82	92	e110	3870	313	2990	439	304	96	63	68	132
23	83	92	e110	2680	276	2310	440	590	91	60	59	126
24	84	91	e105	4180	273	1860	838	783	86	60	76	108
25	85	89	e105	3480	282	1790	731	713	81	63	83	96
26	85	91	e100	2010	275	1550	630	592	77	66	135	89
27	86	89	e99	1310	264	1320	558	490	76	62	140	84
28	86	91	e98	991	277	1120	492	406	77	61	109	91
29	85	95	e96	788	---	1030	436	342	77	69	90	98
30	85	96	e95	632	---	1020	392	290	77	77	76	115
31	86	---	e94	530	---	976	---	251	---	76	68	---
TOTAL	2892	2874	3344	33416	13880	46187	18857	12659	3762	1981	2068	8509
MEAN	93.3	95.8	108	1078	496	1490	629	408	125	63.9	66.7	284
MAX	135	110	150	4180	1010	4780	1390	879	227	80	140	2390
MIN	82	85	91	90	264	376	392	195	76	53	49	58
CFSM	.14	.14	.16	1.59	.73	2.20	.93	.60	.19	.09	.10	.42
IN.	.16	.16	.18	1.84	.76	2.54	1.04	.70	.21	.11	.11	.47

e Estimated

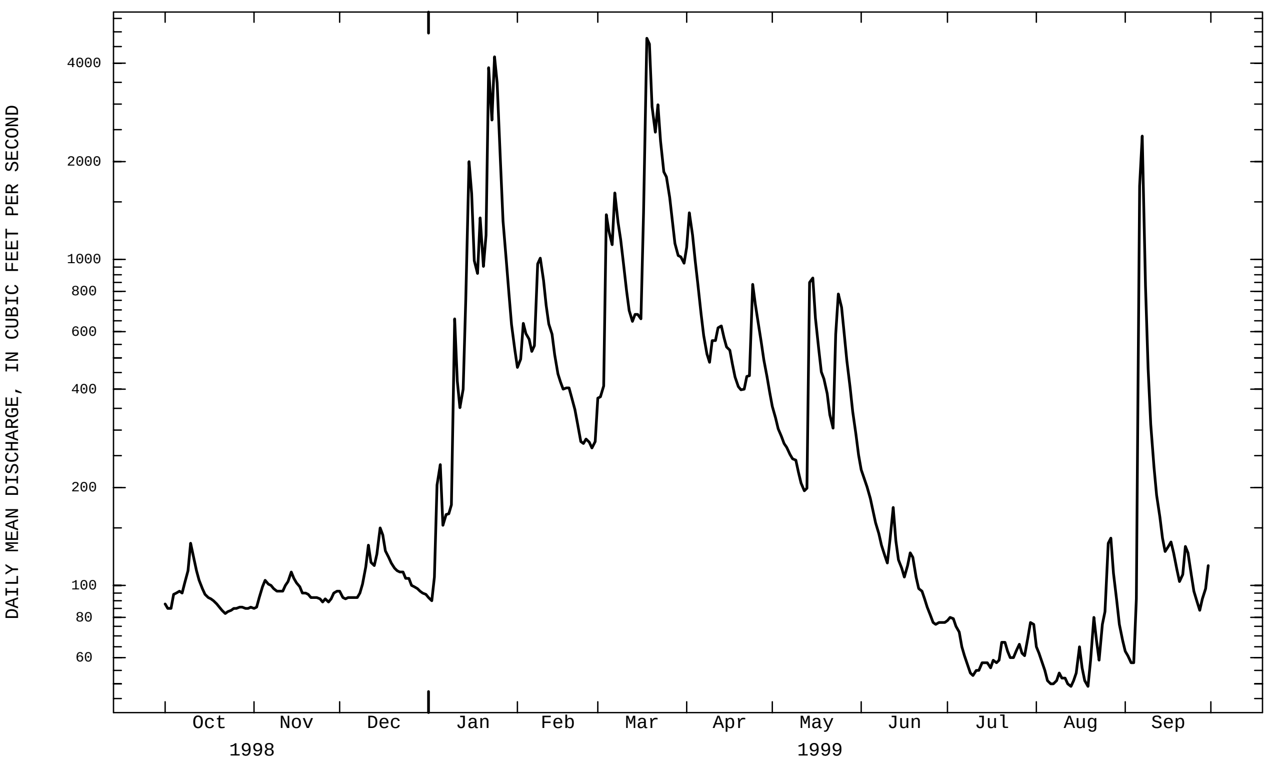
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1928 - 1999, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	324	489	708	949	1167	1656	1261	1008	534	292	288	256
MAX	1863	5569	2511	3386	3519	4090	2888	3546	2175	1479	1601	2968
(WY)	1977	1986	1973	1996	1994	1936	1993	1996	1949	1949	1996	1996
MIN	49.3	62.7	95.1	143	212	543	398	233	125	63.9	54.1	52.3
(WY)	1931	1931	1966	1981	1934	1990	1986	1930	1999	1999	1930	1930

01606500 SOUTH BRANCH POTOMAC RIVER NEAR PETERSBURG, WV--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1928 - 1999	
ANNUAL TOTAL	387407		150429			
ANNUAL MEAN	1061		412		742	
HIGHEST ANNUAL MEAN					1619	1996
LOWEST ANNUAL MEAN					365	1969
HIGHEST DAILY MEAN	13600	Mar 21	4780	Mar 18	77000	Nov 5 1985
LOWEST DAILY MEAN	82	Oct 22	49	(a)	43	(b)
ANNUAL SEVEN-DAY MINIMUM	84	Oct 20	51	Aug 7	44	Sep 6 1966
INSTANTANEOUS PEAK FLOW			5820	Mar 18	(c)130000	Nov 5 1985
INSTANTANEOUS PEAK STAGE			6.35	Mar 18	(d)25.40	Nov 5 1985
INSTANTANEOUS LOW FLOW			47	Aug 19	42	(f)
ANNUAL RUNOFF (CFSM)	1.57		.61		1.10	
ANNUAL RUNOFF (INCHES)	21.32		8.28		14.91	
10 PERCENT EXCEEDS	2800		999		1660	
50 PERCENT EXCEEDS	254		125		378	
90 PERCENT EXCEEDS	92		61		95	

a Aug. 13, 19.
b Sept. 27-29, 1959, Sept. 11, 12, 1966.
c From rating curve extended above 16,700 ft^3/s on basis of slope-area measurement of peak flow.
d From floodmarks at former site at gage datum 962.00 ft.
f Sept. 28, 29, 1959, Sept. 11, 12, 1966.



DAILY MEAN DISCHARGE - 1999 WATER YEAR

01608000 SOUTH FORK SOUTH BRANCH POTOMAC RIVER NEAR MOOREFIELD, WV

LOCATION.--Lat 39°00'44", long 78°57'23", Hardy County, Hydrologic Unit 02070001, on right bank 0.2 mi downstream from Stony Creek, 3.5 mi south of Moorefield, and at mile 5.3.

DRAINAGE AREA.--277 mi^2.

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

REVISED RECORDS.--WSP 1141: 1933(M), 1940, 1942-43, 1945, 1948(M). WSP 1302: l93l(M), l935(M). OFR 95-292: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 861.51 ft above sea level (U.S. Army Corps of Engineers datum). Prior to Mar. 11, 1940, nonrecording gage at Harness Ford Bridge 2.0 mi upstream at datum about 31 ft higher.

REMARKS.--Records fair except those below 100 ft^3/s and those for estimated daily discharges (doubtful gage-height record, ice effect), which are poor. The flow from 92.7 mi^2 upstream from station is partially controlled, but not diverted, by several floodwater detention reservoirs with a total combined detention capacity of 19,870 acre-ft. Several measurements of water temperature were made during the year. Water-quality records for some prior periods have been collected at this location.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,740 ft^3/s, Sep 7, gage height, 3.99 ft; minimum discharge, 3.1 ft^3/s, Aug 13.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	34	14	9.5	25	131	98	153	80	56	e13	11	33
2	33	14	9.5	29	123	94	149	76	53	e12	10	28
3	34	16	9.5	63	123	92	140	74	52	e21	9.5	25
4	39	18	9.5	35	129	97	134	72	48	e13	9.3	24
5	34	17	11	34	126	121	130	71	43	e10	8.4	97
6	27	17	15	42	120	141	125	68	40	e8.9	7.1	1220
7	20	17	17	59	113	165	118	68	37	e8.0	5.0	1630
8	23	17	21	54	112	185	113	68	34	e7.3	6.2	985
9	27	17	27	57	108	193	110	68	32	e6.8	9.3	400
10	24	17	27	58	104	195	113	68	29	e6.6	8.7	242
11	24	16	27	92	100	174	114	65	64	e6.4	8.0	175
12	26	16	27	66	95	157	118	62	44	e8.4	6.2	138
13	23	15	29	64	95	153	119	60	40	9.0	5.1	115
14	22	15	31	85	94	162	115	61	35	9.2	8.4	100
15	20	14	31	112	92	178	109	67	30	9.5	9.2	90
16	18	14	31	198	89	188	108	93	e29	8.7	9.1	92
17	17	14	32	164	86	349	102	102	e28	8.2	7.6	98
18	17	13	31	137	86	915	98	108	e27	8.4	7.7	104
19	15	13	28	158	94	1210	93	111	e26	7.9	9.9	94
20	15	13	28	197	129	762	92	104	e25	7.8	11	86
21	14	13	27	181	136	515	90	97	e24	8.9	26	95
22	14	12	26	353	133	516	89	91	e23	9.4	25	163
23	14	12	23	324	126	551	88	98	e23	8.8	18	156
24	15	12	e22	379	117	450	88	98	e22	8.1	16	129
25	14	12	e22	718	112	364	88	91	e21	8.9	36	109
26	14	12	e21	487	109	306	88	87	e20	8.4	84	94
27	14	11	e21	317	103	264	86	83	e17	6.8	95	85
28	14	10	e21	239	101	232	84	77	e21	6.6	74	82
29	14	10	e20	194	---	205	84	70	e19	13	57	77
30	13	9.6	e20	164	---	182	82	64	e15	13	47	89
31	14	---	e20	144	---	163	---	60	---	12	38	---
TOTAL	646	420.6	694.0	5229	3086	9377	3220	2462	977	294.0	682.7	6855
MEAN	20.8	14.0	22.4	169	110	302	107	79.4	32.6	9.48	22.0	228
MAX	39	18	32	718	136	1210	153	111	64	21	95	1630
MIN	13	9.6	9.5	25	86	92	82	60	15	6.4	5.0	24
CFSM	.08	.05	.08	.61	.40	1.09	.39	.29	.12	.03	.08	.82
IN.	.09	.06	.09	.70	.41	1.26	.43	.33	.13	.04	.09	.92

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1928 - 1999, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	127	177	206	272	339	497	404	328	166	83.9	106	94.1
MAX	776	2951	879	1267	1591	1327	1787	946	1071	510	801	1340
(WY)	1977	1986	1974	1996	1998	1993	1987	1988	1949	1949	1955	1996
MIN	12.8	14.0	17.4	21.3	25.2	72.2	91.7	51.2	28.1	9.48	10.4	10.2
(WY)	1992	1999	1966	1981	1934	1981	1981	1930	1977	1999	1965	1968

01608000 SOUTH FORK SOUTH BRANCH POTOMAC RIVER NEAR MOOREFIELD, WV--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1928 - 1999	
ANNUAL TOTAL	153030.6		33943.3			
ANNUAL MEAN	419		93.0		233	
HIGHEST ANNUAL MEAN					480	1996
LOWEST ANNUAL MEAN					85.9	1934
HIGHEST DAILY MEAN	5800	Feb 18	1630	Sep 7	28000	Nov 5 1985
LOWEST DAILY MEAN	9.5	(a)	5.0	Aug 7	4.4	Sep 10 1966
ANNUAL SEVEN-DAY MINIMUM	9.7	Nov 28	6.9	Aug 7	5.3	Sep 5 1966
INSTANTANEOUS PEAK FLOW			1740	Sep 7	(b)110000	Nov 5 1985
INSTANTANEOUS PEAK STAGE			3.99	Sep 7	(c)19.99	Nov 5 1985
INSTANTANEOUS LOW FLOW			3.1	Aug 13	3.1	Aug 13 1999
ANNUAL RUNOFF (CFSM)	1.51		.34		.84	
ANNUAL RUNOFF (INCHES)	20.55		4.56		11.42	
10 PERCENT EXCEEDS	1230		174		514	
50 PERCENT EXCEEDS	82		44		96	
90 PERCENT EXCEEDS	15		9.4		21	

a Dec. 1-4.
b From rating curve extended above 39,000 ft^3/s on basis of slope-area measurement of peak flow.
c From floodmarks.

DAILY MEAN DISCHARGE - 1999 WATER YEAR

01608500 SOUTH BRANCH POTOMAC RIVER NEAR SPRINGFIELD, WV

LOCATION.--Lat 39°26'49", long 78°39'16", Hampshire County, Hydrologic Unit 02070001, on left bank at highway bridge, 2.0 mi east of Springfield, and at mile 13.5.

DRAINAGE AREA.--1,486 mi^2.

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

REVISED RECORDS.--WSP 1552: 1903-06, 1929-30(M), 1932-33(M), 1935(M), 1937-40(M), 1942-43(M), 1945(M). OFR 95-292: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 562.02 ft above sea level. June 1894 to February 1896, nonrecording gage at Baltimore & Ohio Railroad bridge 11.2 mi upstream at different datum. June 26, 1899, to Feb. 2, 1902, nonrecording gage at bridge 10.0 mi upstream at different datum. Aug. 28, 1903, to July 14, 1906, nonrecording gage at present site at different datum. Aug. 8, to Sept. 24, 1928, nonrecording gage at present site and datum.

REMARKS.--Records good except those for estimated daily discharges (ice effect), which are poor. National Weather Service gage-height telemeter and U.S. Army Corps of Engineers satellite telemeter at station. Several measurements of water temperature were made during the year. Water-quality records for some prior periods have been collected at this location.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in November 1877 reached a stage of about 34 ft, from floodmarks, discharge, 140,000 ft^3/s.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 10,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar 18	2300	*9,160	*8.59	No peak greater than base discharge.			

Minimum discharge, 58 ft^3/s, Aug 17, 18.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	140	125	140	e145	856	509	1350	699	428	110	98	141
2	130	130	139	e145	791	573	1500	646	391	109	105	122
3	120	130	140	e145	784	621	1650	604	371	111	98	110
4	130	139	138	e140	902	674	1460	571	342	112	83	106
5	135	154	138	e140	875	1550	1290	542	308	116	77	158
6	150	163	134	271	841	1470	1160	521	285	104	72	1790
7	153	168	136	364	805	1520	1010	507	262	94	68	5500
8	171	162	145	348	863	1890	907	511	236	87	64	3180
9	180	166	152	351	1330	1640	876	480	216	80	61	1620
10	183	162	154	342	1280	1520	1270	468	197	76	62	1030
11	180	169	158	625	1130	1330	1530	441	183	71	66	763
12	204	171	171	1020	995	1160	2050	408	256	71	68	599
13	194	168	201	813	907	1110	1580	385	267	73	64	486
14	176	166	195	783	848	1140	1330	372	257	71	63	403
15	159	168	193	1190	773	1210	1160	841	212	72	60	344
16	147	181	200	e2600	703	1280	1080	1040	186	76	61	329
17	138	175	231	e1900	667	2110	996	900	187	78	61	345
18	135	168	228	1380	648	6920	897	790	185	84	62	341
19	135	165	204	1340	638	8430	828	712	191	78	73	330
20	129	158	192	1620	641	5430	784	668	189	79	68	299
21	121	154	185	1280	659	3830	770	631	183	76	68	270
22	120	147	178	3010	633	4410	788	588	164	76	71	289
23	123	142	169	3610	595	4090	861	615	150	91	85	394
24	118	143	e165	3580	548	3220	1030	783	142	92	121	413
25	117	140	e160	5260	524	2760	1230	985	134	87	110	347
26	121	140	e160	3580	525	2480	1110	923	125	81	129	288
27	124	138	e160	2340	514	2130	1000	817	119	77	312	248
28	126	139	e155	1700	512	1850	907	717	113	83	374	225
29	130	131	e155	1360	---	1600	823	628	111	95	278	223
30	125	135	e150	1140	---	1470	753	552	111	88	212	254
31	121	---	e150	975	---	1410	---	485	---	91	169	---
TOTAL	4435	4597	5176	43497	21787	71337	33980	19830	6501	2689	3363	20947
MEAN	143	153	167	1403	778	2301	1133	640	217	86.7	108	698
MAX	204	181	231	5260	1330	8430	2050	1040	428	116	374	5500
MIN	117	125	134	140	512	509	753	372	111	71	60	106
CFSM	.10	.10	.11	.94	.52	1.55	.76	.43	.15	.06	.07	.47
IN.	.11	.12	.13	1.09	.55	1.79	.85	.50	.16	.07	.08	.52

e Estimated

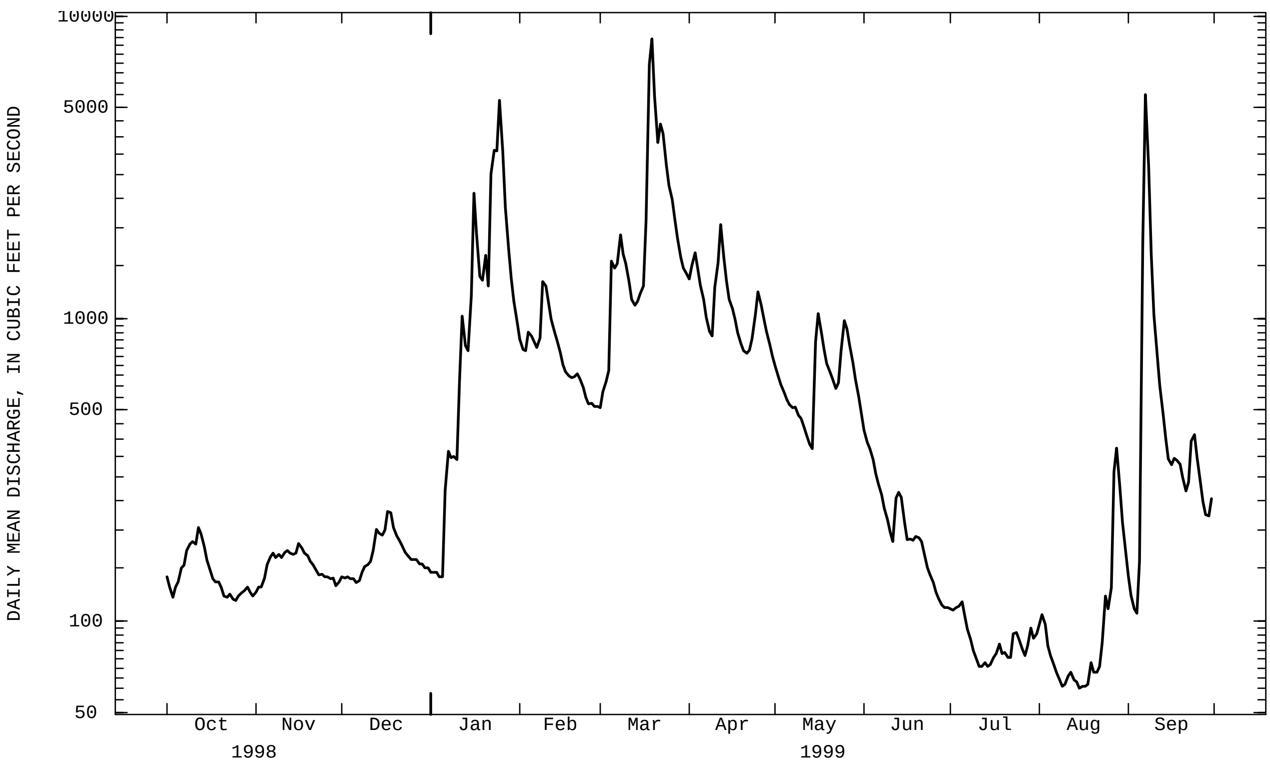
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1899 - 1999, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	619	860	1233	1666	2064	3036	2359	1822	1020	525	538	466
MAX	4629	12850	5000	6928	6474	10490	6421	5785	5231	2638	3923	6538
(WY)	1977	1986	1973	1996	1998	1936	1987	1996	1949	1949	1955	1996
MIN	79.4	82.2	147	271	362	791	829	366	217	86.7	73.5	76.6
(WY)	1931	1905	1966	1981	1934	1981	1976	1977	1999	1999	1930	1930

01608500 SOUTH BRANCH POTOMAC RIVER NEAR SPRINGFIELD, WV--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1899 - 1999	
ANNUAL TOTAL	751043		238139			
ANNUAL MEAN	2058		652		1347	
HIGHEST ANNUAL MEAN					2975	1996
LOWEST ANNUAL MEAN					566	1969
HIGHEST DAILY MEAN	22000	Mar 21	8430	Mar 19	145000	Nov 5 1985
LOWEST DAILY MEAN	88	(a)	60	Aug 15	52	(b)
ANNUAL SEVEN-DAY MINIMUM	95	Sep 3	63	Aug 12	54	Sep 7 1966
INSTANTANEOUS PEAK FLOW			9160	Mar 18	(c)240000	Nov 5 1985
INSTANTANEOUS PEAK STAGE			8.59	Mar 18	(d)44.22	Nov 5 1985
INSTANTANEOUS LOW FLOW			58	(f)	29	(g)
ANNUAL RUNOFF (CFSM)	1.38		.44		.91	
ANNUAL RUNOFF (INCHES)	18.80		5.96		12.32	
10 PERCENT EXCEEDS	5530		1510		3040	
50 PERCENT EXCEEDS	775		236		650	
90 PERCENT EXCEEDS	135		85		152	

a Sept. 6, 7.
b Sept. 11, 12, 1966.
c From rating curve extended above 145,000 ft^3/s on basis of slope-area measurement of peak flow.
d From floodmarks.
f Aug. 17, 18.
g Jan. 28, 1956 (result of freeze-up), July 30, 1966 (result of temporary dam).



DAILY MEAN DISCHARGE - 1999 WATER YEAR

01610000 POTOMAC RIVER AT PAW PAW, WV

LOCATION.--Lat 39°32'20", long 78°27'24", Allegany County, Md., Hydrologic Unit 02070003, on left bank 250 ft upstream from bridge on Maryland State Highway 51 at Paw Paw, 3.3 mi downstream from Little Cacapon River, and at mile 277.

DRAINAGE AREA.--3,129 mi^2.

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

REVISED RECORDS.--WDR MD-DE-98-1: Drainage area.

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

REMARKS.--No estimated daily discharges. Records good. Low flow affected by Stony River Reservoir prior to July 1981, since December 1950 by Savage River Reservoir (see station 01597500), and since July 1981 by Jennings Randolph Lake. National Weather Service gage-height telemeter at station. U.S. Army Corps of Engineers satellite telemeter at station. Several measurements of water temperature were made during the year. Water-quality records for some prior periods have been collected at this location.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known, 54.0 ft on Mar. 18, 1936, discharge, 240,000 ft^3/s, from rating curve extended above 85,000 ft^3/s on basis of slope-area measurement of peak flow at site 5.0 mi upstream at Okonoko, WV.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 20,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar 3	0600	*18,900	*15.12	No peak greater than base discharge.			

Minimum discharge, 260 ft^3/s, Aug 12, 13.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	559	498	415	489	2260	1220	4160	2310	990	422	347	409
2	525	502	405	642	2200	1270	4040	2270	916	431	390	378
3	520	501	373	727	2230	1340	4150	2120	1110	447	360	352
4	1070	504	370	650	2180	2050	3650	1820	991	440	333	339
5	1360	490	372	575	2090	2870	3370	1700	850	415	309	393
6	619	486	366	539	1990	3120	3150	1600	782	404	295	758
7	581	490	364	654	1940	3240	2760	1570	738	376	284	5960
8	620	640	379	662	2260	3590	2400	2320	702	353	278	4480
9	668	511	410	707	3120	3350	2890	2360	666	347	278	2470
10	643	487	401	707	3200	3100	10100	1980	633	340	276	1620
11	618	486	398	706	2850	2790	11000	1750	577	321	268	1200
12	597	473	390	1190	2570	2510	14700	1580	558	330	261	957
13	601	470	393	1300	2260	2430	10900	1490	638	822	422	791
14	578	470	411	1230	1990	2590	8050	1560	625	742	508	683
15	556	475	415	1440	1850	2770	6160	1670	605	576	459	620
16	532	476	415	2530	1720	3100	5980	2350	564	431	438	612
17	518	488	415	3860	1610	4800	5440	2140	571	423	435	638
18	524	466	427	3120	1510	12900	4600	1710	590	583	411	635
19	522	433	433	2720	1460	17400	4120	1540	572	595	321	817
20	512	425	420	4380	1410	11800	3920	1470	540	432	282	1220
21	510	419	415	3440	1350	8970	3980	1380	523	434	285	634
22	514	415	412	2730	1260	11200	4030	1290	506	426	273	540
23	512	415	405	5050	1170	10200	4020	1400	487	356	273	543
24	510	415	395	7100	1130	8520	5780	1480	468	345	311	621
25	510	415	392	8620	1110	7590	5530	1770	446	347	398	591
26	509	415	456	6700	1100	6850	4860	1700	435	360	580	534
27	512	415	521	4900	1090	6200	4020	1540	419	333	616	491
28	516	415	405	3870	1110	5700	3380	1370	415	325	758	482
29	517	415	402	3710	---	5110	2950	1240	428	342	621	470
30	862	415	410	3120	---	4790	2600	1350	422	357	510	575
31	550	---	454	2600	---	4570	---	1310	---	355	451	---
TOTAL	18745	13925	12639	80668	52020	167940	156690	53140	18767	13210	12031	30813
MEAN	605	464	408	2602	1858	5417	5223	1714	626	426	388	1027
MAX	1360	640	521	8620	3200	17400	14700	2360	1110	822	758	5960
MIN	509	415	364	489	1090	1220	2400	1240	415	321	261	339
CFSM	.19	.15	.13	.83	.59	1.73	1.67	.55	.20	.14	.12	.33
IN.	.22	.17	.15	.96	.62	2.00	1.86	.63	.22	.16	.14	.37

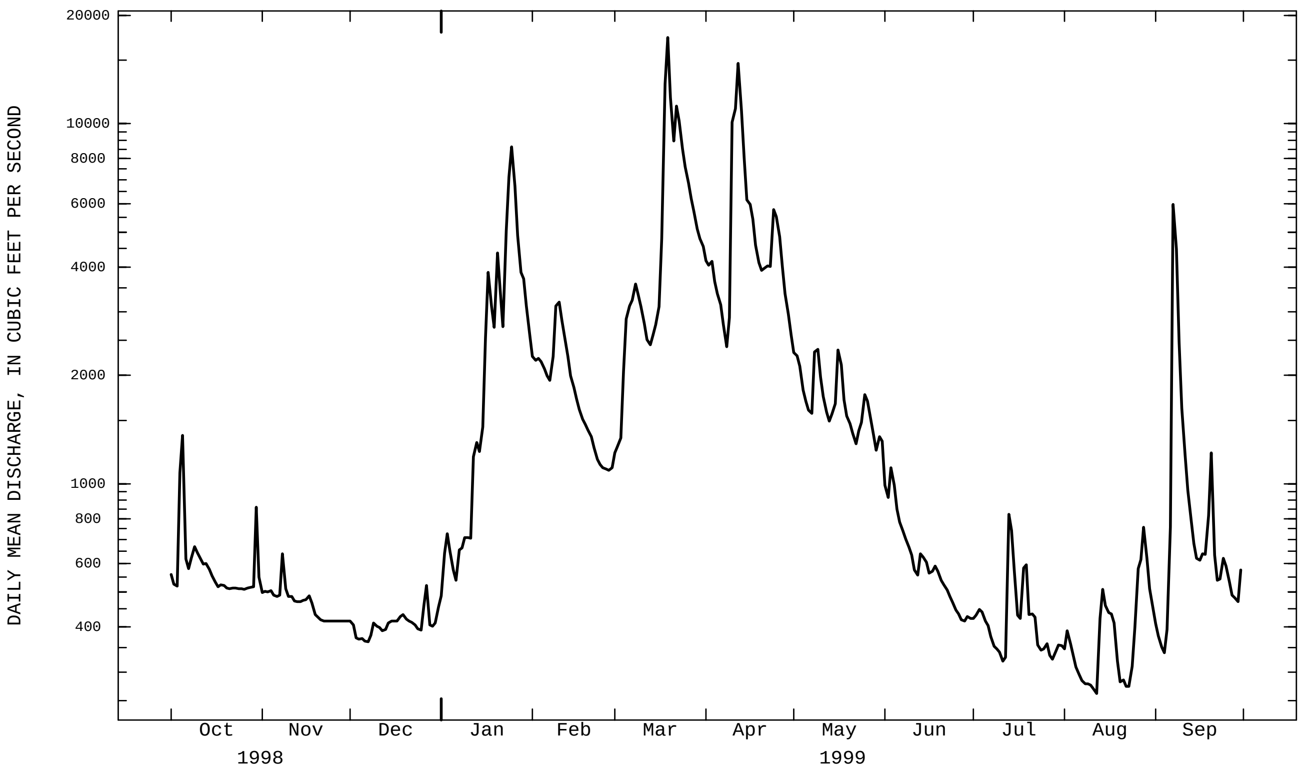
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1939 - 1999, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1520	2052	3322	4064	5381	7561	5999	4504	2548	1352	1254	1149
MAX	9709	17180	12300	13040	14040	17440	15620	11210	7612	5071	6775	12080
(WY)	1977	1986	1973	1996	1998	1994	1993	1996	1972	1949	1996	1996
MIN	261	327	388	679	1116	2043	1882	1074	544	303	278	252
(WY)	1952	1966	1966	1981	1954	1990	1995	1941	1965	1966	1944	1959

01610000 POTOMAC RIVER AT PAW PAW, WV--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1939 - 1999	
ANNUAL TOTAL	1685180		630588			
ANNUAL MEAN	4617		1728		3382	
HIGHEST ANNUAL MEAN					6433	1996
LOWEST ANNUAL MEAN					1499	1969
HIGHEST DAILY MEAN	37200	Mar 22	17400	Mar 19	125000	Nov 6 1985
LOWEST DAILY MEAN	364	Dec 7	261	Aug 12	172	(a)
ANNUAL SEVEN-DAY MINIMUM	376	Dec 2	277	Aug 6	179	Sep 7 1966
INSTANTANEOUS PEAK FLOW			18900	Mar 19	(b)235000	Nov 5 1985
INSTANTANEOUS PEAK STAGE			15.12	Mar 19	53.58	Nov 5 1985
INSTANTANEOUS LOW FLOW			260	(c)	164	(d)
ANNUAL RUNOFF (CFSM)	1.48		.55		1.08	
ANNUAL RUNOFF (INCHES)	20.03		7.50		14.69	
10 PERCENT EXCEEDS	12800		4150		7700	
50 PERCENT EXCEEDS	1580		625		1800	
90 PERCENT EXCEEDS	423		371		440	

a Sept. 10, 12, 13, 1966.
b From rating curve extended above 85,000 ft^3/s on basis of slope-area measurement of peak flow at site 5.0 mi upstream at Okonoko, WV.
c Aug. 12, 13.
d Sept 10, 11, 1966.



DAILY MEAN DISCHARGE - 1999 WATER YEAR

01610155 SIDELING HILL CREEK NEAR BELLEGROVE, MD

LOCATION.--Lat 39°38'58", long 78°20'40", Washington County, Hydrologic Unit 02070003, on left bank at bridge on Zeigler Road, 1.2 mi upstream from mouth, and 4.0 mi south of Bellegrove.

DRAINAGE AREA.--102 mi^2.

PERIOD OF RECORD.--July 1967 to September 1977, April 1999 to current year.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 440.41 ft above sea level.

REMARKS.--Records good above 1.0 ft^3/s and poor below. Several measurements of water temperature were made during the year. Water-quality records for some prior periods have been collected at this location.

EXTREMES FOR CURRENT PERIOD.--Peak discharges greater than base discharge of 1,100 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
May 8	0930	*1,160	*4.10	No other peak greater than base discharge.			

Minimum discharge, 0.00 ft^3/s, Aug 6-25.

DISCHARGE, CUBIC FEET PER SECOND, APRIL 1999 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	57	62	6.6	2.7	.12	1.9
2	---	---	---	---	---	---	62	54	7.9	6.0	.13	1.3
3	---	---	---	---	---	---	55	49	16	3.7	.09	.94
4	---	---	---	---	---	---	50	45	25	8.8	.06	.79
5	---	---	---	---	---	---	54	41	14	5.1	.03	1.3
6	---	---	---	---	---	---	55	38	9.6	3.2	.00	1.9
7	---	---	---	---	---	---	51	52	7.0	1.9	.00	13
8	---	---	---	---	---	---	48	773	5.6	1.2	.00	30
9	---	---	---	---	---	---	86	412	4.4	.77	.00	15
10	---	---	---	---	---	---	711	228	3.4	.57	.00	9.0
11	---	---	---	---	---	---	580	150	2.8	.48	.00	5.8
12	---	---	---	---	---	---	688	114	2.3	.38	.00	4.0
13	---	---	---	---	---	---	434	125	1.8	.34	.00	2.8
14	---	---	---	---	---	---	280	106	1.5	.31	.00	2.1
15	---	---	---	---	---	---	201	81	1.2	.26	.00	1.6
16	---	---	---	---	---	---	204	64	1.0	.21	.00	3.2
17	---	---	---	---	---	---	149	54	2.6	.15	.00	6.7
18	---	---	---	---	---	---	121	46	6.1	.11	.00	5.6
19	---	---	---	---	---	---	103	41	6.5	.09	.00	7.4
20	---	---	---	---	---	---	103	35	6.9	.16	.00	5.9
21	---	---	---	---	---	---	107	29	5.3	.26	.00	4.8
22	---	---	---	---	---	---	100	26	3.9	.30	.00	4.0
23	---	---	---	---	---	---	110	28	3.0	.25	.00	3.2
24	---	---	---	---	---	---	175	28	2.2	.18	.00	2.6
25	---	---	---	---	---	---	170	23	1.7	.13	.16	2.1
26	---	---	---	---	---	---	152	19	1.4	.09	14	1.8
27	---	---	---	---	---	---	128	16	1.1	.06	9.8	1.5
28	---	---	---	---	---	---	103	13	.85	.05	6.3	1.6
29	---	---	---	---	---	---	85	11	.68	.09	4.4	1.8
30	---	---	---	---	---	---	72	9.4	.57	.07	3.3	6.6
31	---	---	---	---	---	---	---	7.7	---	.05	2.7	---
TOTAL	---	---	---	---	---	---	5294	2780.1	152.90	37.96	41.09	150.23
MEAN	---	---	---	---	---	---	176	89.7	5.10	1.22	1.33	5.01
MAX	---	---	---	---	---	---	711	773	25	8.8	14	30
MIN	---	---	---	---	---	---	48	7.7	.57	.05	.00	.79
CFSM	---	---	---	---	---	---	1.73	.88	.05	.01	.01	.05
IN.	---	---	---	---	---	---	1.93	1.01	.06	.01	.01	.05

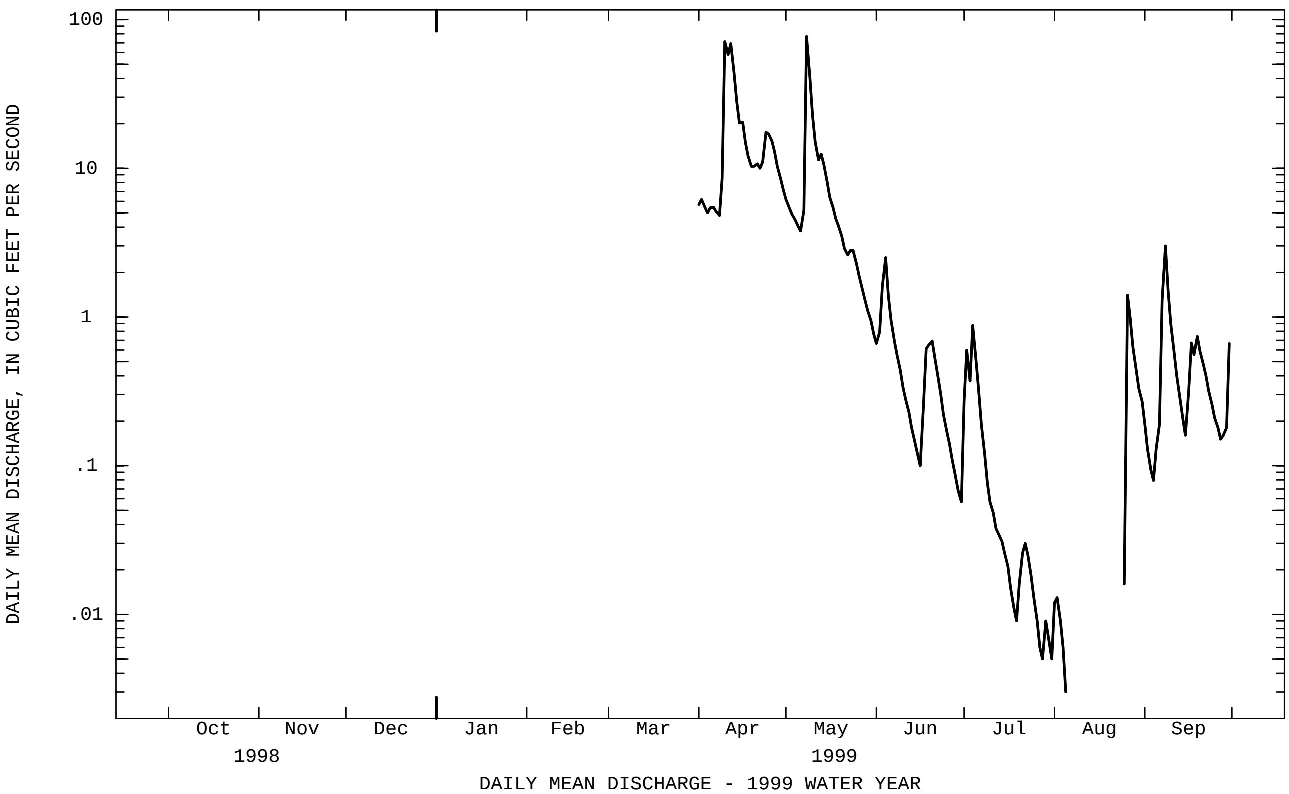
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1967 - 1977, 1999 BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	108	91.1	183	125	193	204	207	122	122	34.2	22.6	28.4
MAX	569	293	401	230	523	346	518	288	726	87.6	85.1	194
(WY)	1977	1971	1973	1974	1971	1977	1970	1971	1972	1977	1969	1975
MIN	1.17	6.69	39.7	11.3	48.6	107	37.8	22.9	5.10	1.22	.039	1.24
(WY)	1975	1975	1969	1977	1969	1969	1971	1969	1999	1999	1968	1972

01610155 SIDELING HILL CREEK NEAR BELLEGROVE, MD--Continued

SUMMARY STATISTICS	WATER YEARS 1967 - 1977	
		1999
ANNUAL MEAN	121	
HIGHEST ANNUAL MEAN	177	1972
LOWEST ANNUAL MEAN	42.0	1969
HIGHEST DAILY MEAN	9200	Jun 22 1972
LOWEST DAILY MEAN	.00	(a)
ANNUAL SEVEN-DAY MINIMUM	.00	Aug 18 1968
INSTANTANEOUS PEAK FLOW	(b)14200	Jun 22 1972
INSTANTANEOUS PEAK STAGE	12.44	Jun 22 1972
INSTANTANEOUS LOW FLOW	.00	(c)
ANNUAL RUNOFF (AC-FT)	87970	
ANNUAL RUNOFF (CFSM)	1.19	
ANNUAL RUNOFF (INCHES)	16.18	
10 PERCENT EXCEEDS	270	
50 PERCENT EXCEEDS	38	
90 PERCENT EXCEEDS	1.7	

a Aug. 18-31, Sept. 1-9, 1968, Aug. 6-24, 1999.
b From rating curve extended above 10,400 ft^3/s.
c Aug. 17-31, Sept. 1-10, 1968, Aug. 6-25, 1999.



01611500 CACAPON RIVER NEAR GREAT CACAPON, WV

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

DRAINAGE AREA.--675 mi^2.

PERIOD OF RECORD.--December 1922 to September 1995, October 1996 to current year.

REVISED RECORDS.--WSP 800: 1924(M). WSP 921: Drainage area. WSP 951: 1936-37. WSP 1552: 1925-26(M), 1928, 1929(M), 1932. OFR 95-292: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 456.78 ft above sea level (U.S. Army Corps of Engineers bench mark). Prior to Nov. 10, 1933, nonrecording gage at same site and datum.

REMARKS.--Records fair except those for estimated daily discharges (ice effect), which are poor. High end of rating is not confirmed above 3,000 ft^3/s since cableway removed in July 1992. National Weather Service gage-height telemeter at the station. Several measurements of water temperature were made during the year. Water-quality records for some prior periods have been collected at this location.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in May 1889 reached a stage of about 24.7 ft, from floodmarks, discharge, 57,500 ft^3/s.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 3,900 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar 19	0600	*3,760	*6.69	No peak greater than base discharge.			

Minimum discharge, 40 ft^3/s, Aug 18-21.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	92	83	90	e78	197	158	350	314	109	58	57	76
2	78	85	90	e98	185	158	345	288	112	64	76	63
3	75	83	88	124	177	173	358	268	124	64	69	56
4	81	83	87	142	174	431	350	253	104	74	54	54
5	80	85	90	130	175	631	331	243	90	76	49	72
6	81	87	90	127	168	475	335	236	83	69	47	96
7	84	87	90	141	160	451	320	229	78	56	45	616
8	95	87	98	152	163	479	298	231	75	50	44	694
9	109	87	101	159	169	448	296	274	72	46	43	436
10	110	88	100	147	172	415	396	310	68	46	43	293
11	108	94	100	150	174	369	620	286	64	46	43	215
12	102	91	103	158	173	343	1560	243	61	45	43	162
13	95	92	103	169	169	335	1470	220	59	44	43	127
14	90	92	102	175	164	363	1090	211	59	44	43	107
15	85	91	97	225	167	417	832	202	63	45	44	93
16	81	90	96	369	169	438	701	194	59	45	43	104
17	80	90	98	333	162	663	616	187	68	45	43	118
18	80	90	98	277	158	2210	517	184	77	44	41	250
19	80	90	98	284	158	3380	442	172	78	44	40	216
20	81	90	99	418	169	2000	400	160	72	47	40	222
21	80	89	95	433	194	1410	378	148	70	50	40	188
22	78	87	e92	326	197	1500	386	142	66	60	63	165
23	77	88	e88	519	181	1660	411	139	62	57	61	185
24	77	89	e85	735	164	1300	715	148	59	51	65	307
25	81	86	e81	1040	150	1020	741	209	58	55	74	242
26	81	89	e78	769	146	809	576	226	58	51	85	197
27	80	90	e77	484	146	652	493	192	55	47	77	159
28	83	90	e75	362	154	553	431	164	57	48	87	137
29	83	89	e73	300	---	485	383	145	58	80	83	131
30	84	87	e72	254	---	429	345	131	57	64	83	162
31	83	---	e70	220	---	381	---	119	---	54	91	---
TOTAL	2654	2649	2804	9298	4735	24536	16486	6468	2175	1669	1759	5943
MEAN	85.6	88.3	90.5	300	169	791	550	209	72.5	53.8	56.7	198
MAX	110	94	103	1040	197	3380	1560	314	124	80	91	694
MIN	75	83	70	78	146	158	296	119	55	44	40	54
CFSM	.13	.13	.13	.44	.25	1.17	.81	.31	.11	.08	.08	.29
IN.	.15	.15	.15	.51	.26	1.35	.91	.36	.12	.09	.10	.33

e Estimated

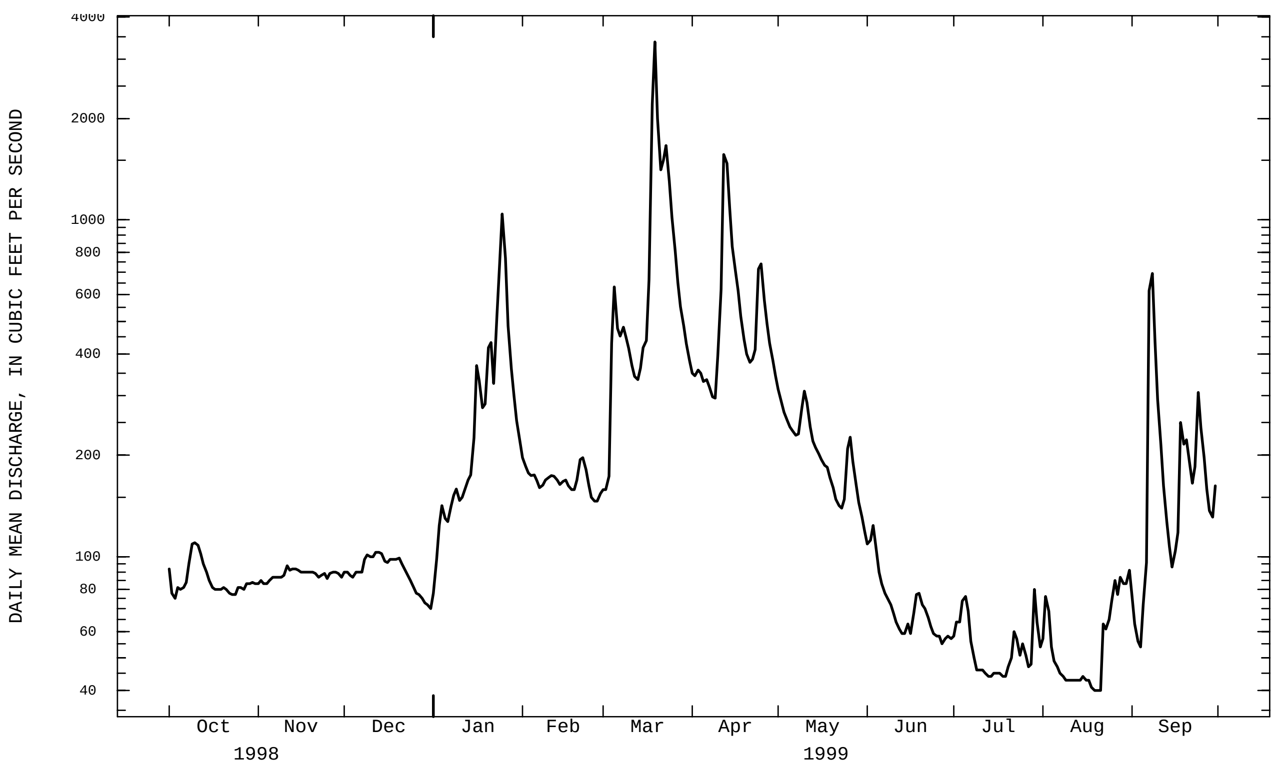
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1923 - 1995, 1997 - 1999, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	329	371	517	649	897	1291	1116	862	429	193	230	175
MAX	2976	2577	2121	1751	3234	5708	2976	3565	3525	936	2791	1636
(WY)	1943	1986	1973	1998	1998	1936	1987	1924	1972	1972	1955	1975
MIN	44.8	51.1	56.5	69.6	89.1	247	242	157	72.5	53.8	39.8	39.4
(WY)	1931	1966	1966	1956	1934	1990	1947	1969	1999	1999	1966	1932

01611500 CACAPON RIVER NEAR GREAT CACAPON, WV--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1923 - 1995 1997 - 1999	
ANNUAL TOTAL	326080		81176			
ANNUAL MEAN	893		222		590	
HIGHEST ANNUAL MEAN					1135	1972
LOWEST ANNUAL MEAN					180	1969
HIGHEST DAILY MEAN	8630	Feb 18	3380	Mar 19	67900	Mar 18 1936
LOWEST DAILY MEAN	65	(a)	40	(b)	26	Sep 12 1966
ANNUAL SEVEN-DAY MINIMUM	68	Sep 14	42	Aug 15	28	Sep 7 1966
INSTANTANEOUS PEAK FLOW			3760	Mar 19	(c)87600	Mar 18 1936
INSTANTANEOUS PEAK STAGE			6.69	Mar 19	30.10	Mar 18 1936
INSTANTANEOUS LOW FLOW			40	(d)	26	(f)
ANNUAL RUNOFF (CFSM)	1.32		.33		.87	
ANNUAL RUNOFF (INCHES)	17.97		4.47		11.88	
10 PERCENT EXCEEDS	2470		449		1340	
50 PERCENT EXCEEDS	229		102		242	
90 PERCENT EXCEEDS	78		54		67	

a Sept. 6, 7, 19.
b Aug. 19-21.
c From rating curve extended above 52,000 ft^3/s.
d Aug. 18-21.
f Sept. 11-13, 1966.



DAILY MEAN DISCHARGE - 1999 WATER YEAR

01613000 POTOMAC RIVER AT HANCOCK, MD

LOCATION.--Lat 39°41'49", long 78°10'39", Washington County, Hydrologic Unit 02070004, on left bank, 0.2 mi downstream from Little Tonoloway Creek, 0.5 mi downstream from bridge on U.S. Highway 522 at Hancock, 1.1 mi upstream from Tonoloway Creek (formerly called Great or Big Tonoloway Creek), and at mile 239.

DRAINAGE AREA.--4,090 mi^2.

PERIOD OF RECORD.--October 1932 to current year. Gage-height records collected at same site since June 1925 are contained in reports of National Weather Service.

REVISED RECORDS.--WSP 781: 1933(M). WSP 801: Drainage area. WDR MD-DE-98-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 383.68 ft above sea level. Oct. 1, 1932, to Jan. 5, 1935, Mar. 18, 1936, to Jan. 20, 1937, nonrecording gage, on former highway bridge just upstream at same datum.

REMARKS.--No estimated daily discharges. Records good. Slight regulation at low flow from power plants upstream. Low flow affected slightly by Stony River Reservoir prior to July 1981, since December 1950 by Savage River Reservoir (see station 01597500), and since July 1981 by Jennings Randolph Lake. National Weather Service gage-height telemeter at station. U.S. Army Corps of Engineers satellite telemeter at station. Several measurements of water temperature were made during the year. Water-quality records for some prior periods have been collected at this location.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known prior to 1932, about 40 ft in May 1889, discharge, about 220,000 ft^3/s.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 23,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar 19	1045	*22,700	*13.02	No peak greater than base discharge.			

Minimum discharge, 245 ft^3/s, Aug 13.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	609	636	511	525	2650	1280	4570	2910	1390	476	395	491
2	609	563	513	520	2440	1390	4230	2640	1100	552	387	430
3	574	563	506	553	2440	1520	4290	2560	1100	481	419	391
4	611	563	475	798	2440	3110	4190	2400	1240	495	395	361
5	1250	563	482	1040	2330	3680	3700	2100	1060	489	356	406
6	1300	554	487	974	2240	4010	3600	1950	918	457	315	468
7	704	548	483	762	2150	3890	3320	1890	853	423	293	3100
8	694	554	508	880	2180	4020	2930	3820	803	379	284	6380
9	720	704	537	999	2750	4070	2860	3750	754	349	277	3830
10	762	606	551	1010	3370	3770	8260	3030	721	341	267	2450
11	738	573	545	962	3160	3460	11700	2540	678	339	266	1720
12	706	561	535	900	2870	3110	16600	2230	619	322	255	1300
13	674	546	529	1240	2650	2970	13600	2100	599	287	250	1050
14	673	545	533	1600	2300	3100	10100	1950	692	798	357	879
15	644	543	552	1590	2110	3380	7610	1940	673	759	514	769
16	618	549	548	1830	1960	3530	6730	2200	642	604	483	767
17	593	554	544	3230	1870	4850	6290	2550	664	463	450	741
18	581	569	541	4160	1730	12500	5520	2330	668	425	447	819
19	585	550	569	3520	1650	21600	4710	1880	658	584	422	849
20	578	520	570	3480	1600	15600	4310	1730	635	625	366	1110
21	564	508	557	4560	1550	11000	4360	1630	600	493	306	1340
22	565	504	540	4040	1500	12500	4320	1530	574	469	285	797
23	563	501	529	6140	1390	12700	4410	1500	551	473	283	672
24	567	498	523	7260	1310	10200	5510	1620	521	389	285	799
25	565	498	503	9760	1260	8780	6530	1730	497	360	347	872
26	568	512	455	8210	1220	7750	5730	2000	476	345	512	796
27	568	507	484	6090	1210	6950	4940	1850	464	351	636	699
28	571	512	565	4500	1250	6280	4110	1660	448	343	679	661
29	575	510	546	3950	---	5690	3620	1480	437	360	807	612
30	576	512	504	3650	---	5140	3230	1330	450	389	667	679
31	902	---	414	3060	---	4860	---	1460	---	370	571	---
TOTAL	20807	16426	16139	91793	57580	196690	175880	66290	21485	13990	12576	36238
MEAN	671	548	521	2961	2056	6345	5863	2138	716	451	406	1208
MAX	1300	704	570	9760	3370	21600	16600	3820	1390	798	807	6380
MIN	563	498	414	520	1210	1280	2860	1330	437	287	250	361
CFSM	.16	.13	.13	.72	.50	1.55	1.43	.52	.18	.11	.10	.30
IN.	.19	.15	.15	.83	.52	1.79	1.60	.60	.20	.13	.11	.33

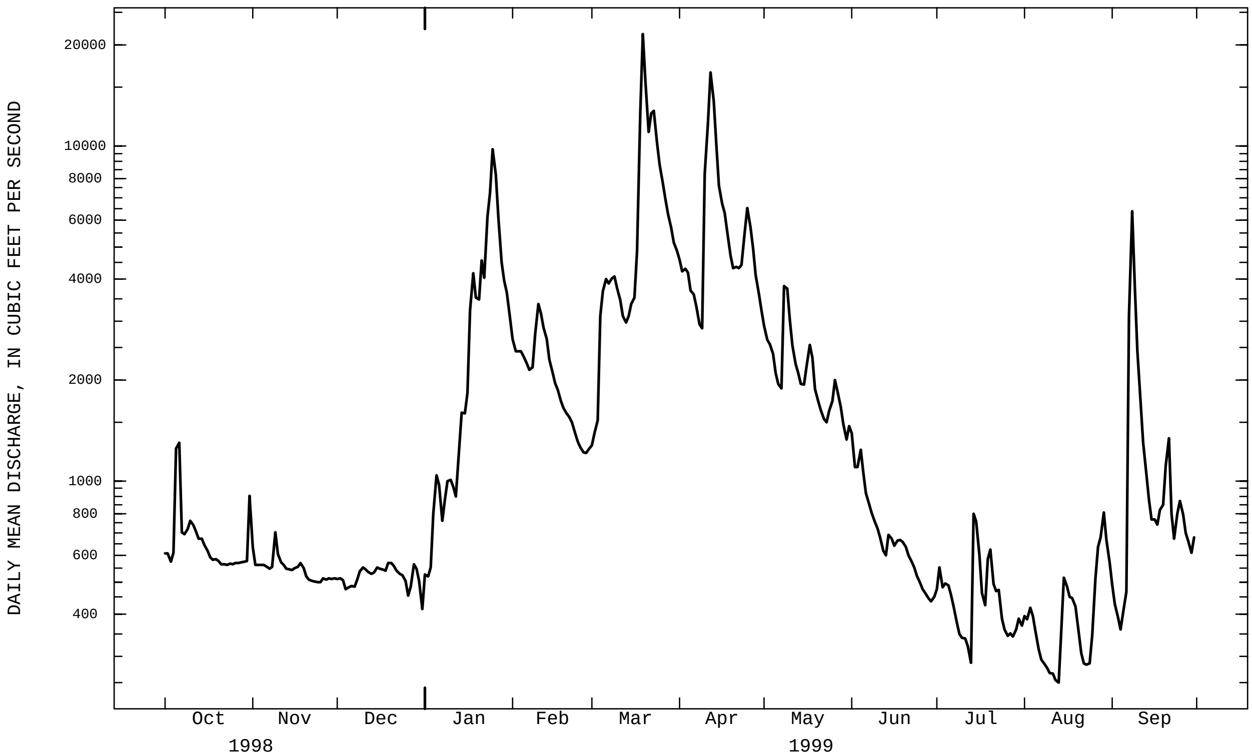
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1933 - 1999, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	2015	2524	4014	5214	6629	9463	7640	5549	3087	1581	1581	1435
MAX	13270	20090	15160	17180	17560	32280	19170	13260	13390	6677	9479	15100
(WY)	1977	1986	1973	1996	1998	1936	1993	1988	1972	1949	1955	1996
MIN	309	399	463	751	1041	2311	2286	1344	622	357	342	329
(WY)	1942	1966	1966	1956	1934	1990	1995	1941	1969	1966	1944	1946

01613000 POTOMAC RIVER AT HANCOCK, MD--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1933 - 1999	
ANNUAL TOTAL	2038990		725894			
ANNUAL MEAN	5586		1989		4216	
HIGHEST ANNUAL MEAN					7932	1996
LOWEST ANNUAL MEAN					1770	1969
HIGHEST DAILY MEAN	48300	Mar 22	21600	Mar 19	261000	Mar 18 1936
LOWEST DAILY MEAN	414	Dec 31	250	Aug 13	184	Oct 3 1932
ANNUAL SEVEN-DAY MINIMUM	493	Dec 2	270	Aug 7	215	Sep 7 1966
INSTANTANEOUS PEAK FLOW			22700	Mar 19	(a)340000	Mar 18 1936
INSTANTANEOUS PEAK STAGE			13.02	Mar 19	47.60	Mar 18 1936
INSTANTANEOUS LOW FLOW			245	Aug 13	180	Oct 4 1932
ANNUAL RUNOFF (CFSM)	1.37		.49		1.03	
ANNUAL RUNOFF (INCHES)	18.55		6.60		14.00	
10 PERCENT EXCEEDS	16000		4560		9640	
50 PERCENT EXCEEDS	1940		741		2190	
90 PERCENT EXCEEDS	546		411		540	

a From rating curve extended above 120,000 ft^3/s on basis of slope-area measurement of peak flow.



DAILY MEAN DISCHARGE - 1999 WATER YEAR

01614500 CONOCOCHEAGUE CREEK AT FAIRVIEW, MD

LOCATION.--Lat 39°42'57", long 77°49'28", Washington County, Hydrologic Unit 02070004, on right bank 0.7 mi upstream from highway bridge in Fairview, 2.0 mi upstream from Rockdale Run, 6.5 mi northwest of Hagerstown, and 19.1 mi upstream from mouth.

DRAINAGE AREA.--494 mi^2.

WATER-DISCHARGE RECORDS

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

REVISED RECORDS.--WSP 756: Drainage area. WSP 1432: 1929(M), 1930, 1931-32(M), 1935(M).

GAGE.--Water-stage recorder. Datum of gage is 391.85 ft above sea level. Prior to Dec. 6, 1932, nonrecording gage at highway bridge 0.7 mi downstream at datum 2.93 ft lower. Dec. 6, 1932, to Oct. 7, 1933, nonrecording gage 150 ft downstream from former site at datum 4.92 ft lower than present datum.

REMARKS.--Water-discharge records good except those for estimated daily discharges (ice effect), which are fair. Diversions for irrigation upstream from station. National Weather Service gage-height telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known prior to 1928, about 16.5 ft, present datum, sometime in 1889, from information by local residents, discharge, about 22,000 ft^3/s.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 4,300 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jan 24	2245	*6,260	*9.12	No other peak greater than base discharge.			

Minimum discharge, 56 ft^3/s, Aug 19.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	115	104	109	e96	449	358	628	596	200	126	105	93
2	110	105	107	e102	538	320	677	555	208	182	114	87
3	111	106	107	e125	634	299	612	517	312	184	96	83
4	137	108	110	e160	536	1430	565	501	284	150	89	81
5	159	106	111	e145	466	1340	1380	475	223	131	86	84
6	144	102	111	e125	413	1060	1140	450	200	120	80	126
7	131	103	111	e115	395	964	911	435	189	111	76	217
8	164	102	118	e110	449	787	787	780	183	105	76	259
9	256	103	135	e130	440	711	865	984	175	99	82	177
10	198	105	128	e150	415	652	2250	702	169	100	78	147
11	169	108	120	e170	381	606	1890	590	159	101	75	140
12	159	110	116	e150	366	590	2180	527	156	102	76	115
13	142	109	113	e140	382	614	1700	552	154	96	73	105
14	136	110	113	e170	364	694	1400	555	158	97	71	100
15	129	108	111	e200	326	750	1210	470	188	97	70	103
16	126	110	109	e170	311	824	1250	429	163	101	82	282
17	122	108	109	e150	313	1300	1050	404	163	91	72	811
18	121	111	108	e170	333	2290	908	384	221	80	68	442
19	118	109	106	e600	316	1890	807	369	186	83	66	271
20	115	110	105	e700	293	1400	794	345	165	84	84	211
21	113	111	106	e600	275	1370	789	319	160	86	174	198
22	112	109	106	e530	254	2770	1050	304	156	103	142	198
23	113	108	103	e550	230	1880	1350	310	149	100	105	175
24	110	107	102	e4000	234	1490	1340	325	137	96	97	155
25	108	108	e102	3730	226	1270	1100	315	129	104	151	137
26	108	112	e100	1490	233	1080	967	284	125	104	168	125
27	110	114	e100	1060	225	943	872	263	120	93	168	118
28	111	110	e99	855	256	848	781	247	134	90	148	145
29	108	110	e99	716	---	771	709	233	136	89	133	448
30	105	109	e98	595	---	699	648	220	127	84	114	2610
31	105	---	e97	509	---	632	---	206	---	83	100	---
TOTAL	4065	3235	3369	18513	10053	32632	32610	13646	5229	3272	3119	8243
MEAN	131	108	109	597	359	1053	1087	440	174	106	101	275
MAX	256	114	135	4000	634	2770	2250	984	312	184	174	2610
MIN	105	102	97	96	225	299	565	206	120	80	66	81
CFSM	.27	.22	.22	1.21	.73	2.13	2.20	.89	.35	.21	.20	.56
IN.	.31	.24	.25	1.39	.76	2.46	2.46	1.03	.39	.25	.23	.62

e Estimated

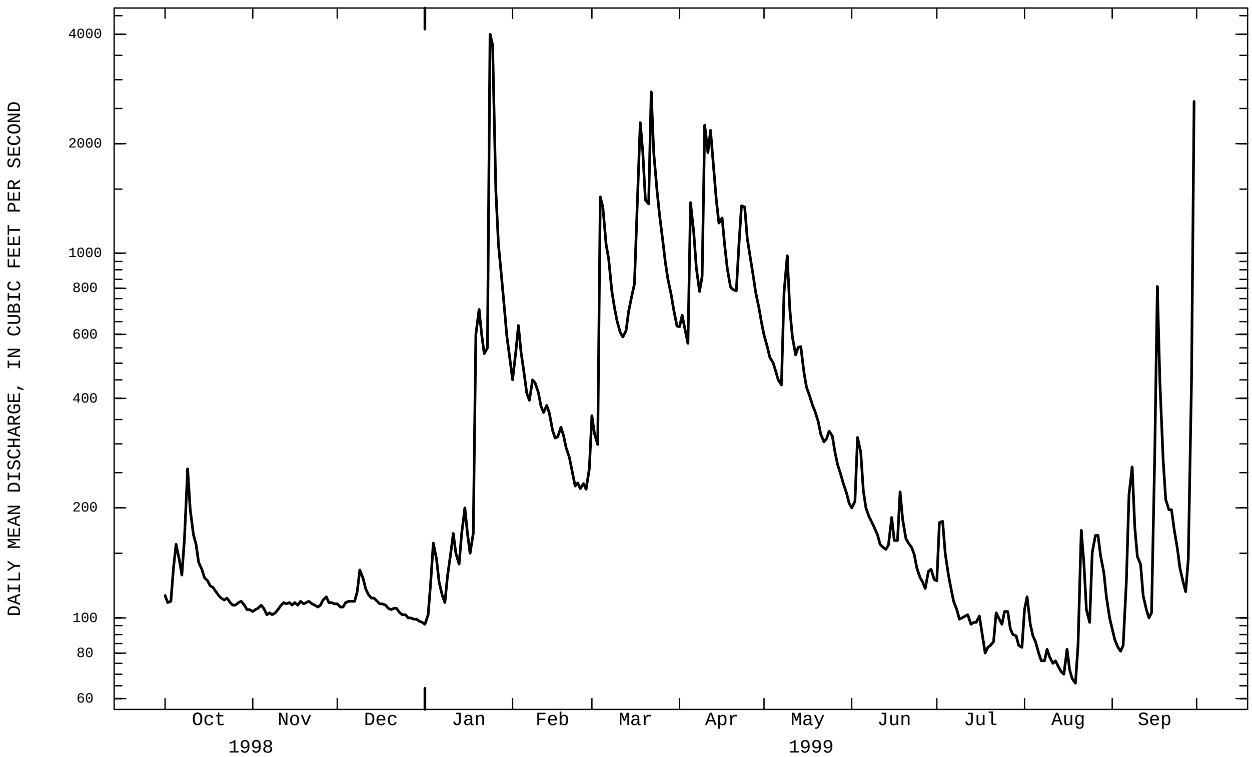
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1928 - 1999, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	331	457	627	694	855	1203	1064	745	508	327	232	262
MAX	2177	1571	1926	2404	2473	3725	2991	1736	3278	1358	921	1886
(WY)	1977	1998	1997	1996	1998	1994	1993	1989	1972	1928	1942	1996
MIN	42.3	45.4	61.2	88.8	151	274	304	218	120	62.2	48.0	54.6
(WY)	1931	1931	1931	1931	1931	1990	1995	1941	1965	1966	1966	1930

01614500 CONOCOCHEAGUE CREEK AT FAIRVIEW, MD--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1928 - 1999	
ANNUAL TOTAL	331907		137986			
ANNUAL MEAN	909		378		607	
HIGHEST ANNUAL MEAN					1183	1996
LOWEST ANNUAL MEAN					301	1954
HIGHEST DAILY MEAN	7330	Mar 22	4000	Jan 24	26700	Jun 23 1972
LOWEST DAILY MEAN	(e)97	Dec 31	66	Aug 19	25	Nov 28 1930
ANNUAL SEVEN-DAY MINIMUM	99	Dec 25	72	Aug 13	28	Sep 7 1966
INSTANTANEOUS PEAK FLOW			6260	Jan 24	(a)32400	Jun 23 1972
INSTANTANEOUS PEAK STAGE			9.12	Jan 24	(b)24.50	Jun 23 1972
INSTANTANEOUS LOW FLOW			56	Aug 19	21	(c)
ANNUAL RUNOFF (CFSM)	1.84		.77		1.23	
ANNUAL RUNOFF (INCHES)	24.99		10.39		16.70	
10 PERCENT EXCEEDS	2260		924		1330	
50 PERCENT EXCEEDS	375		156		336	
90 PERCENT EXCEEDS	108		97		103	

e Estimated.
a From rating curve extended above 15,000 ft^3/s on basis of contracted-opening and flow-over-road measurement of peak flow.
b From floodmarks.
c Aug. 8, Sept. 12, 1966.



DAILY MEAN DISCHARGE - 1999 WATER YEAR

01614500 CONOCOCHEAGUE CREEK AT FAIRVIEW, MD--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1967-83, 1992 to current year.

PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: November 1966 to September 1980.
SUSPENDED SEDIMENT DISCHARGE: October 1966 to September 1980.

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

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURE: Maximum daily, 30.0°C, July 17, 1969; minimum daily, 0.0°C on many days during winter periods.
SEDIMENT CONCENTRATION: Maximum daily mean, 1,050 mg/L, Oct. 25, 1971; minimum daily mean, 1 mg/L, on many days.
SEDIMENT LOAD: Maximum daily, 73,000 tons, June 23, 1972; minimum daily, 0.17 ton, Nov. 24, 26, 27, 1966.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)	NITRO-GEN, TOTAL (MG/L AS N) (00600)	NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS N) (00618)
OCT 1998											
13...	1630	151	448	8.4	20.0	16.0	753	13.6	140	4.8	4.48
NOV											
09...	1615	100	482	8.7	8.0	8.5	761	16.2	139	4.8	4.49
DEC											
08...	1415	116	479	7.7	9.5	12.0	753	7.5	71	4.2	3.91
JAN 1999											
06...	1100	126	565	7.8	-6.5	.0	759	12.8	88	5.7	4.60
24...	0126	1990	320	--	--	--	--	--	--	8.1	--
24...	0531	3590	293	--	--	--	--	--	--	--	--
24...	0816	4560	258	--	--	--	--	--	--	7.6	--
24...	1038	5050	243	--	--	--	--	--	--	--	--
24...	1249	5390	238	--	--	--	--	--	--	6.2	--
24...	1453	5730	230	--	--	--	--	--	--	--	--
24...	1650	5950	228	--	--	--	--	--	--	6.1	--
24...	1843	6120	223	--	--	--	--	--	--	--	--
24...	2035	6180	218	--	--	--	--	--	--	5.8	--
24...	2225	6220	215	--	--	--	--	--	--	--	--
25...	0015	6200	209	--	--	--	--	--	--	5.3	--
25...	0207	6100	207	--	--	--	--	--	--	--	--
25...	0401	5870	208	--	--	--	--	--	--	4.7	--
25...	0601	5530	212	--	--	--	--	--	--	--	--
25...	0812	4910	222	--	--	--	--	--	--	5.1	--
25...	1100	3370	232	--	--	--	--	--	--	--	--
25...	1500	2530	245	--	--	--	--	--	--	5.2	--
25...	1959	2090	258	--	--	--	--	--	--	--	--
FEB											
10...	1445	410	386	7.9	14.0	6.0	759	13.1	106	4.8	4.28
MAR											
17...	1530	1180	305	7.8	19.5	8.0	751	13.9	119	4.1	3.45
17...	2222	1990	--	--	--	--	--	--	--	4.5	3.37
18...	0324	2390	--	--	--	--	--	--	--	4.8	3.39
18...	0807	2330	--	--	--	--	--	--	--	4.8	3.51
18...	1258	2320	--	--	--	--	--	--	--	4.9	3.51
18...	1755	2230	263	--	--	--	--	--	--	4.4	3.53
18...	2259	2200	265	--	--	--	--	--	--	--	--
19...	0413	2080	255	--	--	--	--	--	--	4.1	3.41
19...	0948	1940	250	--	--	--	--	--	--	--	--
APR											
15...	1500	1180	283	7.8	11.0	11.0	746	--	--	3.3	2.88
MAY											
13...	1145	562	321	7.8	17.5	17.5	750	8.0	85	3.1	2.67
JUN											
09...	1400	173	407	8.6	33.5	28.5	754	12.4	162	3.2	2.84
JUL											
08...	1215	104	481	8.2	30.5	27.0	754	9.3	118	3.4	2.95
AUG											
10...	1330	68	498	8.5	25.5	23.5	751	11.7	140	3.5	3.03
31...	1130	98	452	8.0	22.5	20.0	759	8.8	97	3.3	2.88

01614500 CONOCOCHEAGUE CREEK AT FAIRVIEW, MD--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)	SEDI-MENT, SUS-PENDED (MG/L) (80154)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY) (80155)
OCT 1998											
13...	.011	4.49	.023	.35	.28	.161	.143	.137	2.9	5	2.0
NOV											
09...	.085	4.58	<.020	.24	.37	.083	.086	.081	3.6	5	1.3
DEC											
08...	.015	3.92	.047	.29	.26	.172	.156	.145	3.5	3	.81
JAN 1999											
06...	.018	4.62	.605	1.1	.94	.144	.041	.104	3.6	8	2.7
24...	--	3.69	.138	4.5	.71	.957	.097	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	570	5530
24...	--	3.66	.198	3.9	.83	.999	.160	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	545	7430
24...	--	3.71	.184	2.5	.78	.723	.160	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	347	5370
24...	--	3.62	.152	2.4	.76	.578	.141	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	274	4530
24...	--	3.60	.133	2.2	.68	.486	.136	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	208	3490
25...	--	3.55	.128	1.8	.59	.425	.123	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	158	2600
25...	--	3.67	.107	1.0	.68	.304	.113	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	106	1580
25...	--	3.94	.086	1.1	.60	.238	.099	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	90	819
25...	--	4.20	.074	1.0	.56	.201	.072	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	59	333
FEB											
10...	.024	4.30	.090	.46	.25	.064	.053	.045	2.1	6	6.4
MAR											
17...	.030	3.48	<.020	.65	.34	.102	.039	.025	5.6	30	96
17...	.018	3.39	.027	1.1	.37	.195	.026	.015	--	107	575
18...	.019	3.40	.028	1.4	.37	.292	.045	.033	--	148	955
18...	.016	3.53	.031	1.3	.37	.258	.045	.031	--	129	812
18...	.017	3.53	.028	1.4	.34	.199	.033	.023	--	95	595
18...	.015	3.55	.020	.81	.31	.127	.029	.020	--	--	--
18...	--	--	--	--	--	--	--	--	--	63	374
19...	.012	3.43	.022	.64	.24	.114	.024	.017	--	--	--
19...	--	--	--	--	--	--	--	--	--	53	278
APR											
15...	.016	2.90	.026	.36	.22	.059	.030	.026	6.2	22	70
MAY											
13...	.025	2.69	.040	.39	.18	.082	.055	.040	3.4	11	17
JUN											
09...	.023	2.86	<.020	.29	.31	.123	.112	.089	2.6	4	2.1
JUL											
08...	.030	2.98	<.020	.44	.14	.042	<.050	.186	3.2	5	1.5
AUG											
10...	.016	3.04	.025	.42	.31	.216	.211	.190	2.5	2	.38
31...	.012	2.89	.025	.44	.24	.204	.194	.168	4.5	10	2.7

01614500 CONOCOCHEAGUE CREEK AT FAIRVIEW, MD--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)	NITRO-GEN, TOTAL (MG/L AS N) (00600)	NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS N) (00618)
SEP 1999											
07...	1452	251	--	--	--	--	--	--	--	3.9	2.90
07...	1841	298	--	--	--	--	--	--	--	4.4	3.13
07...	2232	274	--	--	--	--	--	--	--	4.3	3.22
08...	0220	298	--	--	--	--	--	--	--	5.2	3.22
08...	0608	281	--	--	--	--	--	--	--	4.6	3.43
08...	1012	254	--	--	--	--	--	--	--	4.5	3.52
08...	1440	251	--	--	--	--	--	--	--	4.0	3.12
08...	1857	242	--	--	--	--	--	--	--	3.7	2.83
15...	1145	99	482	7.7	16.5	19.5	755	7.2	79	3.9	3.47
16...	1350	260	--	--	--	--	--	--	--	4.9	3.13
17...	0750	952	--	--	--	--	--	--	--	6.6	4.66
18...	0012	608	--	--	--	--	--	--	--	7.1	5.69
19...	0438	302	--	--	--	--	--	--	--	5.9	4.83
29...	0021	251	--	--	--	--	--	--	--	4.6	3.50
29...	0324	485	--	--	--	--	--	--	--	5.1	3.61
29...	0539	538	--	--	--	--	--	--	--	5.1	3.74
29...	0751	523	--	--	--	--	--	--	--	4.8	3.67
29...	1330	454	388	7.6	23.0	18.5	755	7.5	81	4.8	3.59
30...	0300	689	--	--	--	--	--	--	--	4.7	3.12
30...	0645	1720	309	--	--	--	--	--	--	--	--
30...	0838	2660	--	--	--	--	--	--	--	6.8	3.44
30...	1002	3220	285	--	--	--	--	--	--	--	--
30...	1117	3390	--	--	--	--	--	--	--	7.8	4.04
30...	1230	3410	268	--	--	--	--	--	--	--	--
30...	1343	3380	--	--	--	--	--	--	--	6.0	4.34
30...	1458	3340	254	--	--	--	--	--	--	--	--
30...	1612	3370	--	--	--	--	--	--	--	7.3	4.51
30...	1725	3420	241	--	--	--	--	--	--	--	--
30...	1838	3480	--	--	--	--	--	--	--	6.4	4.33
30...	1949	3530	228	--	--	--	--	--	--	--	--
30...	2058	3610	--	--	--	--	--	--	--	6.5	4.10
30...	2207	3660	238	--	--	--	--	--	--	--	--
30...	2315	3670	--	--	--	--	--	--	--	6.3	4.16

DATE	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)	SEDI-MENT, SUS-PENDED (MG/L) (80154)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY) (80155)
SEP 1999											
07...	.029	2.93	<.020	1.0	.31	.286	.144	.126	--	81	55
07...	.041	3.17	.051	1.2	.36	.346	.158	.139	--	122	98
07...	.042	3.26	.061	1.1	.39	.327	.177	.134	--	102	75
08...	.064	3.28	.185	1.9	.62	1.03	.521	.638	--	258	208
08...	.047	3.47	.089	1.2	.53	.071	.206	.205	--	120	91
08...	.049	3.57	.072	.95	.43	.289	.174	.189	--	70	48
08...	.044	3.17	.046	.79	.40	.264	.183	.140	--	54	37
08...	.038	2.87	.039	.85	.39	.259	.170	.140	--	63	41
15...	.016	3.48	.021	.38	.37	.198	.211	.188	3.3	8	2.2
16...	.012	3.14	<.020	1.8	.44	.503	.216	.198	--	217	152
17...	.022	4.68	.056	1.9	.58	.549	.126	.100	--	283	727
18...	.027	5.71	.035	1.4	.54	.313	.106	.083	--	148	243
19...	.022	4.85	.022	1.1	.38	.172	.085	.068	--	74	60
29...	.011	3.51	<.020	1.1	.29	.326	.137	.143	--	130	88
29...	.023	3.63	.022	1.5	.27	.422	.143	.143	--	177	232
29...	.018	3.75	.021	1.3	.30	.397	.144	.155	--	163	237
29...	.017	3.69	.023	1.1	.25	.349	.136	.140	--	143	202
29...	.025	3.61	.081	1.2	.38	.263	.172	.174	7.8	96	118
30...	.021	3.14	.023	1.5	.54	.375	.175	.148	--	--	--
30...	--	--	--	--	--	--	--	--	--	626	2910
30...	.022	3.46	.066	3.4	.61	.962	.115	.087	--	--	--
30...	--	--	--	--	--	--	--	--	--	740	6430
30...	.028	4.07	.083	3.8	.76	1.09	.112	.075	--	--	--
30...	--	--	--	--	--	--	--	--	--	676	6220
30...	.030	4.36	.078	1.6	.72	.450	.105	.069	--	--	--
30...	--	--	--	--	--	--	--	--	--	436	3930
30...	.029	4.54	.068	2.8	.66	.622	.109	.079	--	--	--
30...	--	--	--	--	--	--	--	--	--	349	3220
30...	.024	4.36	.049	2.0	.58	.424	.087	.066	--	--	--
30...	--	--	--	--	--	--	--	--	--	304	2900
30...	.021	4.12	.035	2.4	.54	.449	.075	.050	--	--	--
30...	--	--	--	--	--	--	--	--	--	337	3330
30...	.020	4.18	.039	2.1	.54	.417	.066	.046	--	--	--

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01616500 OPEQUON CREEK NEAR MARTINSBURG, WV

LOCATION.--Lat 39°25'25", long 77°56'20", Berkeley County, Hydrologic Unit 02070004, on right bank 300 ft upstream from Evans Run, 2.3 mi upstream from Tuscarora Creek, 3.0 mi southeast of Martinsburg, and at mile 11.6.

DRAINAGE AREA.--273 mi^2.

PERIOD OF RECORD.--May 1905 to July 1906, July 1947 to current year.

REVISED RECORDS.--WSP 1702: 1959. See revisions and estimates of peak discharges in Appendix of WV-97-1. OFR 95-292: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 354.89 ft above sea level. Prior to July 1906, nonrecording gage at approximately the same site at different datum. July 23, 1947 to July 22, 1948, nonrecording gage at present site and datum.

REMARKS.--Records fair except those for estimated daily discharges (ice effect), which are poor. Some diurnal fluctuation at low flow caused by mills in Virginia and since July 22, 1988, by wastewater treatment plant, 1,000 ft upstream from Opequon Creek near Berryville, VA (01615000); drainage area 57.4 mi^2. Several measurements of water temperature were made during the year. Water-quality records for some prior periods have been collected at this location.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in March 1936 reached a stage of about 17.5 ft, from information by local residents, estimated discharge, 19,100 ft^3/s.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,900 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Sep 30	1500	*2,050	*8.63	No peak greater than base discharge.			

Minimum discharge, 34 ft^3/s, Jan 1.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	70	69	59	57	92	86	162	119	70	52	51	42
2	66	68	60	67	100	84	198	113	71	54	54	40
3	68	68	58	84	101	91	176	109	70	95	49	38
4	75	68	57	94	93	560	165	109	69	80	45	38
5	79	69	59	86	88	431	233	107	65	57	43	80
6	75	69	61	79	84	290	229	104	65	53	42	284
7	75	70	58	66	82	257	192	103	64	50	40	213
8	87	69	60	64	87	202	169	118	64	48	40	585
9	105	67	67	67	87	183	158	150	61	47	39	208
10	88	68	72	80	83	177	183	115	60	46	40	121
11	78	71	62	69	80	173	251	105	62	46	40	108
12	75	70	60	64	80	183	632	100	60	46	39	81
13	74	67	58	81	82	253	387	97	59	47	39	69
14	74	65	59	167	78	311	277	94	63	47	42	63
15	73	65	59	132	75	365	230	91	66	46	47	78
16	72	65	58	104	73	567	213	87	61	45	45	471
17	71	66	58	88	74	875	191	85	64	45	41	907
18	72	66	58	159	88	883	169	87	83	42	39	260
19	71	64	58	209	122	496	157	86	69	42	39	161
20	70	63	56	144	111	311	151	84	61	42	38	125
21	68	65	55	130	95	364	148	83	62	54	41	128
22	69	63	54	130	86	925	156	81	61	47	40	141
23	69	62	52	155	80	534	152	98	60	57	39	127
24	69	61	54	492	77	360	219	98	57	59	39	103
25	70	63	52	434	75	292	205	92	55	94	42	92
26	69	64	e51	209	74	243	170	85	54	48	83	83
27	69	61	e50	155	72	213	152	81	52	44	88	79
28	69	59	e49	131	77	195	140	77	54	50	55	234
29	66	59	e48	116	---	178	132	75	55	87	53	241
30	66	60	e47	103	---	165	127	74	52	78	47	1390
31	68	---	e49	96	---	154	---	72	---	53	43	---
TOTAL	2270	1964	1758	4112	2396	10401	6124	2979	1869	1701	1422	6590
MEAN	73.2	65.5	56.7	133	85.6	336	204	96.1	62.3	54.9	45.9	220
MAX	105	71	72	492	122	925	632	150	83	95	88	1390
MIN	66	59	47	57	72	84	127	72	52	42	38	38
CFSM	.27	.24	.21	.49	.31	1.23	.75	.35	.23	.20	.17	.80
IN.	.31	.27	.24	.56	.33	1.42	.83	.41	.25	.23	.19	.90

e Estimated

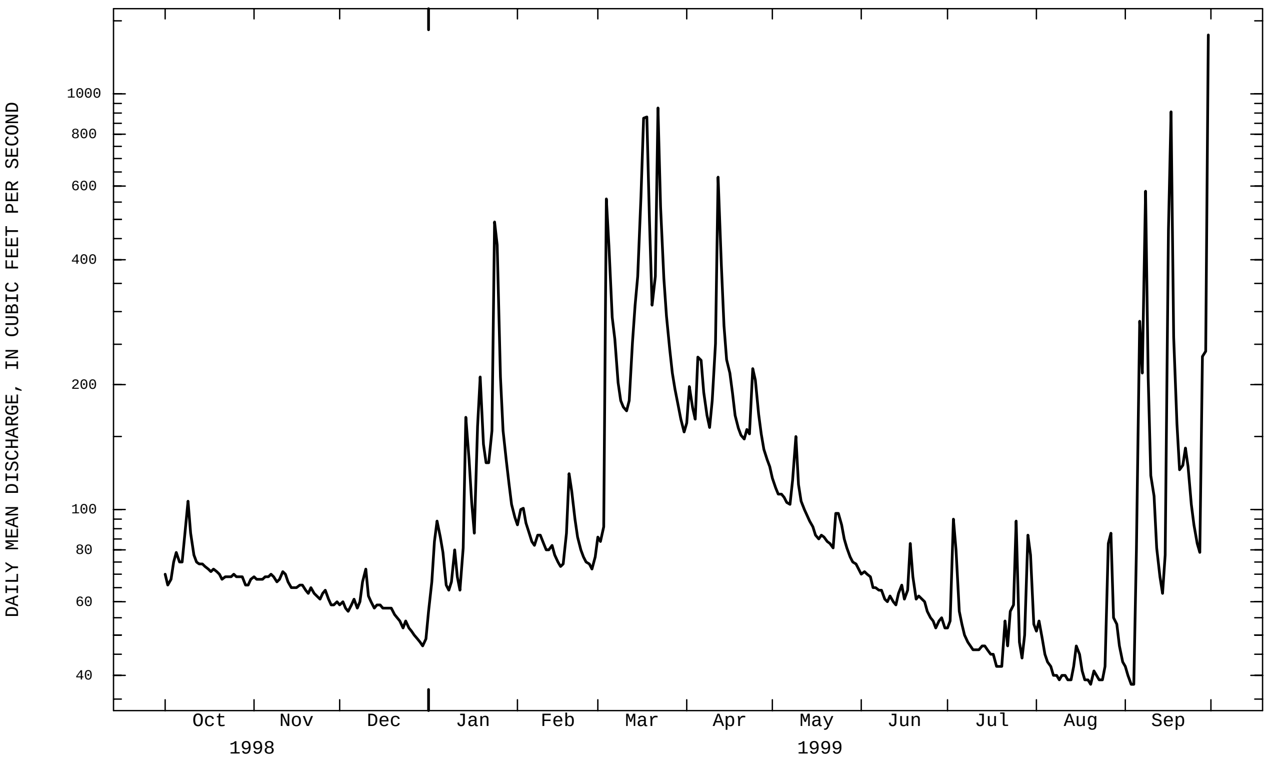
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1947 - 1999, BY WATER YEAR (WY)

MEAN	149	175	243	291	352	456	380	279	210	139	137	130
MAX	788	609	821	1337	1269	1461	1199	1091	1190	456	772	970
(WY)	1977	1997	1973	1996	1998	1993	1984	1988	1972	1972	1996	1996
MIN	30.5	35.1	33.7	39.6	76.6	119	97.8	86.0	62.3	49.4	36.6	35.2
(WY)	1948	1966	1966	1966	1954	1959	1954	1969	1999	1966	1966	1947

01616500 OPEQUON CREEK NEAR MARTINSBURG, WV--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1947 - 1999	
ANNUAL TOTAL	149649		43586			
ANNUAL MEAN	410		119		245	
HIGHEST ANNUAL MEAN					581	1996
LOWEST ANNUAL MEAN					85.7	1954
HIGHEST DAILY MEAN	7420	Mar 21	1390	Sep 30	15000	Jan 20 1996
LOWEST DAILY MEAN	(e)47	Dec 30	38	(a)	26	Oct 25 1947
ANNUAL SEVEN-DAY MINIMUM	49	Dec 25	39	Aug 18	27	Sep 7 1966
INSTANTANEOUS PEAK FLOW			2050	Sep 30	(b)23400	Jan 20 1996
INSTANTANEOUS PEAK STAGE			8.63	Sep 30	18.76	Jan 20 1996
INSTANTANEOUS LOW FLOW			34	Jan 1	25	Oct 25 1947
ANNUAL RUNOFF (CFSM)	1.50		.44		.90	
ANNUAL RUNOFF (INCHES)	20.39		5.94		12.18	
10 PERCENT EXCEEDS	868		215		480	
50 PERCENT EXCEEDS	184		74		140	
90 PERCENT EXCEEDS	63		47		56	

e Estimated
a Aug. 20, Sept. 3, 4.
b From rating curve extended above 7,100 ft^3/s.



DAILY MEAN DISCHARGE - 1999 WATER YEAR

01617800 MARSH RUN AT GRIMES, MD

LOCATION.--Lat 39°30'53", long 77°46'38", Washington County, Hydrologic Unit 02070004, on right bank 220 ft upstream from bridge on Sprecher Road, 0.1 mi downstream from unnamed tributary, 0.5 mi southwest of Grimes, 1.5 mi upstream from mouth, and 2.2 mi southwest of Fairplay.

DRAINAGE AREA.--18.9 mi^2.

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

GAGE.--Water-stage recorder. Datum of gage is 354.72 ft above sea level.

REMARKS.--Records good. Several measurements of water temperature were made during the year. Water-quality records for some prior periods have been collected at this location.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 60 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jan 18	1500	*136	*2.62	No other peak greater than base discharge.			

Minimum discharge, 0.18 ft^3/s, Sep 26.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.0	1.2	1.1	2.2	5.9	4.7	9.8	6.5	2.5	1.8	.44	.66
2	2.0	1.0	1.2	1.8	7.2	3.9	9.6	6.4	2.9	3.4	.57	.65
3	2.5	1.0	1.4	7.8	6.5	4.5	8.7	6.4	4.9	2.6	.55	.69
4	4.2	1.1	1.1	7.5	6.1	12	8.5	6.3	3.1	1.0	.55	.74
5	3.8	.96	1.0	4.6	5.5	8.2	9.1	6.1	3.0	.85	.50	1.4
6	3.6	.95	1.0	e3.6	5.4	8.0	8.2	6.1	2.4	.55	.57	1.8
7	3.6	.98	.99	e3.2	5.8	7.5	7.8	5.9	2.4	.53	.57	1.9
8	4.9	1.0	1.2	e5.5	6.9	6.6	7.1	6.2	3.4	1.0	.31	1.3
9	4.2	1.0	1.5	e9.0	6.1	6.7	7.9	5.8	2.9	1.3	.34	1.2
10	3.7	1.1	1.1	12	5.6	6.5	9.3	4.9	2.3	1.4	.30	1.5
11	3.5	1.8	1.1	.29	5.3	6.2	11	4.5	1.4	1.4	.29	1.5
12	3.3	1.7	1.1	.31	5.3	6.5	13	5.1	1.2	1.1	.52	1.5
13	3.5	1.6	2.0	10	5.2	6.0	11	5.9	2.0	1.2	.28	1.6
14	3.7	1.6	3.0	15	4.9	6.6	9.7	5.5	2.8	.76	.35	1.7
15	3.0	1.6	2.8	4.3	4.5	7.3	8.9	5.3	3.3	.80	.35	2.6
16	3.6	2.1	2.9	3.3	4.5	8.2	9.1	5.5	2.5	.85	.31	6.1
17	1.8	3.0	2.9	5.2	4.8	11	8.2	5.1	2.8	.82	.30	4.2
18	1.4	3.0	2.8	46	5.6	11	8.1	4.3	2.8	.85	.25	2.2
19	2.3	2.8	2.9	13	4.9	9.2	8.0	4.0	2.6	.80	.25	2.0
20	3.6	2.9	3.2	9.3	4.5	8.4	8.3	3.5	2.4	.82	.27	2.1
21	2.6	2.8	1.7	8.2	4.3	11	8.2	3.5	2.4	.97	.26	2.5
22	2.6	2.7	.88	7.9	5.1	16	8.5	3.6	2.4	.99	.37	2.6
23	2.6	2.8	.86	11	7.3	13	8.2	4.3	2.2	.98	.31	2.9
24	2.8	2.6	1.0	23	3.7	12	8.3	3.6	1.5	.82	.33	2.5
25	2.6	2.4	.95	13	3.6	11	7.7	3.4	1.4	1.0	.46	1.7
26	2.4	2.8	.91	9.9	3.5	10	7.6	3.2	1.4	1.2	.78	.19
27	2.4	2.6	1.2	8.7	3.4	9.9	7.1	3.2	1.2	.74	.72	.27
28	2.3	2.6	1.2	8.0	4.9	9.5	7.0	3.5	2.2	.75	.57	1.2
29	2.1	2.6	1.2	7.7	---	9.0	6.9	3.3	2.5	.75	.57	1.5
30	2.2	2.4	.86	7.2	---	8.6	6.6	3.2	2.5	.75	.61	12
31	2.2	---	1.3	6.4	---	8.3	---	2.5	---	.55	.62	---
TOTAL	91.0	58.69	48.35	274.90	146.3	267.3	257.4	146.6	73.3	33.33	13.47	64.70
MEAN	2.94	1.96	1.56	8.87	5.22	8.62	8.58	4.73	2.44	1.08	.43	2.16
MAX	4.9	3.0	3.2	46	7.3	16	13	6.5	4.9	3.4	.78	12
MIN	1.4	.95	.86	.29	3.4	3.9	6.6	2.5	1.2	.53	.25	.19
CFSM	.16	.10	.08	.47	.28	.46	.45	.25	.13	.06	.02	.11
IN.	.18	.12	.10	.54	.29	.53	.51	.29	.14	.07	.03	.13

e Estimated

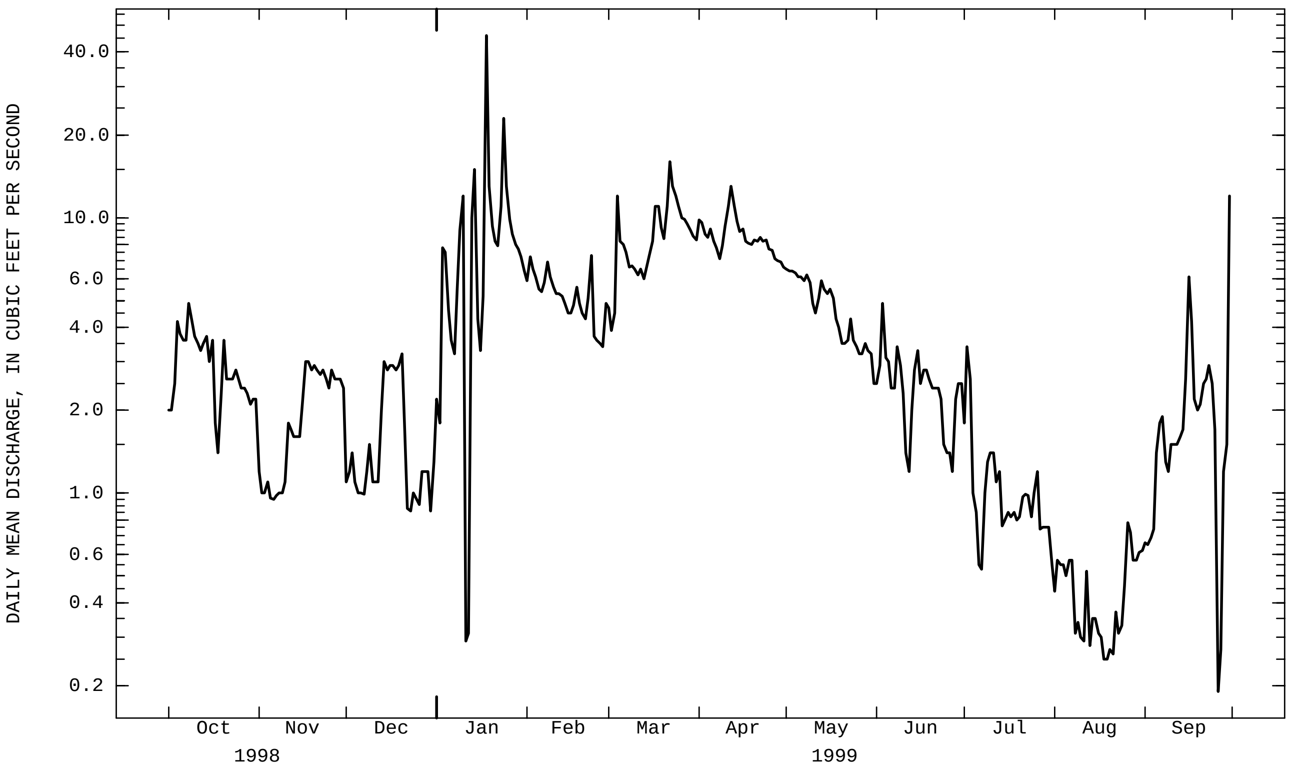
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1964 - 1999, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	7.95	8.03	11.0	13.0	15.4	19.5	19.4	16.1	13.3	9.74	7.45	6.50
MAX	39.5	29.3	39.9	30.1	33.3	48.6	49.8	36.2	48.2	32.4	24.2	31.8
(WY)	1977	1997	1997	1979	1998	1994	1984	1972	1972	1972	1996	1975
MIN	.83	1.71	1.56	2.24	4.14	5.08	4.45	3.65	2.44	1.08	.43	1.05
(WY)	1987	1992	1999	1981	1989	1990	1969	1969	1999	1999	1999	1995

01617800 MARSH RUN AT GRIMES, MD--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1964 - 1999	
ANNUAL TOTAL	6040.14		1475.34			
ANNUAL MEAN	16.5		4.04		12.4	
HIGHEST ANNUAL MEAN					23.9	1972
LOWEST ANNUAL MEAN					4.04	1999
HIGHEST DAILY MEAN	165	Mar 21	46	Jan 18	223	Jun 23 1972
LOWEST DAILY MEAN	.86	(a)	.19	Sep 26	(b).00	Oct 1 1977
ANNUAL SEVEN-DAY MINIMUM	1.0	Nov 2	.28	Aug 15	.28	Aug 15 1999
INSTANTANEOUS PEAK FLOW			136	Jan 18	(c)459	Feb 12 1985
INSTANTANEOUS PEAK STAGE			2.62	Jan 18	4.45	Feb 12 1985
INSTANTANEOUS LOW FLOW			.18	Sep 26	(b).00	Oct 1 1977
ANNUAL RUNOFF (CFSM)	.88		.21		.66	
ANNUAL RUNOFF (INCHES)	11.89		2.90		8.92	
10 PERCENT EXCEEDS	35		8.7		25	
50 PERCENT EXCEEDS	12		2.8		9.0	
90 PERCENT EXCEEDS	1.7		.64		2.8	

a Dec. 23, 30.
b Result of regulation caused by construction work upstream from station.
c From rating curve extended above 220 ft^3/s.



DAILY MEAN DISCHARGE - 1999 WATER YEAR

01619500 ANTIETAM CREEK NEAR SHARPSBURG, MD

LOCATION.--Lat 39°27'01", long 77°43'52", Washington County, Hydrologic Unit 02070004, on left bank 400 ft downstream from Burnside Bridge, 1.0 mi southeast of Sharpsburg, and 4.0 mi upstream from mouth.

DRAINAGE AREA.--281 mi^2.

PERIOD OF RECORD.--June 1897 to September 1905, August 1928 to current year. Monthly discharge only for some periods, published in WSP 1302.

REVISED RECORDS.--WSP 192: 1897-1905. WSP 726: Drainage area. WSP 1432: 1929-31(M), 1933, 1935(M), 1937(M), 1949(M), 1952(M).

GAGE.--Water-stage recorder. Concrete control since Mar. 29, 1934. Datum of gage is 311.05 ft above sea level. June 24, 1897, to Aug. 25, 1905, nonrecording gage a few hundred feet downstream from Middle Bridge, 1.2 mi upstream at datum 12 ft higher. Aug. 21, 1928, to July 13, 1933, nonrecording gage at Burnside Bridge, 0.1 mi upstream at present datum.

REMARKS.--No estimated daily discharges. Records good. Some diurnal fluctuation caused by powerplant upstream from station. Since 1928 records include pumpage from the Potomac River for municipal supply of Hagerstown. This water later enters Antietam Creek upstream from station as sewage. National Weather Service gage-height telemeter at station. Several measurements of water temperature were made during the year. Water-quality records for some prior periods have been collected at this location.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,500 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jan 19	0230	*1,740	*5.42	No other peak greater than base discharge.			

Minimum discharge, 66 ft^3/s, Aug 19, 20.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	141	114	105	90	192	173	285	234	143	112	86	74
2	137	114	103	112	214	163	301	228	148	153	132	73
3	140	115	103	144	233	157	277	223	231	138	91	72
4	161	114	103	211	205	318	263	224	174	114	84	73
5	161	113	103	148	192	309	325	218	150	108	80	98
6	152	114	102	127	183	257	313	212	142	104	78	132
7	147	115	101	112	184	263	280	209	139	101	76	160
8	179	113	105	106	207	243	270	252	137	98	76	160
9	201	112	114	126	194	231	283	305	133	92	82	115
10	168	114	108	215	185	228	398	229	129	92	77	103
11	153	117	104	161	177	222	382	214	127	89	75	93
12	148	113	101	124	172	214	479	209	126	93	73	87
13	145	111	101	152	181	205	421	214	129	93	73	82
14	134	110	100	225	171	208	390	205	149	91	80	82
15	130	108	100	179	164	230	366	195	164	90	92	93
16	126	108	99	150	161	240	364	190	137	85	78	251
17	126	108	99	135	164	257	355	186	133	82	76	307
18	125	109	99	530	181	333	325	184	138	81	71	170
19	125	107	98	917	180	375	305	181	131	81	68	129
20	121	107	97	312	171	334	305	178	124	82	67	116
21	119	108	97	240	163	353	309	171	124	80	80	128
22	121	107	99	230	159	629	302	169	125	106	107	123
23	123	106	96	235	154	497	302	188	120	125	81	114
24	123	106	96	599	151	433	332	192	114	97	74	106
25	120	105	101	520	151	399	289	181	110	99	76	102
26	118	109	97	330	149	363	274	169	108	99	135	98
27	121	109	97	276	147	338	267	165	106	94	115	96
28	119	105	95	250	161	317	260	160	133	90	90	129
29	117	105	97	228	---	303	253	154	158	90	82	119
30	116	104	97	211	---	286	243	149	124	86	76	575
31	115	---	93	199	---	273	---	147	---	83	74	---
TOTAL	4232	3300	3110	7594	4946	9151	9518	6135	4106	3028	2605	4060
MEAN	137	110	100	245	177	295	317	198	137	97.7	84.0	135
MAX	201	117	114	917	233	629	479	305	231	153	135	575
MIN	115	104	93	90	147	157	243	147	106	80	67	72
(†)	-15.0	-14.5	-14.4	-14.9	-14.2	-14.7	-13.8	-15.0	-16.7	-17.8	-16.4	-15.5
MEAN≠	163	180	245	291	349	457	454	363	273	196	158	158
CFSM≠	0.58	0.64	0.87	1.04	1.24	1.63	1.62	1.29	0.97	0.70	0.56	0.56
IN≠	0.67	0.71	1.00	1.20	1.29	1.88	1.81	1.49	1.08	0.81	0.65	0.62

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1931 - 1999, BY WATER YEAR (WY)

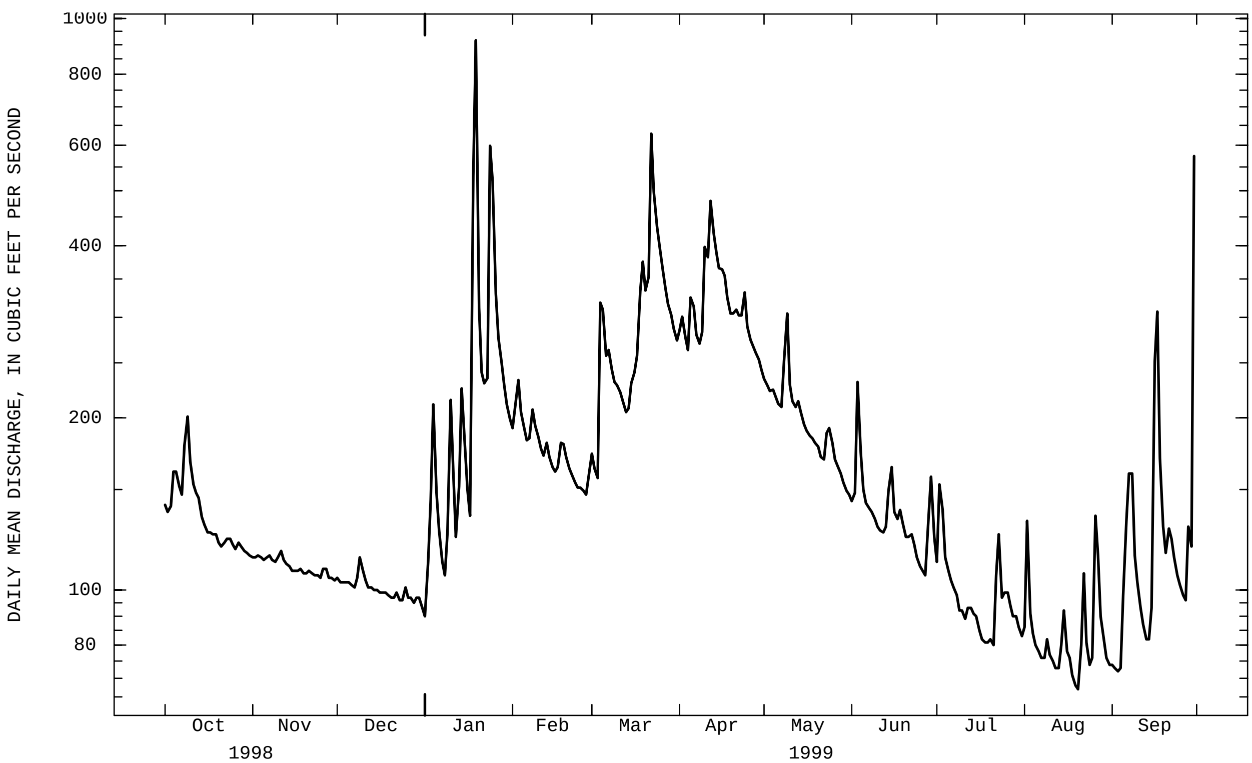
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	178	195	259	306	363	472	468	378	290	214	174	173
MAX	916	628	964	943	1206	1299	1201	859	1278	604	531	1090
(WY)	1977	1997	1997	1996	1998	1994	1993	1998	1972	1996	1996	1975
MIN	65.5	65.6	61.5	57.3	72.5	101	163	139	109	86.7	65.0	69.4
(WY)	1964	1966	1966	1966	1931	1931	1969	1931	1966	1954	1966	1963

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

01619500 ANTIETAM CREEK NEAR SHARPSBURG, MD--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1931 - 1999	
ANNUAL TOTAL	183721		61785			
ANNUAL MEAN	503		169		289	
ANNUAL MEAN≠	489		154		279	
HIGHEST ANNUAL MEAN					554	1996
LOWEST ANNUAL MEAN					124	1966
HIGHEST DAILY MEAN	4000	Mar 21	917	Jan 19	8970	Sep 26 1975
LOWEST DAILY MEAN	93	Dec 31	67	Aug 20	37	Jan 30 1966
ANNUAL SEVEN-DAY MINIMUM	97	Dec 25	75	Aug 29	49	Jan 26 1966
INSTANTANEOUS PEAK FLOW			1740	Jan 19	(a)12600	Jul 20 1956
INSTANTANEOUS PEAK STAGE			5.42	Jan 19	16.73	Jul 20 1956
INSTANTANEOUS LOW FLOW			66	(b)	(c)9.4	Nov 22 1957
ANNUAL RUNOFF (CFSM)	1.79		.60		1.03	
ANNUAL RUNOFF (CFSM)≠	1.74		.55		.99	
ANNUAL RUNOFF (INCHES)	24.32		8.18		13.96	
ANNUAL RUNOFF (INCHES)≠	23.65		7.44		13.48	
10 PERCENT EXCEEDS	1150		305		557	
50 PERCENT EXCEEDS	298		133		208	
90 PERCENT EXCEEDS	107		86		98	

≠ Adjusted for inflow since January 1930.
a From rating curve extended above 7,300 ft^3/s on basis of contracted-opening measurement of peak flow.
b Aug. 18, 20.
c Result of regulation caused by construction work upstream from station.



DAILY MEAN DISCHARGE - 1999 WATER YEAR

01636500 SHENANDOAH RIVER AT MILLVILLE, WV

LOCATION.--Lat 39°16'55", long 77°47'22", Jefferson County, Hydrologic Unit 02070007, on left bank 0.4 mi downstream from Cattail Run, 1.0 mi upstream from Millville, 5.0 mi upstream from Harpers Ferry, and at mile 4.7.

DRAINAGE AREA.--3,022 mi^2.

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

REVISED RECORDS.--WSP 951: 1936(M). WSP 1432: Drainage area at former site, 1895-99, 1901-02, 1905, 1907-08, 1932(M), 1935(M). OFR 95-292.

GAGE.--Water-stage recorder. Datum of gage is 293.00 ft above sea level. Apr. 15, 1895, to Mar. 31, 1909, nonrecording gage at site 0.8 mi downstream at datum 0.32 ft higher.

REMARKS.--Records good except those for estimated daily discharges (ice effect), which are fair. Some regulation by upstream hydroelectric plants, including that of Potomac Light and Power Company, 0.5 mi upstream from station. National Weather Service gage-height telemeter and U.S. Army Corps of Engineers satellite telemeter at station. Several measurements of water temperature were made during the year. Water-quality records for some prior periods have been collected at this location.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of 1870 reached practically same stage as flood of Mar. 18, 1936, 26.36 ft, discharge, 151,000 ft^3/s.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 15,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Sep 8	1500	*12,100	*7.98	No peak greater than base discharge.			

Minimum discharge, 233 ft^3/s, Aug 12-14.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	693	652	643	e590	1780	1360	2360	1190	1020	463	493	483
2	665	650	652	e600	1710	1330	2260	1160	990	448	435	390
3	660	639	658	760	1640	1320	2180	1160	940	479	418	342
4	668	653	646	712	1580	1750	2190	1190	939	481	448	311
5	678	684	649	924	1630	2130	2170	1120	852	519	410	401
6	669	688	636	1200	1660	1940	2040	1120	844	511	389	436
7	679	684	628	1280	1580	1870	1950	1080	821	469	378	1890
8	768	696	631	1480	1520	1770	1860	1180	824	433	379	9650
9	791	696	708	1220	1440	1690	1800	1240	860	405	328	6720
10	768	665	800	1080	1430	1700	1800	1360	799	376	295	4270
11	771	687	832	1330	1390	1690	1870	1700	729	378	248	3070
12	804	719	841	1240	1340	1640	1980	1920	658	340	253	2310
13	881	672	937	1890	1300	1690	2050	1640	620	397	251	1890
14	816	683	874	1790	1240	1850	1900	1500	629	412	269	1530
15	779	719	833	1770	1170	1960	1800	1360	609	410	280	1420
16	734	700	804	1810	1130	2230	1730	1370	559	411	337	1750
17	709	678	832	1670	1180	3050	1680	1600	545	399	353	3840
18	696	693	875	2030	1230	4600	1610	1820	550	394	299	3960
19	684	689	844	2250	1370	7670	1540	1740	551	448	294	3130
20	665	682	804	1950	1520	8110	1500	1590	539	424	397	2440
21	659	661	746	1710	1820	6270	1460	1440	516	410	393	2010
22	657	652	716	1900	1860	5970	1460	1370	477	380	330	2460
23	646	643	680	2240	1790	6890	1470	1320	463	386	372	4190
24	643	627	679	3080	1650	6050	1580	1410	422	389	378	3460
25	652	654	687	4330	1540	4990	1490	1420	361	844	408	2700
26	651	671	669	5340	1470	4370	1460	1420	362	527	628	2050
27	641	666	647	4440	1430	3810	1440	1360	345	385	649	1640
28	646	657	635	3450	1400	3300	1400	1240	498	382	556	1560
29	661	639	e620	2730	---	3010	1320	1120	487	460	466	1520
30	653	652	e610	2290	---	2760	1250	1040	478	454	478	4830
31	652	---	e600	1960	---	2500	---	1020	---	447	532	---
TOTAL	21739	20151	22416	61046	41800	101270	52600	42200	19287	13661	12144	76653
MEAN	701	672	723	1969	1493	3267	1753	1361	643	441	392	2555
MAX	881	719	937	5340	1860	8110	2360	1920	1020	844	649	9650
MIN	641	627	600	590	1130	1320	1250	1020	345	340	248	311
CFSM	.23	.22	.24	.65	.49	1.08	.58	.45	.21	.15	.13	.85
IN.	.27	.25	.28	.75	.51	1.25	.65	.52	.24	.17	.15	.94

e Estimated

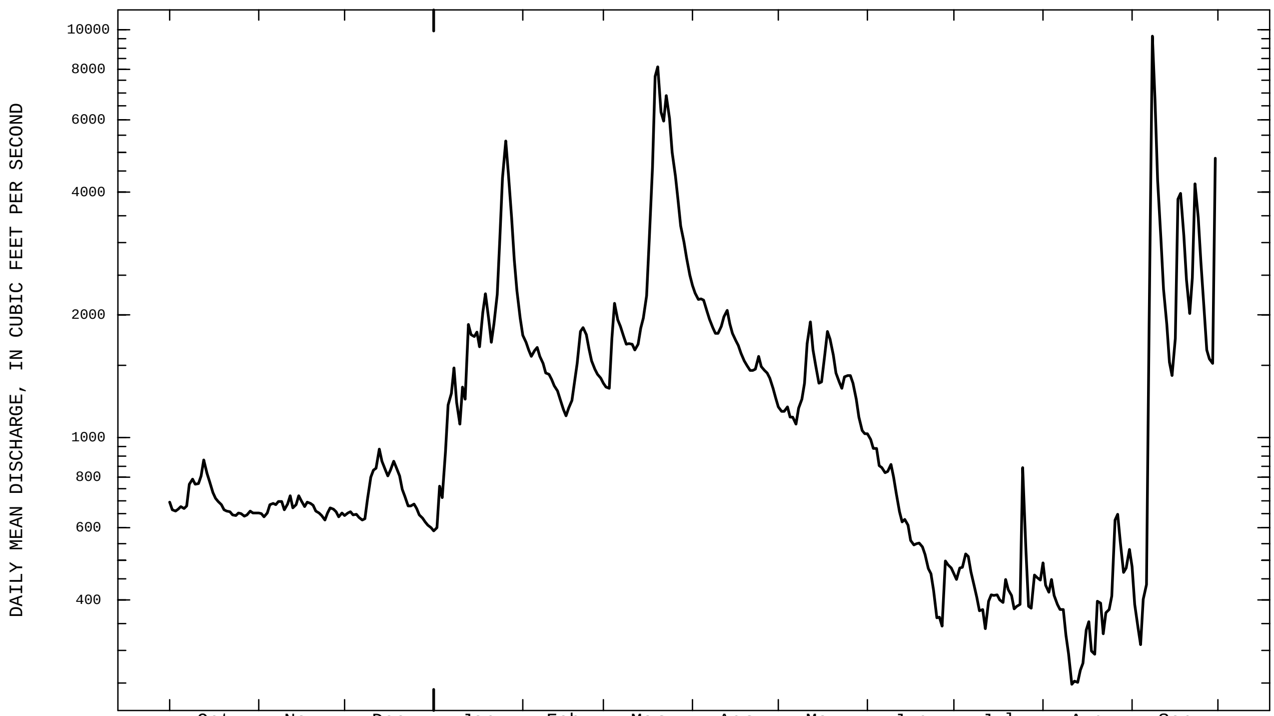
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1895 - 1909, 1928 - 1999, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1939	1868	2490	3277	3959	5080	4378	3363	2397	1447	1632	1471
MAX	16250	13350	8164	13470	18100	17540	12840	8701	10380	4809	10390	14780
(WY)	1943	1986	1973	1996	1998	1936	1901	1901	1972	1972	1955	1996
MIN	343	388	410	503	542	929	992	1001	643	402	388	411
(WY)	1931	1932	1966	1966	1931	1931	1981	1969	1999	1966	1930	1963

01636500 SHENANDOAH RIVER AT MILLVILLE, WV--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1895 - 1909 1928 - 1999	
ANNUAL TOTAL	1773486		484967			
ANNUAL MEAN	4859		1329		2769	
HIGHEST ANNUAL MEAN					5618	1996
LOWEST ANNUAL MEAN					1111	1981
HIGHEST DAILY MEAN	44400	Feb 19	9650	Sep 8	192000	Oct 16 1942
LOWEST DAILY MEAN	(e)600	Dec 31	248	Aug 11	194	Jul 24 1930
ANNUAL SEVEN-DAY MINIMUM	638	Dec 25	275	Aug 9	240	Sep 7 1966
INSTANTANEOUS PEAK FLOW			12100	Sep 8	(a)230000	Oct 16 1942
INSTANTANEOUS PEAK STAGE			7.98	Sep 8	32.40	Oct 16 1942
INSTANTANEOUS LOW FLOW			233	(b)	59	Oct 4 1930
ANNUAL RUNOFF (CFSM)	1.61		.44		.92	
ANNUAL RUNOFF (INCHES)	21.83		5.97		12.45	
10 PERCENT EXCEEDS	12300		2300		5600	
50 PERCENT EXCEEDS	1810		844		1620	
90 PERCENT EXCEEDS	661		400		610	

e Estimated.
a From floodmarks.
b Aug. 12-14.



DAILY MEAN DISCHARGE - 1999 WATER YEAR

01637500 CATOCTIN CREEK NEAR MIDDLETOWN, MD

LOCATION.--Lat 39°25'35", long 77°33'25", Frederick County, Hydrologic Unit 02070008, on right bank 300 ft downstream from bridge on State Highway 17, 1.3 mi south of Middletown, 2.2 mi downstream from Little Catoctin Creek, and 14.8 mi upstream from mouth.

DRAINAGE AREA.--66.9 mi^2.

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

REVISED RECORDS.--WSP 1432: 1947-48. WDR MD-DE-77-1: 1960(M), 1965(M), 1970(M), 1972(P), 1975(P).

GAGE.--Water-stage recorder and concrete control. Elevation of gage is 385 ft above sea level, from topographic map.

REMARKS.--Records good except those for estimated daily discharges (doubtful gage-height record), which are poor. Several measurements of water temperature were made during the year. Water-quality records for some prior periods have been collected at this location.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,200 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Sep 30	0130	*2,010	*5.47	No other peak greater than base discharge.			

Minimum discharge, unknown.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.2	3.5	4.6	4.6	21	40	75	38	e13	6.2	5.4	e4.5
2	1.9	3.6	4.3	4.5	37	29	88	37	e13	84	5.8	e4.0
3	1.9	3.8	4.5	106	38	29	65	35	e35	35	4.3	e3.7
4	3.4	3.8	4.5	47	26	129	59	36	21	14	3.1	e3.4
5	3.8	3.5	4.6	18	22	76	73	34	14	9.2	2.4	26
6	4.7	3.5	4.8	18	17	66	62	32	12	6.4	1.9	58
7	4.6	3.2	4.8	16	16	74	56	32	11	4.3	1.9	24
8	18	3.4	6.1	16	33	58	53	81	9.8	3.0	1.6	14
9	25	3.8	9.4	19	37	57	57	65	8.4	3.1	e1.6	9.2
10	12	3.8	9.2	17	31	54	82	40	7.4	2.8	e1.5	9.6
11	7.7	5.8	8.4	15	27	48	102	34	7.9	3.7	e1.5	7.0
12	6.0	6.0	6.8	13	26	46	141	31	8.2	3.5	e1.4	4.5
13	4.8	7.0	6.0	30	29	47	108	33	7.9	3.8	e1.4	3.4
14	4.2	6.7	6.0	72	25	48	97	31	25	3.6	e14	4.2
15	5.9	6.1	5.2	39	21	57	90	28	23	2.8	4.3	4.6
16	4.4	6.0	4.8	32	21	67	88	26	13	e2.5	2.2	88
17	4.0	5.7	4.8	39	22	91	77	24	12	e2.2	1.7	82
18	3.7	5.4	4.6	288	43	140	68	e22	13	e2.0	1.5	30
19	3.1	5.4	4.5	149	48	111	62	e21	11	e1.9	e1.4	18
20	2.8	5.4	4.5	82	35	86	64	e19	8.6	e1.9	e1.4	14
21	2.7	5.4	4.5	61	31	130	61	e18	9.0	e1.8	e4.0	12
22	2.8	5.4	4.7	56	24	220	69	e17	9.0	e1.8	e15	14
23	2.8	5.4	4.8	73	21	143	64	e21	8.1	e1.8	e10	18
24	2.8	5.4	4.8	376	24	124	82	34	6.2	e1.7	e12	13
25	3.0	5.4	4.6	129	21	107	59	29	5.2	e1.7	e15	11
26	3.1	7.9	4.2	72	23	93	53	e25	4.7	e2.7	e21	8.7
27	3.1	12	4.3	53	21	83	49	e20	4.5	2.1	36	6.9
28	3.4	6.3	4.6	44	28	75	46	e18	6.0	9.2	12	6.6
29	3.4	5.4	5.1	37	---	68	44	e16	10	5.8	e9.0	38
30	3.5	5.2	5.1	30	---	60	41	e15	8.7	3.1	e7.0	798
31	3.6	---	5.0	26	---	54	---	e14	---	2.4	e5.0	---
TOTAL	158.3	159.2	164.1	1982.1	768	2510	2135	926	345.6	230.0	206.3	1338.3
MEAN	5.11	5.31	5.29	63.9	27.4	81.0	71.2	29.9	11.5	7.42	6.65	44.6
MAX	25	12	9.4	376	48	220	141	81	35	84	36	798
MIN	1.9	3.2	4.2	4.5	16	29	41	14	4.5	1.7	1.4	3.4
CFSM	.08	.08	.08	.96	.41	1.21	1.06	.45	.17	.11	.10	.67
IN.	.09	.09	.09	1.10	.43	1.40	1.19	.51	.19	.13	.11	.74

e Estimated

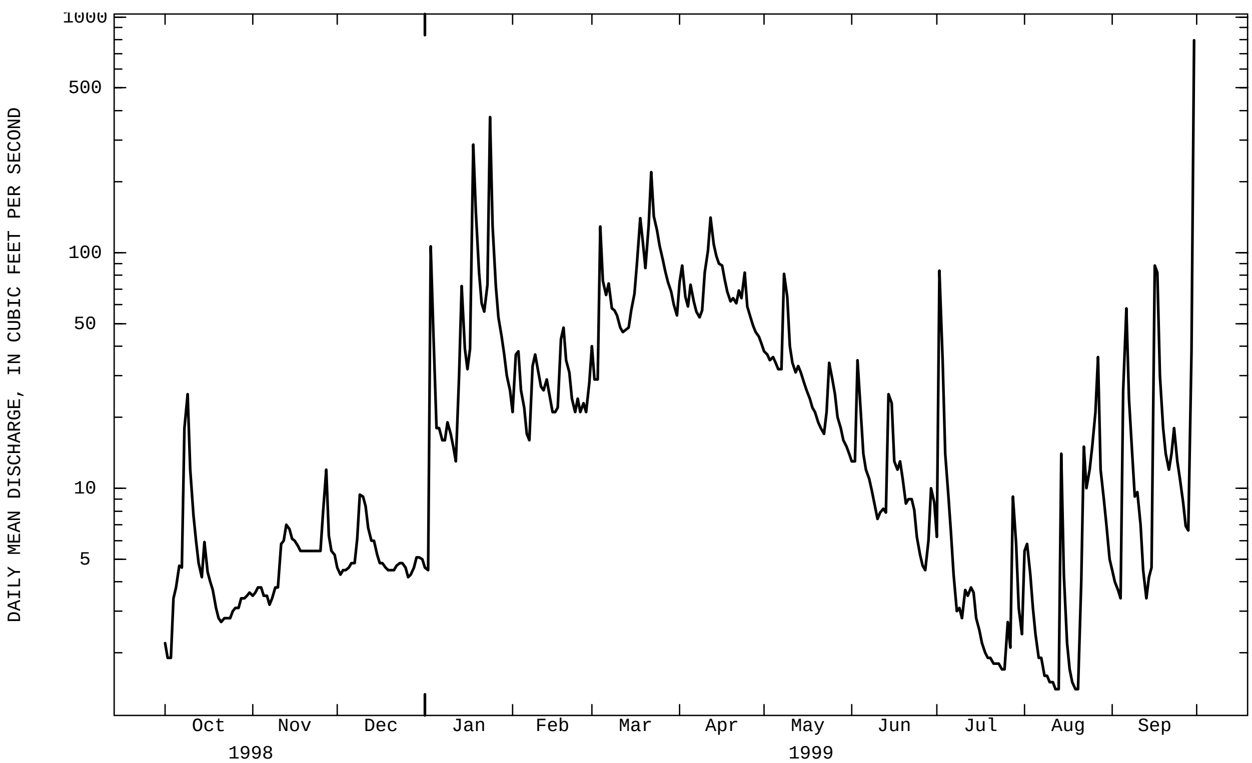
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1947 - 1999, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	35.7	49.6	85.9	105	124	156	139	101	59.4	33.6	22.4	27.4
MAX	399	162	318	333	373	407	360	391	439	214	208	284
(WY)	1977	1986	1993	1998	1998	1994	1993	1988	1972	1949	1955	1975
MIN	2.62	3.61	3.80	4.25	27.4	46.3	40.1	29.2	11.5	4.86	2.04	1.68
(WY)	1964	1966	1966	1966	1999	1969	1995	1963	1999	1966	1966	1965

01637500 CATOCTIN CREEK NEAR MIDDLETOWN, MD--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1947 - 1999	
ANNUAL TOTAL	46826.3		10922.9			
ANNUAL MEAN	128		29.9		78.0	
HIGHEST ANNUAL MEAN					164	1996
LOWEST ANNUAL MEAN					29.7	1954
HIGHEST DAILY MEAN	2080	May 8	798	Sep 30	4880	Oct 9 1976
LOWEST DAILY MEAN	1.8	Sep 6	(e)1.4	(a)	.00	(b)
ANNUAL SEVEN-DAY MINIMUM	2.1	Sep 1	1.6	Aug 7	.00	Aug 27 1966
INSTANTANEOUS PEAK FLOW			2010	Sep 30	(c)12000	Oct 9 1976
INSTANTANEOUS PEAK STAGE			5.47	Sep 30	14.13	Oct 9 1976
INSTANTANEOUS LOW FLOW			UNKNOWN		.00	(b)
ANNUAL RUNOFF (CFSM)	1.92		.45		1.17	
ANNUAL RUNOFF (INCHES)	26.04		6.07		15.84	
10 PERCENT EXCEEDS	340		74		178	
50 PERCENT EXCEEDS	29		12		38	
90 PERCENT EXCEEDS	3.2		2.8		5.5	

e Estimated.
a Aug. 12, 13, 19, 20.
b Aug. 27 to Sept. 12, 1966.
c From rating curve extended above 2,600 ft^3/s on basis of slope-area measurement of peak flow.



DAILY MEAN DISCHARGE - 1999 WATER YEAR

01638500 POTOMAC RIVER AT POINT OF ROCKS, MD

LOCATION.--Lat 39°16'25", long 77°32'35", Frederick County, Hydrologic Unit 02070008, on left bank at downstream side of bridge on U.S. Highway 15 at Point of Rocks, 0.3 mi downstream from Catoctin Creek (Virginia), 6 mi upstream from Monocacy River, and at mile 159.5.

DRAINAGE AREA.--9,651 mi^2.

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

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

GAGE.--Water-stage recorder. Datum of gage is 200.63 ft above sea level. Prior to Oct. 28, 1929, nonrecording gage at same site. Prior to Sept. 2, 1902, at datum about 0.45 ft higher.

REMARKS.--Records good except those for estimated daily discharges (backwater, ice effect), which are fair. Low flow affected slightly from 1913 to July 1981 by Stony River Reservoir; since December 1950 by Savage River Reservoir (see station 01597500); and since July 1981 by Jennings Randolph Lake. Low flow affected extensively at times by run-of-the-river hydroelectric plants. National Weather Service gage-height telemeter at station. Several measurements of water temperature were made during the year. Water-quality records for some prior periods have been collected at this location.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 2, 1889, reached a stage of 40.2 ft, from floodmarks, discharge, about 460,000 ft^3/s from rating curve extended as explained in footnotes.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 35,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar 20	0130	*40,600	*9.42	No other peak greater than base discharge.			

Minimum discharge, 695 ft^3/s, Aug 14.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1750	1500	e1700	e1700	6300	3430	9270	6090	2860	1370	e1150	1710
2	1700	1820	e1650	e1600	5990	3550	8960	5610	2950	1530	e1150	1460
3	1730	1850	e1650	2940	5580	3640	8410	5250	2940	2060	e1100	1350
4	1600	1690	e1630	2340	5540	4520	8260	5100	2780	1720	e1150	1300
5	1780	1680	e1700	e2800	5290	11600	8180	4880	2630	1630	e1100	1650
6	1960	1870	e1640	e2500	5280	10200	8540	4550	2500	1570	e1150	2190
7	2520	1690	e1600	e2400	4990	9410	8140	4340	2300	1440	1170	2950
8	2560	1750	e1700	e2500	4910	8820	7370	4410	2300	1290	1070	e7000
9	2310	1580	e1750	e2800	4890	8290	6780	8030	2030	1160	1040	e12000
10	2180	1900	e1850	e2700	5060	8150	7050	8290	1950	1060	1020	e10000
11	2070	1980	e1950	e2600	5770	7570	16900	6890	1920	930	976	e8500
12	2090	1880	e1900	e2700	5730	7030	22600	6350	1810	973	814	e6000
13	2260	1810	e1800	e2900	5320	6600	27400	5660	1720	978	762	e4500
14	2080	1820	e1900	e3300	5000	6770	21200	5740	1620	1040	721	e3800
15	1950	1720	e1800	e5000	4620	7440	16400	4990	1760	969	1030	e3500
16	1800	e1650	e1700	5200	4230	8140	13300	4630	1800	e1100	967	e5000
17	1850	e1550	e1750	4860	4160	9540	12100	4580	1790	e1300	e1020	7310
18	1660	e1700	e1800	6270	4230	16200	11000	5400	1750	e1200	e1080	8960
19	1750	e1780	e1850	9920	4300	33400	9660	5010	1800	e1100	e1040	e6500
20	1770	1800	e1850	6910	4170	37300	8530	4570	1910	e1000	1010	e5500
21	1710	1800	e1830	6400	4210	27000	7980	4140	1840	e1050	1070	e4800
22	1660	1760	e1800	6600	4340	24500	7980	3890	1690	e1050	987	e4800
23	1680	1760	e1780	7030	4040	29400	8210	3820	1680	e1100	1010	e5200
24	1670	1810	e1760	11700	3900	25400	9030	3800	1680	e1100	1030	e5000
25	1670	1750	e1750	23900	3640	20500	10400	3690	1590	e1200	986	e4500
26	1670	1850	e1730	21900	3510	17500	11200	3840	1480	e1500	1230	e4000
27	1660	1840	e1700	16900	3330	15200	9940	3860	1450	1360	1890	3530
28	1670	1850	e1600	12700	3340	13300	8750	3820	1420	1220	1870	3470
29	1740	1820	e1500	9780	---	12000	7560	3480	1590	1300	1790	3460
30	1760	e1750	e1550	8310	---	10700	6780	3230	1620	e1200	1660	11300
31	1790	---	e1700	7370	---	9720	---	2960	---	e1150	1850	---
TOTAL	58050	53010	53870	206530	131670	416820	327880	150900	59160	38650	35893	151240
MEAN	1873	1767	1738	6662	4702	13450	10930	4868	1972	1247	1158	5041
MAX	2560	1980	1950	23900	6300	37300	27400	8290	2950	2060	1890	12000
MIN	1600	1500	1500	1600	3330	3430	6780	2960	1420	930	721	1300
CFSM	.19	.18	.18	.69	.49	1.39	1.13	.50	.20	.13	.12	.52
IN.	.22	.20	.21	.80	.51	1.61	1.26	.58	.23	.15	.14	.58

e Estimated

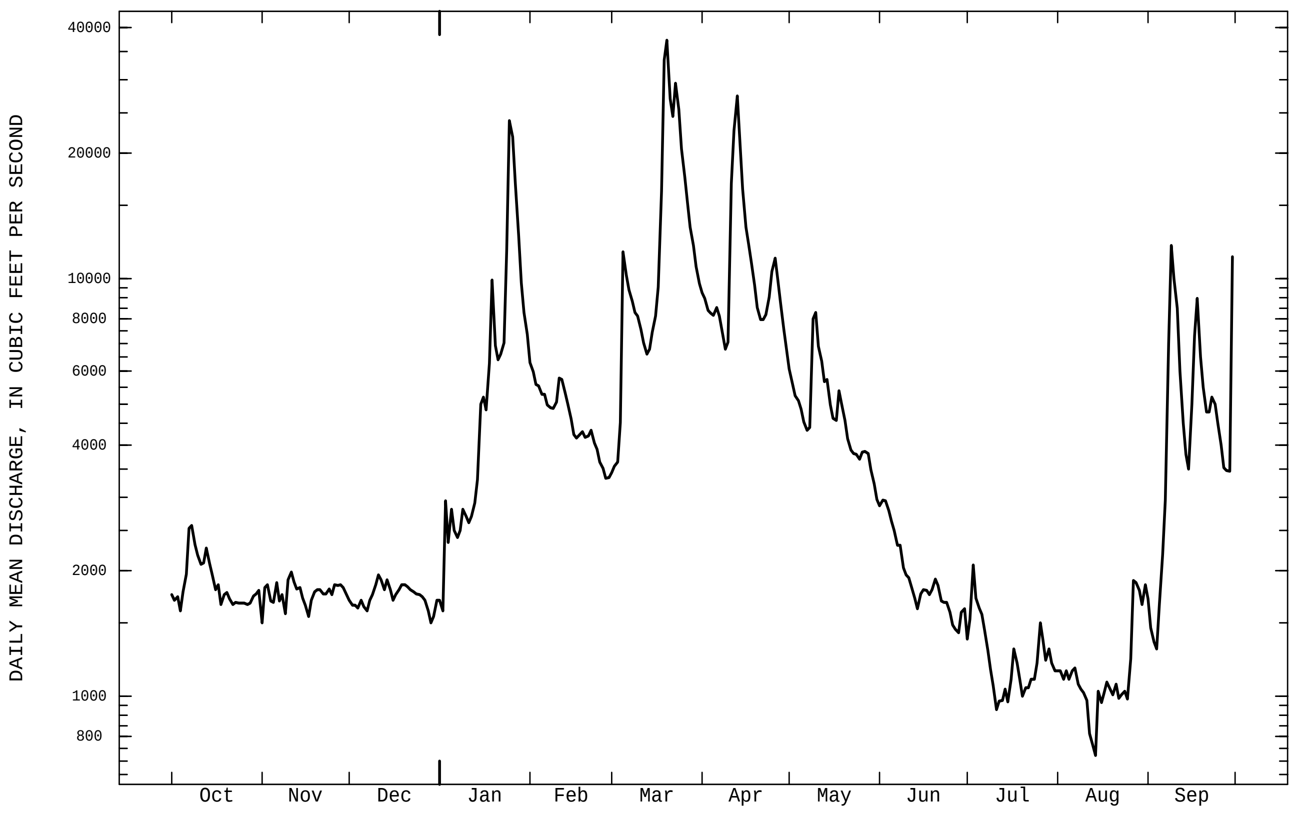
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1895 - 1999, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	5025	5684	8585	11600	14500	19840	16490	12330	7965	4514	4269	3786
MAX	37030	39000	32610	42160	47870	68360	43840	41970	40400	16000	23580	38300
(WY)	1943	1986	1973	1996	1998	1936	1993	1924	1972	1949	1955	1996
MIN	706	840	1253	1703	2661	5400	4368	3276	1932	1056	771	834
(WY)	1931	1931	1966	1981	1934	1931	1915	1930	1969	1966	1930	1930

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

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1895 - 1999	
ANNUAL TOTAL	5305290		1683673			
ANNUAL MEAN	14540		4613		9535	
HIGHEST ANNUAL MEAN					18750	1996
LOWEST ANNUAL MEAN					4366	1969
HIGHEST DAILY MEAN	113000	Mar 22	37300	Mar 20	434000	Mar 19 1936
LOWEST DAILY MEAN	1500	Nov 1	721	Aug 14	540	Sep 10 1914
ANNUAL SEVEN-DAY MINIMUM	1650	Dec 25	899	Aug 10	593	Sep 6 1966
INSTANTANEOUS PEAK FLOW			40600	Mar 20	(a)480000	Mar 19 1936
INSTANTANEOUS PEAK STAGE			9.42	Mar 20	41.03	Mar 19 1936
INSTANTANEOUS LOW FLOW			695	Aug 14	530	(b)
ANNUAL RUNOFF (CFSM)	1.51		.48		.99	
ANNUAL RUNOFF (INCHES)	20.45		6.49		13.42	
10 PERCENT EXCEEDS	38800		9740		20800	
50 PERCENT EXCEEDS	5150		2300		5380	
90 PERCENT EXCEEDS	1700		1150		1680	

a From rating curve extended above 300,000 ft^3/s, on the basis of adjustment of figure of peak flow at station near Washington for inflow and storage, and slope-area measurement of peak flow.
b Sept. 11, 12, 1966.



01639000 MONOCACY RIVER AT BRIDGEPORT, MD

LOCATION.--Lat 39°40’43", long 77°14’06", Frederick County, Hydrologic Unit 02070009, on right bank 60 ft downstream from bridge on State Highway 140 at Bridgeport, 0.9 mi upstream from Cattail Branch, 3.4 mi northwest of Taneytown, 4.8 mi downstream from confluence of Rock and Marsh Creeks at Pennsylvania-Maryland State line, and 52 mi upstream from mouth.

DRAINAGE AREA.--173 mi^2.

PERIOD OF RECORD.--May 1942 to current year.

REVISED RECORDS.--WSP 1382: 1944(M).

GAGE.--Water-stage recorder. Concrete control since Sept. 15, 1947. Datum of gage is 340.83 ft above sea level (levels by U.S. Army Corps of Engineers). Prior to May 3, 1946, nonrecording gage and crest-stage gages at site 0.3 mi downstream at datum 0.98 ft lower.

REMARKS.--Records good except those for estimated daily discharges (ice effect), which are poor. Occasional regulation at low flow from Lake Herrtage and other unknown sources upstream from station. Several measurements of water temperature were made during the year. Water-quality records for some periods have been collected at this location.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Aug. 24, 1933, reached a stage of about 25 ft, present site and datum, from floodmarks, discharge, 23,000 ft^3/s. Stage exceeded that of June 1889, from information by local residents.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 4,800 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Sep 30	0900	*6,330	*12.11	No other peak greater than base discharge.			

Minimum discharge, 0.41 ft^3/s, Aug 14, 15.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.4	5.0	16	8.7	93	188	110	82	18	11	4.1	10
2	3.9	5.2	30	8.1	329	108	251	75	16	11	3.6	8.1
3	3.3	6.4	30	161	390	86	160	70	34	13	3.8	6.8
4	4.7	6.9	31	321	195	887	129	67	43	16	3.7	6.7
5	15	6.5	24	108	135	429	401	61	23	12	3.0	7.0
6	18	6.5	13	e46	103	341	214	56	18	6.9	2.3	9.8
7	14	6.1	10	31	94	377	152	57	15	4.3	1.6	23
8	16	5.7	9.3	22	177	184	120	184	14	2.8	1.5	41
9	57	6.3	11	26	188	146	252	202	13	1.8	1.2	24
10	54	7.5	12	64	130	131	1060	96	11	1.6	.89	15
11	38	9.3	12	94	100	152	671	74	9.2	1.3	.73	11
12	24	8.3	10	56	85	123	881	61	10	.84	.54	9.4
13	17	9.4	9.5	135	99	103	374	119	11	1.1	.45	7.3
14	11	9.3	9.9	318	85	100	250	88	12	1.7	.43	5.6
15	9.1	8.2	10	128	68	132	189	63	16	3.0	1.1	5.7
16	7.6	7.8	9.7	132	62	327	196	53	17	4.6	3.0	752
17	6.7	28	9.5	100	66	795	198	48	14	4.6	2.0	698
18	7.3	30	10	791	284	751	144	43	13	3.8	1.5	133
19	7.9	30	10	1100	265	326	119	41	17	3.5	1.2	71
20	6.3	29	9.9	538	143	214	127	39	14	2.7	17	48
21	5.6	29	9.4	334	105	489	150	34	12	2.5	502	44
22	4.6	29	9.1	422	80	1480	549	30	11	45	65	127
23	4.1	29	8.6	685	e56	432	406	38	12	43	26	99
24	4.2	29	8.2	2770	e52	308	529	57	9.8	19	16	58
25	4.8	28	e8.0	715	51	249	243	49	7.5	11	25	40
26	5.9	26	e8.0	330	53	188	178	36	6.8	6.0	123	29
27	6.6	16	8.0	214	53	151	146	29	5.3	3.6	69	23
28	6.6	20	8.1	206	77	132	116	25	5.1	4.1	36	40
29	6.4	14	8.5	169	---	116	103	22	13	5.5	23	100
30	5.9	11	9.3	135	---	99	93	21	13	4.3	14	3220
31	5.4	---	8.6	111	---	87	---	20	---	3.4	11	---
TOTAL	385.3	462.4	380.6	10278.8	3618	9631	8511	1940	433.7	254.94	963.64	5672.4
MEAN	12.4	15.4	12.3	332	129	311	284	62.6	14.5	8.22	31.1	189
MAX	57	30	31	2770	390	1480	1060	202	43	45	502	3220
MIN	3.3	5.0	8.0	8.1	51	86	93	20	5.1	.84	.43	5.6
CFSM	.07	.09	.07	1.92	.75	1.80	1.64	.36	.08	.05	.18	1.09
IN.	.08	.10	.08	2.21	.78	2.07	1.83	.42	.09	.05	.21	1.22

e Estimated

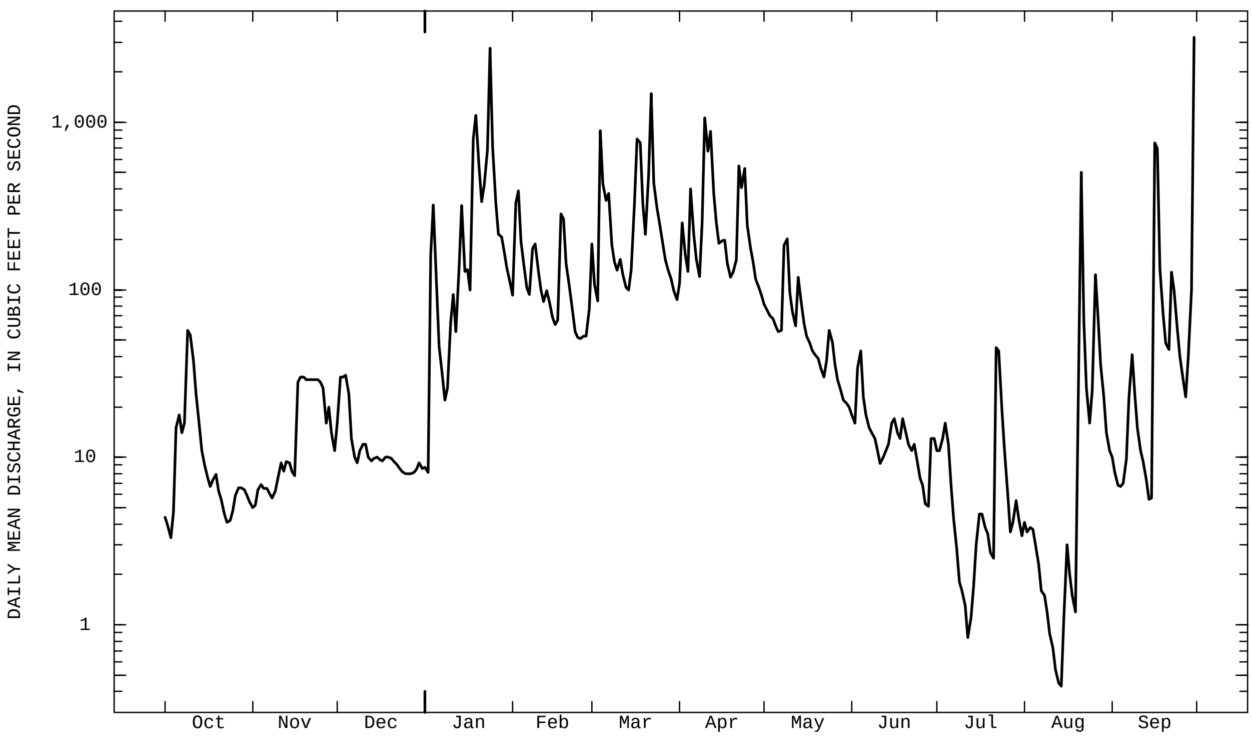
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1942 - 1999, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	93.6	181	269	308	380	457	298	212	132	81.3	59.3	85.3
MAX	906	513	780	1214	1029	1606	1029	964	1065	598	613	1027
(WY)	1977	1986	1997	1996	1961	1994	1983	1989	1972	1949	1942	1975
MIN	3.24	10.4	12.3	13.8	51.0	94.7	58.1	41.2	10.5	2.68	2.40	2.34
(WY)	1964	1954	1999	1981	1980	1949	1995	1969	1966	1966	1944	1943

01639000 MONOCACY RIVER AT BRIDGEPORT, MD--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1942 - 1999	
ANNUAL TOTAL	100508.4		42531.78			
ANNUAL MEAN	275		117		212	
HIGHEST ANNUAL MEAN					447	1996
LOWEST ANNUAL MEAN					76.8	1954
HIGHEST DAILY MEAN	5560	Jan 8	3220	Sep 30	16700	Jun 22 1972
LOWEST DAILY MEAN	2.1	Sep 19	.43	Aug 14	.00	(a)
ANNUAL SEVEN-DAY MINIMUM	2.6	Sep 15	.76	Aug 9	.04	Jul 22 1966
INSTANTANEOUS PEAK FLOW			6330	Sep 30	(b)24400	Jun 19 1996
INSTANTANEOUS PEAK STAGE			12.11	Sep 30	25.42	Jun 19 1996
INSTANTANEOUS LOW FLOW			.41	(c)	.00	(d)
ANNUAL RUNOFF (CFSM)	1.59		.67		1.22	
ANNUAL RUNOFF (INCHES)	21.61		9.15		16.62	
10 PERCENT EXCEEDS	678		312		450	
50 PERCENT EXCEEDS	34		26		65	
90 PERCENT EXCEEDS	5.8		4.1		8.0	

a July 25-28, 1966.
b From rating curve extended above 14,000 ft^3/s on basis of slope-conveyence study.
c Aug. 14, 15.
d July 24-29, 1966.



DAILY MEAN DISCHARGE - 1999 WATER YEAR

01639140 PINEY CREEK NEAR TANEYTOWN, MD

LOCATION.--Lat 39°39'38", long 77°13'16", Carroll County, Hydrologic Unit 02070009, on left bank at downstream side of bridge on Roop Road, 2.4 mi west of Taneytown, and 4.2 mi upstream from mouth.

DRAINAGE AREA.--31.3 mi^2.

PERIOD OF RECORD.--May 1990 to current year.

GAGE.--Water-stage recorder. Datum of gage is 383.22 ft above sea level.

REMARKS.--Records good except those for estimated daily discharges (ice effect), which are poor. Several measurements of water temperature were made during the year. Water-quality records for some prior periods have been collected at this location.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jan 18	2030	*1,880	*6.79	No other peak greater than base discharge.			

Minimum discharge, 0.30 ft^3/s, Aug 18-20.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.60	1.3	1.4	e1.2	9.3	39	39	8.0	2.0	1.3	1.6	.92
2	.60	1.3	1.2	e1.1	80	21	54	7.4	3.2	.92	1.5	.76
3	.61	1.2	1.2	95	53	22	30	7.3	9.7	1.1	1.3	.65
4	1.2	1.1	1.3	34	30	109	41	7.7	5.4	2.0	1.1	.63
5	.87	.99	1.4	15	22	53	87	7.3	3.4	1.7	.69	.90
6	1.5	.89	1.6	2.5	17	58	42	6.7	2.7	.79	.55	2.3
7	1.6	.83	1.4	1.2	19	52	31	6.7	2.3	.61	.51	9.3
8	8.7	.83	1.6	1.2	43	30	25	31	2.2	.52	.54	7.3
9	11	.93	2.0	12	29	27	53	16	1.8	.48	.50	3.6
10	5.3	.89	2.0	66	21	27	98	8.6	1.5	.50	.44	2.7
11	4.9	1.2	2.1	22	16	29	108	7.2	1.5	.47	.42	1.9
12	2.8	1.4	1.7	6.8	14	24	99	6.1	1.5	.50	.41	1.4
13	1.8	2.1	1.6	178	17	19	58	6.5	1.6	.44	.44	1.2
14	1.5	1.9	1.4	167	13	19	43	5.9	1.9	.43	.40	1.1
15	1.3	1.4	1.4	134	11	35	34	5.1	7.0	.41	.44	2.0
16	1.3	1.4	1.3	83	11	82	34	4.6	3.6	.36	.44	249
17	1.2	1.3	1.2	15	12	92	31	4.5	2.6	.35	.43	73
18	1.2	1.5	1.3	720	76	62	24	4.3	5.6	.42	.40	20
19	1.2	1.4	1.3	425	45	39	19	4.1	4.2	.44	.44	11
20	1.0	1.5	1.3	71	29	30	21	3.5	2.4	.44	25	8.5
21	1.3	1.6	1.3	46	21	117	19	3.1	2.0	.51	41	13
22	1.4	1.6	1.4	51	15	144	35	2.7	2.0	6.4	4.6	16
23	1.5	1.6	1.3	72	e11	63	27	6.5	2.0	5.1	1.7	11
24	1.6	1.5	e1.2	253	e10	50	27	6.9	1.5	1.7	1.7	7.7
25	1.5	1.3	e1.1	75	e9.6	42	16	6.0	1.2	.97	3.7	6.4
26	1.6	2.3	e1.1	42	10	32	14	4.3	.99	.70	13	5.4
27	1.4	2.9	e1.1	29	10	27	12	3.2	.69	.60	7.8	4.7
28	1.4	2.9	1.2	23	32	24	11	2.9	.71	.87	3.9	16
29	1.4	2.0	1.2	17	---	20	10	2.5	.82	1.4	2.7	21
30	1.3	1.6	1.3	13	---	16	9.5	2.4	2.1	.87	1.9	349
31	1.3	---	e1.3	11	---	14	---	2.2	---	.60	1.2	---
TOTAL	65.88	44.66	43.2	2683.0	685.9	1418	1151.5	201.2	80.11	33.90	120.75	848.36
MEAN	2.13	1.49	1.39	86.5	24.5	45.7	38.4	6.49	2.67	1.09	3.90	28.3
MAX	11	2.9	2.1	720	80	144	108	31	9.7	6.4	41	349
MIN	.60	.83	1.1	1.1	9.3	14	9.5	2.2	.69	.35	.40	.63
CFSM	.07	.05	.04	2.77	.78	1.46	1.23	.21	.09	.03	.12	.90
IN.	.08	.05	.05	3.19	.82	1.69	1.37	.24	.10	.04	.14	1.01

e Estimated

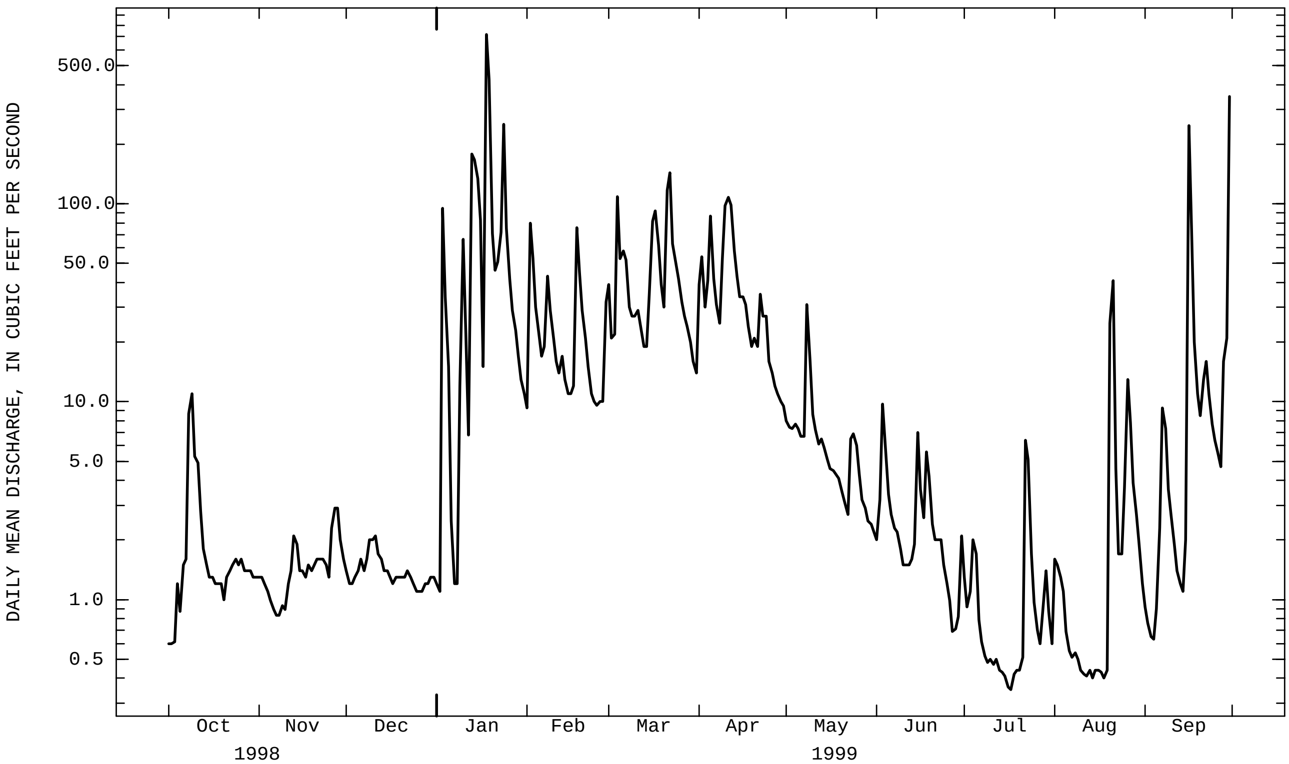
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1990 - 1999, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	19.9	38.9	61.7	83.4	51.0	104	54.5	25.7	15.6	19.6	10.1	15.6
MAX	73.2	73.3	134	200	123	237	183	63.8	62.0	101	43.5	77.3
(WY)	1997	1997	1997	1996	1998	1993	1993	1998	1996	1996	1996	1996
MIN	.94	1.49	1.39	18.8	24.5	31.1	10.7	6.49	1.99	.57	.74	.67
(WY)	1998	1999	1999	1992	1999	1995	1995	1999	1991	1991	1997	1997

01639140 PINEY CREEK NEAR TANEYTOWN, MD--Continue

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1990 - 1999	
ANNUAL TOTAL	16239.23		7376.46			
ANNUAL MEAN	44.5		20.2		41.4	
HIGHEST ANNUAL MEAN					68.5	1996
LOWEST ANNUAL MEAN					20.2	1999
HIGHEST DAILY MEAN	982	Jan 8	720	Jan 18	2770	Jan 19 1996
LOWEST DAILY MEAN	.60	(a)	.35	Jul 17	.00	(b)
ANNUAL SEVEN-DAY MINIMUM	.66	Sep 18	.41	Jul 13	.03	Aug 2 1991
INSTANTANEOUS PEAK FLOW			1880	Jan 18	7520	Jan 19 1996
INSTANTANEOUS PEAK STAGE			6.79	Jan 18	(c)11.41	Jan 19 1996
INSTANTANEOUS LOW FLOW			.30	(d)	.00	(f)
ANNUAL RUNOFF (CFSM)	1.42		.65		1.32	
ANNUAL RUNOFF (INCHES)	19.30		8.77		17.97	
10 PERCENT EXCEEDS	121		50		85	
50 PERCENT EXCEEDS	7.7		2.9		14	
90 PERCENT EXCEEDS	.95		.67		1.3	

a Sept. 19, Oct. 1, 2.
b Aug. 4, 5, Sept. 2, 3, 1991.
c From floodmarks.
d Aug. 18-20.
f Aug. 3-9, 17, Sept. 1-4, 1991.



DAILY MEAN DISCHARGE - 1999 WATER YEAR

01639500 BIG PIPE CREEK AT BRUCEVILLE, MD

LOCATION.--Lat 39°36'45", long 77°14'10", Carroll County, Hydrologic Unit 02070009, on left bank 300 ft downstream from bridge on State Highway 194, 800 ft downstream from Bruceville, 3.5 mi upstream from Detour and confluence with Little Pipe Creek.

DRAINAGE AREA.--102 mi^2.

PERIOD OF RECORD.--October 1947 to current year. Prior to December 1947, monthly discharge only, published in WSP 1302.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 336.88 ft above sea level.

REMARKS.--Records good except those for estimated daily discharges (ice effect), which are fair. Occasional diversion for irrigation upstream from station. Several measurements of water temperature were made during the year. Water-quality records for some prior periods hve been collected at this location.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,600 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jan 18	1530	*2,210	*6.33	Sep 16	1600	1,700	5.31

Minimum discharge, 7.5 ft^3/s, Aug 19, 20.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	25	29	31	28	57	125	112	55	30	17	44	16
2	23	30	30	24	220	81	136	53	31	18	42	15
3	23	30	29	422	163	77	98	51	54	28	23	14
4	33	29	30	133	106	255	117	57	36	22	17	14
5	38	28	30	e50	90	155	251	52	31	18	16	18
6	32	28	30	e56	77	161	137	51	29	15	14	28
7	30	29	30	e60	81	173	114	53	28	14	13	55
8	179	28	31	80	130	113	101	94	27	12	13	36
9	128	29	43	98	96	104	115	77	25	12	13	23
10	70	29	39	227	80	104	183	54	23	12	12	22
11	57	36	33	78	70	104	221	50	25	12	11	20
12	44	44	32	75	69	91	238	48	28	13	10	17
13	41	33	30	202	76	81	158	52	23	13	9.5	16
14	38	32	30	146	64	83	124	49	36	14	9.1	15
15	36	32	30	123	59	115	110	45	39	12	9.1	17
16	34	30	29	187	58	189	111	42	29	12	8.7	752
17	33	30	29	193	62	220	100	42	28	12	9.1	493
18	34	30	29	1010	185	201	90	42	42	11	8.7	82
19	33	29	29	406	140	132	84	41	31	10	8.0	57
20	32	30	28	165	99	112	87	40	26	9.0	8.8	45
21	30	32	28	127	82	226	83	38	30	8.5	42	50
22	31	31	29	120	69	340	88	37	30	228	20	62
23	30	29	29	145	e62	174	88	53	25	51	14	48
24	31	29	28	600	e58	149	86	59	23	26	15	38
25	31	29	e28	233	e54	134	72	66	20	22	17	32
26	31	36	e28	134	e55	114	69	43	20	21	43	29
27	30	46	31	102	56	103	65	39	19	20	183	28
28	31	34	31	88	102	98	62	36	18	18	38	43
29	30	32	31	75	---	91	60	35	20	19	24	62
30	30	32	38	66	---	81	57	33	19	17	19	633
31	30	---	30	60	---	75	---	31	---	19	17	---
TOTAL	1298	945	953	5513	2520	4261	3417	1518	845	735.5	731.0	2780
MEAN	41.9	31.5	30.7	178	90.0	137	114	49.0	28.2	23.7	23.6	92.7
MAX	179	46	43	1010	220	340	251	94	54	228	183	752
MIN	23	28	28	24	54	75	57	31	18	8.5	8.0	14
CFSM	.41	.31	.30	1.74	.88	1.35	1.12	.48	.28	.23	.23	.91
IN.	.47	.34	.35	2.01	.92	1.55	1.25	.55	.31	.27	.27	1.01

e Estimated

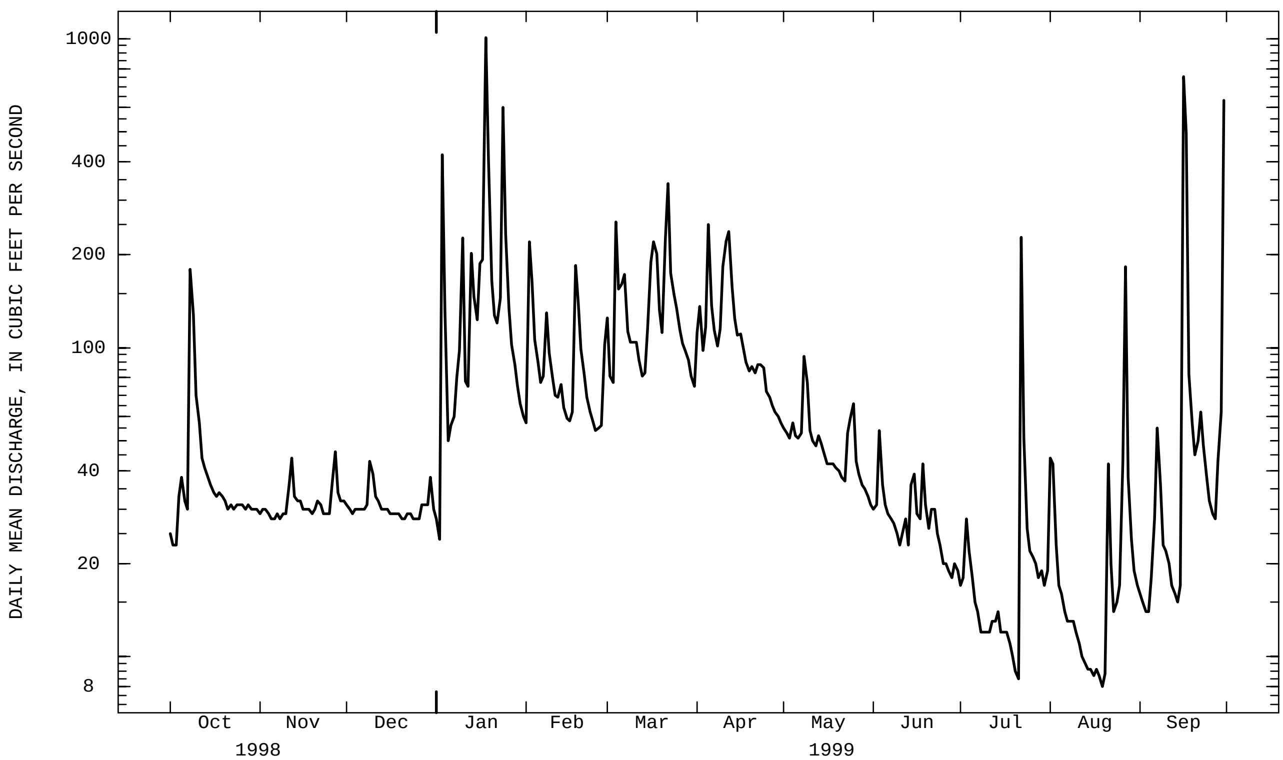
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1948 - 1999, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	61.3	87.5	126	154	176	199	165	122	98.9	71.9	54.5	65.5
MAX	390	289	453	492	387	613	514	383	891	295	212	730
(WY)	1980	1948	1997	1996	1979	1994	1993	1989	1972	1949	1955	1975
MIN	14.9	16.7	18.9	22.5	58.1	71.4	61.3	38.6	19.8	10.4	4.39	13.0
(WY)	1964	1966	1966	1966	1954	1981	1965	1965	1966	1966	1966	1963

01639500 BIG PIPE CREEK AT BRUCEVILLE, MD--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1948 - 1999	
ANNUAL TOTAL	56976		25516.5			
ANNUAL MEAN	156		69.9		115	
HIGHEST ANNUAL MEAN					227	1972
LOWEST ANNUAL MEAN					50.8	1966
HIGHEST DAILY MEAN	2100	Mar 21	1010	Jan 18	14400	Jun 22 1972
LOWEST DAILY MEAN	23	(a)	8.0	Aug 19	1.0	Sep 12 1966
ANNUAL SEVEN-DAY MINIMUM	26	Sep 27	8.8	Aug 14	1.4	Sep 7 1966
INSTANTANEOUS PEAK FLOW			2210	Jan 18	(b)28000	Sep 26 1975
INSTANTANEOUS PEAK STAGE			6.33	Jan 18	18.98	Sep 26 1975
INSTANTANEOUS LOW FLOW			7.5	(c)	1.0	Sep 12 1966
ANNUAL RUNOFF (CFSM)	1.53		.69		1.13	
ANNUAL RUNOFF (INCHES)	20.78		9.31		15.29	
10 PERCENT EXCEEDS	347		145		217	
50 PERCENT EXCEEDS	78		36		67	
90 PERCENT EXCEEDS	29		15		24	

a Oct. 2, 3.
b From rating curve extended above 3,900 ft^3/s on the basis of contracted-opening measurement at gage height of 17.86 ft.
c Aug. 19, 20.



DAILY MEAN DISCHARGE - 1999 WATER YEAR

01643000 MONOCACY RIVER AT JUG BRIDGE NEAR FREDERICK, MD

LOCATION.--Lat 39°24'13", long 77°21'58", Frederick County, Hydrologic Unit 02070009, on right bank 500 ft downstream from Interstate 70 highway bridge, 0.4 mi downstream from Linganore Creek, 2.0 mi east of Frederick, and 16.9 mi upstream from mouth.

DRAINAGE AREA.--817 mi^2.

PERIOD OF RECORD.--October 1929 to current year. Monthly discharge only for October, November 1929, published in WSP 1302.

REVISED RECORDS.--WSP 711: 1930.

GAGE.--Water-stage recorder. Nonrecording gage at site 0.2 mile downstream. Datum of gage is 231.92 ft above sea level.

REMARKS.--Records good except those for estimated daily discharges (ice effect), which are fair. Occasional regulation at low and medium flows since September 1972 by Linganore Reservoir, total capacity, 883,200,000 gal, 2.8 mi upstream from station. National Weather Service gage-height telemeter at station. Several measurements of water temperature were made during the year. Water-quality records for some prior periods have been collected at this location.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in June 1889 reached a stage of 30 ft, from floodmarks, discharge, 56,000 ft^3/s.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 8,800 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Sep 30	1900	*11,400	*12.54	No other peak greater than base discharge.			

Minimum discharge, 35 ft^3/s, Aug 12, 13.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	99	115	135	122	479	706	651	475	159	109	71	95
2	97	130	129	108	620	647	993	445	155	149	87	85
3	93	168	129	595	1480	522	947	422	190	176	109	79
4	112	185	144	1620	899	1650	775	407	251	155	83	79
5	123	185	147	580	674	1840	1660	386	213	115	67	181
6	141	178	150	e230	558	1250	1390	357	171	99	58	221
7	141	144	142	e220	510	1430	1060	345	151	89	53	424
8	358	117	141	e210	699	1020	910	441	143	80	52	381
9	635	116	174	226	793	779	869	804	133	73	48	258
10	374	116	202	e210	655	793	2230	535	133	66	43	201
11	278	143	175	e200	548	782	1840	405	137	65	41	155
12	227	137	135	e300	486	807	3100	358	135	64	40	128
13	190	156	132	483	475	721	1820	336	145	70	38	111
14	178	132	129	1170	481	673	1380	399	162	64	154	100
15	167	126	125	e800	418	786	1170	348	189	65	75	106
16	152	126	123	e600	378	1210	1110	304	188	60	47	1460
17	138	124	121	804	380	2000	1080	283	181	54	44	4650
18	130	127	124	2350	594	2260	945	274	173	58	45	1010
19	127	148	120	4490	1220	1580	822	264	180	51	44	493
20	124	146	120	1870	774	1200	774	256	161	51	43	357
21	148	147	120	1230	599	1170	799	240	153	49	198	354
22	179	149	122	1030	504	4210	801	225	145	56	475	449
23	159	148	118	1290	423	2090	1280	261	143	217	177	497
24	113	144	120	4970	383	1460	1210	327	131	185	195	377
25	114	144	118	4280	376	1260	929	335	119	126	228	293
26	114	167	107	1450	368	1110	722	292	107	108	333	247
27	114	169	105	1030	363	950	642	236	102	86	535	218
28	116	177	126	839	411	845	584	208	98	90	367	386
29	116	149	124	745	---	763	537	189	110	85	180	595
30	116	144	124	628	---	672	508	179	103	91	133	7970
31	115	---	93	550	---	605	---	167	---	79	110	---
TOTAL	5288	4357	4074	35230	16548	37791	33538	10503	4561	2885	4173	21960
MEAN	171	145	131	1136	591	1219	1118	339	152	93.1	135	732
MAX	635	185	202	4970	1480	4210	3100	804	251	217	535	7970
MIN	93	115	93	108	363	522	508	167	98	49	38	79
CFSM	.21	.18	.16	1.39	.72	1.49	1.37	.41	.19	.11	.16	.90
IN.	.24	.20	.19	1.60	.75	1.72	1.53	.48	.21	.13	.19	1.00

e Estimated

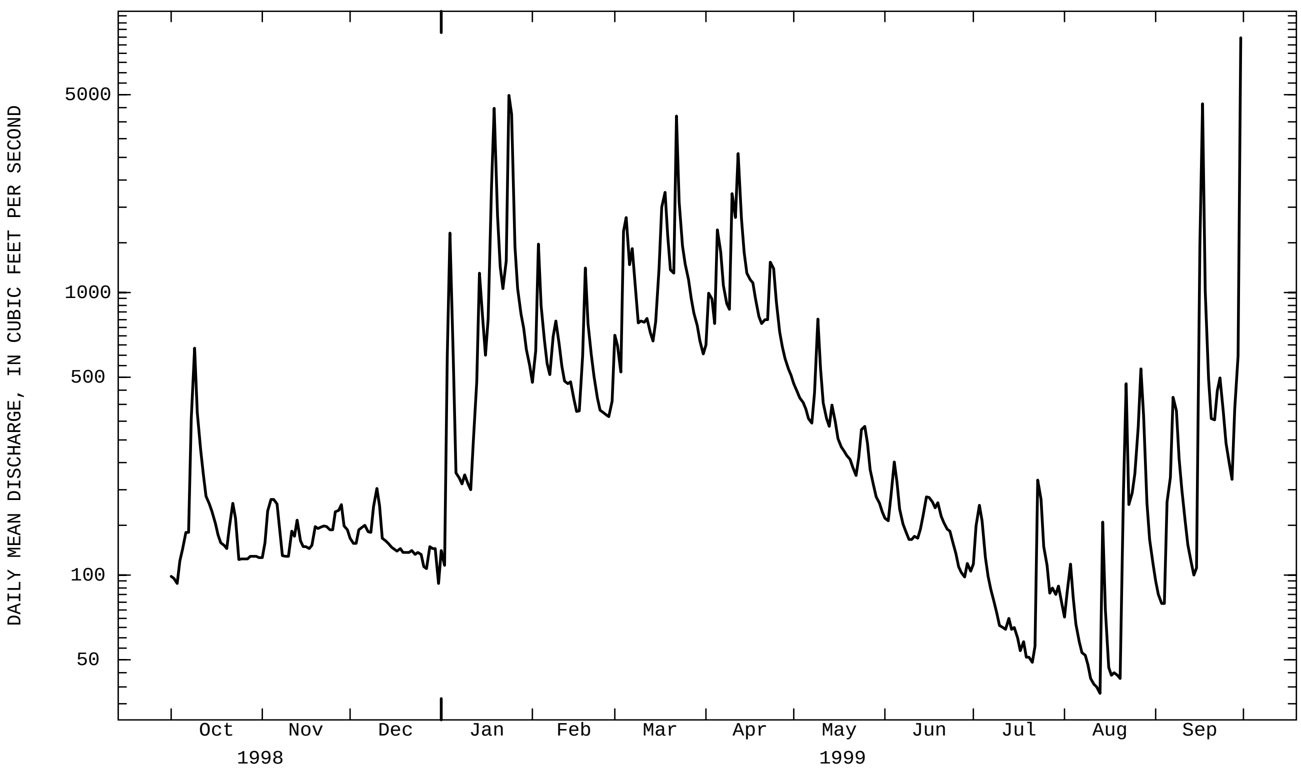
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1930 - 1999, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	510	726	1041	1241	1474	1833	1528	1023	716	458	410	488
MAX	3943	2504	3606	4159	4062	5851	4533	3773	6826	2571	3233	5165
(WY)	1977	1933	1997	1996	1984	1993	1983	1989	1972	1949	1933	1975
MIN	46.8	65.1	108	123	175	589	432	296	152	64.5	36.4	59.9
(WY)	1931	1931	1966	1981	1931	1981	1995	1963	1999	1966	1966	1963

01643000 MONOCACY RIVER AT JUG BRIDGE NEAR FREDERICK, MD--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1930 - 1999	
ANNUAL TOTAL	480410		180908			
ANNUAL MEAN	1316		496		951	
HIGHEST ANNUAL MEAN					1834	1972
LOWEST ANNUAL MEAN					345	1931
HIGHEST DAILY MEAN	17500	Jan 9	7970	Sep 30	74000	Jun 23 1972
LOWEST DAILY MEAN	93	Oct 3	38	Aug 13	19	(a)
ANNUAL SEVEN-DAY MINIMUM	102	Sep 14	45	Aug 7	19	Sep 7 1966
INSTANTANEOUS PEAK FLOW			11400	Sep 30	81600	Jun 23 1972
INSTANTANEOUS PEAK STAGE			12.54	Sep 30	(b)35.90	Jun 23 1972
INSTANTANEOUS LOW FLOW			35	(c)	17	(d)
ANNUAL RUNOFF (CFSM)	1.61		.61		1.16	
ANNUAL RUNOFF (INCHES)	21.87		8.24		15.82	
10 PERCENT EXCEEDS	3080		1180		2000	
50 PERCENT EXCEEDS	439		190		477	
90 PERCENT EXCEEDS	117		85		122	

a Sept. 7-13, 1966.
b From floodmarks.
c Aug. 12, 13.
d Sept. 11 and 13, 1966.



DAILY MEAN DISCHARGE - 1999 WATER YEAR

01643500 BENNETT CREEK AT PARK MILLS, MD

LOCATION.--Lat 39°17'40", long 77°24'30", Frederick County, Hydrologic Unit 02070009, on left bank 75 ft downstream from highway bridge, 0.2 mi south of Park Mills, 1.8 mi upstream from mouth, and 3.7 mi southwest of Urbana.

DRAINAGE AREA.--62.8 mi^2.

PERIOD OF RECORD.--July 1948 to September 1958. Annual maximum, water years 1960-66. August 1966 to current year.

GAGE.--Water-stage recorder and concrete control. Elevation of gage is 240 ft above sea level, from topographic maps.

REMARKS.--Records good except those for estimated daily discharges (ice effect, missing record), which are fair. Several measurements of water temperature were made during the year. Water-quality records for some prior periods have been collected at this location.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,200 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Sep 16	1600	*2,030	*5.51	Sep 30	0500	1,240	4.49

Minimum discharge, 0.96 ft^3/s, Aug 12-14, 19.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.7	e13	14	13	29	56	88	33	16	8.9	2.9	3.7
2	5.9	e14	13	12	65	41	86	30	16	8.6	2.4	3.6
3	6.2	e14	14	228	56	44	66	30	15	9.1	2.1	3.4
4	10	e14	14	70	44	114	61	30	15	7.7	1.7	4.5
5	12	e13	14	68	37	72	90	30	14	6.8	1.5	77
6	12	e13	14	19	34	65	71	30	14	5.4	1.3	77
7	10	e13	14	20	33	70	64	30	14	4.6	1.3	64
8	94	e13	15	16	33	53	59	62	13	4.0	1.3	47
9	e33	e14	25	42	30	52	59	42	12	3.7	1.4	21
10	e17	e14	18	49	28	52	65	33	11	3.7	1.4	20
11	e16	e28	17	26	27	48	95	29	13	4.1	1.2	13
12	e15	e20	15	e25	27	52	108	28	11	3.8	1.0	11
13	e14	15	15	e35	29	53	77	27	17	4.8	1.0	9.5
14	e14	14	16	s45	25	56	68	26	19	5.0	1.2	8.7
15	e14	14	14	51	24	80	63	25	23	4.3	1.8	11
16	e13	14	14	51	24	121	64	23	14	3.7	2.1	566
17	e13	14	14	76	28	126	60	24	17	3.1	1.6	117
18	e13	14	14	282	88	101	53	24	18	2.7	1.3	49
19	e13	13	13	102	67	77	50	22	14	2.5	1.1	34
20	e12	14	14	59	49	67	49	21	14	2.7	1.1	28
21	e12	15	14	48	41	88	48	21	17	3.2	1.4	86
22	e12	14	14	43	35	119	50	21	16	3.7	2.3	76
23	e12	14	13	44	33	79	47	28	13	3.8	2.3	44
24	e12	14	14	235	33	73	47	43	11	2.9	15	33
25	e12	13	13	103	30	67	42	38	10	2.4	20	28
26	e11	19	12	64	30	59	42	24	9.6	5.1	36	24
27	e12	19	13	51	28	54	37	21	9.0	3.8	18	24
28	e12	15	14	44	49	52	37	20	9.8	3.9	8.9	41
29	e12	14	15	37	---	49	35	19	12	7.6	6.1	37
30	e12	14	17	33	---	45	34	18	9.1	5.2	4.3	450
31	e13	---	14	30	---	42	---	17	---	3.5	3.7	---
TOTAL	475.8	446	454	2021	1056	2127	1815	869	416.5	144.3	148.7	2011.4
MEAN	15.3	14.9	14.6	65.2	37.7	68.6	60.5	28.0	13.9	4.65	4.80	67.0
MAX	94	28	25	282	88	126	108	62	23	9.1	36	566
MIN	5.9	13	12	12	24	41	34	17	9.0	2.4	1.0	3.4
CFSM	.24	.24	.23	1.04	.60	1.09	.96	.45	.22	.07	.08	1.07
IN.	.28	.26	.27	1.20	.63	1.26	1.08	.51	.25	.09	.09	1.19

e Estimated

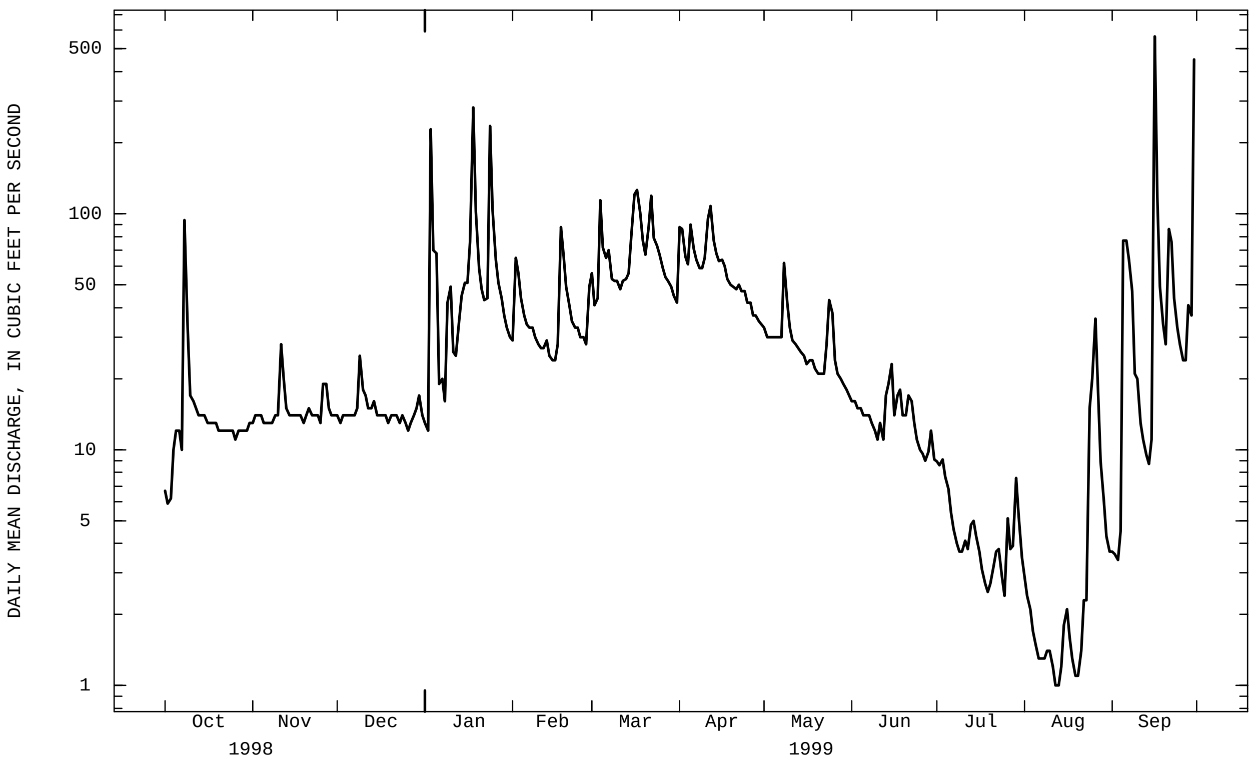
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1948 - 1999, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	39.2	49.9	78.8	90.7	101	119	106	86.2	67.1	42.3	34.8	39.9
MAX	245	160	295	289	229	369	286	302	498	178	148	211
(WY)	1980	1997	1997	1996	1979	1993	1993	1988	1972	1987	1955	1971
MIN	8.21	12.5	14.6	15.5	37.7	37.6	44.6	25.8	13.9	4.65	4.80	7.38
(WY)	1987	1982	1999	1981	1999	1981	1985	1969	1999	1999	1999	1986

01643500 BENNETT CREEK AT PARK MILLS, MD--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1948 - 1999	
ANNUAL TOTAL	32116.6		11984.7			
ANNUAL MEAN	88.0		32.8		71.0	
HIGHEST ANNUAL MEAN					141	1972
LOWEST ANNUAL MEAN					32.0	1981
HIGHEST DAILY MEAN	1840	Mar 21	566	Sep 16	5500	Jun 22 1972
LOWEST DAILY MEAN	5.9	Oct 2	1.0	(a)	.40	Sep 8 1966
ANNUAL SEVEN-DAY MINIMUM	7.1	Sep 27	1.2	Aug 8	.91	Sep 3 1966
INSTANTANEOUS PEAK FLOW			2030	Sep 16	(b)32200	Jun 21 1972
INSTANTANEOUS PEAK STAGE			5.51	Sep 16	(c)22.10	Jun 21 1972
INSTANTANEOUS LOW FLOW			.96	(d)	.30	Sep 8 1966
ANNUAL RUNOFF (CFSM)	1.40		.52		1.13	
ANNUAL RUNOFF (INCHES)	19.02		7.10		15.35	
10 PERCENT EXCEEDS	197		68		133	
50 PERCENT EXCEEDS	35		17		43	
90 PERCENT EXCEEDS	12		3.7		14	

a Aug. 12, 13.
b From rating curve extended above 2,700 ft^3/s on basis of contracted-opening measurement at gage heights of 11.15, 14.33, and 22.1 ft.
c From floodmarks.
d Aug. 12-14, 19.



DAILY MEAN DISCHARGE - 1999 WATER YEAR

01644600 GREAT SENECA CREEK NEAR QUINCE ORCHARD, MD

LOCATION.--Lat 39°07'57", long 77°16'21", Montgomery County, Hydrologic Unit 02060008, on left bank 10 ft downstream from bridge on Riffle Ford Road, 1.35 mi northwest of Quince Orchard, 1.75 mi southeast of the intersection of Maryland Route 118 and Riffle Ford Road, and 4.5 mi upstream from the confluence with Little Seneca Creek.

DRAINAGE AREA.--50.7 mi^2.

PERIOD OF RECORD.--July 1997 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 265 ft above sea level, from topographic maps.

REMARKS.--Records good except those for estimated daily discharges (missing record), which are fair. Several measurements of water temperature were made during the year. Records include pumpage from a Washington Suburban Sanitary Commission wastewater facility located immediately upstream from station.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,100 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jan 3	1000	1,220	8.05	Sep 16	1815	*1,990	*9.52
Sep 5	1600	1,270	8.16				

Minimum discharge, 9.3 ft^3/s, Aug 13.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14	24	24	24	38	74	e72	34	22	24	15	18
2	17	25	25	24	120	47	e77	33	22	47	14	17
3	17	26	24	488	70	54	e58	33	21	59	14	17
4	20	25	24	95	52	161	e53	33	21	30	14	82
5	21	25	24	45	47	73	e92	32	21	24	14	503
6	21	25	24	34	43	63	e64	31	21	21	14	263
7	20	25	24	33	43	69	e55	31	22	19	14	165
8	212	25	28	31	43	50	e52	172	21	19	13	298
9	70	27	65	114	41	49	e54	55	21	18	14	74
10	36	30	36	85	39	56	e67	40	19	17	15	95
11	29	63	29	44	37	54	e91	34	18	18	14	41
12	26	38	26	40	43	52	e93	32	19	18	14	32
13	25	30	35	53	54	51	e64	30	22	19	13	27
14	24	27	37	52	41	59	e58	30	96	19	24	25
15	24	26	29	111	38	146	e56	27	81	19	24	29
16	23	25	27	85	36	e169	e59	27	33	18	14	1110
17	22	25	26	80	41	e141	e55	27	32	17	14	191
18	23	25	25	271	187	e110	e52	27	35	16	13	71
19	23	24	25	129	86	e77	e51	27	27	16	12	53
20	22	24	25	66	57	e66	e49	25	63	16	72	47
21	21	29	24	56	48	e87	e52	25	46	16	24	165
22	22	26	26	55	44	e145	e56	25	33	17	28	112
23	22	25	26	49	41	e82	e48	50	28	17	18	61
24	23	24	27	326	40	e72	e41	104	24	16	167	50
25	23	23	27	123	39	e66	e37	64	24	16	172	45
26	23	53	26	68	39	e57	e36	35	23	35	114	42
27	24	38	25	55	37	e52	e35	30	23	18	53	40
28	24	29	25	49	82	e50	e34	27	38	17	31	49
29	24	26	28	45	---	e45	36	27	45	17	23	50
30	24	26	31	42	---	e43	35	25	28	17	20	345
31	24	---	26	40	---	e41	---	23	---	15	19	---
TOTAL	943	863	873	2812	1526	2361	1682	1215	949	655	1024	4117
MEAN	30.4	28.8	28.2	90.7	54.5	76.2	56.1	39.2	31.6	21.1	33.0	137
MAX	212	63	65	488	187	169	93	172	96	59	172	1110
MIN	14	23	24	24	36	41	34	23	18	15	12	17
(†)	-7.6	-8.0	-7.2	-8.2	-9.4	-7.6	-8.7	-8.0	-9.0	-9.6	-9.7	-9.9
MEAN≠	22.8	20.7	21.0	82.6	45.1	68.6	47.4	31.2	22.6	11.4	23.3	127
CFSM≠	.45	.41	.41	1.63	.89	1.35	.94	.61	.45	.23	.46	2.51
IN≠	.52	.46	.48	1.88	.93	1.56	1.04	.71	.50	.26	.53	2.80

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1997 - 1999, BY WATER YEAR (WY)

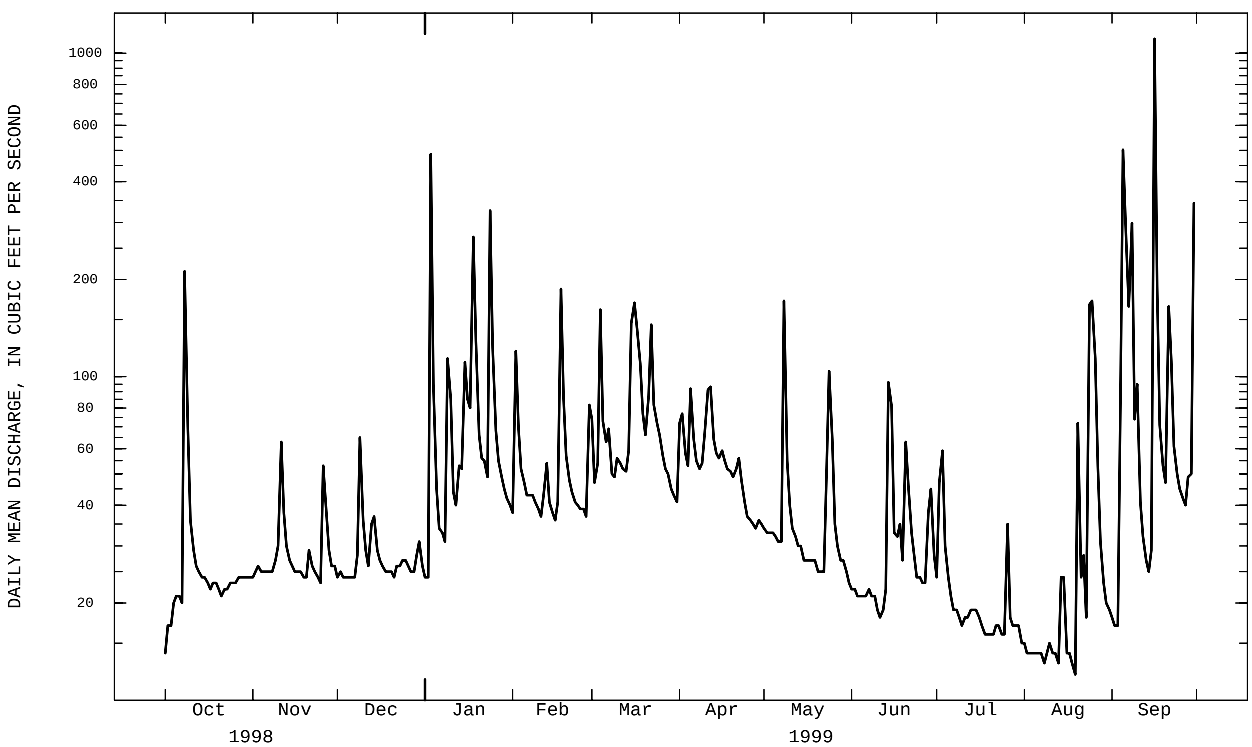
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	30.4	60.0	35.1	103	105	125	78.2	80.1	54.0	30.3	31.9	63.1
MAX	30.4	91.2	42.1	116	155	175	100	121	76.4	41.0	33.0	137
(WY)	1998	1998	1998	1998	1998	1998	1998	1998	1998	1998	1999	1999
MIN	30.4	28.8	28.2	90.7	54.5	76.2	56.1	39.2	31.6	21.1	29.9	20.6
(WY)	1998	1999	1999	1999	1999	1999	1999	1999	1999	1999	1997	1998

† Pumpage in cubic feet per second, from Washington Suburban Sanitary Commission.
≠ Adjusted for pumpage.

01644600 GREAT SENECA CREEK NEAR QUINCE ORCHARD, MD--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1997 - 1999	
ANNUAL TOTAL	28001		19020			
ANNUAL MEAN	76.7		52.1		67.6	
ANNUAL MEAN≠	69.5		43.5		60.0	
HIGHEST ANNUAL MEAN					83.0	1998
HIGHEST ANNUAL MEAN≠					76.0	1998
LOWEST ANNUAL MEAN					52.1	1999
LOWEST ANNUAL MEAN≠					43.5	1999
HIGHEST DAILY MEAN	1480	Mar 21	1110	Sep 16	1480	Mar 21 1998
HIGHEST DAILY MEAN≠	1470	Mar 21	1100	Sep 16	1470	Mar 21 1998
LOWEST DAILY MEAN	13	Sep 30	12	Aug 19	12	Aug 19 1999
LOWEST DAILY MEAN≠	9.3	Sep 29	3.1	Aug 19	3.1	Aug 19 1999
ANNUAL SEVEN-DAY MINIMUM	16	Sep 27	14	Aug 2	14	Aug 2 1999
INSTANTANEOUS PEAK FLOW			1990	Sep 16	(a)2440	Mar 21 1998
INSTANTANEOUS PEAK STAGE			9.52	Sep 16	10.26	Mar 21 1998
INSTANTANEOUS LOW FLOW			9.3	Aug 13	9.3	Aug 13 1999
ANNUAL RUNOFF (CFSM)	1.51		1.03		1.33	
ANNUAL RUNOFF (CFSM)≠	1.37		.86		1.18	
ANNUAL RUNOFF (INCHES)	20.55		13.96		18.11	
ANNUAL RUNOFF (INCHES)≠	18.60		11.66		16.08	
10 PERCENT EXCEEDS	141		89		112	
50 PERCENT EXCEEDS	46		32		37	
90 PERCENT EXCEEDS	22		18		20	

≠ Adjusted for inflow.
a From rating curve extended above 500 ft^3/s.



DAILY MEAN DISCHARGE - 1999 WATER YEAR

01645000 SENECA CREEK AT DAWSONVILLE, MD

LOCATION.--Lat 39°07'41", long 77°20'13", Montgomery County, Hydrologic Unit 02070008, on right bank 60 ft downstream from bridge on State Highway 28, 150 ft downstream from mouth of Great Seneca Creek, 0.5 mi east of Dawsonville, and 5.8 mi upstream from mouth.

DRAINAGE AREA.--101 mi^2.

PERIOD OF RECORD.--September 1930 to current year.

REVISED RECORDS.--WSP 726: Drainage area. WSP 1232: 1930. WSP 1272: 1933. WSP 1432: 1934-35(M), 1941(M). WDR MD-DE-74-1: 1970(M).

GAGE.--Water-stage recorder. Concrete control since Mar. 3, 1934. Datum of gage is 214.02 ft above sea level. 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.

REMARKS.--Records good except those for estimated daily discharges (ice effect), which are fair. Small diversion at times for irrigation upstream from station. National Weather Service gage-height telemeter at station. Several measurements of water temperature were made during the year. Water-quality records for some prior periods have been collected at this location.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,300 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Sep 5	1800	1,350	5.69	Sep 16	1445	*3,060	*7.95

Minimum discharge, 12 ft^3/s, Aug 7.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15	27	29	e25	61	120	118	54	34	29	17	23
2	19	27	29	e24	153	81	127	52	34	36	16	22
3	19	28	28	497	117	76	95	52	32	88	15	22
4	22	28	28	125	88	237	89	52	31	37	15	49
5	25	27	29	e47	80	132	145	51	32	27	15	553
6	25	26	29	e46	69	107	105	51	32	23	15	402
7	24	27	29	43	67	116	92	51	30	20	14	297
8	245	28	30	41	67	86	86	191	29	20	15	532
9	102	28	74	114	63	82	92	84	28	19	16	150
10	48	30	48	130	60	92	111	70	27	18	16	162
11	37	69	36	67	56	91	147	63	26	18	16	76
12	32	49	32	60	58	88	148	58	25	18	15	60
13	31	35	38	76	78	89	106	56	26	20	15	54
14	29	31	46	77	61	96	95	53	74	20	18	51
15	28	30	34	135	55	233	92	42	116	20	36	63
16	27	29	32	131	53	262	97	40	43	50	17	1500
17	27	28	31	125	55	225	90	40	36	20	15	632
18	27	28	30	409	243	181	85	40	46	17	14	150
19	27	28	30	258	149	131	83	40	33	16	13	95
20	25	29	30	123	101	107	83	37	66	15	73	82
21	25	32	29	120	84	144	85	36	63	16	30	296
22	24	31	30	85	70	221	92	37	42	18	36	277
23	24	30	30	74	63	134	79	65	35	17	23	134
24	25	29	31	505	60	115	68	123	31	15	210	124
25	25	28	31	252	60	106	61	97	28	16	168	115
26	25	55	30	133	60	94	59	53	28	36	184	104
27	25	50	30	99	58	88	57	45	27	21	73	58
28	25	35	30	86	100	83	56	42	34	18	42	69
29	25	32	32	77	---	78	55	40	64	20	30	77
30	26	31	37	68	---	74	55	38	34	19	26	624
31	26	---	32	63	---	70	---	36	---	18	23	---
TOTAL	1109	985	1034	4115	2289	3839	2753	1789	1186	745	1231	6853
MEAN	35.8	32.8	33.4	133	81.8	124	91.8	57.7	39.5	24.0	39.7	228
MAX	245	69	74	505	243	262	148	191	116	88	210	1500
MIN	15	26	28	24	53	70	55	36	25	15	13	22
CFSM	.35	.33	.33	1.31	.81	1.23	.91	.57	.39	.24	.39	2.26
IN.	.41	.36	.38	1.52	.84	1.41	1.01	.66	.44	.27	.45	2.52

e Estimated

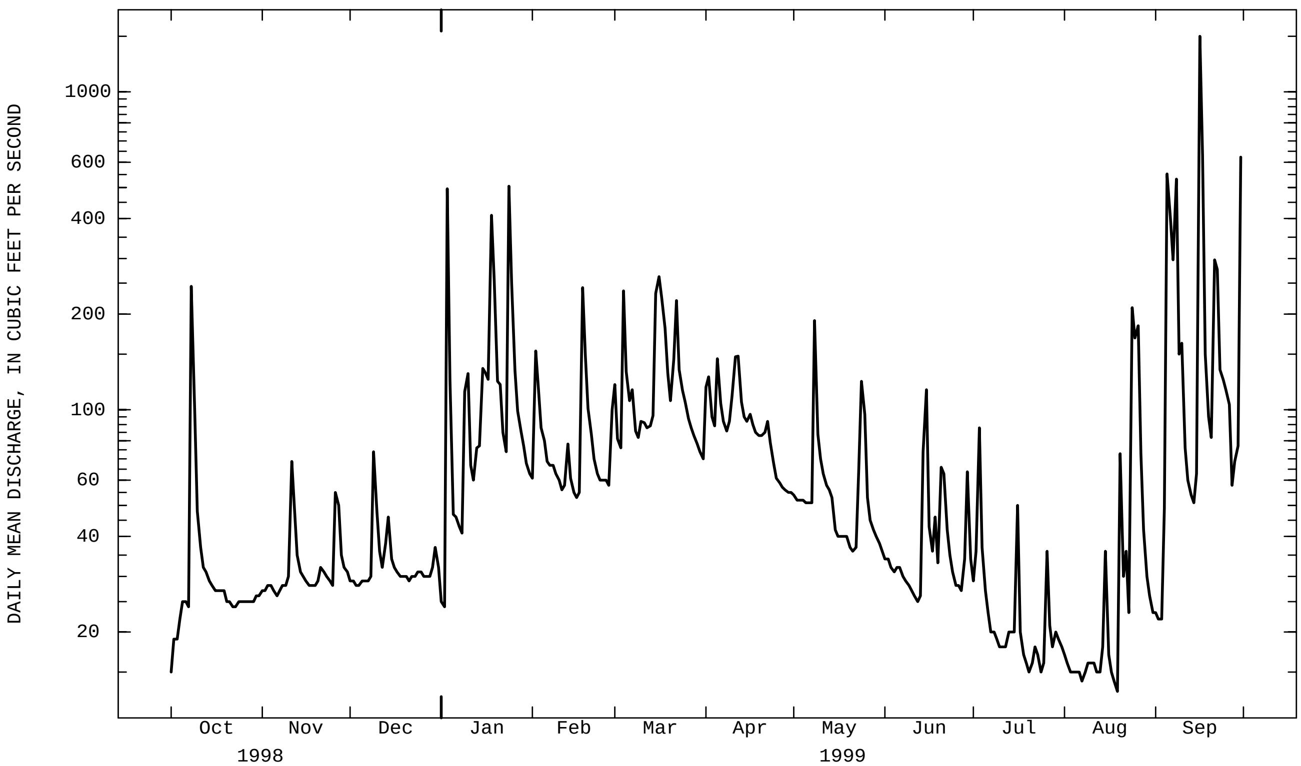
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1930 - 1999, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	68.0	85.0	110	131	148	163	148	127	105	75.7	67.2	78.1
MAX	479	290	452	440	484	511	457	510	747	273	248	566
(WY)	1980	1994	1997	1996	1979	1993	1993	1989	1972	1956	1971	1971
MIN	7.10	12.6	20.6	30.2	26.7	44.3	55.9	30.3	35.3	13.4	8.35	10.1
(WY)	1931	1932	1932	1966	1931	1931	1969	1931	1986	1955	1932	1931

01645000 SENECA CREEK AT DAWSONVILLE, MD--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1930 - 1999	
ANNUAL TOTAL	49927		27928			
ANNUAL MEAN	137		76.5		109	
HIGHEST ANNUAL MEAN					251	1972
LOWEST ANNUAL MEAN					32.8	1931
HIGHEST DAILY MEAN	3140	Mar 21	1500	Sep 16	9900	Jun 22 1972
LOWEST DAILY MEAN	15	Oct 1	13	Aug 19	1.8	(a)
ANNUAL SEVEN-DAY MINIMUM	19	Sep 28	15	Aug 2	2.2	Sep 27 1930
INSTANTANEOUS PEAK FLOW			3060	Sep 16	(b)26100	Jun 22 1972
INSTANTANEOUS PEAK STAGE			7.95	Sep 16	(c)16.40	Jun 22 1972
INSTANTANEOUS LOW FLOW			12	Aug 7	1.7	(d)
ANNUAL RUNOFF (CFSM)	1.35		.76		1.07	
ANNUAL RUNOFF (INCHES)	18.39		10.29		14.60	
10 PERCENT EXCEEDS	262		134		190	
50 PERCENT EXCEEDS	70		46		69	
90 PERCENT EXCEEDS	25		20		26	

a Sept. 29, 1930, Sept. 12, 1966.
b From rating curve extended above 3,000 ft^3/s on basis of contracted-opening and flow over-road measurement at gage height 12.17 ft at gage; and contracted-opening and flow-over-road measurement at gage height 16.32 ft at site 5.0 mi downstream, adjusted for flow from intervening area.
c From high-water mark in gage house.
d Sept. 28, 29, 1930.



DAILY MEAN DISCHARGE - 1999 WATER YEAR

01646500 POTOMAC RIVER NEAR WASHINGTON, DC

LOCATION.--Lat 38°56'58", long 77°07'40", Montgomery County, Hydrologic Unit 02070008, on left bank just upstream from Little Falls Dam, 1 mi upstream from District of Columbia boundary line, 1.2 mi upstream from Chain Bridge, 1.8 mi east of Langley, Fairfax County, and at mile 117.4.

DRAINAGE AREA.--11,560 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--March 1930 to current year.

REVISED RECORDS.--WSP 726: Drainage area. WDR MD-DE-75-1: 1973-74(M).

GAGE.--Water-stage recorder and concrete control. Datum of gage is 37.95 ft above sea level. Prior to June 7, 1930, nonrecording gage, and June 7, 1930, to Jan. 22, 1965, water-stage recorder at site 1 mi upstream on right bank at same datum.

REMARKS.--No estimated daily discharges. Water-discharge records good. Diversions at Great Falls through aqueducts, and since June 1959, from gage pool at Little Falls Dam, for municipal supply of Washington, D.C.; since October 1958, at Rockville Filtration Plant, for municipal supply of city of Rockville; since April 1961, at Potomac Filtration Plant for water supply of Washington Suburban Sanitary District; since October 1961, at Fairfax Water Treatment Plant for water supply of city of Fairfax (from Goose Creek); since April 1964, at Violets Lock to Chesapeake and Ohio Canal; and since October 1985, at Fairfax County Water Authority Treatment Plant for water supply of the county. Low flow affected slightly prior to July 1981 by Stony River Reservoir, since December 1950, by Savage River Reservoir (see station 01597500), and since July 1981, by Jennings Randolph Lake. National Weather Service gage-height telemeter at station. Satellite telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 2, 1889, was of approximately the same magnitude as that of March 19, 1936.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 45,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar 20	1015	*46,400	*6.51	No other peak greater than base discharge.			

Minimum discharge, 141 ft^3/s, Aug 13.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1210	1410	1180	1210	7560	4450	11300	7390	2370	1080	438	1230
2	1270	1230	1210	1130	7210	4460	11600	6620	2180	1100	478	1270
3	1320	1220	1240	2360	7100	4460	11100	6090	2220	972	424	1190
4	1350	1560	1100	3490	7160	6000	10500	5740	2210	1180	431	1230
5	1300	1470	1240	2780	6460	9660	10600	5470	2200	1250	374	2100
6	1290	1340	1150	2170	5970	14700	11400	5250	2090	865	487	2380
7	1490	1470	1100	1940	5710	12100	11300	4830	1850	724	486	2170
8	2630	1480	1140	2180	5380	11600	10100	5580	1600	680	401	2800
9	3390	1300	1490	2350	5500	10600	9230	5740	1520	649	476	10500
10	2770	1240	1480	2440	5600	10100	9200	9940	1340	488	379	14300
11	2410	1640	1470	2230	5770	9570	14200	8540	1370	517	281	9350
12	2090	1770	1650	2440	6320	8800	26000	7100	1270	377	288	6480
13	1930	1620	1650	2790	6430	8640	33200	6370	1320	451	174	4710
14	2020	1460	1400	3230	5700	8580	28900	5800	1480	402	304	3680
15	1900	1390	1670	4910	5350	10500	22100	5710	1600	284	479	3110
16	1810	1290	1490	5010	4900	12500	17700	4940	1280	383	358	7160
17	1590	1180	1210	5180	4570	13500	15200	4530	1470	287	274	9140
18	1580	1180	1300	5860	5760	16200	14000	4570	1500	234	260	10300
19	1320	1230	1390	12300	6330	29800	12300	5200	1380	424	270	7320
20	1380	1320	1390	12500	6110	44700	10900	4710	1620	428	685	5350
21	1450	1340	1340	8890	5230	36200	9790	4110	1870	441	595	5710
22	1260	1270	1240	7960	5020	30700	9410	3710	1620	295	568	6100
23	1370	1190	1350	8040	4950	35300	9550	3840	1400	358	464	4610
24	1400	1240	1310	12600	4640	32800	11000	4060	1190	344	799	4980
25	1330	1220	1280	29100	4310	26400	11400	4140	1120	440	1460	4780
26	1240	1390	1250	28400	4010	22100	12900	3640	1080	725	2300	4020
27	1340	1400	1210	21900	3860	19000	12200	3590	900	762	2000	3380
28	1220	1410	1140	16500	4020	16600	10800	3360	803	746	1670	3300
29	1340	1320	1030	12700	---	14700	9540	3260	1170	679	1830	3440
30	1270	1280	987	10300	---	13300	8270	2940	1070	516	1550	12000
31	1390	---	1230	8730	---	12000	---	2650	---	490	1360	---
TOTAL	50660	40860	40317	243620	156930	510020	405690	159420	46093	18571	22343	158090
MEAN	1634	1362	1301	7859	5605	16450	13520	5143	1536	599	721	5270
MAX	3390	1770	1670	29100	7560	44700	33200	9940	2370	1250	2300	14300
MIN	1210	1180	987	1130	3860	4450	8270	2650	803	234	174	1190
(†)	607	597	605	610	582	583	604	689	780	791	708	581
MEAN≠	2242	2959	2907	8471	6187	17040	14130	5832	2316	1391	1429	5854
CFSM≠	0.19	0.17	0.16	0.73	0.54	1.47	1.22	0.50	0.20	0.12	0.12	0.51
IN≠	0.22	0.19	0.19	0.85	0.56	1.70	1.36	0.58	0.22	0.14	0.14	0.57

† Diversions, in cubic feet per second, for municipal supply of Washington, D.C., Washington Suburban Sanitary District, city of Rockville, city of Fairfax (from Goose Creek), Fairfax County, and the Chesapeake and Ohio Canal (insignificant diversion to canal during current water year). Records provided by U.S. Army Corps of Engineers, Washington Suburban Sanitary Commission, city of Rockville, city of Fairfax, and Fairfax County Water Authority.
≠ Adjusted for diversion.

01646500 POTOMAC RIVER NEAR WASHINGTON, DC--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1930 - 1958, BY WATER YEAR (WY) (UNREGULATED)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	6120	6496	9843	13570	16660	21060	19120	13610	7960	5135	5804	4419
MAX	44100	21040	30900	37190	36790	76510	36430	27780	19090	21040	28210	19940
(WY)	1943	1933	1951	1937	1939	1936	1933	1932	1951	1949	1955	1945
MIN	583	700	1536	2527	2982	6505	7202	3953	2867	1284	569	679
(WY)	1931	1931	1944	1956	1934	1931	1947	1930	1930	1930	1930	1930

SUMMARY STATISTICS	WATER YEARS 1930 - 1958	
ANNUAL MEAN	10790	
HIGHEST ANNUAL MEAN	16100	1949
LOWEST ANNUAL MEAN	4525	1930
HIGHEST DAILY MEAN	426000	Mar 19 1936
LOWEST DAILY MEAN	448	Aug 25 1930
ANNUAL SEVEN-DAY MINIMUM	499	Aug 21 1930
INSTANTANEOUS PEAK FLOW	484000	Mar 19 1936
INSTANTANEOUS PEAK STAGE	(a)28.10	Mar 19 1936
INSTANTANEOUS LOW FLOW	430	Aug 24 1930
ANNUAL RUNOFF (CFSM)	.93	
ANNUAL RUNOFF (INCHES)	12.68	
10 PERCENT EXCEEDS	23600	
50 PERCENT EXCEEDS	6440	
90 PERCENT EXCEEDS	1810	

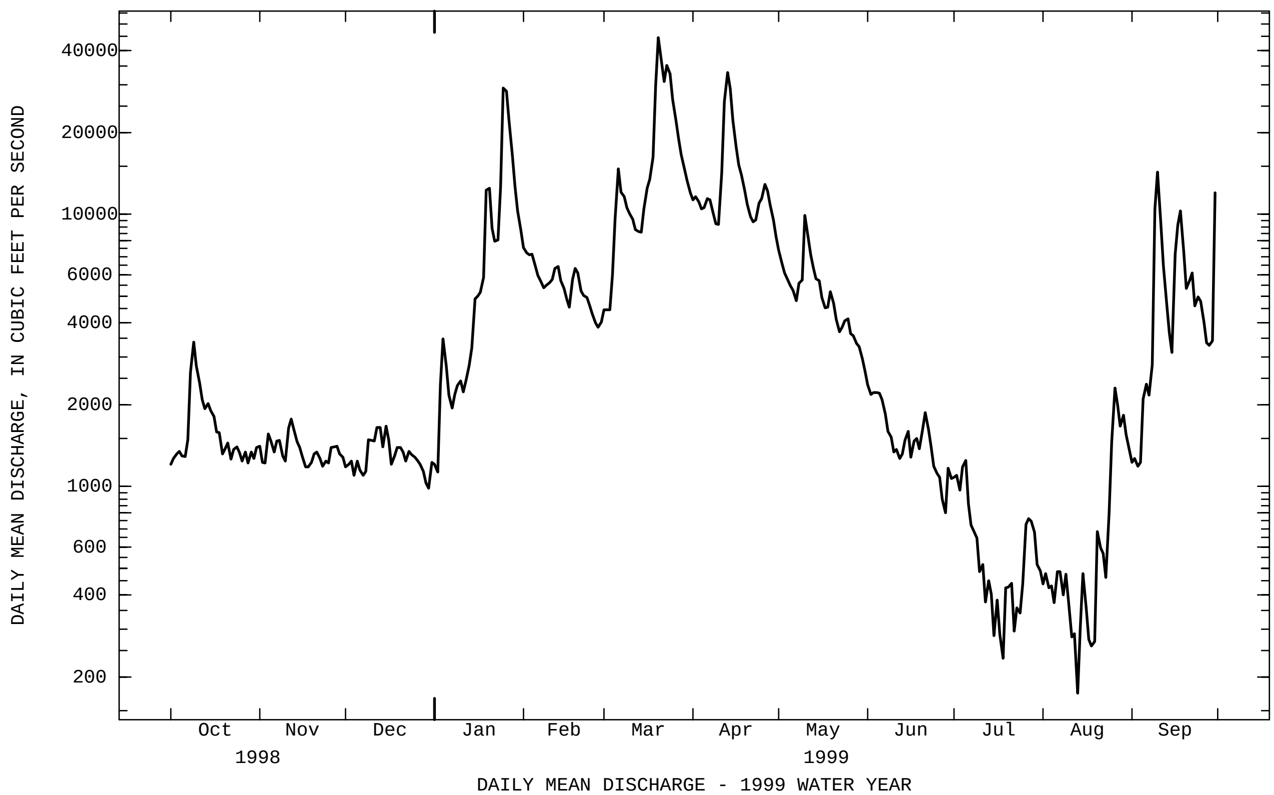
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1959 - 1999, BY WATER YEAR (WY) (REGULATED, UNADJUSTED)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	6008	7848	11490	14430	17870	25530	20790	15370	9312	4735	4063	4768
MAX	36790	42030	37630	52890	61040	67370	57850	40410	46630	17160	21720	44620
(WY)	1977	1986	1997	1996	1998	1994	1993	1989	1972	1972	1996	1996
MIN	908	1097	1038	1682	5605	7403	5810	3921	1536	599	538	791
(WY)	1964	1966	1966	1981	1999	1990	1995	1969	1999	1999	1966	1964

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1959 - 1999	
ANNUAL TOTAL	6650717		1852614			
ANNUAL MEAN	18220		5076		11820	
ANNUAL MEAN≠	18830		5722		12323	
HIGHEST ANNUAL MEAN					23760	1996
HIGHEST ANNUAL MEAN≠					24370	1996
LOWEST ANNUAL MEAN					4900	1969
LOWEST ANNUAL MEAN≠					5306	1969
HIGHEST DAILY MEAN	140000	Mar 22	44700	Mar 20	334000	Jun 24 1972
LOWEST DAILY MEAN	987	Dec 30	174	Aug 13	(b)121	Sep 9 1966
LOWEST DAILY MEAN≠	1810	Sep 9	1860	Oct 24	(c)601	Sep 10 1966
ANNUAL SEVEN-DAY MINIMUM	1160	Dec 25	303	Aug 13	181	Sep 7 1966
INSTANTANEOUS PEAK FLOW			46400	Mar 20	359000	Jun 24 1972
INSTANTANEOUS PEAK STAGE			6.51	Mar 20	22.03	Jun 24 1972
INSTANTANEOUS LOW FLOW			141	Aug 13	66	Sep 9 1966
ANNUAL RUNOFF (CFSM)	1.58		.44		1.02	
ANNUAL RUNOFF (CFSM)≠	1.63		.49		1.03	
ANNUAL RUNOFF (INCHES)	21.40		5.96		13.89	
ANNUAL RUNOFF (INCHES)≠	22.12		6.72		14.48	
10 PERCENT EXCEEDS	50900		12100		27100	
50 PERCENT EXCEEDS	6070		2170		6480	
90 PERCENT EXCEEDS	1270		506		1550	

a At previous site, 1 mi upstream at same datum.
≠ Adjusted for diversion.
b Minimum daily discharge observed at gaging station, does not include diversion of 489 ft^3/s.
c Includes diversion of 449 ft^3/s for municipal use.

01646500 POTOMAC RIVER NEAR WASHINGTON, DC--Continued



01646500 POTOMAC RIVER NEAR WASHINGTON, DC--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1989 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1988 to current year.
WATER TEMPERATURE: October 1988 to current year.

INSTRUMENTATION.--Water-quality monitor October 1988 to current year.

REMARKS.--Missing record for specific conductance during Jan and Mar due to instrument malfunction. Missing record for water temperature during July-Sep due to instrument malfunction.

EXTREMES FOR PERIOD OF DAILY RECORD--
SPECIFIC CONDUCTANCE (water years 1989-98): Maximum, 747 microsiemens, Jan. 11, 1991 (may have been greater than 1,000 microsiemens during period of missing record in Jan and Mar 1999); minimum, 68 microsiemens, Oct. 23, 1990.
WATER TEMPERATURE (water years 1989-93, 1995-99): Maximum, 33.5°C, July 11, 1993; minimum, 0.0°C, on many day during winter periods.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum, UNKNOWN (may have been greater than 1,000 microsiemens during period of missing record in Jan and Mar); minimum, 119 microsiemens, Sep 16.
WATER TEMPERATURE: Maximum, 33.4°C, Jul 18; minimum, 0.1°C, Dec 24.

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	410	403	406	391	384	388	438	431	435	516	447	477
2	408	398	403	398	387	395	435	430	432	471	452	461
3	404	397	401	403	396	400	432	429	430	931	446	615
4	407	398	403	405	401	404	430	426	427	704	504	579
5	413	406	410	415	405	411	427	425	426	518	489	506
6	416	410	414	419	411	416	425	419	422	520	499	511
7	421	414	419	417	410	413	420	415	419	499	447	462
8	420	222	387	423	410	417	417	413	414	495	458	479
9	382	257	354	429	423	427	414	391	407	546	437	454
10	392	380	389	427	420	425	396	374	388	829	546	751
11	403	391	395	420	403	413	404	393	397	770	700	749
12	410	403	408	416	407	413	405	396	403	734	696	720
13	406	389	397	432	416	426	411	403	407	715	615	682
14	392	389	390	436	432	435	418	398	410	664	615	646
15	397	391	395	440	435	438	403	396	400	---	---	---
16	404	397	402	442	438	441	407	401	404	1070	766	907
17	417	404	413	445	441	444	410	402	407	766	641	712
18	425	416	419	446	442	444	411	406	408	831	621	699
19	422	416	419	449	433	439	415	408	411	717	494	570
20	422	403	418	436	423	430	423	414	420	494	398	428
21	413	403	409	429	422	426	422	416	420	471	414	442
22	419	407	415	428	422	425	416	407	410	475	452	464
23	424	417	421	435	423	430	418	411	414	476	456	469
24	429	418	425	444	435	440	423	416	419	478	341	435
25	435	424	430	444	438	441	444	418	425	409	341	367
26	435	428	431	447	444	446	456	441	449	390	289	364
27	430	420	428	450	446	449	476	450	456	289	240	260
28	420	407	415	451	430	438	471	456	463	289	241	265
29	409	393	403	442	434	438	476	464	468	289	265	275
30	400	385	393	436	430	433	486	436	462	265	263	264
31	392	383	388	---	---	---	502	466	479	265	257	261
MONTH	435	222	406	451	384	426	502	374	424	---	---	---

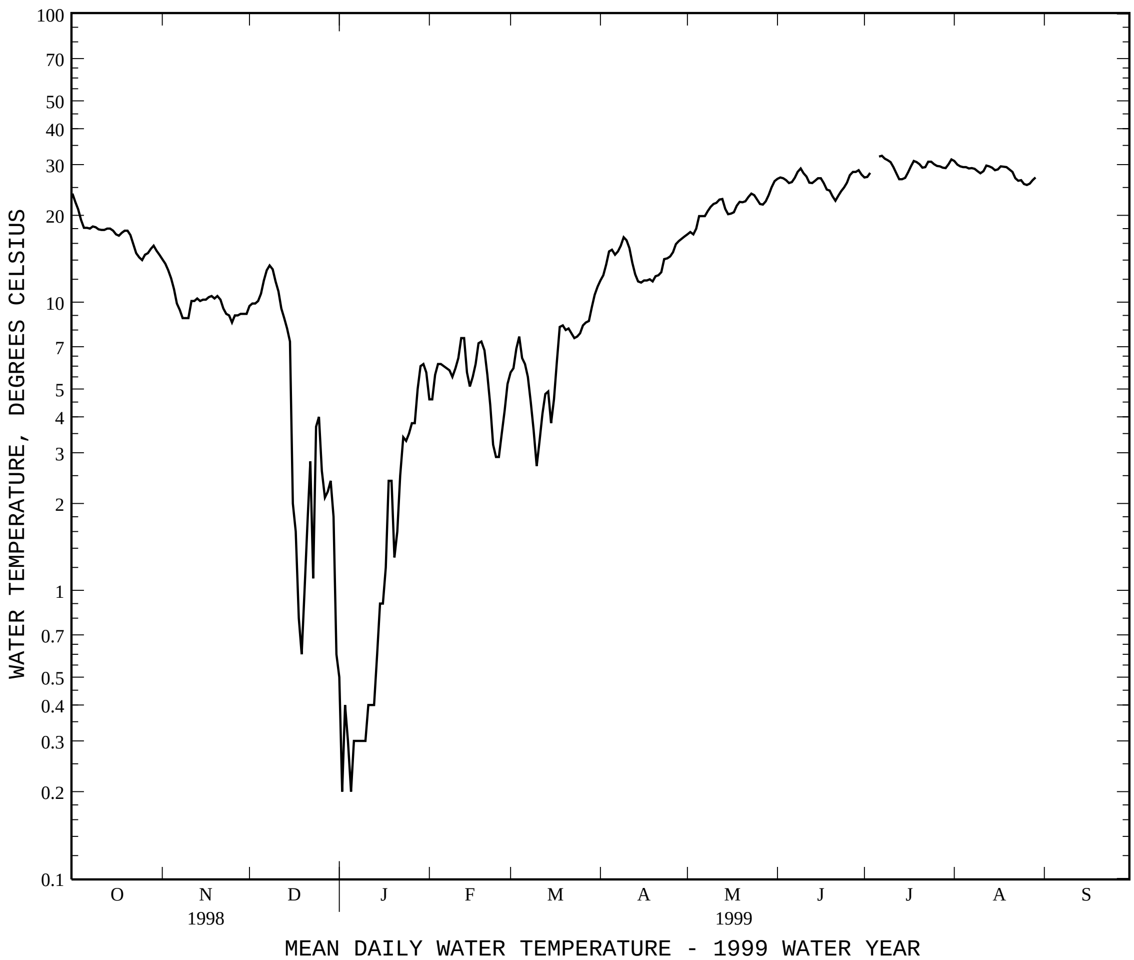
01646500 POTOMAC RIVER NEAR WASHINGTON, DC--Continued

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	278	261	268	532	384	465	292	256	268	279	256	264
2	313	278	298	384	355	375	280	270	273	294	259	267
3	302	283	287	453	351	390	277	271	273	286	267	277
4	296	287	290	413	351	387	284	273	276	289	276	282
5	310	296	305	397	351	365	298	279	286	288	264	274
6	312	306	308	384	344	360	308	291	298	285	269	277
7	315	312	314	385	353	364	334	307	318	285	274	280
8	340	315	321	353	277	320	323	281	287	294	276	287
9	330	324	328	277	256	261	292	280	285	292	276	283
10	331	324	328	532	266	342	304	267	283	299	285	289
11	339	329	334	504	396	431	278	270	272	311	299	306
12	346	333	337	513	401	463	284	262	274	309	281	296
13	350	332	337	442	345	396	273	239	249	287	256	278
14	351	339	346	740	307	358	241	172	191	256	243	248
15	349	338	344	---	---	---	188	173	179	264	249	255
16	346	330	339	1010	543	699	208	188	198	278	264	271
17	349	333	343	570	383	455	233	207	216	286	278	281
18	353	227	313	393	338	362	260	232	250	292	283	288
19	309	277	300	352	315	331	265	236	250	295	285	290
20	319	305	311	315	197	247	268	244	260	295	282	288
21	326	311	316	230	190	202	266	240	255	289	277	281
22	328	311	316	249	192	202	268	245	250	288	281	284
23	340	321	330	203	193	197	263	245	250	294	284	288
24	336	325	331	200	173	189	278	258	265	290	238	277
25	343	323	333	182	172	179	281	257	268	304	242	287
26	342	323	335	192	180	187	280	259	268	322	298	307
27	349	336	343	215	192	205	354	274	301	345	297	305
28	507	337	383	234	208	222	373	266	315	320	303	312
29	---	---	---	262	231	242	274	257	263	333	320	327
30	---	---	---	254	240	248	277	263	266	325	296	308
31	---	---	---	257	249	254	---	---	---	299	291	295
MONTH	507	227	323	---	---	---	373	172	263	345	238	286

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	299	290	293	429	387	408	446	361	382	388	372	381
2	302	291	295	452	429	442	374	368	371	409	388	402
3	317	300	310	479	452	465	384	373	377	423	407	411
4	335	292	309	480	471	475	388	375	381	423	419	421
5	432	289	331	484	475	478	388	376	379	424	386	415
6	324	290	295	488	477	482	382	376	379	386	359	368
7	298	290	293	501	487	494	381	373	377	359	341	347
8	305	291	299	506	499	503	373	365	369	344	301	317
9	299	287	292	507	503	505	392	368	374	349	326	337
10	323	291	308	506	494	501	406	373	391	360	293	332
11	326	309	322	501	491	496	413	389	403	383	360	373
12	323	313	319	491	488	490	414	381	397	391	340	377
13	314	280	297	493	488	490	386	382	384	340	300	311
14	280	266	272	488	478	482	387	384	385	301	279	287
15	268	264	266	478	465	473	408	381	392	279	256	265
16	276	263	268	465	445	456	419	398	411	256	119	190
17	278	273	276	445	433	440	413	380	405	185	159	171
18	284	276	279	433	426	431	380	360	373	202	185	193
19	281	276	279	427	420	423	367	361	363	202	197	199
20	277	266	273	421	404	412	376	349	365	201	196	198
21	269	266	268	404	396	399	360	351	356	239	201	217
22	273	262	267	407	395	401	378	354	367	284	239	264
23	269	262	266	397	395	396	387	355	362	301	284	294
24	302	266	276	396	389	392	370	344	352	303	227	256
25	307	292	303	389	380	386	351	334	342	262	227	237
26	310	305	307	387	374	383	366	348	359	292	262	282
27	317	305	309	379	361	371	365	350	361	301	292	298
28	340	317	329	375	364	367	362	325	347	313	301	308
29	348	337	341	397	369	379	363	338	351	320	218	314
30	387	338	358	374	364	370	363	340	346	323	255	292
31	---	---	---	433	371	387	381	348	365	---	---	---
MONTH	432	262	297	507	361	438	446	325	373	424	119	302

01646500 POTOMAC RIVER NEAR WASHINGTON, DC--Continued



01646500 POTOMAC RIVER NEAR WASHINGTON, DC--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

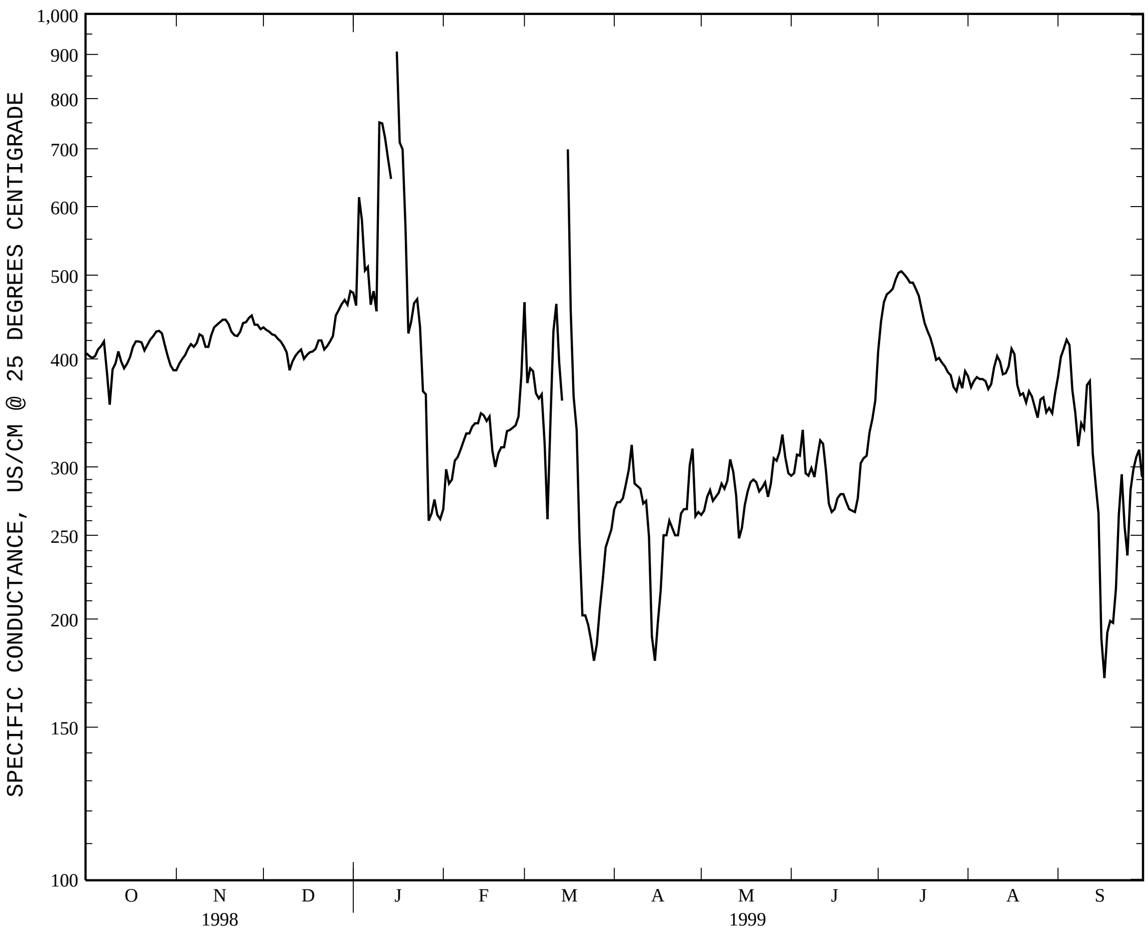
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	24.5	23.2	23.8	14.7	13.5	14.1	10.2	9.2	9.7	.7	.2	.5
2	23.2	21.6	22.3	14.3	13.4	13.6	10.2	9.3	9.9	.4	.2	.2
3	22.1	20.5	21.0	13.6	12.5	12.9	10.4	9.4	9.9	1.1	.2	.4
4	20.5	18.5	19.3	12.5	12.0	12.1	10.3	9.8	10.1	1.1	.2	.3
5	18.5	17.9	18.1	12.0	10.6	11.1	11.8	10.2	10.7	.3	.2	.2
6	18.2	17.9	18.1	10.8	9.6	9.9	12.9	11.1	11.9	.3	.3	.3
7	18.3	17.6	18.0	9.6	9.2	9.4	13.8	12.1	12.9	.3	.3	.3
8	18.6	18.1	18.3	9.2	8.7	8.8	13.8	13.3	13.4	.3	.3	.3
9	18.4	18.0	18.2	9.3	8.3	8.8	13.3	12.7	13.0	.3	.3	.3
10	18.2	17.7	17.9	9.3	8.5	8.8	12.8	11.5	11.8	.4	.3	.3
11	18.5	16.9	17.8	10.8	9.1	10.1	11.8	10.4	10.9	.4	.4	.4
12	18.2	17.5	17.8	10.6	9.6	10.1	10.4	9.2	9.5	.4	.4	.4
13	18.2	17.7	18.0	10.5	10.1	10.3	9.3	8.5	8.8	.6	.4	.4
14	18.3	17.6	18.0	10.6	9.7	10.1	8.6	7.7	8.1	.7	.5	.6
15	18.1	17.1	17.7	10.5	9.7	10.2	7.8	2.6	7.3	1.4	.7	.9
16	17.7	16.7	17.2	10.7	9.5	10.2	2.6	1.8	2.0	1.6	.5	.9
17	17.7	16.3	17.0	10.7	10.0	10.4	2.0	1.1	1.6	2.2	.6	1.2
18	18.3	16.5	17.4	10.8	10.2	10.5	1.1	.6	.8	3.9	1.6	2.4
19	18.0	17.3	17.7	10.7	9.8	10.3	1.0	.3	.6	3.5	1.8	2.4
20	18.2	17.3	17.7	11.0	10.0	10.5	1.4	.7	1.0	1.9	1.2	1.3
21	18.0	16.7	17.1	11.0	9.6	10.2	2.2	1.3	1.7	2.2	1.2	1.6
22	17.0	15.2	15.9	10.0	9.0	9.5	3.2	2.0	2.8	2.8	2.2	2.5
23	15.2	14.3	14.8	9.6	8.7	9.1	2.0	.6	1.1	4.5	2.7	3.4
24	15.1	13.6	14.3	9.3	8.4	9.0	5.0	.1	3.7	5.4	.7	3.3
25	14.5	13.4	14.0	9.1	8.2	8.5	4.4	3.5	4.0	5.6	.6	3.5
26	15.5	13.7	14.6	9.5	8.5	9.0	3.5	2.2	2.6	4.4	3.4	3.8
27	15.1	14.5	14.8	9.4	8.5	9.0	2.4	1.9	2.1	4.6	3.2	3.8
28	16.0	14.7	15.3	9.8	8.3	9.1	2.4	2.0	2.2	5.8	4.6	5.0
29	16.1	15.3	15.7	9.6	8.6	9.1	2.5	2.4	2.4	6.4	5.7	6.0
30	15.7	14.6	15.1	9.5	8.7	9.1	2.5	1.0	1.8	6.8	5.7	6.1
31	15.3	14.1	14.6	---	---	---	1.0	.4	.6	6.2	4.8	5.7
MONTH	24.5	13.4	17.3	14.7	8.2	10.1	13.8	.1	6.1	6.8	.2	1.9

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	4.9	4.4	4.6	6.1	5.3	5.7	12.2	11.5	11.9	18.7	16.0	17.2
2	5.1	4.3	4.6	7.4	4.8	5.9	13.3	11.5	12.4	18.7	16.5	17.5
3	6.7	5.1	5.6	8.7	5.6	6.9	14.5	12.7	13.5	17.7	16.8	17.2
4	6.8	5.4	6.1	8.4	6.8	7.6	16.0	13.8	15.0	19.7	16.6	18.0
5	6.9	5.5	6.1	7.0	5.8	6.4	16.2	14.6	15.2	21.3	18.3	19.9
6	6.6	5.6	6.0	6.6	5.8	6.1	15.2	14.1	14.6	20.3	19.4	19.9
7	6.3	5.7	5.9	6.1	4.6	5.5	15.8	14.6	15.0	20.9	19.1	19.9
8	6.1	5.6	5.8	5.1	3.9	4.5	17.3	14.7	15.7	22.0	19.5	20.7
9	6.3	4.9	5.5	4.3	2.4	3.6	17.9	16.0	16.8	22.8	20.3	21.4
10	7.3	5.0	5.9	3.4	2.3	2.7	17.6	15.5	16.4	23.1	20.9	21.9
11	7.6	5.3	6.4	4.3	2.6	3.3	16.7	14.3	15.4	23.3	21.4	22.1
12	8.8	6.3	7.5	5.3	3.2	4.1	14.3	13.3	13.7	24.1	21.5	22.7
13	7.9	6.2	7.5	5.8	4.0	4.8	13.4	11.8	12.5	23.2	22.2	22.8
14	6.3	5.1	5.7	5.3	4.2	4.9	12.6	10.8	11.8	22.2	20.3	21.1
15	6.4	4.0	5.1	4.5	3.3	3.8	12.6	11.3	11.7	21.5	19.1	20.2
16	7.0	4.2	5.5	5.6	3.8	4.6	12.5	11.3	11.9	21.4	18.9	20.3
17	7.4	5.3	6.1	7.3	5.1	6.2	12.2	11.6	11.9	21.6	19.1	20.5
18	8.1	6.6	7.2	8.8	7.3	8.2	12.4	11.6	12.0	22.9	20.1	21.6
19	8.0	6.7	7.3	8.7	7.6	8.3	12.3	11.5	11.8	23.2	21.3	22.3
20	7.4	6.2	6.8	8.7	7.2	8.0	13.0	11.8	12.3	23.7	20.9	22.2
21	6.7	5.1	5.6	8.3	7.8	8.1	12.6	11.8	12.4	23.9	20.5	22.4
22	5.6	3.5	4.4	8.2	7.3	7.8	14.4	11.7	12.7	24.6	21.3	23.2
23	4.4	2.6	3.2	7.9	7.0	7.5	14.5	13.4	14.1	24.6	22.6	23.8
24	4.2	2.1	2.9	7.9	7.2	7.6	15.5	13.2	14.2	24.3	22.5	23.5
25	4.0	2.3	2.9	8.5	7.0	7.8	15.5	13.6	14.4	23.7	21.6	22.7
26	5.0	2.8	3.5	9.2	7.4	8.3	15.9	14.2	14.9	22.8	20.7	21.9
27	5.9	3.0	4.2	9.1	8.1	8.5	16.6	15.3	15.9	23.2	20.3	21.8
28	5.9	4.7	5.2	9.1	8.4	8.6	17.0	15.9	16.3	23.5	20.8	22.4
29	---	---	---	10.8	8.9	9.6	17.3	16.2	16.6	25.1	21.7	23.5
30	---	---	---	11.5	10.0	10.6	18.2	16.0	16.9	26.9	23.2	25.0
31	---	---	---	12.2	10.7	11.3	---	---	---	27.7	24.9	26.3
MONTH	8.8	2.1	5.5	12.2	2.3	6.7	18.2	10.8	14.0	27.7	16.0	21.5

01646500 POTOMAC RIVER NEAR WASHINGTON, DC--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	27.5	25.9	26.8	27.7	26.7	27.1	31.7	30.2	30.9	---	---	---
2	28.2	26.2	27.1	27.6	26.7	27.2	30.4	29.4	30.0	---	---	---
3	27.6	26.4	26.9	29.6	26.8	28.1	30.6	28.9	29.6	---	---	---
4	27.3	25.5	26.5	29.6	24.6	---	30.1	28.9	29.4	---	---	---
5	26.7	25.3	25.9	---	---	---	29.9	28.9	29.4	---	---	---
6	27.8	25.0	26.1	33.2	30.7	32.0	29.8	28.5	29.1	---	---	---
7	28.5	25.9	27.0	33.0	31.1	32.2	30.1	28.6	29.2	---	---	---
8	29.7	27.4	28.3	32.4	31.0	31.5	29.6	28.6	29.0	---	---	---
9	30.4	27.9	29.1	31.7	30.4	31.1	28.9	28.0	28.5	---	---	---
10	29.4	26.7	28.0	31.4	29.5	30.6	29.0	27.3	28.0	---	---	---
11	29.1	25.7	27.3	29.7	28.9	29.4	29.7	27.6	28.5	---	---	---
12	27.5	25.6	26.0	28.9	26.7	28.0	31.4	28.5	29.8	---	---	---
13	26.8	25.1	25.9	27.5	26.0	26.7	30.7	28.4	29.6	---	---	---
14	27.4	25.4	26.4	27.2	26.4	26.7	30.4	28.5	29.3	---	---	---
15	28.2	26.0	26.9	29.1	25.7	27.0	29.6	28.3	28.7	---	---	---
16	27.4	26.1	26.9	29.7	26.8	28.2	30.5	27.9	28.9	---	---	---
17	26.9	25.1	25.9	30.9	28.6	29.6	31.7	28.5	29.6	---	---	---
18	25.1	23.9	24.6	33.4	29.5	30.9	30.3	28.6	29.5	---	---	---
19	25.3	23.3	24.4	31.4	30.0	30.6	31.1	28.6	29.4	---	---	---
20	24.6	22.7	23.3	30.7	29.5	30.1	30.0	28.3	28.9	---	---	---
21	22.9	22.1	22.5	29.9	28.8	29.3	28.8	27.8	28.3	---	---	---
22	25.6	21.8	23.4	31.0	28.4	29.4	27.8	26.1	26.9	---	---	---
23	25.7	22.9	24.3	32.5	29.5	30.7	27.0	25.9	26.4	---	---	---
24	26.2	23.9	25.0	31.5	30.1	30.7	27.2	26.0	26.5	---	---	---
25	27.0	24.9	26.0	30.7	29.5	30.1	26.1	25.1	25.7	---	---	---
26	29.1	25.7	27.6	30.1	29.1	29.7	27.1	24.8	25.5	---	---	---
27	28.7	27.8	28.3	30.6	29.1	29.6	27.1	25.0	25.8	---	---	---
28	28.5	28.1	28.3	30.1	28.7	29.3	28.2	25.4	26.5	---	---	---
29	29.7	27.9	28.7	30.1	28.4	29.2	28.5	26.0	27.1	---	---	---
30	28.8	27.3	27.7	31.5	29.0	30.1	---	---	---	---	---	---
31	---	---	---	33.0	29.9	31.3	---	---	---	---	---	---
MONTH	30.4	21.8	26.4	---	---	---	---	---	---	---	---	---



MEAN DAILY SPECIFIC CONDUCTANCE - 1999 WATER YEAR

01646580 POTOMAC RIVER AT CHAIN BRIDGE AT WASHINGTON, DC

LOCATION.--Lat 38°55'46", long 77°07'02", Arlington County, Va., Hydrologic Unit 02070010, under right downstream side of bridge on Virginia State Highway 123, and at river mile 115.9.

DRAINAGE AREA.--11,570 mi^2.

PERIOD OF RECORD.--Water years 1973 to current year. Prior to October 1977, published as "at Great Falls."

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: June 1978 to September 1981.
pH: June 1978 to September 1981.
WATER TEMPERATURE: June 1978 to September 1981.
DISSOLVED OXYGEN: June 1978 to September 1981.
SUSPENDED SEDIMENT DISCHARGE: October 1978 to September 1981.

INSTRUMENTATION.--Water-quality monitor June 1978 to September 1981.

REMARKS--Extreme high flows are sampled from the George Mason Memorial Bridge (14th Street) located 6 mi downstream from Chain Bridge. On May 3 and Nov. 17, 1994 samples were collected and analyzed using ultraclean methodologies. Data on trace metals for these dates are available from the University of Delaware. Data on organics for these dates are available from George Mason University.

EXTREMES FOR PERIOD OF DAILY RECORD--
SPECIFIC CONDUCTANCE (water years 1979, 1981): Maximum, 598 microsiemens, Sept. 12, 1981; minimum, 116 microsiemens, Jan. 25, 1979.
pH (water years 1979, 1981): Maximum, 9.3 units, Mar. 29, 1981; minimum, 6.7 units, June 2, 1981.
WATER TEMPERATURE (water years 1979, 1981): Maximum, 31.0°C, July 23-24, 1978; minimum, 0.0°C on many days during winter periods.
DISSOLVED OXYGEN (water years 1979, 1981): Maximum, 16.4 mg/L, on many days in 1979; minimum, 5.6 mg/L, June 2, 1981.
SEDIMENT CONCENTRATION: Maximun daily mean, 812 mg/L, Sept. 6, 1979; minimum daily mean, 1 mg/L on many days during winter periods.
SEDIMENT LOAD: Maximum daily, 281,000 tons, Feb. 27, 1979; minimum daily, 3.2 tons, Jan. 5, 1981.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)
OCT 1998												
14...	1000	1990	351	--	15.0	18.0	758	9.2	98	150	42	11
NOV												
12...	0815	1700	412	8.5	12.0	10.0	772	11.2	98	160	44	13
DEC												
15...	0945	1650	388	8.4	5.0	7.5	771	12.3	101	170	46	13
JAN 1999												
21...	0900	8940	366	7.6	6.0	2.0	768	14.1	101	130	38	9.0
FEB												
17...	0900	4440	334	8.5	7.0	6.5	758	12.2	100	140	40	8.9
MAR												
09...	1015	10500	259	7.6	-3.0	4.0	768	13.1	99	99	29	6.6
APR												
13...	1215	34600	233	7.8	15.0	13.0	759	10.7	102	86	25	5.7
MAY												
10...	1100	10600	278	8.0	20.0	22.0	763	8.7	100	--	--	--
JUN												
07...	1030	1890	314	8.2	31.0	27.0	763	7.7	97	--	--	--
22...	0945	1700	332	8.2	22.5	22.0	765	8.3	95	--	--	--
JUL												
12...	1030	308	348	8.5	22.0	26.5	767	6.7	83	--	--	--
AUG												
09...	1000	510	371	8.4	24.0	27.5	757	6.5	83	--	--	--
SEP												
14...	1115	3640	336	8.1	26.5	26.0	763	7.9	98	--	--	--

01646580 POTOMAC RIVER AT CHAIN BRIDGE AT WASHINGTON, DC--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	ALKA- LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	CAR- BONATE WATER DIS IT FIELD MG/L AS CO3 (00452)	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	NITRO- GEN, TOTAL (MG/L AS N) (00600)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N) (00618)
OCT 1998												
14...	14	3.4	110	--	134	40	19	.19	3.3	209	1.6	--
NOV												
12...	17	3.0	108	E2	129	45	21	.17	.41	238	1.9	.925
DEC												
15...	16	3.1	118	--	145	39	22	.20	.43	233	1.1	.882
JAN 1999												
21...	22	5.1	89	--	109	37	32	<.10	3.5	224	2.6	1.68
FEB												
17...	13	2.4	88	1	107	42	20	<.10	.35	195	1.6	1.32
MAR												
09...	11	2.3	66	--	80	22	18	<.10	2.7	150	1.8	1.35
APR												
13...	9.3	2.1	54	--	66	29	14	<.10	4.6	143	1.6	.909
MAY												
10...	--	--	78	--	95	--	--	--	--	--	1.5	1.02
JUN												
07...	--	--	89	--	109	--	--	--	--	--	--	.585
22...	--	--	90	--	109	--	--	--	--	--	1.1	--
JUL												
12...	--	--	88	2	107	--	--	--	--	--	.83	--
AUG												
09...	--	--	74	1	90	--	--	--	--	--	--	--
SEP												
14...	--	--	86	--	104	--	--	--	--	--	--	1.08

DATE	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N) (00623)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	ACETO- CHLOR, WATER FLTRD REC (UG/L) (49260)	ALA- CHLOR, WATER, DISS, REC, (UG/L) (46342)
OCT 1998												
14...	<.010	1.32	.027	.30	.25	.057	E.048	.042	E9.7	6.4	<.0020	<.002
NOV												
12...	.012	.937	.049	.91	.27	.497	<.050	.019	17	8.8	<.0020	<.002
DEC												
15...	.010	.892	.021	.22	.22	<.050	<.050	<.010	16	E3.6	<.0020	<.002
JAN 1999												
21...	.023	1.71	.208	.87	.67	.244	.162	.131	36	11	<.0020	<.002
FEB												
17...	.020	1.34	<.020	.28	.15	.029	.016	.013	25	7.9	<.0020	<.002
MAR												
09...	.013	1.37	<.020	.41	.29	.062	.024	.016	41	8.1	<.0020	<.002
APR												
13...	.013	.922	.068	.66	.66	.132	.049	.033	35	4.5	<.0020	<.002
MAY												
10...	.014	1.04	.108	.47	.29	.081	.049	.045	--	--	<.0020	<.002
JUN												
07...	.011	.596	.053	<.10	.28	.095	.078	.061	--	--	<.0020	<.002
22...	<.010	.658	.032	.45	.35	.099	.090	.067	--	--	<.0020	<.002
JUL												
12...	<.010	.211	.033	.62	.44	.128	.116	.081	--	--	<.0020	<.002
AUG												
09...	<.010	.068	.029	<.10	<.10	.092	.082	.055	--	--	<.0020	<.002
SEP												
14...	.022	1.10	<.020	E.10	.31	.090	.078	.057	--	--	<.0020	<.002

E Estimated

01646580 POTOMAC RIVER AT CHAIN BRIDGE AT WASHINGTON, DC--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	ATRA-ZINE, WATER, DISS, REC (UG/L) (39632)	BEN-FLUR-ALIN WAT FLD 0.7 U GF, REC (UG/L) (82673)	BUTYL-ATE, WATER, DISS, REC (UG/L) (04028)	CAR-BARYL WATER FLTRD 0.7 U GF, REC (UG/L) (82680)	CARBO-FURAN WATER FLTRD 0.7 U GF, REC (UG/L) (82674)	CHLOR-PYRIFOS DIS-SOLVED (UG/L) (38933)	CYANA-ZINE, WATER, DISS, REC (UG/L) (04041)	DCPA WATER FLTRD 0.7 U GF, REC (UG/L) (82682)	DEETHYL ATRA-ZINE, WATER, DISS, REC (UG/L) (04040)	DI-AZINON, DIS-SOLVED (UG/L) (39572)	DI-ELDRIN DIS-SOLVED (UG/L) (39381)	2,6-DI-ETHYL ANILINE WAT FLT 0.7 U GF, REC (UG/L) (82660)
OCT 1998												
14...	.068	<.0020	<.0020	<.0030	<.0030	<.0040	<.0040	<.0020	E.0749	<.002	<.001	<.0030
NOV												
12...	.057	<.0020	<.0020	<.0030	<.0030	<.0040	<.0040	<.0020	E.0674	<.002	<.001	<.0030
DEC												
15...	.046	<.0020	<.0020	<.0030	<.0030	<.0040	<.0040	<.0020	E.0632	<.002	<.001	<.0030
JAN 1999												
21...	.037	<.0020	<.0020	<.0030	<.0030	<.0040	<.0040	<.0020	E.0344	<.002	<.001	<.0030
FEB												
17...	.029	<.0020	<.0020	<.0030	<.0030	<.0040	<.0040	<.0020	E.0313	<.002	<.001	<.0030
MAR												
09...	.022	<.0020	<.0020	<.0030	<.0030	<.0040	<.0040	<.0020	E.0253	<.002	<.001	<.0030
APR												
13...	.019	<.0020	<.0020	<.0030	<.0030	<.0040	<.0040	<.0020	E.0167	<.002	<.001	<.0030
MAY												
10...	.071	<.0020	<.0020	E.0052	<.0030	<.0040	<.0040	<.0020	E.0632	.005	<.001	<.0030
JUN												
07...	.078	<.0020	<.0020	<.0030	<.0030	<.0040	<.0040	<.0020	E.0345	<.002	<.001	<.0030
22...	.144	<.0020	<.0020	E.0088	<.0030	<.0040	.0087	<.0020	E.0832	.005	<.001	<.0030
JUL												
12...	.266	<.0020	<.0020	<.0030	<.0030	<.0040	.0151	E.0019	E.142	<.002	<.001	<.0030
AUG												
09...	.066	<.0020	<.0020	<.0030	<.0030	<.0040	<.0040	<.0020	E.0762	<.002	<.001	<.0030
SEP												
14...	.029	<.0020	<.0020	<.0030	<.0030	<.0040	<.0040	<.0020	E.0211	<.002	<.001	<.0030

DATE	DISUL-FOTON WATER FLTRD 0.7 U GF, REC (UG/L) (82677)	EPTC WATER FLTRD 0.7 U GF, REC (UG/L) (82668)	ETHAL-FLUR-ALIN WAT FLT 0.7 U GF, REC (UG/L) (82663)	ETHO-PROP WATER FLTRD 0.7 U GF, REC (UG/L) (82672)	FONOFOS WATER DISS REC (UG/L) (04095)	LINDANE DIS-SOLVED (UG/L) (39341)	LIN-URON WATER FLTRD 0.7 U GF, REC (UG/L) (82666)	MALA-THION, DIS-SOLVED (UG/L) (39532)	METHYL AZIN-PHOS WAT FLT 0.7 U GF, REC (UG/L) (82686)	METHYL PARA-THION WAT FLT 0.7 U GF, REC (UG/L) (82667)	METO-LACHLOR WATER DISSOLV (UG/L) (39415)	METRI-BUZIN SENCOR WATER DISSOLV (UG/L) (82630)
OCT 1998												
14...	<.0170	<.0020	<.0040	<.0030	<.0030	<.004	<.0020	<.005	<.0010	<.0060	.016	<.004
NOV												
12...	<.0170	<.0020	<.0040	<.0030	<.0030	<.004	<.0020	<.005	<.0010	<.0060	.013	<.004
DEC												
15...	<.0170	<.0020	<.0040	<.0030	<.0030	<.004	<.0020	<.005	<.0010	<.0060	.011	<.004
JAN 1999												
21...	<.0170	<.0040	<.0040	<.0030	<.0030	<.004	<.0020	<.005	<.0010	<.0060	.047	.012
FEB												
17...	<.0170	<.0020	<.0040	<.0030	<.0030	<.004	<.0020	<.005	<.0010	<.0060	.013	<.004
MAR												
09...	<.0170	<.0020	<.0040	<.0030	<.0030	<.004	<.0020	<.005	<.0010	<.0060	.014	<.004
APR												
13...	<.0170	<.0020	<.0040	<.0030	<.0030	<.004	<.0020	<.005	<.0010	<.0060	.014	<.004
MAY												
10...	<.0170	<.0020	<.0040	<.0030	<.0030	<.004	<.0020	<.005	<.0010	<.0060	.028	<.004
JUN												
07...	<.0170	<.0020	<.0040	<.0030	<.0030	<.004	<.0020	<.005	<.0010	<.0060	.018	<.004
22...	<.0170	<.0020	<.0040	<.0030	<.0030	<.004	<.0020	<.005	<.0010	<.0060	.042	<.004
JUL												
12...	<.0170	<.0020	<.0040	<.0030	<.0030	<.004	<.0020	<.005	<.0010	<.0060	.106	<.004
AUG												
09...	<.0170	<.0020	<.0040	<.0030	<.0030	<.004	<.0020	<.005	<.0010	<.0060	.019	<.004
SEP												
14...	<.0170	<.0020	<.0040	<.0030	<.0030	<.004	<.0020	<.005	<.0010	<.0060	.016	<.004

E Estimated

01646580 POTOMAC RIVER AT CHAIN BRIDGE AT WASHINGTON, DC--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	MOLINATE WATER FLTRD 0.7 U GF, REC (UG/L) (82671)	NAPROPAMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82684)	PARATHION, DISSOLVED (UG/L) (39542)	PEBULATE WATER FILTRD 0.7 U GF, REC (UG/L) (82669)	PENDIMETHALIN WAT FLT 0.7 U GF, REC (UG/L) (82683)	PERMETHRIN CIS WAT FLT 0.7 U GF, REC (UG/L) (82687)	PHORATE WATER FLTRD 0.7 U GF, REC (UG/L) (82664)	PROMETON, WATER, DISS, REC (UG/L) (04037)	PRONAMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82676)	PROPCHLOR, WATER, DISS, REC (UG/L) (04024)	PROPARGITE WATER FLTRD 0.7 U GF, REC (UG/L) (82685)	PROPANIL WATER FLTRD 0.7 U GF, REC (UG/L) (82679)
OCT 1998												
14...	<.0040	<.0030	<.004	<.0040	<.0040	<.0050	<.0020	E.0096	<.0030	<.0070	<.0130	<.0040
NOV												
12...	<.0040	<.0030	<.004	<.0040	<.0040	<.0050	<.0020	E.0075	<.0030	<.0070	<.0130	<.0040
DEC												
15...	<.0040	<.0030	<.004	<.0040	<.0040	<.0050	<.0020	E.0050	<.0030	<.0070	<.0130	<.0040
JAN 1999												
21...	<.0040	<.0030	<.004	<.0040	<.0040	<.0050	<.0020	E.0073	<.0030	<.0070	<.0130	<.0040
FEB												
17...	<.0040	<.0030	<.004	<.0040	<.0040	<.0050	<.0020	E.0035	<.0030	<.0070	<.0130	<.0040
MAR												
09...	<.0040	<.0030	<.004	<.0040	<.0040	<.0050	<.0020	<.0180	<.0030	<.0070	<.0130	<.0040
APR												
13...	<.0040	<.0030	<.004	<.0040	<.0040	<.0050	<.0020	<.0180	<.0030	<.0070	<.0130	<.0040
MAY												
10...	<.0040	<.0030	<.004	<.0040	<.0040	<.0050	<.0020	<.0180	<.0030	<.0070	<.0130	<.0040
JUN												
07...	<.0040	<.0030	<.004	<.0040	<.0040	<.0050	<.0020	.0219	<.0030	<.0070	<.0130	<.0040
22...	<.0040	<.0030	<.004	<.0040	<.0040	<.0050	<.0020	E.0099	<.0030	<.0070	<.0130	<.0040
JUL												
12...	<.0040	<.0030	<.004	<.0040	<.0040	<.0050	<.0020	.0236	<.0030	<.0070	--	<.0040
AUG												
09...	<.0040	<.0030	<.004	<.0040	<.0040	<.0050	<.0020	E.0124	<.0030	<.0070	<.0130	<.0040
SEP												
14...	<.0040	<.0030	<.004	<.0040	<.0040	<.0050	<.0020	E.0116	<.0030	<.0070	<.0130	<.0040

DATE	SIMAZINE, WATER, DISS, REC (UG/L) (04035)	TEBUTHIURON WATER FLTRD 0.7 U GF, REC (UG/L) (82670)	TERBACIL WATER FLTRD 0.7 U GF, REC (UG/L) (82665)	TERBUFOS WATER FLTRD 0.7 U GF, REC (UG/L) (82675)	THIOBENCARB WATER FLTRD 0.7 U GF, REC (UG/L) (82681)	TRIALLATE WATER FLTRD 0.7 U GF, REC (UG/L) (82678)	TRIFLURALIN WAT FLT 0.7 U GF, REC (UG/L) (82661)	ALPHA BHC DISSOLVED (UG/L) (34253)	SEDIMENT, SUSPENDED (MG/L) (80154)	SEDIMENT, DISCHARGE, SUSPENDED (T/DAY) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
OCT 1998											
14...	.0234	<.0100	<.0070	<.0130	<.0020	<.0010	<.0020	<.0020	5	27	--
NOV											
12...	.0179	E.0074	<.0070	<.0130	<.0020	<.0010	<.0020	<.0020	2	9.2	--
DEC											
15...	.0129	E.0045	<.0070	<.0130	<.0020	<.0010	<.0020	<.0020	<1	<4.5	--
JAN 1999											
21...	.123	E.0044	E.0081	<.0130	<.0020	<.0010	<.0020	<.0020	35	845	99
FEB											
17...	.0128	E.0063	<.0070	<.0130	<.0020	<.0010	<.0020	<.0020	2	24	--
MAR											
09...	.0128	<.0100	<.0070	<.0130	<.0020	<.0010	<.0020	<.0020	13	360	--
APR											
13...	.0103	<.0100	<.0070	<.0130	<.0020	<.0010	<.0020	<.0020	60	5610	94
MAY											
10...	.0267	<.0100	<.0070	<.0130	<.0020	<.0010	<.0020	<.0020	11	315	--
JUN											
07...	.0364	<.0100	<.0070	<.0130	<.0020	<.0010	<.0020	<.0020	2	12	--
22...	.103	E.0053	<.0070	<.0130	<.0020	<.0010	E.0019	<.0020	4	18	--
JUL											
12...	.285	<.0100	<.0070	<.0130	<.0020	<.0010	<.0020	<.0020	4	3.7	--
AUG											
09...	.0292	E.0055	<.0070	<.0130	<.0020	<.0010	<.0020	<.0020	4	5.4	--
SEP											
14...	.0198	E.0059	<.0070	<.0130	<.0020	<.0010	<.0020	<.0020	7	66	--

E Estimated

01648000 ROCK CREEK AT SHERRILL DRIVE, WASHINGTON, DC

LOCATION.--Lat 38°58'21", long 77°02'25", District of Columbia, Hydrologic Unit 02070010, on left bank 125 ft downstream from Sherrill Drive Bridge in Rock Creek Park in Washington, and 7.5 mi upstream from mouth.

DRAINAGE AREA.--62.2 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1929 to current year.

REVISED RECORDS.--WSP 1432: 1933(M).

GAGE.--Water-stage recorder, crest-stage gage, and concrete control. Datum of gage is 148.87 ft above sea level.

REMARKS.--No estimated daily discharges. Water-discharge records good. Flow affected by two upstream reservoirs which control flow from about 25 mi^2, Needwood Lake on Rock Creek since Sept. 1966 and Bernard Frank Lake on North Branch Rock Creek since February 1968.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,200 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jan 3	1000	1,260	5.87	Sep 16	1330	*2,000	*7.83
Sep 9	2315	1,520	6.71				

Minimum discharge, 1.2 ft^3/s, Aug 8, 12, 13.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.7	7.5	12	11	23	72	76	27	13	28	3.3	6.1
2	7.0	7.9	12	12	123	43	51	27	12	32	2.8	5.2
3	7.6	8.9	11	406	51	44	40	25	11	36	2.7	4.8
4	6.1	8.8	11	82	42	155	48	25	11	17	2.3	128
5	6.1	8.9	11	50	37	67	108	24	10	12	3.4	456
6	5.9	9.4	11	40	30	70	46	24	9.8	9.6	2.7	230
7	6.5	10	11	26	26	78	39	24	9.4	8.6	2.1	209
8	176	10	21	21	26	44	36	65	9.2	7.1	1.8	169
9	59	12	84	78	25	40	64	40	9.1	7.0	6.1	310
10	27	12	19	56	24	62	83	31	9.1	6.6	3.6	287
11	19	77	14	31	22	56	121	26	9.0	6.0	2.7	49
12	14	20	13	30	41	50	81	24	9.0	7.3	1.5	31
13	12	13	53	40	58	46	54	23	11	9.8	1.3	20
14	12	9.7	23	40	27	94	44	20	91	6.1	87	15
15	11	9.4	14	208	25	279	47	22	47	4.9	38	54
16	11	9.4	13	77	22	134	47	20	17	4.8	7.7	1230
17	9.9	8.9	12	56	34	113	39	20	14	4.5	4.6	217
18	8.6	9.0	11	181	193	97	35	19	13	4.1	2.7	144
19	8.0	8.6	12	97	75	76	34	19	13	3.7	1.7	113
20	8.6	9.3	11	66	51	59	33	18	118	3.9	81	86
21	8.0	15	11	62	39	148	34	18	38	4.1	25	291
22	8.0	15	15	46	33	167	37	22	19	4.4	14	130
23	7.4	13	12	33	28	74	55	89	15	4.6	5.8	62
24	8.0	13	14	353	27	61	45	184	12	4.2	180	41
25	8.0	12	16	116	26	52	31	42	11	3.9	215	30
26	8.0	89	14	74	24	45	29	25	10	29	94	24
27	8.0	21	13	52	24	41	28	21	9.0	7.9	91	21
28	7.7	15	14	41	131	41	27	18	8.8	5.1	27	22
29	6.7	13	15	33	---	38	27	15	28	4.6	15	26
30	7.0	13	22	27	---	36	27	14	12	3.9	10	299
31	7.9	---	14	25	---	34	---	13	---	3.5	7.4	---
TOTAL	507.7	488.7	539	2470	1287	2416	1466	984	608.4	294.2	943.2	4710.1
MEAN	16.4	16.3	17.4	79.7	46.0	77.9	48.9	31.7	20.3	9.49	30.4	157
MAX	176	89	84	406	193	279	121	184	118	36	215	1230
MIN	5.9	7.5	11	11	22	34	27	13	8.8	3.5	1.3	4.8
CFSM	.26	.26	.28	1.28	.74	1.25	.79	.51	.33	.15	.49	2.52
IN.	.30	.29	.32	1.48	.77	1.44	.88	.59	.36	.18	.56	2.82

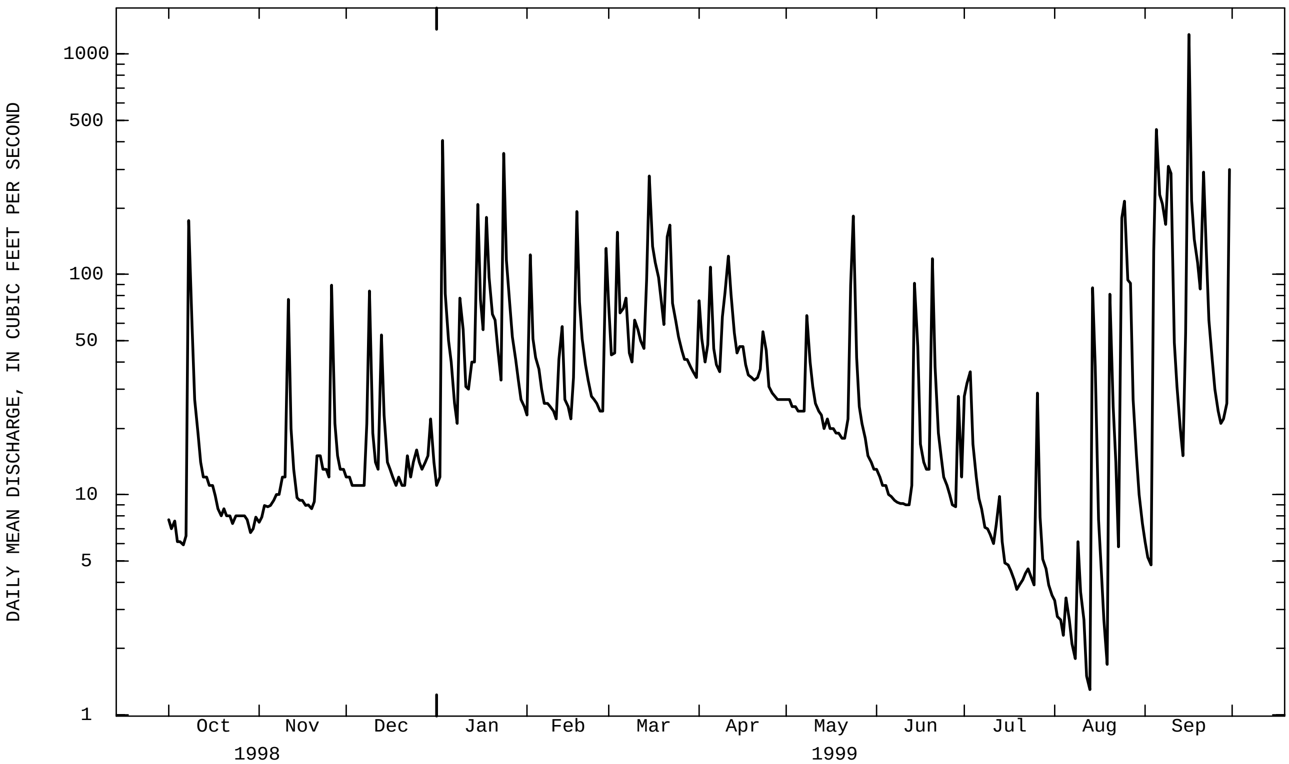
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1930 - 1999, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	40.8	52.8	61.7	73.7	83.4	92.0	84.4	74.4	59.6	48.5	47.2	46.9
MAX	196	165	184	201	210	221	215	232	456	192	174	348
(WY)	1980	1953	1973	1978	1979	1993	1973	1989	1972	1945	1955	1979
MIN	2.63	4.57	8.75	11.8	11.9	23.4	29.2	24.3	18.3	7.09	1.72	2.04
(WY)	1931	1932	1931	1931	1931	1931	1969	1955	1986	1930	1930	1930

01648000 ROCK CREEK AT SHERRILL DRIVE, WASHINGTON, DC--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1930 - 1999	
ANNUAL TOTAL	25583.7		16714.3			
ANNUAL MEAN	70.1		45.8		63.7	
HIGHEST ANNUAL MEAN					142	1972
LOWEST ANNUAL MEAN					16.1	1931
HIGHEST DAILY MEAN	997	Mar 21	1230	Sep 16	5000	Jun 22 1972
LOWEST DAILY MEAN	5.4	Sep 14	1.3	Aug 13	.50	(a)
ANNUAL SEVEN-DAY MINIMUM	6.2	Sep 10	2.5	Aug 2	.50	Oct 1 1930
INSTANTANEOUS PEAK FLOW			2000	Sep 16	(b)12500	Jun 22 1972
INSTANTANEOUS PEAK STAGE			7.83	Sep 16	(c)16.20	Jun 22 1972
INSTANTANEOUS LOW FLOW			1.2	(d)	.50	(a)
ANNUAL RUNOFF (CFSM)	1.13		.74		1.02	
ANNUAL RUNOFF (INCHES)	15.30		10.00		13.91	
10 PERCENT EXCEEDS	163		97		123	
50 PERCENT EXCEEDS	34		22		38	
90 PERCENT EXCEEDS	8.6		6.1		12	

a Oct. 1-7, 1930.
b From rating curve extended above 5,640 ft^3/s on basis of contracted-opening measurement at gage heights of 13.19 and 16.2 ft.
c From floodmarks.
d Aug. 8, 12, 13..



DAILY MEAN DISCHARGE - 1999 WATER YEAR

01648000 ROCK CREEK AT SHERRILL DRIVE, WASHINGTON, DC--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1994, 1995, October 1998 to September 1999.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	TIME	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	CARBON, INORG, SED, BM WS,<2MM DW, REC (G/KG) (49270)	CARBON, INORG, SED, BM WS,<63U DW, REC (PER- CENT) (49269)	CARBON, ORG + INORG SED, BM WS,<2MM DW, REC (G/KG) (49272)	ALUM- INUM BOT MAT <63U WS FIELD PERCENT (34790)	ANTI- MONY BOT MAT <63U WS FIELD (UG/G) (34795)	ARSENIC BOT MAT <63U WS FIELD (UG/G) (34800)	BARIUM BOT MAT <63U WS FIELD (UG/G) (34805)
AUG 1999												
18...	1400	297	6.8	25.2	758	.500	.09	24.0	8.4	2.7	6.9	510

BERYL- LIUM BOT MAT <63U WS FIELD (UG/G) (34810)	BISMUTH BOT MAT <180UWS FIELD (UG/G) (34816)	CADMIUM BOT MAT <63U WS FIELD (UG/G) (34825)	CALCIUM BOT MAT <63U WS FIELD PERCENT (34830)	CERIUM BOT MAT <63U WS FIELD (UG/G) (34835)	COBALT BOT MAT <63U WS FIELD (UG/G) (34840)	CHRO- MIUM BOT MAT <63U WS FIELD (UG/G) (34845)	COPPER BOT MAT <63U WS FIELD (UG/G) (34850)	EURO- PIUM BOT MAT <63U WS FIELD (UG/G) (34855)	GALLIUM BOT MAT <63U WS FIELD (UG/G) (34860)	GOLD BOT MAT <63U WS FIELD (UG/G) (34870)	HOLMIUM BOT MAT <63U WS FIELD (UG/G) (34875)
4	<1	1.2	1.4	140	150	30	130	3	21	<1	2

IRON BOT MAT <63U WS FIELD PERCENT (34880)	LANTHA- NUM BOT MAT <63U WS FIELD (UG/G) (34885)	LEAD BOT MAT <63U WS FIELD (UG/G) (34890)	LITHIUM BOT MAT <63U WS FIELD (UG/G) (34895)	MAGNE- SIUM BOT MAT <63U WS FIELD PERCENT (34900)	MANGA- NESE BOT MAT <63U WS FIELD (UG/G) (34905)	MERCURY BOT MAT <63U WS FIELD (UG/G) (34910)	MOLYB- DENUM BOT MAT <63U WS FIELD (UG/G) (34915)	NEODYM- IUM BOT MAT <63U WS FIELD (UG/G) (34920)	NICKEL BOT MAT <63U WS FIELD (UG/G) (34925)	NIOBIUM BOT MAT <63U WS FIELD (UG/G) (34930)	PHOS- PHORUS BOT MAT <63U WS FIELD PERCENT (34935)
5.6	74	98	34	1.4	1700	1.4	9	64	94	11	.14

POTAS- SIUM BOT MAT <63U WS FIELD PERCENT (34940)	SCAN- DIUM BOT MAT <63U WS FIELD (UG/G) (34945)	SELE- NIUM BOT MAT <63U WS FIELD (UG/G) (34950)	SILVER BOT MAT <63U WS FIELD (UG/G) (34955)	SODIUM BOT MAT <63U WS FIELD PERCENT (34960)	STRON- TIUM BOT MAT <63U WS FIELD (UG/G) (34965)	SULFUR BOT MAT <63U WS FIELD PERCENT (34970)	TANTA- LUM BOT MAT <63U WS FIELD (UG/G) (34975)	THAL- LIUM BED MAT D SIEVE <63 U TOTAL (UG/G) (04064)	THORIUM BOT MAT <63U WS FIELD (UG/G) (34980)	TIN BOT MAT <63U WS FIELD (UG/G) (34985)	TITA- NIUM, SED, BM WS,<63U DRY WGT REC PERCENT (49274)
1.4	23	.9	.6	.34	110	.14	2	<1.0	14	7	.520

URANIUM BOT MAT <63U WS FIELD (UG/G) (35000)	VANA- DIUM BOT MAT <63U WS FIELD (UG/G) (35005)	YTTRIUM BOT MAT <63U WS FIELD (UG/G) (35010)	YTTER- BIUM BOT MAT <63U WS FIELD (UG/G) (35015)	ZINC BOT MAT <63U WS FIELD (UG/G) (35020)	CARBON, ORGANIC SED, BM WS,<2MM DW, REC (G/KG) (49271)	CARBON, ORGANIC SED, BM WS,<63U DW, REC (PER- CENT) (49266)	2,2'-BI QUINO- LINE, SED, BM WS,<2MM DW, REC (UG/KG) (49391)	3,5- XYLENOL SED, BM WS,<2MM DW, REC (UG/KG) (49421)	4-BROMO PHNPHNL ETHER SED, BM WS,<2MM DW, REC (UG/KG) (49454)	4CHLORO PHNPHN LETHER SED, BM WS,<2MM DW, REC (UG/KG) (49455)	4HCYPEN PHENAN THRENE SED, BM WS,<2MM DW, REC (UG/KG) (49411)
3.6	140	54	5	370	24.0	4.27	<50	<50	<50	<50	130

9,10- ANTHRA- QUINONE SED, BM WS,<2MM DW, REC (UG/KG) (49437)	9H-FLU- ORENE, 1METHYL SED, BM WS,<2MM DW, REC (UG/KG) (49398)	9H-FLU- ORENE SED, BM WS,<2MM DW, REC (UG/KG) (49399)	ACENAPH THENE SED, BM WS,<2MM DW, REC (UG/KG) (49429)	ACENAPH THYLENE SED, BM WS,<2MM DW, REC (UG/KG) (49428)	ACRI- DINE SED, BM WS,<2MM DW, REC (UG/KG) (49430)	ALDRIN, SED, BM WS,<2MM DW, REC (UG/KG) (49319)	ALPHA- BHC, D6 SURROGT SED, BM WS,<2MM DW, REC PERCENT (49275)	ALPHA- BHC, SED, BM WS,<2MM DW, REC (UG/KG) (49338)	ANTHRA- CENE,2- METHYL- SED, BM WS,<2MM DW, REC (UG/KG) (49435)	ANTHRA- CENE SED, BM WS,<2MM DW, REC (UG/KG) (49434)	AZO- BENZENE SED, BM WS,<2MM DW, REC (UG/KG) (49443)
380	<50	E31	E9.7	70	57	<1.00	57.0	<1.00	E15	160	<50

E Estimated

01648000 ROCK CREEK AT SHERRILL DRIVE, WASHINGTON, DC--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	BENZ(A) ANTHRA- CENE SED, BM WS,<2MM DW, REC (UG/KG) (49436)	BENZENE 124TRI- CHLORO- SED, BM WS,<2MM DW, REC (UG/KG) (49438)	BENZENE HEXA- CHLORO- SED, BM WS,<2MM DW, REC (UG/KG) (49343)	BENZENE M-DI- CHLORO- SED, BM WS,<2MM DW, REC (UG/KG) (49441)	BENZENE NITRO- SED, BM WS,<2MM DW, REC (UG/KG) (49444)	BENZENE O-DI- CHLORO- SED, BM WS,<2MM DW, REC (UG/KG) (49439)	BENZENE NITROD5 SURROGT SED, BM WS,<2MM DW, REC PERCENT (49280)	BENZENE P-DI- CHLORO- SED, BM WS,<2MM DW, REC (UG/KG) (49442)	BENZENE PNTCHLR NITRO- SED, BM WS,<2MM DW, REC (UG/KG) (49446)	BENZO (A) PYRENE SED, BM WS,<2MM DW, REC (UG/KG) (49389)	BENZOB FLUOR- ANTHENE SED, BM WS,<2MM DW, REC (UG/KG) (49458)	BENZO(G HI)PERY LENE SED, BM WS,<2MM DW, REC (UG/KG) (49408)
AUG 1999												
18...	690	<50	<1.00	<50	<50	<50	67.4	<50	<50	880	1300	640

BENZO K FLUOR- ANTHENE SED, BM WS,<2MM DW, REC (UG/KG) (49397)	BENZOCI NNOLINE BED MAT WS <2MM DRY WGT REC (UG/KG) (49468)	BETA- BHC, SED, BM WS,<2MM DW, REC (UG/KG) (49339)	BIPHENL 2FLUORO SURROGT SED, BM WS,<2MM DW, REC PERCENT (49279)	BIS2CHL ETHYL ETHER SED, BM WS,<2MM DW, REC (UG/KG) (49456)	CARBA- ZOLE SED, BM WS,<2MM DW, REC (UG/KG) (49449)	CHLORO- NEB, SED, BM WS,<2MM DW, REC (UG/KG) (49322)	CHRY- SENE SED, BM WS,<2MM DW, REC (UG/KG) (49450)	CIS- CHLOR- DANE, SED, BM WS,<2MM DW, REC (UG/KG) (49320)	CIS- NONA- CHLOR, SED, BM WS,<2MM DW, REC (UG/KG) (49316)	CIS- PER- METHRIN SED, BM WS,<2MM DW, REC (UG/KG) (49349)	DCPA, SED, BM WS,<2MM DW, REC (UG/KG) (49324)
820	<50	<1.00	67.0	<50	130	<5.00	1200	6.70	2.00	<5.00	<5.00

DIBENZ (AH),AN THRACEN SED, BM WS,<2MM DW, REC (UG/KG) (49461)	DIEL- DRIN, SED, BM WS,<2MM DW, REC (UG/KG) (49331)	DIPHNYL AMINE,N NITROSO SED, BM WS,<2MM DW, REC (UG/KG) (49433)	DPROPYL AMINE,N NITROSO SED, BM WS,<2MM DW, REC (UG/KG) (49431)	ENDO- SULFAN I, SED, BM WS,<2MM DW, REC (UG/KG) (49332)	ENDRIN, SED, BM WS,<2MM DW, REC (UG/KG) (49335)	FLUOR- ANTHENE BED MAT WS <2MM DRY WGT REC (UG/KG) (49466)	HEPTA- CHLOR EPOXIDE SED, BM WS,<2MM DW, REC (UG/KG) (49342)	HEPTA- CHLOR, SED, BM WS,<2MM DW, REC (UG/KG) (49341)	INDENO 123-CD PYRENE SED, BM WS,<2MM DW, REC (UG/KG) (49390)	ISODRIN SED, BM WS,<2MM DW, REC (UG/KG) (49344)	ISOPHOR ONE SED, BM WS,<2MM DW, REC (UG/KG) (49400)
140	3.00	<50	<50	<1.00	<2.00	2000	1.80	<1.00	750	<1.00	<50

ISO- QUINO- LINE, SED, BM WS,<2MM DW, REC (UG/KG) (49394)	LINDANE SED, BM WS,<2MM DW, REC (UG/KG) (49345)	M-CRE- SOL, 4- CHLORO- SED, BM WS,<2MM DW, REC (UG/KG) (49422)	METHANE 2CHLORO ETHOXY SED, BM WS,<2MM DW, REC (UG/KG) (49401)	METHOXY CHLOR, O,P'-, SED, BM WS,<2MM DW, REC (UG/KG) (49347)	METHOXY CHLOR P,P'-, SED, BM WS,<2MM DW, REC (UG/KG) (49346)	MIREX, SED, BM WS,<2MM DW, REC (UG/KG) (49348)	NAPTHAL ENE, 12 DIMETHL SED, BM WS,<2MM DW, REC (UG/KG) (49403)	NAPTHAL ENE, 16 DIMETHL SED, BM WS,<2MM DW, REC (UG/KG) (49404)	NAPTHAL ENE,236 TRIMETH SED, BM WS,<2MM DW, REC (UG/KG) (49405)	NAPTHAL ENE, 26 DIMETHL SED, BM WS,<2MM DW, REC (UG/KG) (49406)	NAPTHAL ENE, 2- CHLORO- SED, BM WS,<2MM DW, REC (UG/KG) (49407)
<50	<1.00	<50	<50	<5.70	<5.00	<1.00	<50	<50	<50	E28	<50

NAPTHAL ENE, 2- ETHYL- SED BM WS <2MM DW REC (UG/KG) (49948)	NAPHTH- ALENE, SED, BM WS,<2MM DW, REC (UG/KG) (49402)	O, P'- DDD, SED, BM WS,<2MM DW, REC (UG/KG) (49325)	O, P'- DDE, SED, BM WS,<2MM DW, REC (UG/KG) (49327)	O, P'- DDT, SED, BM WS,<2MM DW, REC (UG/KG) (49329)	OXY- CHLOR- DANE, SED, BM WS,<2MM DW, REC (UG/KG) (49318)	P, P'- DDD, SED, BM WS,<2MM DW, REC (UG/KG) (49326)	P, P'- DDE, SED, BM WS,<2MM DW, REC (UG/KG) (49328)	P, P'- DDT, SED, BM WS,<2MM DW, REC (UG/KG) (49330)	PCB, SED, BM WS,<2MM DW, REC (UG/KG) (49459)	P- CRESOL SED, BM WS,<2MM DW, REC (UG/KG) (49451)	PENTA- CHLORO- ANISOLE SED, BM WS,<2MM DW, REC (UG/KG) (49460)
<50.0	E36	2.90	<1.00	<2.00	1.60	3.80	3.80	3.80	80	78	<1.0

PHENAN THRENE 1METHYL SED, BM WS,<2MM DW, REC (UG/KG) (49410)	PHENAN THRENE SED, BM WS,<2MM DW, REC (UG/KG) (49409)	PHENAN- THRI- DINE SED, BM WS,<2MM DW, REC (UG/KG) (49393)	PHENOL C8- ALKYL- SED, BM WS,<2MM DW, REC (UG/KG) (49424)	PHENOL, 2CHLORO BED MAT WS <2MM DRY WGT REC (UG/KG) (49467)	PHENOL SED, BM WS,<2MM DW, REC (UG/KG) (49413)	PHTHALA TE,BIS2 ETHHEXL SED, BM WS,<2MM DW, REC (UG/KG) (49426)	PHTHALA TEBUTYL BENZYL- SED, BM WS,<2MM DW, REC (UG/KG) (49427)	PHTHAL- ATE, DIBUTYL SED, BM WS,<2MM DW, REC (UG/KG) (49381)	PHTHAL- ATE, D IETHYL SED, BM WS,<2MM DW, REC (UG/KG) (49383)	PHTHAL- ATE,DI- METHYL SED, BM WS,<2MM DW, REC (UG/KG) (49384)	PHTHAL ATE, D IOCTYL SED, BM WS,<2MM DW, REC (UG/KG) (49382)
E30	930	E8.8	<50	<50	E30	2200	150	95	E21	<50	<50

PYRENE, 1- METHYL, SED, BM WS,<2MM DW, REC (UG/KG) (49388)	PYRENE, SED, BM WS,<2MM DW, REC (UG/KG) (49387)	QUINO- LINE, SED, BM WS,<2MM DW, REC (UG/KG) (49392)	TERPHEN YL D14- SURROGT SED, BM WS,<2MM DW, REC PERCENT (49278)	THIOPH ENE,DI- BENZO- SED, BM WS,<2MM DW, REC (UG/KG) (49452)	TOLUENE 2,4-DI- NITRO- SED, BM WS,<2MM DW, REC (UG/KG) (49395)	TOLUENE 2,6-DI- NITRO- SED, BM WS,<2MM DW, REC (UG/KG) (49396)	TOXA- PHENE SED, BM WS,<2MM DW, REC (UG/KG) (49351)	TRANS- CHLOR- DANE, SED, BM WS,<2MM DW, REC (UG/KG) (49321)	TRANS- NONA- CHLOR, SED, BM WS,<2MM DW, REC (UG/KG) (49317)	TRANS- PER- METHRIN SED, BM WS,<2MM DW, REC (UG/KG) (49350)
50	1600	<50	75.8	59	<50	<50	<200	5.60	5.20	<6.30

E Estimated

01649500 NORTHEAST BRANCH ANACOSTIA RIVER AT RIVERDALE, MD

LOCATION.--Lat 38°57'37", long 76°55'34", Prince Georges County, Hydrologic Unit 02070010, on right bank at downstream side of bridge on Riverdale Road, 1.8 mi downstream from Indian Creek, and 1.8 mi upstream from confluence with Northwest Branch.

DRAINAGE AREA.--72.8 mi^2.

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

REVISED RECORDS.--WDR MD-DE-75-1: 1972(M).

GAGE.--Water-stage recorders, crest-stage gage, and concrete control. Datum of gage is 12.68 ft above sea level (Washington Suburban Sanitary Commission bench mark). Prior to June 12, 1942, nonrecording gage; June 12, 1942 to Mar. 22, 1966, and Apr. 12, 1967 to Sept. 3, 1969, water-stage recorder, all at bridge at datum 14.00 ft above mean sea level. Mar. 23, 1966 to Apr. 11, 1967, nonrecording gage 600 ft downstream from bridge at datum 9.25 ft above mean sea level.

REMARKS.--No estimated daily discharges. Records good. Some regulation at low flow by sand and gravel plants upstream from station. Several measurements of water temperature were made during the year. Water-quality records for some prior periods have been collected at this location.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Aug. 23 or 24, 1933, reached a stage of about 15.5 ft at datum 14.00 ft above sea level, from floodmarks, discharge, 10,500 ft^3/s, from rating curve extended above 3,000 ft^3/s on basis of velocity-area study.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Aug 25	1845	2,080	5.13	Sep 16	1330	*7,440	*9.23
Sep 9	2330	3,780	6.76				

Minimum discharge, 2.7 ft^3/s, Aug 19, 20.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10	10	17	21	27	117	73	24	12	30	26	9.2
2	8.8	10	16	20	161	56	61	22	12	33	9.1	9.0
3	8.5	11	16	439	66	53	43	22	11	21	4.8	8.3
4	9.7	15	16	94	48	137	75	22	11	12	3.9	160
5	12	12	16	48	40	63	130	23	11	9.2	3.7	452
6	12	12	17	47	33	74	55	24	10	7.7	3.2	210
7	12	12	18	34	31	87	44	24	9.9	7.4	2.8	325
8	123	12	41	33	31	49	39	37	9.5	6.9	3.1	81
9	43	12	92	92	30	45	77	26	9.4	5.7	4.0	502
10	23	12	27	64	28	84	87	21	8.6	5.3	3.6	488
11	16	100	19	45	28	74	155	19	8.6	5.2	3.3	67
12	12	27	16	38	62	75	114	18	8.6	11	3.3	32
13	12	19	79	49	67	71	58	17	9.0	13	3.4	23
14	13	16	35	48	33	181	44	17	67	8.4	74	20
15	11	12	22	283	29	563	52	17	47	7.3	26	162
16	11	12	20	92	29	219	56	17	13	6.2	7.6	4130
17	11	13	18	53	37	109	41	16	20	5.5	4.8	689
18	11	12	18	298	269	74	37	16	28	5.4	3.5	130
19	10	13	16	116	92	56	34	15	13	4.8	3.2	80
20	10	14	16	58	52	48	33	15	109	4.6	38	62
21	9.8	18	16	63	40	362	40	13	51	5.1	60	393
22	9.6	16	20	51	34	526	40	23	33	6.9	11	273
23	9.7	15	19	47	29	115	64	82	14	7.3	8.5	100
24	9.5	15	22	710	28	76	45	128	11	5.8	145	70
25	9.5	16	24	172	29	62	33	43	11	4.6	384	55
26	12	110	22	67	30	51	29	22	9.9	4.5	224	44
27	10	33	21	48	29	46	27	22	9.5	4.0	175	40
28	14	22	21	39	158	52	26	16	9.5	4.1	35	47
29	11	19	21	34	---	44	25	13	24	5.1	18	64
30	12	17	28	30	---	37	24	13	22	6.1	12	529
31	10	---	21	28	---	33	---	12	---	7.2	10	---
TOTAL	496.1	637	770	3261	1570	3639	1661	799	622.5	270.3	1313.8	9254.5
MEAN	16.0	21.2	24.8	105	56.1	117	55.4	25.8	20.8	8.72	42.4	308
MAX	123	110	92	710	269	563	155	128	109	33	384	4130
MIN	8.5	10	16	20	27	33	24	12	8.6	4.0	2.8	8.3
CFSM	.22	.29	.34	1.44	.77	1.61	.76	.35	.29	.12	.58	4.24
IN.	.25	.33	.39	1.67	.80	1.86	.85	.41	.32	.14	.67	4.73

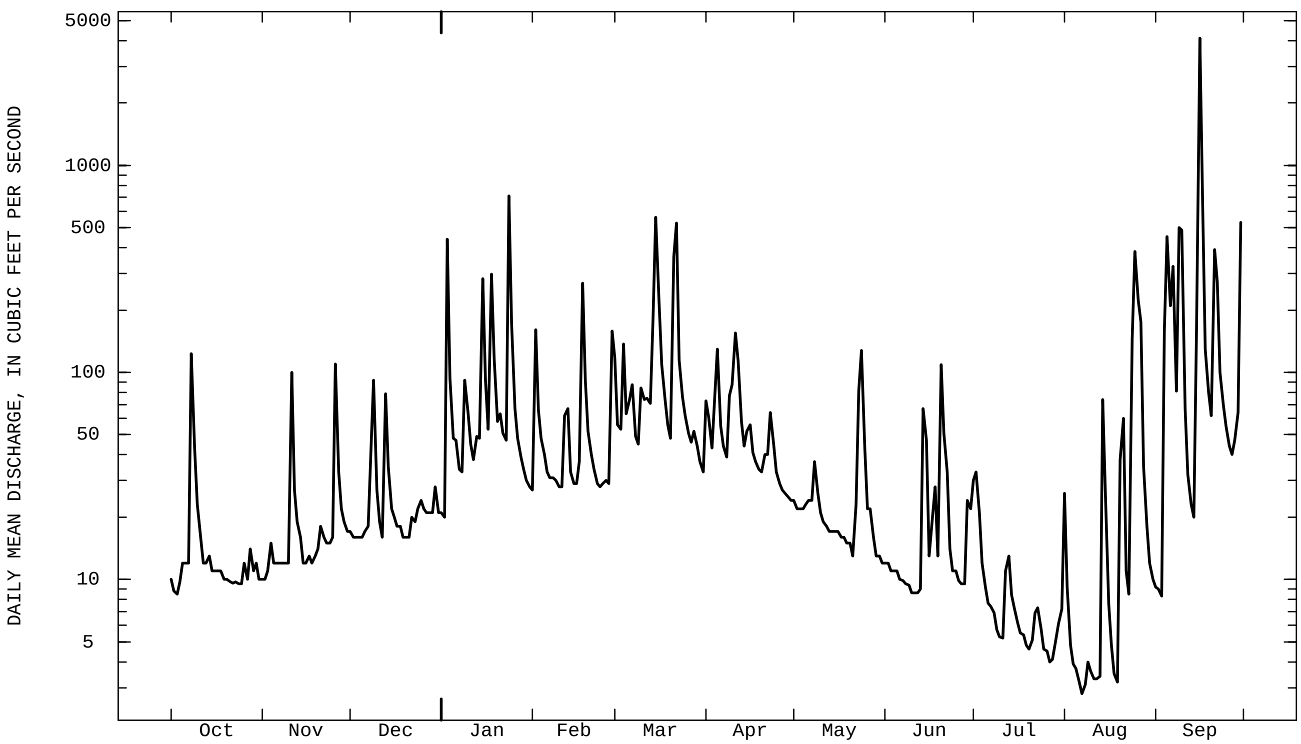
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1938 - 1999, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	54.3	75.4	93.4	106	114	134	110	95.1	68.4	59.8	63.7	62.3
MAX	234	205	275	325	265	339	322	329	353	335	243	449
(WY)	1943	1973	1997	1979	1972	1994	1983	1989	1972	1945	1955	1975
MIN	9.37	15.9	19.8	25.6	39.3	37.0	32.4	23.9	20.3	8.72	7.94	8.32
(WY)	1942	1942	1966	1955	1947	1981	1985	1941	1965	1999	1962	1941

01649500 NORTHEAST BRANCH ANACOSTIA RIVER AT RIVERDALE, MD--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1938 - 1999	
ANNUAL TOTAL	36840.4		24294.2			
ANNUAL MEAN	101		66.6		86.4	
HIGHEST ANNUAL MEAN					150	1972
LOWEST ANNUAL MEAN					49.3	1981
HIGHEST DAILY MEAN	2580	Mar 9	4130	Sep 16	6830	Sep 26 1975
LOWEST DAILY MEAN	7.6	Sep 14	2.8	Aug 7	1.4	Sep 12 1966
ANNUAL SEVEN-DAY MINIMUM	8.3	Sep 10	3.3	Aug 6	1.7	Sep 7 1966
INSTANTANEOUS PEAK FLOW			7440	Sep 16	(a)12000	Jun 22 1972
INSTANTANEOUS PEAK STAGE			9.23	Sep 16	12.93	Oct 16 1942
INSTANTANEOUS LOW FLOW			2.7	(b)	UNKNOWN	
ANNUAL RUNOFF (CFSM)	1.39		.91		1.19	
ANNUAL RUNOFF (INCHES)	18.83		12.41		16.12	
10 PERCENT EXCEEDS	224		116		166	
50 PERCENT EXCEEDS	34		24		44	
90 PERCENT EXCEEDS	10		7.5		16	

a From rating curve extended above 3,800 ft^3/s on basis of average of contracted-opening and slope-area measurements at gage height 9.52 ft.
b Aug. 19, 20.



DAILY MEAN DISCHARGE - 1999 WATER YEAR

01650500 NORTHWEST BRANCH ANACOSTIA RIVER NEAR COLESVILLE, MD

LOCATION.--Lat 39°03'55", long 77°01'58", Montgomery County, Hydrologic Unit 02070010, on right bank 400 ft upstream from bridge on State Highway 183, 1.5 mi southwest of Colesville, 3 mi upstream from Burnt Mills, 10 mi upstream from Sligo Creek, and 12.5 mi upstream from confluence with Northeast Branch.

DRAINAGE AREA.--21.1 mi^2.

PERIOD OF RECORD.--October 1923 to September 1983, November 1997 to September 1998. Monthly discharge only for some periods, published in WSP 1302.

REVISED RECORDS.--WSP 1432: 1942(M), 1925-26, 1929-30(M), 1933(M), 1939(P), 1940(M), 1943-46, 1948-49(P).

GAGE.--Water-stage recorder and concrete control. Datum of gage is 264.75 ft above sea level. Prior to Apr. 22, 1932, nonrecording gages in same general vicinity at different datums. Apr. 22, 1932 to Apr. 11, 1934, nonrecording gages at present site and datum.

REMARKS.--No estimated daily discharges. Records good. Diversions at low flow since 1962 for irrigation of golf courses upstream from station. Records include pumpage from the Patuxent River to augment water supply for Washington Suburban Sanitary District, Aug. 12, 1939 to Aug. 1960. Several measurements of water temperature were made during the year. Water-quality records for some prior periods have been collected at this location.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 600 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Sep 5	1630	722	5.68	Sep 16	1415	*2,070	*9.32
Sep 9	2030	1,160	7.33				

Minimum discharge, 0.00 ft^3/s, Jul 18-19, 24-31, Aug 1-14, 18-20.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.54	2.3	e4.7	4.1	8.0	28	26	8.0	3.1	2.2	.00	.95
2	.45	3.0	e4.7	4.0	36	14	19	7.6	2.8	6.5	.00	.78
3	.40	2.8	e4.6	162	16	15	14	7.6	2.7	6.7	.00	.65
4	.44	2.7	e4.5	18	12	49	16	7.8	2.3	2.2	.00	57
5	.66	2.2	e5.6	12	10	20	31	7.2	2.2	1.4	.00	237
6	1.5	2.4	e5.1	6.6	9.2	21	16	7.2	2.2	1.2	.00	120
7	1.4	2.6	e6.0	6.0	9.1	28	14	7.7	2.3	1.0	.00	106
8	37	2.7	e10	5.6	9.0	14	13	11	2.1	.66	.00	50
9	9.0	3.4	e24	23	7.9	14	27	7.8	2.1	.54	.00	156
10	3.5	3.5	e6.8	15	7.8	17	21	6.9	1.6	.48	.00	69
11	2.5	12	e4.7	7.9	8.4	15	52	6.7	2.0	.42	.00	12
12	1.9	5.4	e3.7	12	14	17	30	6.3	1.9	.49	.00	6.7
13	1.8	3.0	e18	18	14	17	17	5.6	2.2	.83	.01	5.1
14	2.3	3.0	e5.0	18	8.7	23	14	5.2	20	.45	13	4.6
15	2.4	3.3	4.3	99	7.9	112	14	5.1	7.8	.51	2.5	40
16	2.8	3.4	4.2	28	7.8	77	15	4.8	3.2	.44	.46	942
17	2.7	3.8	4.3	19	10	50	13	5.2	2.9	.33	.26	54
18	2.6	3.4	4.1	83	80	29	12	5.0	3.4	.21	.00	17
19	2.4	3.0	4.0	25	23	19	12	5.0	2.9	.34	.00	11
20	2.4	3.3	4.0	14	14	16	12	4.6	22	.37	15	9.2
21	2.3	4.4	4.1	12	12	60	13	4.2	8.0	.33	6.6	64
22	2.2	3.8	4.4	11	10	87	13	4.8	4.4	.25	1.9	38
23	2.3	3.0	4.1	9.8	9.1	24	15	20	3.3	.34	.68	13
24	2.3	e3.0	4.5	159	9.3	19	13	31	2.4	.22	55	9.2
25	2.2	e3.0	4.6	32	9.1	17	11	9.2	2.2	.01	79	7.6
26	2.0	e31	4.1	15	9.1	15	10	6.0	1.9	.09	29	6.7
27	2.0	e9.3	4.1	12	8.6	14	9.9	5.0	1.6	.00	13	7.4
28	1.8	e5.6	4.2	11	41	14	9.1	4.4	1.8	.00	3.0	7.3
29	1.9	e4.6	5.0	9.7	---	13	8.6	4.1	2.0	.00	1.6	9.8
30	2.0	e5.1	6.4	8.9	---	13	8.5	3.8	1.5	.00	1.2	126
31	2.2	---	4.6	8.0	---	12	---	3.6	---	.00	1.0	---
TOTAL	101.89	144.0	182.4	868.6	421.0	883	499.1	228.4	120.8	28.51	223.21	2187.98
MEAN	3.29	4.80	5.88	28.0	15.0	28.5	16.6	7.37	4.03	.92	7.20	72.9
MAX	37	31	24	162	80	112	52	31	22	6.7	79	942
MIN	.40	2.2	3.7	4.0	7.8	12	8.5	3.6	1.5	.00	.00	.65
CFSM	.16	.23	.28	1.33	.71	1.35	.79	.35	.19	.04	.34	3.46
IN.	.18	.25	.32	1.53	.74	1.56	.88	.40	.21	.05	.39	3.86

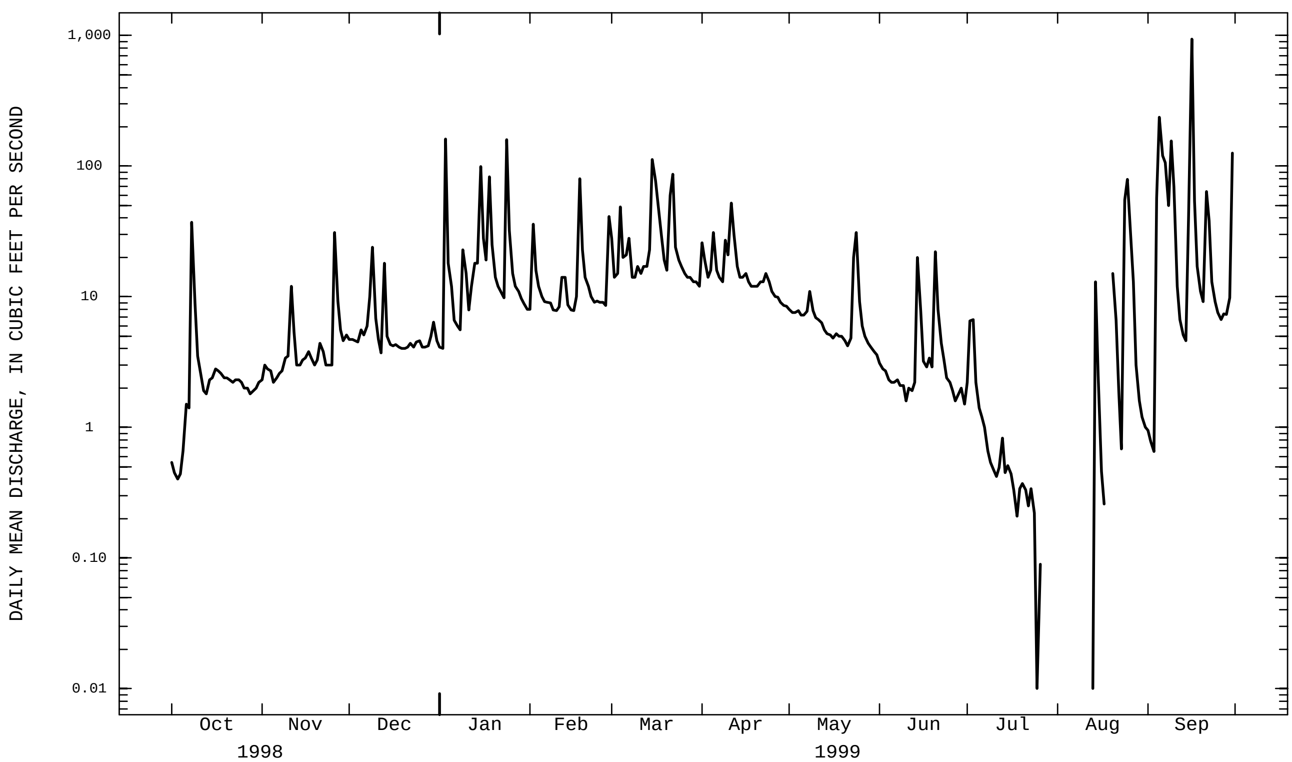
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1924 - 1999, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	14.6	19.0	21.8	27.0	33.6	32.6	30.0	24.2	20.0	15.2	16.5	17.4
MAX	56.3	55.6	57.0	81.0	97.0	68.0	78.5	62.5	141	73.7	60.9	118
(WY)	1980	1927	1973	1979	1936	1953	1952	1978	1972	1975	1955	1979
MIN	1.79	2.37	3.50	5.93	4.52	7.46	11.3	7.37	4.03	.92	.72	1.40
(WY)	1932	1932	1932	1931	1931	1931	1969	1999	1999	1999	1930	1930

01650500 NORTHWEST BRANCH ANACOSTIA RIVER NEAR COLESVILLE, MD--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1924 - 1999	
ANNUAL TOTAL	9318.94		5888.89			
ANNUAL MEAN	25.5		16.1		22.5	
HIGHEST ANNUAL MEAN					45.7	1972
LOWEST ANNUAL MEAN					8.45	1931
HIGHEST DAILY MEAN	486	Mar 21	942	Sep 16	2370	Jun 22 1972
LOWEST DAILY MEAN	.40	Oct 3	.00	Jul 27	.00	Aug 30 1966
ANNUAL SEVEN-DAY MINIMUM	.57	Sep 29	.00	Jul 27	.00	Sep 5 1966
INSTANTANEOUS PEAK FLOW			2070	Sep 16	11000	Jun 22 1972
INSTANTANEOUS PEAK STAGE			9.32	Sep 16	15.89	Jun 22 1972
INSTANTANEOUS LOW FLOW					.00	Aug 30 1966
ANNUAL RUNOFF (CFSM)	1.21		.76		1.07	
ANNUAL RUNOFF (INCHES)	16.43		10.38		14.49	
10 PERCENT EXCEEDS	57		29		36	
50 PERCENT EXCEEDS	11		5.6		14	
90 PERCENT EXCEEDS	1.5		.45		4.7	

e Estimated



DAILY MEAN DISCHARGE - 1999 WATER YEAR

01651000 NORTHWEST BRANCH ANACOSTIA RIVER NEAR HYATTSVILLE, MD

LOCATION.--Lat 38°57'09", long 76°58'00", Prince Georges County, Hydrologic Unit 02070010, on right bank at downstream side of bridge on Queens Chapel Road (State Highway 500), 0.8 mi downstream from Sligo Branch, 1.0 mi west of Hyattsville, and 1.6 mi upstream from confluence with Northeast Branch.

DRAINAGE AREA.--49.4 mi^2.

PERIOD OF RECORD.--July 1938 to current year. Monthly discharge only for July 1938 published in WSP 1302.

REVISED RECORDS.--WSP 971: 1942(M).

GAGE.--Water-stage recorder and concrete control. Datum of gage is 17.10 ft above sea level (Washington Suburban Sanitary Commission bench mark). Prior to Oct. 22, 1938, nonrecording gage; Oct. 22, 1938 to Sept. 17, 1951, water-stage recorder; Sept. 17, 1951 to Aug. 29, 1952, nonrecording gage and crest-stage gage.

REMARKS.--No estimated daily discharges. Records good. Prior to June 1961, low flow regulated by storage at Burnt Mills Dam, 7.0 mi upstream from 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 upstream from station. Several measurements of water temperature were made during the year. Water-quality records for some prior periods have been collected at this location.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,700 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Sep 9	2115	2,190	4.13	Sep 16	1330	*4,570	*5.77

Minimum discharge, 1.3 ft^3/s, Aug 5-8.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.1	6.4	9.9	10	18	70	66	17	8.6	26	2.0	3.5
2	4.6	7.0	9.9	6.5	122	31	44	16	7.9	14	1.8	3.3
3	3.8	8.3	9.5	367	42	36	30	16	7.3	16	1.8	3.3
4	4.4	6.3	9.5	51	30	116	48	17	6.5	9.1	1.6	112
5	4.6	5.5	10	15	25	46	83	17	6.2	6.1	1.5	397
6	4.1	6.3	11	12	23	50	32	15	7.2	4.4	1.5	269
7	5.2	5.4	13	12	21	60	26	18	6.1	3.9	1.4	253
8	128	6.0	25	11	20	31	27	32	6.1	3.4	1.9	98
9	40	8.2	66	64	19	31	64	16	5.8	3.1	1.7	298
10	13	11	17	39	18	58	58	13	6.0	2.4	1.9	245
11	7.7	70	9.9	19	18	42	104	13	5.9	2.0	2.0	33
12	6.6	20	8.0	22	50	37	68	12	5.9	4.6	1.5	17
13	7.1	8.8	50	35	40	36	33	13	7.5	6.4	1.9	12
14	6.4	6.3	20	32	19	118	28	12	69	3.7	105	13
15	6.1	6.4	10	216	16	268	36	11	35	3.0	31	57
16	6.8	6.3	8.4	63	16	126	34	10	9.5	2.2	8.0	1880
17	6.6	6.3	8.5	39	27	93	26	10	19	2.0	3.7	173
18	8.1	6.2	7.9	184	195	59	22	10	9.6	2.1	2.6	46
19	8.0	8.0	7.7	66	55	38	20	11	8.2	1.8	2.0	30
20	7.1	9.0	8.4	32	28	32	21	12	88	2.9	37	23
21	7.1	11	8.5	48	23	194	27	10	29	2.5	20	264
22	6.9	9.8	12	31	20	198	29	28	12	3.0	11	111
23	6.1	11	8.1	27	19	53	51	68	7.6	2.3	6.3	38
24	6.7	12	11	424	19	39	30	127	6.4	3.3	146	24
25	5.9	10	10	88	19	36	20	30	7.4	3.5	230	20
26	6.7	84	12	37	19	32	19	14	8.0	5.8	131	18
27	7.5	25	8.9	26	20	30	20	10	6.0	5.9	40	18
28	7.3	11	11	24	123	32	19	9.8	5.7	5.7	12	23
29	6.1	9.6	12	22	---	29	18	9.6	30	4.6	7.1	33
30	6.0	10	16	19	---	28	17	8.5	14	3.1	4.9	340
31	6.5	---	9.7	18	---	30	---	8.5	---	2.6	4.1	---
TOTAL	355.1	411.1	438.8	2059.5	1064	2079	1120	614.4	451.4	161.4	824.2	4855.1
MEAN	11.5	13.7	14.2	66.4	38.0	67.1	37.3	19.8	15.0	5.21	26.6	162
MAX	128	84	66	424	195	268	104	127	88	26	230	1880
MIN	3.8	5.4	7.7	6.5	16	28	17	8.5	5.7	1.8	1.4	3.3
CFSM	.23	.28	.29	1.34	.77	1.36	.76	.40	.30	.11	.54	3.28
IN.	.27	.31	.33	1.55	.80	1.57	.84	.46	.34	.12	.62	3.66

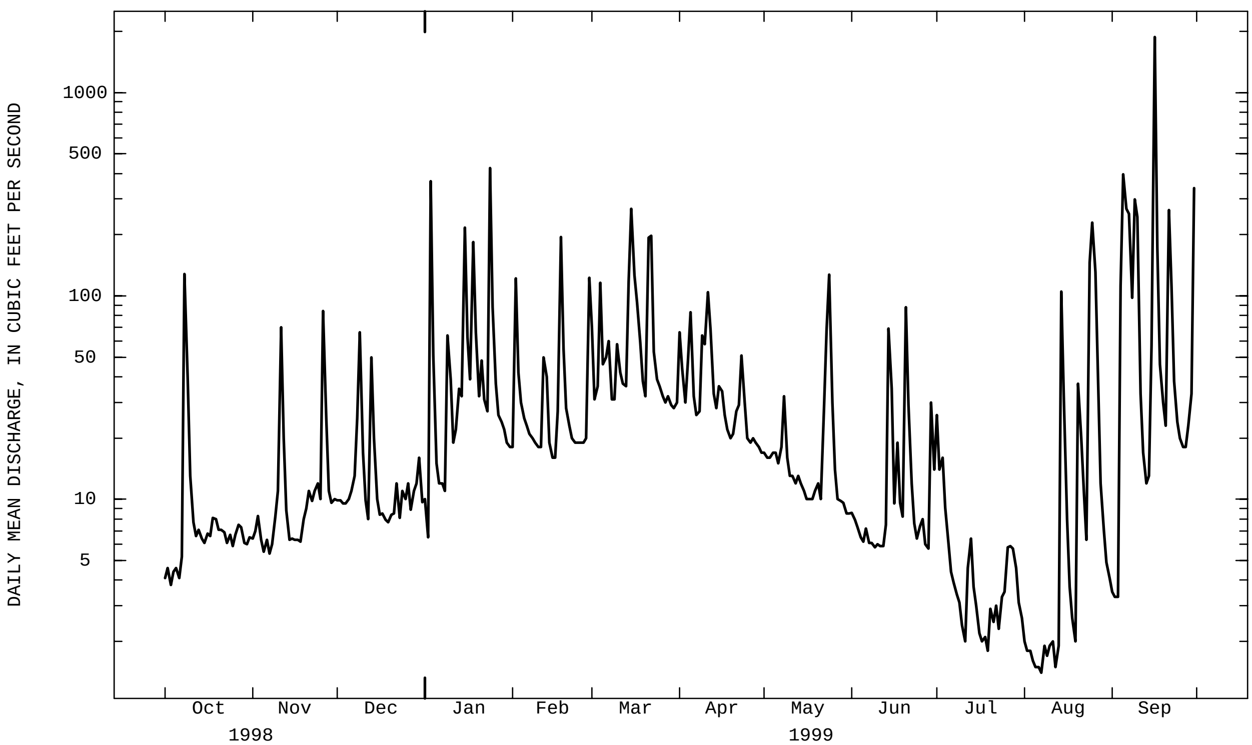
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1938 - 1999, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	29.2	41.8	49.5	56.1	64.1	72.4	61.5	55.8	42.3	34.2	37.1	39.5
MAX	129	128	144	173	183	176	167	198	237	159	193	327
(WY)	1980	1994	1997	1979	1979	1994	1952	1989	1972	1945	1955	1975
MIN	2.44	4.30	11.4	8.04	13.6	23.5	15.3	9.91	10.1	4.07	3.61	2.58
(WY)	1942	1942	1966	1955	1947	1981	1950	1941	1940	1944	1943	1941

01651000 NORTHWEST BRANCH ANACOSTIA RIVER NEAR HYATTSVILLE, MD--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1938 - 1999	
ANNUAL TOTAL	21280.3		14434.0			
ANNUAL MEAN	58.3		39.5		48.6	
HIGHEST ANNUAL MEAN					96.9	1979
LOWEST ANNUAL MEAN					20.8	1947
HIGHEST DAILY MEAN	904	Jan 28	1880	Sep 16	5050	Sep 26 1975
LOWEST DAILY MEAN	2.9	Sep 17	1.4	Aug 7	.40	(a)
ANNUAL SEVEN-DAY MINIMUM	3.7	Sep 11	1.6	Aug 3	.60	Sep 7 1966
INSTANTANEOUS PEAK FLOW			4570	Sep 16	(b)18000	Jun 22 1972
INSTANTANEOUS PEAK STAGE			5.77	Sep 16	14.47	Jun 22 1972
INSTANTANEOUS LOW FLOW			1.3	(c)	.20	Sep 11 1966
ANNUAL RUNOFF (CFSM)	1.18		.80		.98	
ANNUAL RUNOFF (INCHES)	16.02		10.87		13.37	
10 PERCENT EXCEEDS	139		83		92	
50 PERCENT EXCEEDS	25		14		24	
90 PERCENT EXCEEDS	6.0		3.7		6.5	

a Sept. 8, 11, 1966.
b From rating curve extended above 4,000 ft^3/s on basis of the average of slope-area and step-backwater measurements of peak flow.
c Aug. 5-8.



DAILY MEAN DISCHARGE - 1999 WATER YEAR

01651800 WATTS BRANCH AT WASHINGTON, D.C.

LOCATION.--Lat 38°54'04", long 76°56'33", District of Columbia, Hydrologic Unit 02070010, on right bank 5 ft downstream from footbridge, 200 ft upstream from Minnesota Ave., and 1.0 mi upstream from mouth.

DRAINAGE AREA.-- 3.28 mi^2.

PERIOD OF RECORD.--June 1992 to current year.

GAGE.--Water-stage recorder, crest-stage gage, and cobblestone control. Datum of gage is 16.52 ft above sea level.

REMARKS.--Records fair except those for estimated daily discharges (missing record), which are poor. Several measurements of water temperature were made during the year.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 350 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jun 14	1700	584	4.93	Sep 16	0600	519	4.69
Aug 25	1815	*809	*5.67	Sep 16	1015	524	4.71
Aug 26	2000	397	4.20	Sep 16	1245	704	5.34
Sep 4	1600	630	5.09				

Minimum discharge, 0.28 ft^3/s, Aug 11, 12.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.56	.60	1.4	1.5	1.8	3.4	4.5	2.0	.60	1.1	1.6	1.3
2	.56	.60	1.4	1.6	9.6	2.1	1.8	2.4	1.3	.80	1.2	1.4
3	.53	.83	1.4	29	2.3	4.3	1.6	2.0	.65	1.3	1.5	1.4
4	.55	.72	1.3	3.0	2.4	5.9	9.1	2.0	.53	2.2	1.4	26
5	.60	.64	1.4	2.2	1.9	2.1	4.3	2.0	.55	2.6	1.3	15
6	.58	.70	1.4	1.6	2.0	3.2	1.9	2.1	.69	2.9	.93	11
7	.61	.84	1.7	2.0	1.8	1.7	1.7	2.1	2.0	2.0	1.1	6.6
8	4.6	.89	8.1	3.5	1.8	1.5	1.7	4.0	2.9	.82	1.4	3.3
9	.99	.92	8.2	8.7	1.7	1.8	4.5	1.8	1.9	.78	.80	4.0
10	.64	1.1	1.6	3.1	1.6	6.5	2.2	1.5	.53	3.0	.46	2.3
11	.60	3.7	1.4	2.7	1.6	3.8	7.3	1.4	.47	.62	.47	1.0
12	.60	1.0	1.4	2.9	6.7	3.1	2.2	1.4	.46	4.2	.42	.89
13	.61	.89	8.4	2.9	2.4	2.3	1.8	1.0	2.0	.87	.83	.79
14	.64	.89	1.6	4.5	1.7	25	1.7	.84	28	1.0	5.8	.78
15	.60	.96	1.3	15	1.7	23	3.1	.78	1.3	.98	.92	15
16	.57	.97	1.3	2.5	1.6	5.3	1.9	.75	.62	.86	.92	204
17	.53	1.1	1.3	1.8	2.4	3.2	1.6	.72	4.8	1.3	.86	7.7
18	.53	1.0	1.3	28	16	2.5	1.6	.67	.88	1.8	.80	3.2
19	.58	1.1	1.2	3.4	2.7	2.1	1.6	.65	.59	1.4	.96	2.2
20	.64	1.4	1.2	2.2	2.1	1.9	1.8	.60	7.8	.81	e4.0	2.0
21	.60	1.6	1.3	9.5	1.9	33	3.0	.61	1.9	1.1	e2.0	21
22	.61	1.3	1.4	2.9	1.8	10	2.6	4.4	.90	5.3	e1.0	8.5
23	.68	1.3	1.5	4.1	1.7	3.6	5.0	3.0	.76	1.6	e.90	2.8
24	.67	1.4	2.2	46	1.7	2.9	2.0	5.0	.68	.88	e6.0	2.3
25	.64	1.4	1.8	4.3	1.9	2.3	1.8	.79	.71	.91	67	2.0
26	.56	8.0	1.6	2.6	1.7	2.0	1.9	.66	.90	1.6	23	1.9
27	.53	1.3	1.6	2.3	1.7	1.9	1.6	.64	.90	2.1	3.9	2.1
28	.59	1.3	1.6	2.0	12	2.6	1.6	.58	.83	1.7	1.5	2.6
29	.54	1.3	1.6	1.9	---	1.8	1.9	.85	7.6	1.7	1.2	4.8
30	.59	1.3	1.8	1.7	---	1.7	1.9	1.1	1.3	1.4	.97	32
31	.63	---	1.6	1.7	---	1.6	---	1.1	---	2.0	1.0	---
TOTAL	22.76	41.05	66.3	201.1	90.2	168.1	81.2	49.44	75.05	51.63	136.14	389.86
MEAN	.73	1.37	2.14	6.49	3.22	5.42	2.71	1.59	2.50	1.67	4.39	13.0
MAX	4.6	8.0	8.4	46	16	33	9.1	5.0	28	5.3	67	204
MIN	.53	.60	1.2	1.5	1.6	1.5	1.6	.58	.46	.62	.42	.78
CFSM	.22	.42	.65	1.98	.98	1.65	.83	.49	.76	.51	1.34	3.96
IN.	.26	.47	.75	2.28	1.02	1.91	.92	.56	.85	.59	1.54	4.42

e Estimated

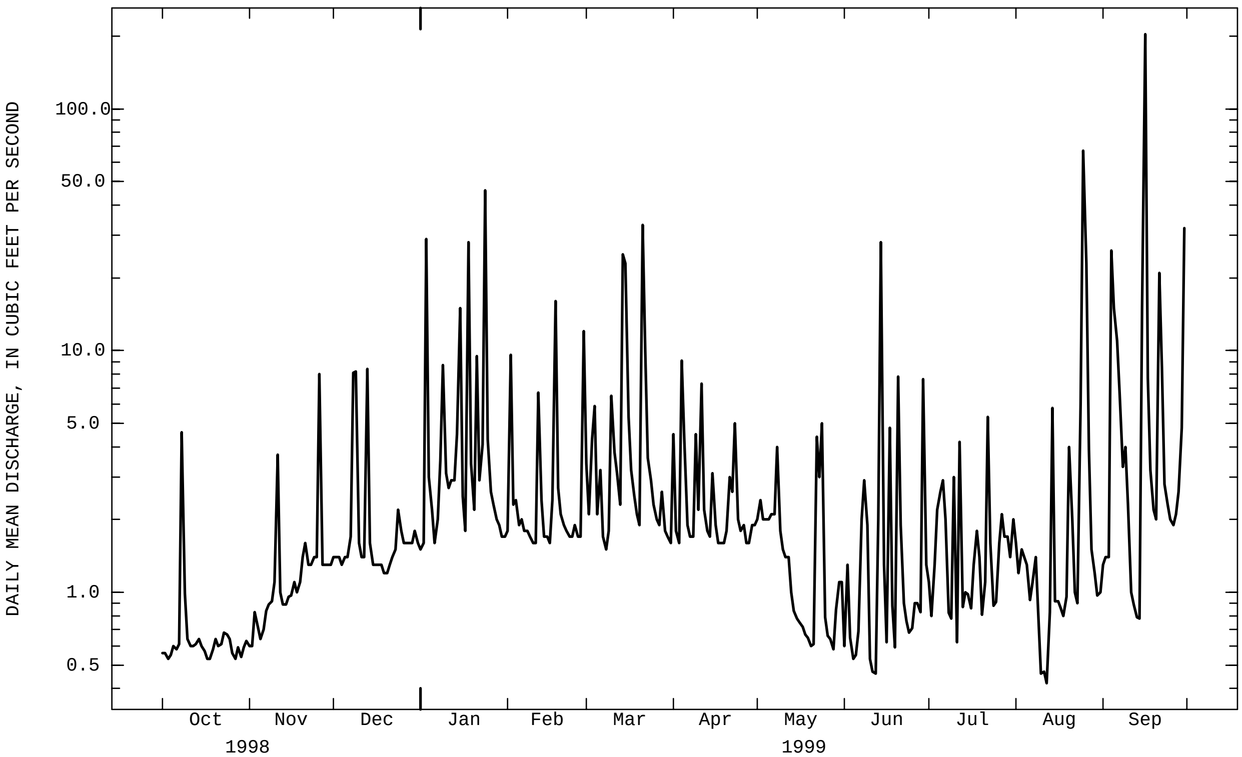
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1992 - 1999, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	3.31	4.41	4.18	6.93	5.69	9.25	4.62	4.50	2.99	2.80	2.74	4.07
MAX	9.08	6.74	9.57	9.71	11.3	15.7	6.55	6.72	4.64	4.54	4.39	13.0
(WY)	1996	1998	1997	1996	1998	1994	1996	1998	1996	1996	1999	1999
MIN	.73	1.37	2.14	4.72	2.80	5.25	2.36	1.59	1.83	1.63	1.23	1.37
(WY)	1999	1999	1999	1997	1995	1995	1995	1999	1994	1998	1998	1998

01651800 WATTS BRANCH AT WASHINGTON, D.C.--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1992 - 1999	
ANNUAL TOTAL	1718.29		1372.83			
ANNUAL MEAN	4.71		3.76		4.63	
HIGHEST ANNUAL MEAN					5.87	1996
LOWEST ANNUAL MEAN					2.84	1995
HIGHEST DAILY MEAN	121	Mar 9	204	Sep 16	204	Sep 16 1999
LOWEST DAILY MEAN	.46	Sep 13	.42	Aug 12	.37	Jul 23 1993
ANNUAL SEVEN-DAY MINIMUM	.52	Aug 31	.57	Oct 1	.45	Jul 30 1993
INSTANTANEOUS PEAK FLOW			809	Aug 25	(a)1510	Sep 26 1994
INSTANTANEOUS PEAK STAGE			5.67	Aug 25	7.36	Sep 26 1994
INSTANTANEOUS LOW FLOW			.28	(b)	.28	(b)
ANNUAL RUNOFF (CFSM)	1.44		1.15		1.41	
ANNUAL RUNOFF (INCHES)	19.49		15.57		19.19	
10 PERCENT EXCEEDS	9.2		6.2		9.8	
50 PERCENT EXCEEDS	1.6		1.6		2.0	
90 PERCENT EXCEEDS	.56		.61		.78	

a From rating curve extended above 260 ft^3/s.
b Aug. 11, 12, 1999.



DAILY MEAN DISCHARGE - 1999 WATER YEAR

01653600 PISCATAWAY CREEK AT PISCATAWAY, MD

LOCATION.--Lat 38°42'20", long 76°58'00", Prince Georges County, Hydrologic Unit 02070010, on left bank 75 ft downstream from bridge on State Highway 223, at Piscataway, 0.4 mi upstream from Tinker Creek, and 4.8 mi upstream from mouth.

DRAINAGE AREA.--39.5 mi^2.

PERIOD OF RECORD.--October 1965 to current year.

GAGE.--Water-stage recorder and concrete control. Elevation of gage is 10 ft above sea level, from topographic map.

REMARKS.--Records good except those for estimated daily discharges (backwater from beaver activity), which are fair. Several measurements of water temperature were made during the year. Water-quality records for some prior periods have been collected at this location.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 450 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jan 24	1700	561	6.26	Aug 27	0530	1,620	8.21
Mar 15	1730	644	6.56	Sep 16	1830	*5,600	*10.56
Mar 22	0230	543	6.18	Sep 30	0800	478	6.01
Aug 26	0130	656	6.59				

Minimum discharge, 0.00 ft^3/s, Jul 31, Aug 1, 4-25.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	38	e.94	e2.1	8.5	17	71	38	16	1.9	e12	.01	6.8
2	6.4	e1.0	e2.0	7.1	40	33	43	15	1.6	e6.0	.01	5.8
3	2.6	e1.4	e2.0	154	35	27	35	14	1.2	e3.0	.01	5.1
4	e1.5	e1.8	e1.8	72	25	82	34	15	1.2	e1.5	.00	6.9
5	e1.2	e1.4	e1.9	21	23	42	55	13	.90	e.80	.00	116
6	e1.1	e1.3	e1.9	13	20	35	34	13	.66	e.35	.00	37
7	e.98	e1.3	e2.4	11	19	57	30	13	.43	e.19	.00	58
8	7.6	e1.4	e2.5	9.2	21	34	28	13	.13	e.10	.00	18
9	11	e1.6	e8.2	12	18	31	31	12	.03	e.05	.00	17
10	4.1	e1.8	e6.4	20	16	38	53	9.8	.02	e.03	.00	12
11	e1.4	e6.1	e4.6	11	14	42	43	8.8	.05	e.01	.00	8.4
12	e1.2	e3.3	e3.8	9.7	16	44	44	8.1	.02	e.00	.00	5.7
13	e1.1	e3.0	e13	10	41	48	31	7.9	.06	e.00	.00	4.6
14	e.98	e1.6	e2.8	9.8	23	83	27	7.0	1.3	e.00	.00	4.4
15	e.86	e1.7	e15	63	17	576	25	6.4	18	e.00	.00	49
16	e.74	e1.7	7.4	49	16	230	28	6.1	4.7	e.00	.00	2260
17	e.80	e1.7	5.9	21	16	97	24	6.2	2.0	e.00	.00	938
18	e.80	e1.5	5.4	84	122	68	22	6.1	3.6	e.00	.00	132
19	e1.2	e1.6	5.4	87	77	48	21	5.6	2.9	e.00	.00	70
20	e.94	e1.9	5.9	30	38	41	21	5.2	5.5	e.00	.00	53
21	e.82	e2.4	5.9	35	29	101	22	4.3	22	e.01	.00	59
22	e.70	e2.0	8.0	103	24	396	30	4.1	7.5	e.03	.00	107
23	e.64	e1.9	8.4	37	20	105	45	10	3.8	e.08	.00	50
24	e.74	e2.0	9.3	307	19	74	70	25	2.4	e.06	.00	37
25	e.75	e2.0	9.1	227	19	61	31	19	1.6	e.04	110	30
26	e.82	e4.6	8.6	61	18	47	25	6.7	.95	e.06	468	27
27	e.93	e4.4	8.5	40	16	42	22	5.2	e.70	e.05	969	26
28	e.97	e2.9	8.7	32	35	42	20	3.9	e.30	.04	66	27
29	e.93	e2.7	10	27	---	38	18	3.2	e.15	.02	23	29
30	e.95	e2.1	12	22	---	36	17	2.7	e.60	.01	12	308
31	e.91	---	10	19	---	32	---	2.4	---	.00	8.2	---
TOTAL	93.66	65.04	198.9	1612.3	794	2701	967	287.7	86.20	24.43	1656.23	4507.7
MEAN	3.02	2.17	6.42	52.0	28.4	87.1	32.2	9.28	2.87	.79	53.4	150
MAX	38	6.1	15	307	122	576	70	25	22	12	969	2260
MIN	.64	.94	1.8	7.1	14	27	17	2.4	.02	.00	.00	4.4
CFSM	.08	.05	.16	1.32	.72	2.21	.82	.23	.07	.02	1.35	3.80
IN.	.09	.06	.19	1.52	.75	2.54	.91	.27	.08	.02	1.56	4.25

e Estimated

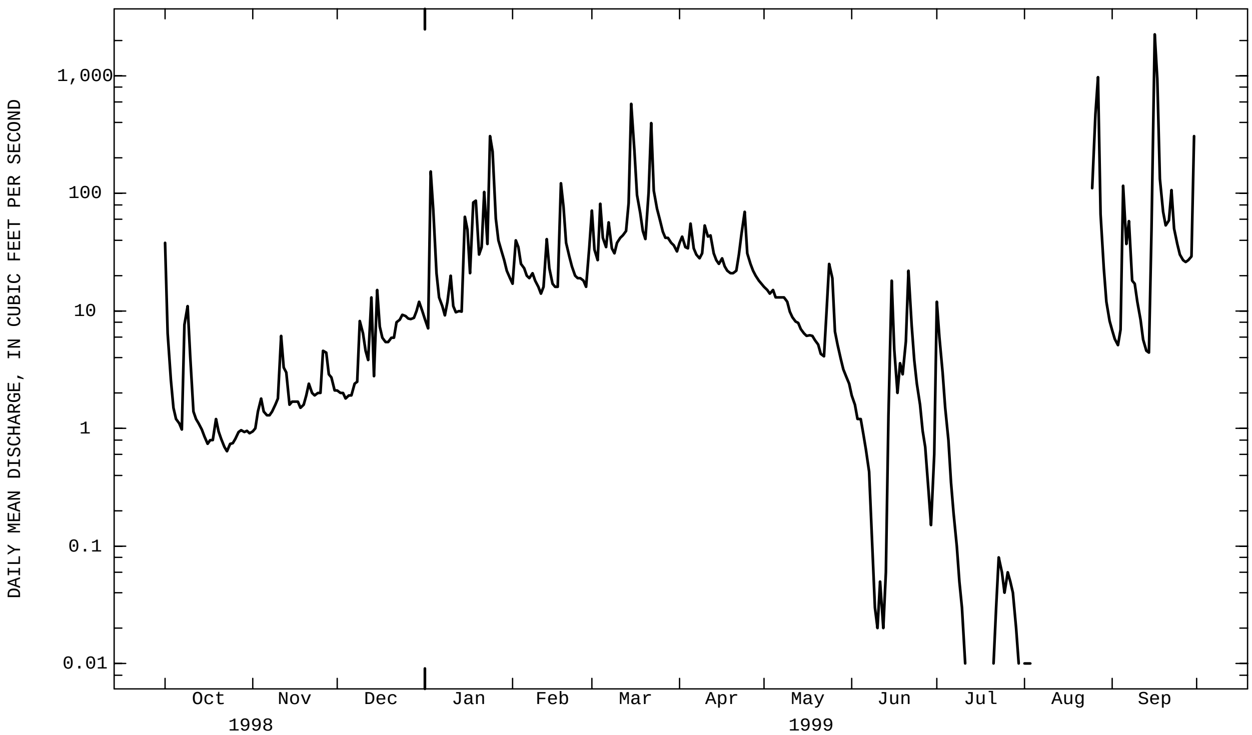
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1966 - 1999, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	28.0	33.5	51.3	64.7	71.2	85.1	66.1	48.2	30.4	18.0	20.4	30.3
MAX	177	95.8	153	217	188	268	218	189	173	92.7	88.8	256
(WY)	1980	1973	1973	1978	1972	1994	1983	1989	1972	1975	1971	1975
MIN	1.31	1.27	5.26	5.96	23.6	17.5	18.1	9.28	1.42	.14	.006	.000
(WY)	1987	1992	1966	1981	1977	1981	1985	1999	1986	1966	1966	1977

01653600 PISCATAWAY CREEK AT PISCATAWAY, MD--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1966 - 1999	
ANNUAL TOTAL	20103.62		12994.16			
ANNUAL MEAN	55.1		35.6		45.5	
HIGHEST ANNUAL MEAN					85.9	1972
LOWEST ANNUAL MEAN					13.4	1981
HIGHEST DAILY MEAN	962	Feb 5	2260	Sep 16	4500	Sep 6 1979
LOWEST DAILY MEAN	.00	(a)	.00	(b)	.00	(b)
ANNUAL SEVEN-DAY MINIMUM	.00	Aug 28	.00	Jul 12	.00	Jul 9 1966
INSTANTANEOUS PEAK FLOW			5600	Sep 16	(c)8540	Sep 6 1979
INSTANTANEOUS PEAK STAGE			10.56	Sep 16	11.21	Sep 6 1979
INSTANTANEOUS LOW FLOW			.00	(b)	.00	(d)
ANNUAL RUNOFF (CFSM)	1.39		.90		1.15	
ANNUAL RUNOFF (INCHES)	18.93		12.24		15.64	
10 PERCENT EXCEEDS	135		58		90	
50 PERCENT EXCEEDS	11		7.9		23	
90 PERCENT EXCEEDS	.03		.01		1.4	

a Aug. 7, 8, 28-31, Sep. 1-21.
b Many days.
c From rating curve extended above 1,700 ft^3/s on basis of contracted-opening measurement of peak flow at bridge 100 ft upstream.
d No flow at times in 1966, 1970, 1977, 1980-83, 1985-89, 1991-95, 1997-99.



DAILY MEAN DISCHARGE - 1999 WATER YEAR

01660920 ZEKIAH SWAMP RUN NEAR NEWTOWN, MD

LOCATION.--Lat 38°29'26", long 76°55'37", Charles County, Hydrologic Unit 02070011, on left-center downstream side of bridge on State Highway 6, 1.0 mi southeast of Newtown, and 1.7 mi downstream from Kerrick Swamp.

DRAINAGE AREA.--79.9 mi^2.

PERIOD OF RECORD.--June 1983 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 34.88 ft above sea level.

REMARKS.--Records fair except those for estimated daily discharges (missing record, backwater from beaverdams), which are poor. Low flow affected by ground-water diversions from municipal well fields at Waldorf and St. Charles, and occasional farm irrigation upstream from station during summer months. Several measurements of water temperature were made during the year.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 700 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar 16	0615	770	3.80	Sep 17	0230	*4,080	*5.51

Minimum discharge, 0.00 ft^3/s, Oct 1-31, Nov 1-30, Dec 1-10, Jun 7-16, Jul 9-31, Aug 1-26.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	e24	34	e200	64	35	e1.1	e18	.00	1.2
2	.00	.00	.00	e22	e54	e100	79	32	e.60	e21	.00	.53
3	.00	.00	.00	e110	e58	e90	78	31	e.45	e8.0	.00	.33
4	.00	.00	.00	e100	e50	e120	85	33	e.28	e3.0	.00	.68
5	.00	.00	.00	e60	e40	e100	193	33	e.14	e1.0	.00	36
6	.00	.00	.00	e30	e37	e80	164	32	e.08	e.40	.00	61
7	.00	.00	.00	e30	e40	e72	101	e31	.04	e.10	.00	51
8	.00	.00	.00	e23	e43	e67	80	e29	.00	e.04	.00	36
9	.00	.00	.00	e38	e39	e66	74	e26	.00	.02	.00	18
10	.00	.00	2.5	e40	e34	e66	89	e24	.00	.00	.00	9.4
11	.00	.00	4.4	e35	e32	69	86	e22	.00	.00	.00	5.4
12	.00	.00	6.1	e29	e40	78	82	e20	.00	.00	.00	3.9
13	.00	.00	13	e25	e70	82	72	e19	.00	.00	.00	2.1
14	.00	.00	22	25	e50	96	62	e17	.00	.00	.00	1.1
15	.00	.00	e26	36	e38	511	55	e17	.00	.00	.00	1.4
16	.00	.00	e24	62	e36	702	56	e16	e.00	.00	.00	986
17	.00	.00	e21	61	e35	390	55	e18	e.00	.00	.00	2530
18	.00	.00	e19	67	e100	185	48	e18	e.00	.00	.00	641
19	.00	.00	e19	118	e88	121	45	e18	e.00	.00	.00	208
20	.00	.00	e19	101	e68	92	45	e16	e.50	.00	.00	94
21	.00	.00	e20	66	e54	95	44	e14	e25	.00	.00	66
22	.00	.00	e20	71	e47	357	49	e14	e9.0	.00	.00	79
23	.00	.00	e21	103	e42	420	54	e24	e4.5	.00	.00	84
24	.00	.00	e20	205	e43	227	103	e20	e2.0	.00	.00	54
25	.00	.00	e22	413	e44	145	111	e16	e1.0	.00	.00	36
26	.00	.00	e21	325	e45	113	68	e12	e.50	.00	67	26
27	.00	.00	e22	112	e44	92	53	e8.0	e.30	.00	233	22
28	.00	.00	e25	71	e100	84	46	e6.0	e.15	.00	129	24
29	.00	.00	e29	55	---	77	43	e4.0	e.60	.00	37	30
30	.00	.00	e30	45	---	70	38	e2.5	e4.0	.00	9.6	153
31	.00	---	e27	38	---	63	---	e1.7	---	.00	2.8	---
TOTAL	0.00	0.00	433.00	2540	1405	5030	2222	609.2	50.24	51.56	478.40	5261.04
MEAN	.000	.000	14.0	81.9	50.2	162	74.1	19.7	1.67	1.66	15.4	175
MAX	.00	.00	30	413	100	702	193	35	25	21	233	2530
MIN	.00	.00	.00	22	32	63	38	1.7	.00	.00	.00	.33
CFSM	.00	.00	.17	1.03	.63	2.03	.93	.25	.02	.02	.19	2.19
IN.	.00	.00	.20	1.18	.65	2.34	1.03	.28	.02	.02	.22	2.45

e Estimated

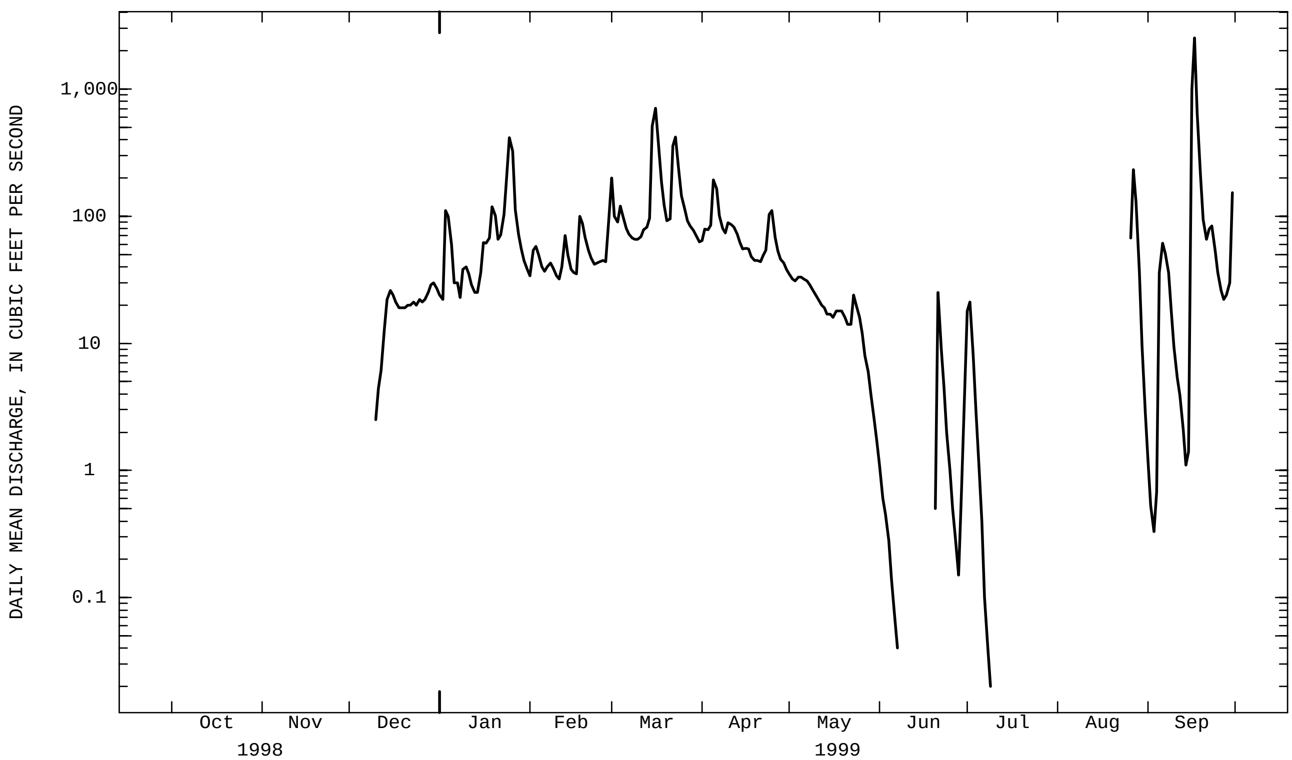
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1983 - 1999, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	43.3	72.8	101	135	148	193	131	102	59.1	29.0	28.3	37.3
MAX	163	139	236	268	375	491	277	334	311	93.5	113	175
(WY)	1990	1986	1997	1996	1998	1994	1993	1989	1989	1989	1990	1999
MIN	.000	.000	14.0	49.1	50.2	57.0	30.5	19.7	1.67	1.66	.39	.000
(WY)	1999	1999	1999	1985	1999	1985	1985	1999	1999	1999	1995	1995

01660920 ZEKIAH SWAMP RUN NEAR NEWTOWN, MD--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1983 - 1999	
ANNUAL TOTAL	40450.45		18080.44			
ANNUAL MEAN	111		49.5		90.1	
HIGHEST ANNUAL MEAN					137	1990
LOWEST ANNUAL MEAN					43.5	1995
HIGHEST DAILY MEAN	1480	Feb 5	2530	Sep 17	2570	Mar 29 1994
LOWEST DAILY MEAN	.00	(a)	.00	(a)	.00	(a)
ANNUAL SEVEN-DAY MINIMUM	.00	Aug 2	.00	Oct 1	.00	Jul 20 1987
INSTANTANEOUS PEAK FLOW			4080	Sep 17	(b)4080	Sep 17 1999
INSTANTANEOUS PEAK STAGE			5.51	Sep 17	5.51	Sep 17 1999
INSTANTANEOUS LOW FLOW			.00	(a)	.00	(c)
ANNUAL RUNOFF (CFSM)	1.39		.62		1.13	
ANNUAL RUNOFF (INCHES)	18.83		8.42		15.31	
10 PERCENT EXCEEDS	286		100		203	
50 PERCENT EXCEEDS	26		18		49	
90 PERCENT EXCEEDS	.00		.00		1.0	

a Many days.
b From rating curve extended above 1,500 ft^3/s.
c No flow at times in 1983, 1985-89, 1991, 1993, 1995-1999.



DAILY MEAN DISCHARGE - 1999 WATER YEAR

01661050 ST. CLEMENT CREEK NEAR CLEMENTS, MD

LOCATION.--Lat 38°20'00", long 76°43'31", St. Marys County, Hydrologic Unit 02070011, on left bank 60 ft downstream from bridge on State Highway 242, 0.5 mi north of Clements, 2.3 mi upstream from mouth, and 5.7 mi northwest of Leonardtown.

DRAINAGE AREA.--18.5 mi^2.

PERIOD OF RECORD.--October 1968 to current year.

REVISED RECORDS.--WDR MD-DE-79-1: 1974(P).

GAGE.--Water-stage recorder, crest-stage gage, and concrete control. Elevation of gage is 8 ft above sea level, from topographic map.

REMARKS.--Records good. Several measurements of water temperature were made during the year. Water-quality records for some prior periods have been collected at this location.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 220 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar 15	0830	265	3.46	Aug 26	0200	397	4.40
Apr 4	2300	231	3.16	Sep 16	1430	*3,780	*6.43

Minimum discharge, 0.00 ft^3/s, Jul 10-27, Aug 1-25.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.19	1.5	3.3	3.7	6.6	31	19	6.1	.80	4.3	.02	.80
2	.22	1.7	3.2	3.6	12	15	27	5.8	.61	4.9	.00	.63
3	.28	2.3	3.1	30	13	11	16	6.0	.40	1.9	.00	.73
4	.15	3.5	3.2	28	9.1	19	60	6.7	.27	1.1	.00	1.0
5	.40	2.6	3.3	8.6	7.9	13	103	6.2	.22	.64	.00	2.0
6	1.1	2.3	3.4	5.5	7.4	10	30	5.6	.25	.28	.00	4.6
7	.72	2.2	3.5	5.6	7.9	9.8	20	5.8	.22	.14	.00	4.5
8	9.5	2.1	3.7	e5.6	8.4	7.8	17	5.2	.17	.09	.00	2.8
9	20	2.4	13	e5.3	7.2	8.1	16	4.4	.15	.04	.00	1.9
10	6.0	2.6	10	e5.3	6.8	11	21	4.0	.10	.02	.00	1.8
11	2.8	3.7	5.5	e5.6	6.3	12	17	3.5	.11	.02	.00	1.4
12	2.2	4.3	4.2	5.6	8.5	15	18	3.4	.08	.00	.00	.97
13	2.0	3.4	21	6.2	19	13	14	3.3	1.2	.00	.00	.70
14	1.8	2.9	20	5.7	11	26	13	3.1	2.0	.00	.00	.51
15	1.5	2.8	8.2	28	7.8	211	12	2.8	1.2	.00	.00	1.7
16	1.4	2.6	5.9	24	7.4	59	12	2.6	.61	.00	.00	1120
17	1.5	2.6	5.0	11	7.1	27	10	2.9	.86	.00	.00	197
18	1.4	2.6	4.4	23	26	20	9.4	2.9	2.0	.00	.00	27
19	1.4	2.6	4.1	28	23	15	9.2	2.9	1.6	.00	.00	14
20	1.6	2.8	4.1	13	12	13	11	2.6	2.2	.00	.00	10
21	1.4	3.4	4.1	9.1	9.2	25	12	2.2	5.4	.00	.00	9.2
22	1.2	3.1	4.4	8.0	7.8	111	13	2.2	3.7	.00	.00	18
23	1.1	2.9	3.8	7.7	6.7	35	11	4.4	2.1	.00	.00	12
24	1.3	2.9	4.4	61	7.2	22	12	4.3	1.3	.00	.00	7.0
25	1.3	2.9	4.6	49	7.1	18	9.4	3.0	.87	.00	76	5.4
26	1.4	6.9	4.2	17	7.8	15	8.5	2.3	.69	.00	189	4.9
27	1.5	6.4	4.2	12	7.2	14	7.6	1.9	.46	.00	12	4.6
28	1.7	4.1	5.4	10	16	15	6.8	1.5	.35	.38	4.0	4.9
29	1.7	3.5	5.9	8.7	---	13	6.8	1.4	.24	.21	2.3	5.5
30	1.5	3.3	5.9	7.6	---	11	6.4	1.2	.97	.13	1.4	28
31	1.5	---	4.4	6.8	---	10	---	.94	---	.08	1.0	---
TOTAL	71.76	92.9	183.4	448.2	283.4	835.7	548.1	111.14	31.13	14.23	285.72	1493.54
MEAN	2.31	3.10	5.92	14.5	10.1	27.0	18.3	3.59	1.04	.46	9.22	49.8
MAX	20	6.9	21	61	26	211	103	6.7	5.4	4.9	189	1120
MIN	.15	1.5	3.1	3.6	6.3	7.8	6.4	.94	.08	.00	.00	.51
CFSM	.13	.17	.32	.78	.55	1.46	.99	.19	.06	.02	.50	2.69
IN.	.14	.19	.37	.90	.57	1.68	1.10	.22	.06	.03	.57	3.00

e Estimated

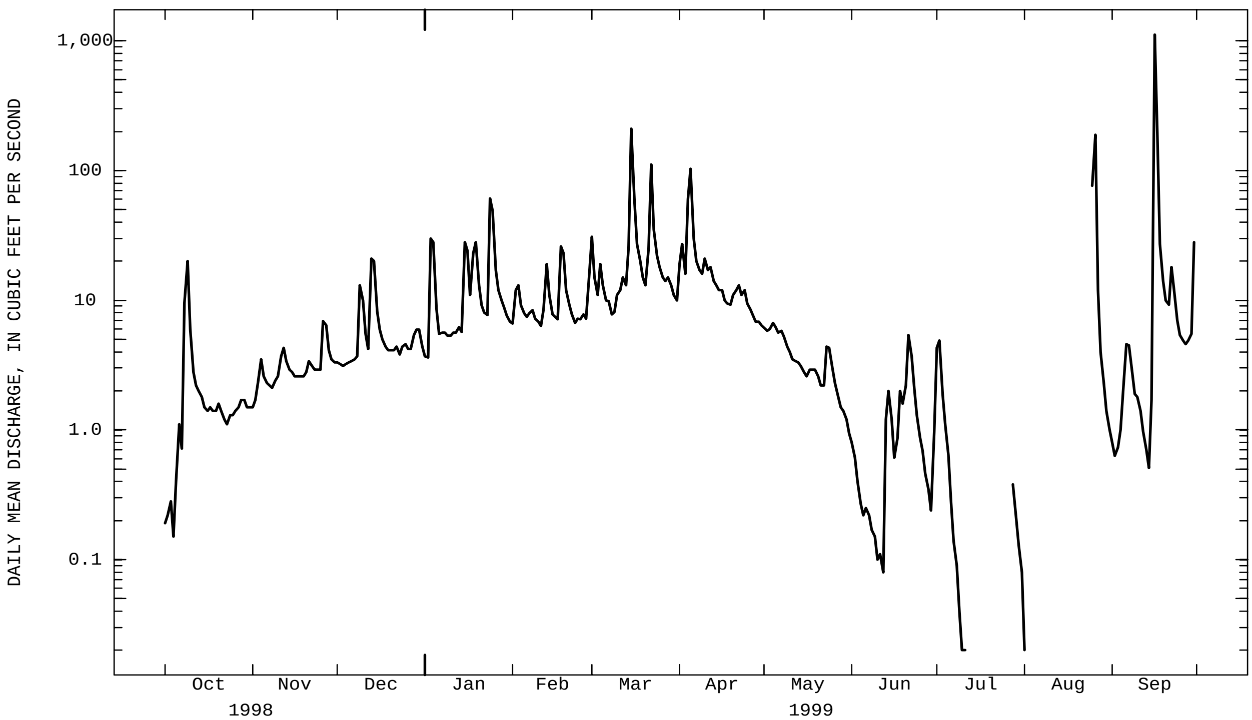
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1969 - 1999, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	10.2	15.0	20.7	27.3	30.4	34.9	26.8	21.4	15.8	11.3	10.7	12.6
MAX	46.8	45.3	48.9	77.4	89.7	115	54.7	57.9	116	56.4	45.0	75.2
(WY)	1980	1980	1997	1978	1998	1994	1983	1978	1972	1975	1985	1979
MIN	.73	3.10	5.01	5.30	10.1	10.1	9.05	3.59	1.04	.46	.036	.000
(WY)	1989	1999	1989	1981	1999	1981	1985	1999	1999	1999	1988	1988

01661050 ST. CLEMENT CREEK NEAR CLEMENTS, MD--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1969 - 1999	
ANNUAL TOTAL	9587.72		4399.22			
ANNUAL MEAN	26.3		12.1		19.7	
HIGHEST ANNUAL MEAN					34.5	1972
LOWEST ANNUAL MEAN					9.19	1981
HIGHEST DAILY MEAN	729	Feb 5	1120	Sep 16	1580	Jun 22 1972
LOWEST DAILY MEAN	.15	Oct 4	.00	(a)	.00	(b)
ANNUAL SEVEN-DAY MINIMUM	.24	Sep 11	.00	Jul 12	.00	Aug 31 1980
INSTANTANEOUS PEAK FLOW			3780	Sep 16	(c)4500	Sep 6 1979
INSTANTANEOUS PEAK STAGE			6.43	Sep 16	(d)6.96	Sep 6 1979
INSTANTANEOUS LOW FLOW			.00	(f)	.00	(g)
ANNUAL RUNOFF (CFSM)	1.42		.65		1.07	
ANNUAL RUNOFF (INCHES)	19.28		8.85		14.47	
10 PERCENT EXCEEDS	54		19		38	
50 PERCENT EXCEEDS	9.2		4.0		11	
90 PERCENT EXCEEDS	.97		.00		1.2	

a July 12-27, Aug. 2-24.
b Many days.
c From rating curve extended above 480 ft^3/s on basis of contracted-opening and flow-over-road measurement of peak flow.
d Backwater from tide; maximum gage height unaffected by backwater, 6.55 ft, June 22, 1972.
f July 10-27, Aug. 1-25.
g No flow at times in 1977, 1980, 1981, 1983, 1985-89, 1991, 1993, 1995, 1999.



DAILY MEAN DISCHARGE - 1999 WATER YEAR

01661500 ST. MARYS RIVER AT GREAT MILLS, MD

LOCATION.--Lat 38°14'36", long 76°30'13", St. Marys County, Hydrologic Unit 02070011, on left bank at downstream side of bridge on State Highway 471 in Great Mills, 0.3 mi downstream from Western Branch, and 12.0 mi upstream from mouth.

DRAINAGE AREA.--24.0 mi^2.

PERIOD OF RECORD.--June 1946 to current year.

REVISED RECORDS.--WSP 1702: 1946, 1948-49, 1955, 1957-58. WDR MD-DE-83-1: 1981-82(M).

GAGE.--Water-stage recorder and concrete control. Elevation of gage is 10 ft above sea level, from topographic map.

REMARKS.--No estimated daily discharges. Records good. Occasional regulation by reservoir on Western Branch of St. Marys River, 2.0 mi upstream since 1975, total capacity, 3,200 acre feet. Several measurements of water temperature were made during the year. Water-quality records for some prior periods have been collected at this location.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 400 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar 15	0500	406	4.32	Sep 16	1330	*6,560	*12.82

Minimum discharge, 0.13 ft^3/s, Aug 10-14.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.0	2.5	5.4	7.1	9.5	81	22	5.7	1.4	3.0	.43	2.1
2	2.1	3.0	5.0	6.6	13	39	28	5.4	1.3	4.6	.35	1.8
3	2.0	4.6	7.0	103	13	27	19	5.6	1.2	2.6	.28	1.5
4	2.3	5.1	5.8	41	12	28	45	6.1	1.2	1.4	.26	1.6
5	2.5	4.0	5.4	22	13	20	92	6.1	1.2	1.1	.28	2.0
6	2.5	3.7	5.3	15	12	17	39	5.5	1.2	.80	.30	2.2
7	2.4	3.5	5.2	12	11	16	30	5.6	1.3	.55	.27	2.1
8	4.9	3.3	5.5	11	12	12	24	5.4	1.3	.54	.25	1.9
9	12	3.5	18	11	11	12	19	4.7	1.2	.45	.27	1.7
10	8.3	3.5	14	10	10	14	18	4.5	1.1	.39	.22	2.3
11	5.3	5.6	9.3	8.8	9.4	15	16	3.9	1.2	.38	.17	2.2
12	3.5	5.7	8.2	8.5	10	16	17	3.6	1.3	.52	.18	1.8
13	3.3	4.4	33	8.2	19	14	13	3.5	1.9	1.7	.21	1.5
14	3.1	4.0	22	8.0	13	33	12	3.1	4.8	1.9	.61	1.3
15	2.5	3.9	14	34	11	254	10	2.9	3.2	1.7	.71	4.4
16	2.3	3.8	11	23	10	105	10	2.8	2.4	1.4	.49	2650
17	2.1	3.8	9.5	15	9.9	57	9.0	3.1	2.3	1.1	.35	512
18	2.2	6.5	8.2	19	24	39	8.2	3.0	2.6	.96	.30	230
19	2.2	5.0	7.0	25	24	27	8.2	3.2	2.2	.82	.25	205
20	2.3	4.5	6.8	17	19	20	8.2	3.1	3.1	.77	2.1	196
21	2.2	5.5	6.5	13	13	31	8.0	2.7	5.7	.83	1.7	198
22	2.3	4.6	6.8	11	11	131	8.7	2.4	4.0	.93	1.4	213
23	2.4	4.3	6.1	11	9.9	67	9.3	2.7	2.8	.91	1.1	104
24	2.5	4.2	9.3	88	11	42	11	4.5	1.9	.76	1.1	50
25	2.5	3.9	10	62	10	31	8.6	3.9	1.6	.74	52	29
26	2.6	7.4	8.5	32	10	23	8.2	2.8	1.5	2.0	71	19
27	6.7	6.9	7.8	21	9.5	19	7.4	2.3	1.3	1.5	31	14
28	2.7	5.9	8.9	18	40	23	6.7	2.1	1.4	1.6	12	11
29	3.2	5.5	10	14	---	18	6.3	1.8	1.4	.85	7.4	9.5
30	2.0	5.4	11	12	---	15	6.1	1.6	1.4	.61	4.5	21
31	2.5	---	8.1	10	---	13	---	1.5	---	.55	2.8	---
TOTAL	102.4	137.5	298.6	697.2	380.2	1259	527.9	115.1	60.4	37.96	194.28	4491.9
MEAN	3.30	4.58	9.63	22.5	13.6	40.6	17.6	3.71	2.01	1.22	6.27	150
MAX	12	7.4	33	103	40	254	92	6.1	5.7	4.6	71	2650
MIN	2.0	2.5	5.0	6.6	9.4	12	6.1	1.5	1.1	.38	.17	1.3
CFSM	.14	.19	.40	.94	.57	1.69	.73	.15	.08	.05	.26	6.24
IN.	.16	.21	.46	1.08	.59	1.95	.82	.18	.09	.06	.30	6.96

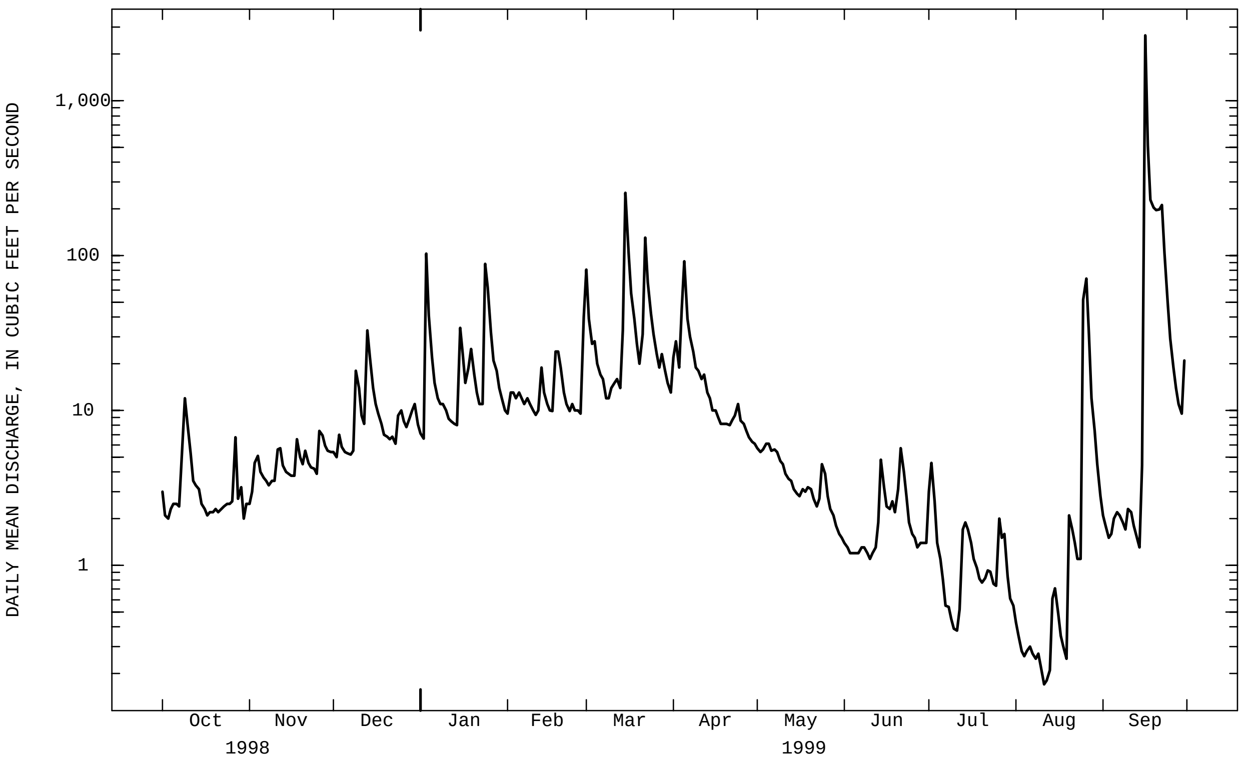
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1946 - 1999, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	12.5	19.0	28.5	35.1	37.8	45.5	32.5	25.1	15.0	14.4	17.0	15.6
MAX	70.3	84.4	98.6	125	213	166	95.9	97.4	68.4	68.7	118	150
(WY)	1997	1957	1997	1978	1998	1994	1983	1990	1972	1996	1955	1999
MIN	2.58	4.29	5.27	6.45	9.31	8.52	6.82	3.71	2.01	1.22	1.29	2.02
(WY)	1969	1982	1966	1955	1968	1981	1985	1999	1999	1999	1995	1988

01661500 ST. MARYS RIVER AT GREAT MILLS, MD--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1946 - 1999	
ANNUAL TOTAL	16308.2		8302.44			
ANNUAL MEAN	44.7		22.7		24.7	
HIGHEST ANNUAL MEAN					50.9	1998
LOWEST ANNUAL MEAN					11.1	1966
HIGHEST DAILY MEAN	1580	Feb 5	2650	Sep 16	2650	Sep 16 1999
LOWEST DAILY MEAN	2.0	(a)	.17	Aug 11	.17	Aug 11 1999
ANNUAL SEVEN-DAY MINIMUM	2.1	Sep 11	.22	Aug 7	.22	Aug 7 1999
INSTANTANEOUS PEAK FLOW			6560	Sep 16	(b)7950	Aug 20 1969
INSTANTANEOUS PEAK STAGE			12.82	Sep 16	13.34	Aug 20 1969
INSTANTANEOUS LOW FLOW			.13	(c)	.13	Aug 10 1999
ANNUAL RUNOFF (CFSM)	1.86		.95		1.03	
ANNUAL RUNOFF (INCHES)	25.28		12.87		14.01	
10 PERCENT EXCEEDS	89		29		48	
50 PERCENT EXCEEDS	12		5.5		12	
90 PERCENT EXCEEDS	2.5		.95		3.1	

a Sept. 16, 17.
b From rating curve extended above 1,500 ft^3/s on basis of contracted-opening measurement at gage height 12.08 ft.
c Aug. 10-14.



DAILY MEAN DISCHARGE - 1999 WATER YEAR

03075500 YOUGHIOGHENY RIVER NEAR OAKLAND, MD

LOCATION.--Lat 39°25'19", long 79°25'32", Garrett County, Hydrologic Unit 05020006, on left bank 200 ft downstream from CSX Railroad bridge, 250 ft downstream from Little Youghiogheny River, 1.2 mi northwest of Oakland, and 1.5 mi upstream from Dunkard Lick Run.

DRAINAGE AREA.--134 mi^2.

PERIOD OF RECORD.--August 1941 to current year.

REVISED RECORDS.--WSP 1113: 1947(M).

GAGE.--Water-stage recorder and concrete control. Datum of gage is 2,353.61 ft above sea level. Prior to Aug. 1, 1946, nonrecording gage at bridge 200 ft upstream at same datum.

REMARKS.--Records good. Town of Oakland diverted an average of 0.4 ft^3/s for water supply. The diversion is returned upstream from station as sewage. U.S. Army Corps of Engineers satellite telemeter at station. Several measurements of water temperature were made during the year. Water-quality records for some prior periods have been collected at this location.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in March 1936 reached a stage of 15.3 ft, from floodmarks.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jan 24	1315	2,230	5.30	Mar 22	0230	2,230	5.30
Mar 18	2300	*2,300	*5.37				

Minimum discharge, 3.2 ft^3/s, Sep 4.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	64	22	24	54	250	606	834	170	35	21	29	4.5
2	35	20	23	51	329	420	784	149	35	24	37	4.0
3	27	22	21	65	300	551	585	133	47	40	47	3.8
4	56	24	21	101	277	1170	430	121	38	24	31	3.4
5	54	24	22	82	295	790	369	110	32	18	19	12
6	38	22	23	70	356	674	286	105	29	16	15	45
7	31	22	26	73	665	933	239	94	28	13	12	91
8	53	22	64	e64	1530	671	207	94	26	11	12	37
9	100	22	168	606	1010	521	456	86	24	9.3	20	20
10	70	22	90	888	704	482	1040	73	22	9.7	18	13
11	61	25	65	428	504	399	1080	65	20	15	13	9.0
12	49	26	53	296	402	289	1230	59	19	13	10	7.5
13	40	25	47	796	340	249	874	74	18	11	10	6.4
14	35	23	45	1340	268	229	639	80	17	11	12	5.9
15	31	22	40	1500	236	245	516	61	18	10	9.9	5.6
16	28	22	37	991	239	229	653	49	19	11	8.8	5.2
17	25	21	39	781	250	292	491	45	27	11	7.7	5.2
18	23	20	40	1170	250	1450	620	43	33	25	6.0	5.2
19	24	20	37	1190	215	1820	879	66	23	15	5.0	5.1
20	26	19	47	804	191	1240	888	57	19	11	4.8	5.4
21	24	20	79	670	171	1300	880	43	18	11	6.3	4.7
22	37	20	182	683	158	1840	888	44	17	9.9	7.8	4.9
23	44	19	174	1040	184	1110	798	146	16	9.9	7.9	4.4
24	32	18	131	2030	129	902	828	122	15	20	7.2	4.7
25	27	18	97	1370	126	946	606	119	13	36	8.2	4.8
26	26	24	74	878	124	919	460	81	12	21	13	4.5
27	24	37	67	676	117	850	361	65	11	14	12	4.3
28	23	29	65	586	402	801	278	61	13	17	10	8.1
29	24	24	66	468	---	918	227	49	17	73	13	12
30	24	22	68	351	---	968	191	42	26	55	8.6	46
31	21	---	60	283	---	850	---	37	---	26	6.1	---
TOTAL	1176	676	1995	20385	10022	24664	18617	2543	687	611.8	427.3	392.6
MEAN	37.9	22.5	64.4	658	358	796	621	82.0	22.9	19.7	13.8	13.1
MAX	100	37	182	2030	1530	1840	1230	170	47	73	47	91
MIN	21	18	21	51	117	229	191	37	11	9.3	4.8	3.4
CFSM	.28	.17	.48	4.91	2.67	5.94	4.63	.61	.17	.15	.10	.10
IN.	.33	.19	.55	5.66	2.78	6.85	5.17	.71	.19	.17	.12	.11

e Estimated

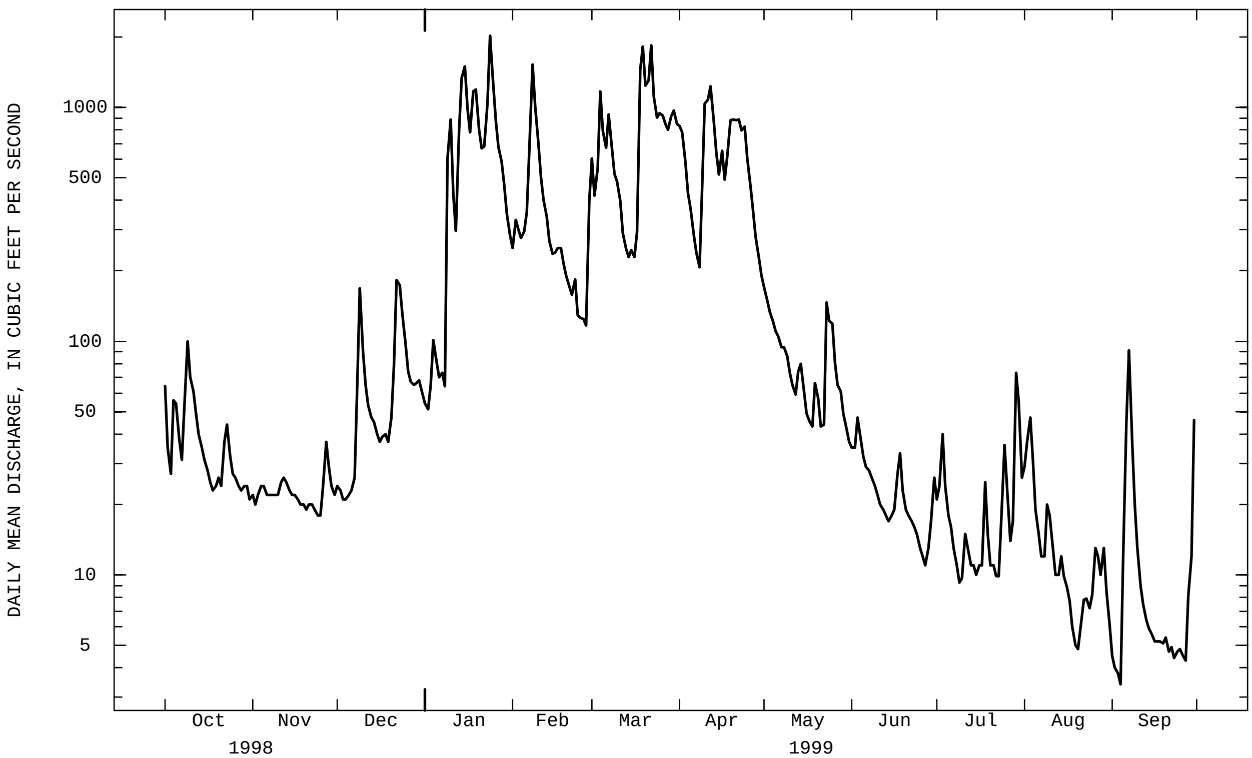
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1941 - 1999, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	115	242	406	439	498	615	450	333	203	160	131	86.7
MAX	608	1152	1027	973	1100	1477	879	995	730	629	586	600
(WY)	1955	1986	1973	1996	1986	1963	1973	1996	1981	1978	1956	1996
MIN	4.45	7.08	62.2	63.2	127	168	121	76.0	22.9	10.3	10.5	5.99
(WY)	1954	1954	1944	1977	1978	1990	1946	1982	1999	1953	1944	1953

03075500 YOUGHIOGHENY RIVER NEAR OAKLAND, MD--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1941 - 1999	
ANNUAL TOTAL	115689		82196.7			
ANNUAL MEAN	317		225		306	
HIGHEST ANNUAL MEAN					518	1996
LOWEST ANNUAL MEAN					193	1947
HIGHEST DAILY MEAN	2610	Apr 20	2030	Jan 24	8740	Jan 19 1996
LOWEST DAILY MEAN	14	Sep 15	3.4	Sep 4	2.5	Oct 4 1953
ANNUAL SEVEN-DAY MINIMUM	16	Sep 13	4.6	Sep 21	2.7	Oct 2 1953
INSTANTANEOUS PEAK FLOW			2300	Mar 18	(a)14100	Jan 19 1996
INSTANTANEOUS PEAK STAGE			5.37	Mar 18	13.06	Jan 19 1996
INSTANTANEOUS LOW FLOW			3.2	Sep 4	UNKNOWN	
ANNUAL RUNOFF (CFSM)	2.37		1.68		2.28	
ANNUAL RUNOFF (INCHES)	32.12		22.82		31.01	
10 PERCENT EXCEEDS	904		830		728	
50 PERCENT EXCEEDS	129		43		165	
90 PERCENT EXCEEDS	22		9.8		24	

a From rating curve extended above 7,000 ft^3/s.



DAILY MEAN DISCHARGE - 1999 WATER YEAR

03076000 DEEP CREEK RESERVOIR NEAR OAKLAND, MD

LOCATION.--Lat 39°30'34", long 79°23'28", Garrett County, Hydrologic Unit 05020006, on Deep Creek at dam, 1.8 mi upstream from mouth and 7.0 mi north of Oakland.

DRAINAGE AREA.--64.7 mi^2.

PERIOD OF RECORD.--July 1925 to current year. Prior to October 1950, monthend contents published in WSP 1305, and October 1950 to September 1955, monthend contents published in WSP 1385.

GAGE.--Water-stage recorder at right end of spillway. Datum of gage is at sea level, unadjusted.

REMARKS.--Reservoir is formed by an earthfill dam completed January 1925, with storage beginning at that time. Usable capacity, 92,975 acre-ft 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.

COOPERATION.--Elevations and capacity table furnished by Pennsylvania Electric Co.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 93,800 acre-ft, July 14, 1990, elevation, 2,462.25 ft; minimum observed, 11,763 acre-ft, Sept. 30, 1925, elevation, 2,433.45 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 89,300 acre-ft, April 25, 26, elevation, 2,461.0 ft; minimum, 70,800 acre-ft, Dec. 3-8, 12-31, Jan. 1-8, elevation, 2,455.9 ft.

MONTHEND ELEVATION AND CONTENTS AT 2400, WATER YEAR OCTBER 1998 TO SEPTEMBER 1999

Date	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)
Sept. 30	2457.4	76100	
Oct. 31	2456.7	73600	-2500
Nov. 30	2456.0	71100	-2500
Dec. 31	2455.9	70800	-300
CAL YR 1998			-700
Jan. 31	2457.8	77500	+6700
Feb. 28	2458.1	78600	+1100
Mar. 31	2459.3	83000	+4400
Apr. 30	2460.8	88500	+5500
May 31	2460.3	86700	-1800
June 30	2459.4	83300	-3400
July 31	2458.3	79300	-4000
Aug. 31	2457.5	76400	-2900
Sept. 30	2456.5	72900	-3500
WTR YR 1999			-3200

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03076500 YOUGHIOGHENY RIVER AT FRIENDSVILLE, MD

LOCATION.--Lat 39°39'13", long 79°24'3l", Garrett County, Hydrologic Unit 05020006, on left bank 0.7 mi upstream from bridge on State Highway 42 at Friendsville, and 1.5 mi upstream from Bear Creek.

DRAINAGE AREA.--295 mi^2.

PERIOD OF RECORD.--August 1898 to December 1904 and October 1940 to current year. Annual maximum, water years 1905, 1923-3l, 1940, published in WSP 1675. October, November 1940 monthly discharge only, published in WSP 1305. September 1922 to September 1926 (gage heights only) in reports of Pennsylvania Department of Forests and Waters.

REVISED RECORDS.--WSP 1385: Drainage area at former site, 1898-1905, 1941(M), 1942, 1944-45, 1948-49, 1951(M).

GAGE.--Water-stage recorder. Datum of gage is 1,487.33 ft above sea level. Aug. 17, 1898, to Dec. 31, 1904, and Sept. 1, 1922, to Sept. 30, 1926, nonrecording gages at bridge 0.7 mi downstream at datum 16.24 ft and 16.29 ft lower, respectively.

REMARKS.--Records good. Low and medium flow regulated since July 1925 by Deep Creek Reservoir, 12 mi upstream from station (see station 03076000). U.S. Army Corps of Engineers satellite telemeter at station. Several measurements of water temperature were made during the year. Water-quality records for some prior periods have been collected at this location.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,730 ft^3/s, Jan 24, gage height, 5.10 ft; minimum discharge, 38 ft^3/s, Jul 19, Sep 6.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	206	85	55	173	560	785	1640	449	104	67	175	67
2	190	70	55	183	656	727	1680	311	105	136	184	70
3	166	110	58	264	671	731	1250	386	131	132	137	134
4	109	112	54	248	621	1280	1020	433	188	126	128	76
5	200	93	65	109	659	1260	679	392	195	108	80	68
6	104	79	57	105	567	998	530	301	113	108	129	57
7	81	114	58	91	819	1160	450	287	254	104	68	108
8	120	92	77	100	2120	1210	388	215	128	64	71	112
9	257	91	234	e700	1930	1090	875	201	125	110	73	71
10	165	135	200	1110	1320	932	1900	274	112	74	68	121
11	141	61	149	627	882	804	1650	165	135	72	59	59
12	197	61	142	509	672	804	2380	157	119	63	82	56
13	127	62	104	748	592	476	1920	189	110	60	131	62
14	106	64	96	1630	487	401	1570	243	70	63	81	68
15	78	61	123	1890	424	461	1340	161	76	64	68	61
16	73	61	85	1520	570	503	1360	146	72	123	49	67
17	77	54	87	1160	591	517	868	191	84	104	111	72
18	63	53	89	1340	599	1370	906	121	155	77	67	65
19	119	80	88	1830	558	2720	1420	216	79	99	64	64
20	89	70	95	1290	356	1970	1540	160	66	53	126	66
21	64	64	143	1040	320	1590	1410	198	65	76	57	68
22	102	52	288	943	295	2410	1530	121	92	102	54	77
23	112	72	383	1310	297	e2100	1590	225	62	121	61	63
24	102	52	254	3150	297	1490	1600	342	62	73	66	126
25	75	66	229	e2500	251	1580	1270	240	120	211	68	64
26	112	58	308	e1800	241	1560	1180	191	100	144	72	64
27	66	70	339	e1400	230	1250	837	158	106	95	135	55
28	63	76	198	1120	340	1160	725	217	86	104	66	67
29	66	66	163	863	---	1640	590	196	78	191	67	70
30	72	64	184	778	---	1780	540	114	77	246	57	106
31	116	---	215	629	---	1660	---	170	---	162	61	---
TOTAL	3618	2248	4675	31160	17925	38419	36638	7170	3269	3332	2715	2284
MEAN	117	74.9	151	1005	640	1239	1221	231	109	107	87.6	76.1
MAX	257	135	383	3150	2120	2720	2380	449	254	246	184	134
MIN	63	52	54	91	230	401	388	114	62	53	49	55
(†)	-40.6	-42.0	-4.88	109	19.8	71.6	92.3	-29.3	-57.0	-65.0	-47.1	-59.0
MEAN≠	76.4	32.9	146	1114	660	1311	1313	202	52.0	42.0	40.5	17.1
CFSM≠	0.26	0.11	0.49	3.78	2.24	4.44	4.45	0.68	0.18	0.14	0.14	0.06
IN≠	0.30	0.12	0.56	4.36	2.33	5.12	4.96	0.78	0.20	0.16	0.16	0.07

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1898 - 1905, 1941 - 1999, BY WATER YEAR (WY)

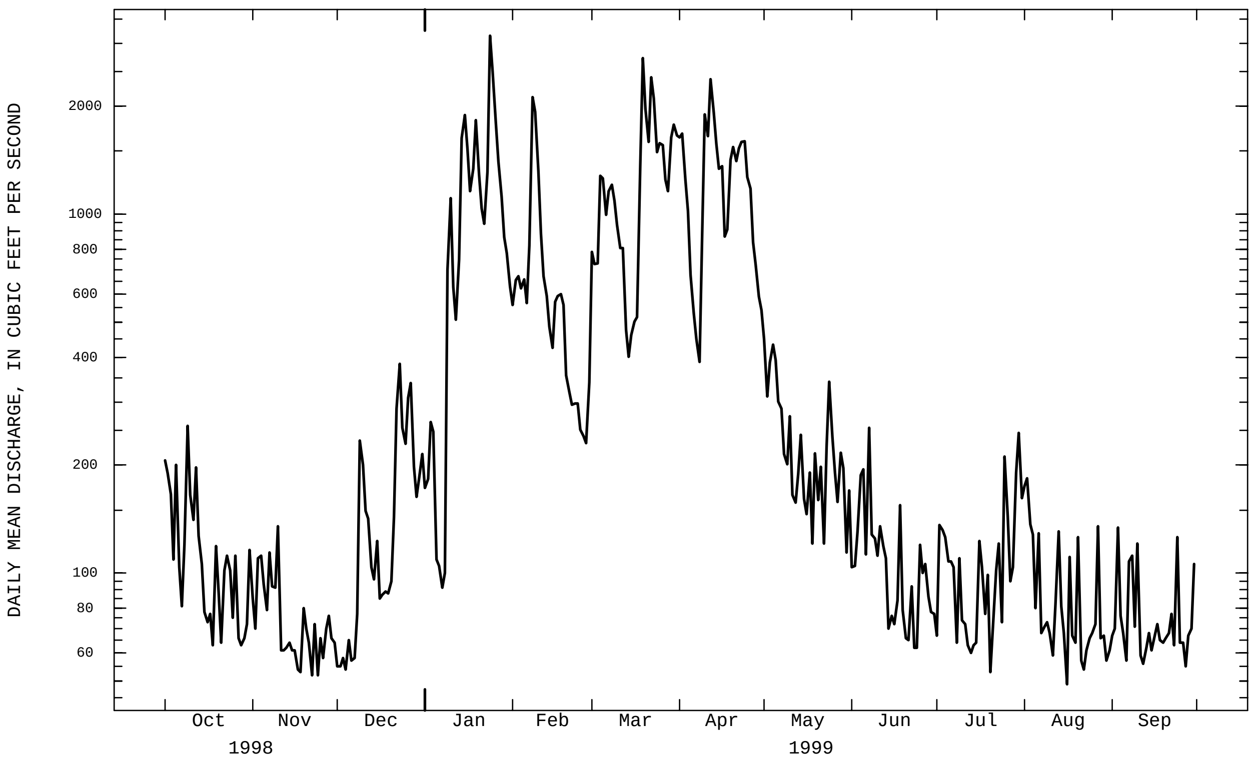
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	282	501	849	889	990	1229	941	693	477	367	298	239
MAX	1103	2190	2147	1886	2277	2644	2231	1888	1823	1335	1319	1059
(WY)	1955	1986	1903	1996	1903	1963	1901	1996	1903	1990	1956	1996
MIN	50.2	55.7	145	140	337	285	327	176	84.2	64.6	51.0	49.8
(WY)	1992	1905	1944	1981	1954	1990	1995	1982	1969	1991	1991	1991

† Change in contents in Deep Creek Reservoir, equivalent in cubic feet per second, provided by Pennsylvania Electric Company.
≠ Adjusted for change in reservoir contents.

03076500 YOUGHIOGHENY RIVER AT FRIENDSVILLE, MD--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1898 - 1905 1941 - 1999	
ANNUAL TOTAL	214246		153453			
ANNUAL MEAN	587		420		643	
ANNUAL MEAN≠	586		416		646	
HIGHEST ANNUAL MEAN					1052	1903
LOWEST ANNUAL MEAN					375	1954
HIGHEST DAILY MEAN	3910	Apr 20	3150	Jan 24	11200	Jan 19 1996
LOWEST DAILY MEAN	47	Sep 6	49	Aug 16	8.2	Sep 11 1966
ANNUAL SEVEN-DAY MINIMUM	57	Dec 1	57	Dec 1	29	Sep 21 1972
INSTANTANEOUS PEAK FLOW			3730	Jan 24	(a)16100	Jan 19 1996
INSTANTANEOUS PEAK STAGE			5.10	Jan 24	(b)14.20	Mar 29 1924
INSTANTANEOUS LOW FLOW			38	(c)	UNKNOWN	
ANNUAL RUNOFF (CFSM)	1.99		1.43		2.18	
ANNUAL RUNOFF (CFSM)≠	1.99		1.41		2.19	
ANNUAL RUNOFF (INCHES)	27.02		19.35		29.62	
ANNUAL RUNOFF (INCHES)≠	26.98		19.15		29.74	
10 PERCENT EXCEEDS	1490		1350		1440	
50 PERCENT EXCEEDS	308		135		408	
90 PERCENT EXCEEDS	66		63		103	

≠ Adjusted for change in reservoir contents since October 1940.
a From rating curve extended above 5,800 ft^3/s on basis of slope-area measurement of peak flow.
b From floodmarks.
c July 19, Sept. 6.



DAILY MEAN DISCHARGE - 1999 WATER YEAR

03076600 BEAR CREEK AT FRIENDSVILLE, MD

LOCATION.--Lat 39°39'22", long 79°23'41", Garrett County, Hydrologic Unit 05020006, on right bank 0.2 mi downstream from bridge on Accident-Friendsville Road, 0.6 mi downstream from South Branch Bear Creek, 0.8 mi southeast of Friendsville, and 1.2 mi upstream from mouth.

DRAINAGE AREA.--48.9 mi^2.

PERIOD OF RECORD.--October 1964 to current year.

REVISED RECORDS.--WDR MD-DE-94-1: 1993.

GAGE.--Water-stage recorder. Datum of gage is 1,551.34 ft above sea level.

REMARKS.--Records good except those for estimated daily discharges (ice effect, missing record), which are fair. U.S. Army Corps of Engineers satellite telemeter at station. Several measurements of water temperature were made during the year. Water-quality records for some prior periods have been collected at this location.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 600 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jan 24	0715	639	3.79	Apr 11	0945	612	3.74
Apr 9	1815	*1,260	*4.70	Apr 23	1815	921	4.23

Minimum discharge, 2.1 ft^3/s, Sep 3, 4.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.8	7.5	6.0	9.6	77	94	211	74	14	9.3	26	2.6
2	7.9	7.2	5.8	9.6	86	81	188	65	17	9.8	20	2.4
3	7.5	7.2	5.8	11	78	127	143	58	20	9.2	11	2.3
4	13	7.0	5.9	15	71	262	133	53	15	7.7	7.8	2.2
5	11	6.9	6.2	13	68	210	125	50	13	6.9	6.7	4.1
6	9.0	6.8	6.3	11	72	162	112	47	12	5.6	6.0	5.2
7	8.3	6.8	6.0	10	106	178	102	44	12	4.8	5.5	8.5
8	22	6.8	7.9	9.7	329	e150	92	42	11	4.4	8.5	5.3
9	20	6.8	13	72	262	e120	441	40	11	4.1	11	4.0
10	19	6.7	8.5	125	178	e100	557	37	9.6	5.9	6.5	3.6
11	17	6.9	7.3	118	135	e85	502	34	9.4	6.0	5.8	2.9
12	14	7.0	6.6	57	117	e78	485	32	9.1	4.5	5.3	2.5
13	12	6.5	6.5	151	97	71	308	33	8.6	4.2	4.8	2.4
14	11	6.5	6.5	289	81	67	240	35	8.6	4.1	4.5	3.1
15	9.9	6.5	6.2	e180	73	71	196	29	10	3.9	4.7	3.1
16	9.3	6.5	5.9	129	68	62	186	25	e15	3.7	4.8	4.4
17	9.0	6.5	6.7	122	66	99	149	24	e25	3.7	4.3	12
18	8.3	6.3	6.9	271	63	387	155	23	13	3.3	3.8	5.5
19	7.9	6.2	6.8	287	58	431	175	30	9.6	3.1	3.6	4.0
20	7.9	6.3	8.1	202	56	313	240	23	8.6	3.1	3.5	3.5
21	7.3	6.8	9.9	155	53	334	255	20	8.3	3.1	3.9	3.9
22	14	6.6	31	195	56	418	211	23	8.0	3.1	3.8	3.7
23	11	6.1	28	391	64	298	406	45	7.4	3.4	3.3	3.3
24	8.5	6.0	24	515	47	251	443	38	7.1	4.2	3.2	3.0
25	7.9	5.9	24	350	44	250	300	31	6.8	8.6	3.4	2.7
26	7.6	7.3	26	242	42	247	243	24	6.7	5.6	6.1	2.5
27	8.0	8.3	19	179	41	233	167	21	6.6	3.2	5.7	2.4
28	7.8	6.8	12	156	71	225	127	19	19	43	5.4	2.6
29	7.7	6.4	11	128	---	250	102	17	17	48	4.1	3.2
30	7.6	6.2	12	105	---	257	88	16	13	16	3.3	18
31	7.5	---	13	88	---	227	---	15	---	9.4	2.8	---
TOTAL	328.7	201.3	348.8	4595.9	2559	6138	7082	1067	351.4	254.9	199.1	128.9
MEAN	10.6	6.71	11.3	148	91.4	198	236	34.4	11.7	8.22	6.42	4.30
MAX	22	8.3	31	515	329	431	557	74	25	48	26	18
MIN	7.3	5.9	5.8	9.6	41	62	88	15	6.6	3.1	2.8	2.2
CFSM	.22	.14	.23	3.03	1.87	4.05	4.83	.70	.24	.17	.13	.09
IN.	.25	.15	.27	3.50	1.95	4.67	5.39	.81	.27	.19	.15	.10

e Estimated

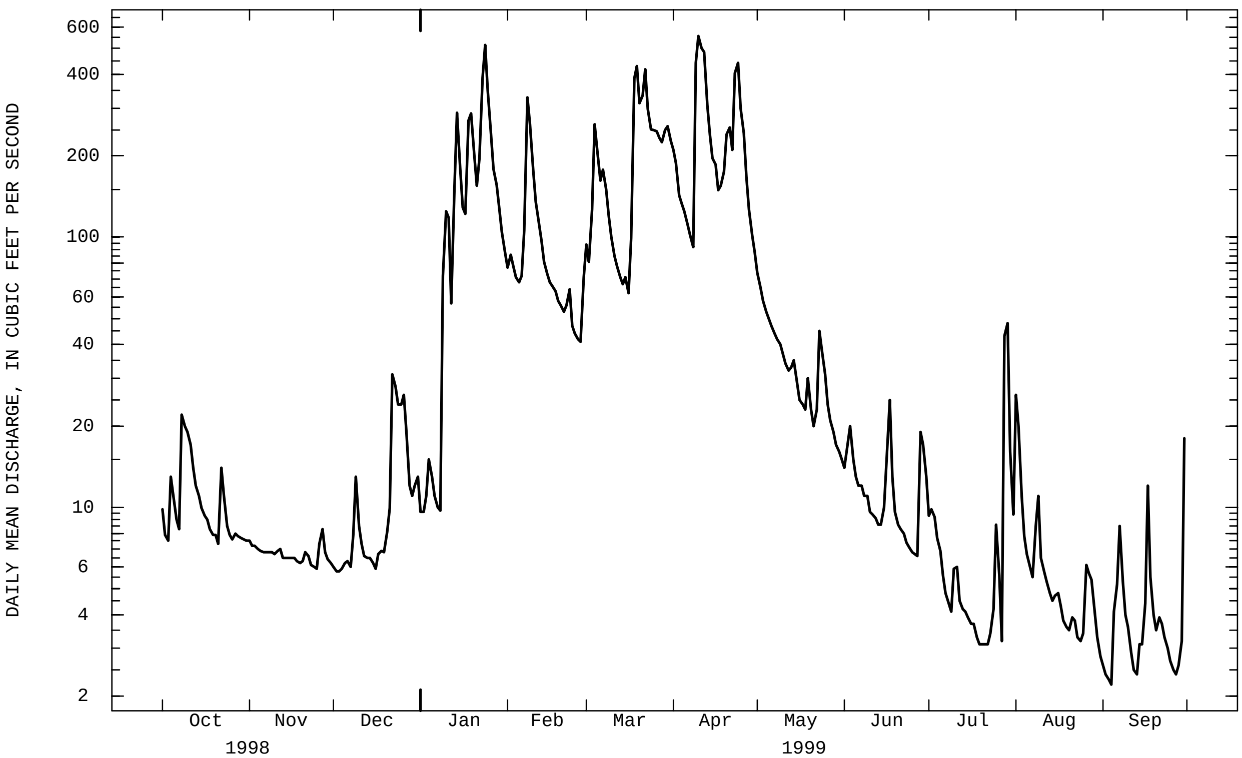
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1965 - 1999, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	34.8	70.1	120	118	152	193	153	103	51.6	49.4	31.4	31.8
MAX	187	341	293	296	387	413	293	223	154	274	117	256
(WY)	1980	1986	1991	1996	1986	1994	1984	1996	1981	1990	1980	1971
MIN	4.05	6.71	11.3	19.1	39.8	45.5	59.4	23.5	10.6	6.35	4.32	2.98
(WY)	1992	1999	1999	1977	1993	1990	1995	1982	1991	1965	1966	1991

03076600 BEAR CREEK AT FRIENDSVILLE, MD--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1965 - 1999	
ANNUAL TOTAL	28615.4		23255.0			
ANNUAL MEAN	78.4		63.7		92.1	
HIGHEST ANNUAL MEAN					133	1996
LOWEST ANNUAL MEAN					53.4	1966
HIGHEST DAILY MEAN	593	Jan 9	557	Apr 10	3100	Sep 14 1971
LOWEST DAILY MEAN	5.8	(a)	2.2	Sep 4	1.6	(b)
ANNUAL SEVEN-DAY MINIMUM	6.0	Dec 1	2.8	Aug 29	2.0	Sep 7 1966
INSTANTANEOUS PEAK FLOW			1260	Apr 9	(c)4650	Sep 14 1971
INSTANTANEOUS PEAK STAGE			4.70	Apr 9	(d)9.60	Sep 14 1971
INSTANTANEOUS LOW FLOW			2.1	(f)	1.5	Sep 12 1966
ANNUAL RUNOFF (CFSM)	1.60		1.30		1.88	
ANNUAL RUNOFF (INCHES)	21.77		17.69		25.59	
10 PERCENT EXCEEDS	210		217		228	
50 PERCENT EXCEEDS	39		12		50	
90 PERCENT EXCEEDS	6.9		3.8		8.3	

a Dec. 2, 3.
b Sept. 12, 13, 1966.
c From rating curve extended above 2,000 ft^3/s on basis of slope-area measurement of peak flow.
d From floodmarks.
f Sept. 3, 4.



DAILY MEAN DISCHARGE - 1999 WATER YEAR

03078000 CASSELMAN RIVER AT GRANTSVILLE, MD

LOCATION.--Lat 39°42'08", long 79°08'12", Garrett County, Hydrologic Unit 05020006, on left bank at downstream side of highway bridge, 0.3 mi upstream from Slaubaugh Run, 0.7 mi downstream from U.S. Highway 40, and 1.0 mi northeast of Grantsville.

DRAINAGE AREA.--62.5 mi^2.

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

REVISED RECORDS.--WSP 1143: 1948.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 2,088.97 ft above sea level.

REMARKS.--Records good except those for estimated daily discharges (ice effect), which are fair. U.S. Army Corps of Engineers satellite telemeter at station. Several measurements of water temperature were made during the year. Water-quality records for some prior periods have been collected at this location.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jan 13	----	ICE JAM	*6.02	Apr 11	1400	1,190	3.69
Jan 23	2345	1,430	4.04	Apr 23	2115	1,140	3.62
Apr 9	2115	*1,630	4.32				

Minimum discharge, 1.3 ft^3/s, Sep 4.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.8	8.5	7.9	14	132	e160	369	101	31	12	11	2.1
2	7.2	7.7	7.2	e12	164	121	326	90	30	11	18	1.8
3	6.6	7.3	7.2	e14	161	179	248	81	37	8.6	9.9	1.6
4	14	7.4	7.2	e18	137	297	253	75	29	7.3	5.9	1.8
5	17	7.3	7.2	e15	133	212	279	68	22	5.8	4.6	4.5
6	12	7.5	7.7	e14	136	180	210	66	18	4.9	3.8	9.0
7	9.3	7.8	7.8	e13	195	225	173	63	16	4.3	3.4	22
8	29	7.4	9.6	e12	524	168	145	61	14	3.7	5.4	10
9	31	7.7	20	e30	277	161	806	56	12	3.4	8.4	5.8
10	23	7.7	15	e130	215	152	843	49	11	4.9	5.8	4.2
11	20	8.6	12	e100	171	141	811	45	11	5.8	4.2	3.3
12	15	7.9	10	e80	155	123	764	43	10	4.7	3.4	2.8
13	12	8.0	9.5	e130	138	104	451	45	8.6	3.9	3.0	2.6
14	11	7.9	10	364	118	86	317	70	8.6	3.5	2.7	2.5
15	10	8.5	9.7	178	117	114	274	53	11	3.3	2.5	2.4
16	9.5	7.9	10	153	108	111	340	43	10	2.9	2.5	3.5
17	8.7	7.5	10	117	110	150	243	38	27	2.8	2.3	4.5
18	8.4	8.1	10	257	100	643	257	35	24	2.6	2.1	4.5
19	8.3	7.5	11	237	88	524	284	39	13	2.5	2.0	3.8
20	8.1	7.5	12	151	79	332	316	41	9.9	2.6	1.9	3.2
21	7.8	8.3	17	136	74	424	280	32	8.8	2.5	1.8	3.1
22	15	7.9	36	172	87	547	256	38	8.2	2.5	1.7	2.8
23	14	7.5	41	669	106	326	525	131	7.2	2.4	1.6	2.7
24	11	7.6	28	1210	77	295	593	98	6.3	3.1	1.6	2.6
25	9.9	7.2	20	494	e66	334	317	83	5.9	3.6	3.2	2.4
26	9.1	9.3	15	296	e54	318	242	63	6.2	2.7	5.2	2.2
27	8.7	12	14	245	e90	312	193	56	5.1	2.3	5.9	2.1
28	8.8	10	e13	332	e130	338	157	49	14	14	4.9	2.2
29	9.5	8.8	e13	267	---	423	133	37	19	81	3.7	4.9
30	8.0	8.2	e14	187	---	434	115	33	13	25	2.8	24
31	9.8	---	16	146	---	377	---	33	---	11	2.4	---
TOTAL	379.5	242.5	428.0	6193	3942	8311	10520	1815	446.8	250.6	137.6	144.9
MEAN	12.2	8.08	13.8	200	141	268	351	58.5	14.9	8.08	4.44	4.83
MAX	31	12	41	1210	524	643	843	131	37	81	18	24
MIN	6.6	7.2	7.2	12	54	86	115	32	5.1	2.3	1.6	1.6
CFSM	.20	.13	.22	3.20	2.25	4.29	5.61	.94	.24	.13	.07	.08
IN.	.23	.14	.25	3.69	2.35	4.95	6.26	1.08	.27	.15	.08	.09

e Estimated

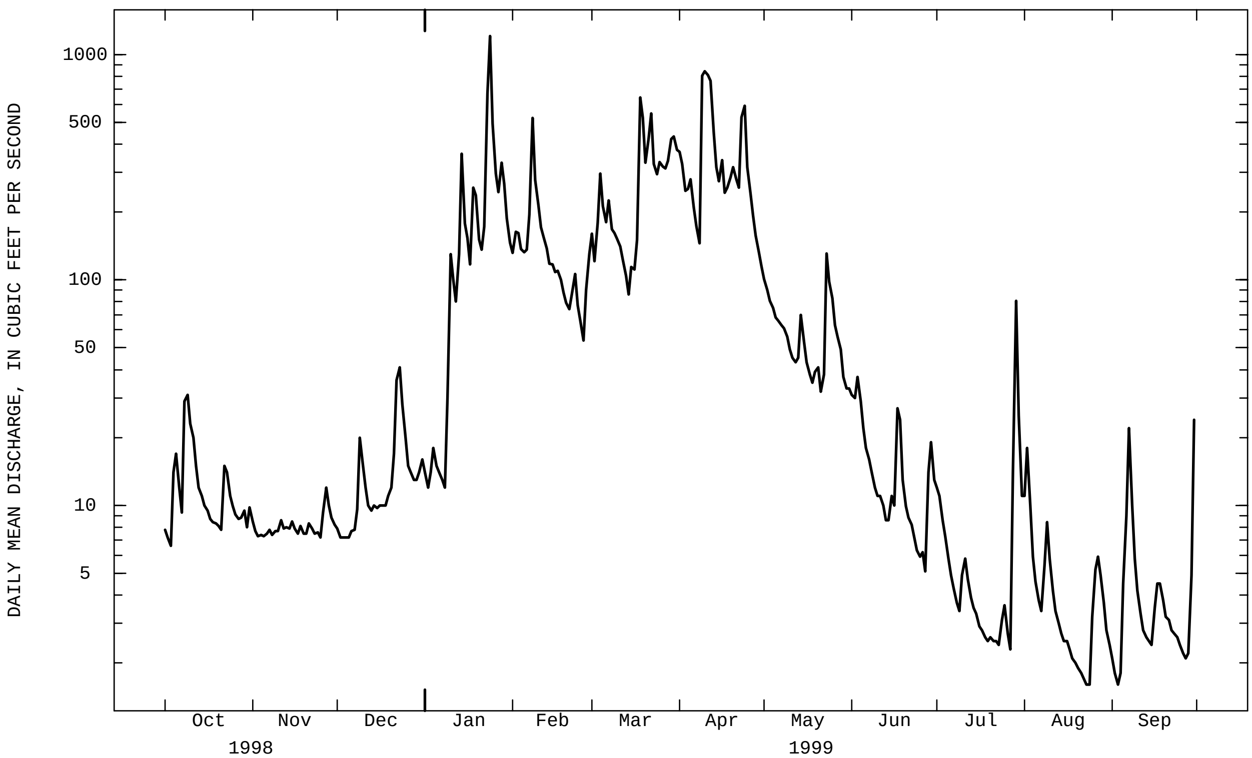
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1947 - 1999, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	46.4	88.9	148	165	197	265	212	136	72.6	49.1	37.3	34.3
MAX	288	449	341	376	414	582	468	312	200	175	202	290
(WY)	1955	1986	1973	1996	1956	1963	1970	1996	1951	1996	1956	1996
MIN	1.65	3.38	13.8	26.4	60.3	57.0	77.1	40.1	10.0	4.30	2.87	1.58
(WY)	1954	1954	1999	1977	1964	1990	1968	1976	1965	1965	1991	1991

03078000 CASSELMAN RIVER AT GRANTSVILLE, MD--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1947 - 1999	
ANNUAL TOTAL	42560.3		32810.9			
ANNUAL MEAN	117		89.9		121	
HIGHEST ANNUAL MEAN					203	1996
LOWEST ANNUAL MEAN					64.2	1954
HIGHEST DAILY MEAN	1120	Feb 18	1210	Jan 24	(e)3600	Jan 19 1996
LOWEST DAILY MEAN	5.0	Aug 8	1.6	(a)	(b).00	Aug 31 1962
ANNUAL SEVEN-DAY MINIMUM	6.9	Sep 14	1.8	Aug 18	.89	Aug 27 1962
INSTANTANEOUS PEAK FLOW			1630	Jan 23	(c)8400	Oct 15 1954
INSTANTANEOUS PEAK STAGE			6.02	Jan 13	10.70	Oct 15 1954
INSTANTANEOUS LOW FLOW			1.3	Sep 4	(b).00	(d)
ANNUAL RUNOFF (CFSM)	1.87		1.44		1.93	
ANNUAL RUNOFF (INCHES)	25.33		19.53		26.21	
10 PERCENT EXCEEDS	282		282		281	
50 PERCENT EXCEEDS	50		14		67	
90 PERCENT EXCEEDS	7.9		2.8		8.1	

e Estimated
a Aug. 23, 24, Sept. 3.
b Result of regulation from unknown source.
c From rating curve extended above 1,600 ft^3/s on basis of contracted-opening measurement at gage height of 8.13 ft.
d Aug. 31, Sept. 1, 1962.



DAILY MEAN DISCHARGE - 1999 WATER YEAR

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 three tables. The first is a table of discharge measurements at low-flow partial-record stations, the second is a table of annual maximum stage and discharge at crest-stage stations, and the third is a table of annual maximum stage for tidal crest-stage stations.

Low-flow partial-record stations

Measurements of streamflow in the area covered by this report made at low-flow partial-record stations are given in the following table. These measurements were made during periods of base flow when streamflow is primarily from ground-water storage. These measurements, when correlated with the simultaneous discharge of a nearby stream when continuous records are available, will give a picture of the low-flow potentiality of a stream. The column headed "Period of record" shows the water years in which measurements were made at the same, or practically the same, site.

Discharge measurements made at low-flow partial-record stations during water year 1999

Station No.	Station Name	Location	Drainage area (mi^2)	Period of record	Measurements Date	Measurements Discharge (ft^3/s)
		INDIAN RIVER BASIN				
01484530	Iron Branch at Millsboro, De.	Lat 38°34'40", long 75°17'19", Sussex County, Hydrologic Unit 02060010, at bridge on U.S. Highway 113, at Millsboro, 1.1 mi upstream from Whartons Branch, and 1.4 mi upstream from mouth.	8.0	1985-88, 1997-99	02-10-99	9.00
					03-09-99	6.04
					04-08-99	10.5
					05-03-99	5.38
					06-10-99	1.93
					07-08-99	1.34
					08-09-99	0.87
					09-03-99	2.61
01484531	Whartons Branch near Millsboro, De.	Lat 38°33'42", long 75°16'30", Sussex County, Hydrologic Unit 02060010, at bridge on U.S. Highway 113, 2.2 mi southeast of Millsboro, and 1.7 mi upstream from mouth.	5.8	1968-69, 1971, 1985-88, 1999	02-10-99	6.56
					03-09-99	3.93
					04-08-99	6.62
					05-03-99	2.94
					06-10-99	0.51
					07-08-99	0.29
					08-09-99	0.10
					09-03-99	0.13
01484550	Pepper Creek at Dagsboro, De.	Lat 38°32'50", long 75°14'40", Sussex County, Hydrologic Unit 02060010, at bridge on State Highway 26, at Dagsboro, and 3.5 mi upstream from mouth.	8.78	1955-71, 1985-88, 1997-99	02-10-99	8.33
					03-09-99	5.59
					04-08-99	9.94
					05-03-99	4.88
					06-10-99	2.20
					07-08-99	1.55
					08-09-99	1.39
					09-03-99	1.38
01484655	Love Creek at Robinsonville, De.	Lat 38°43'03", long 75°11'14", Sussex County, Hydrologic Unit 02060010, at bridge on road No. 277, 0.4 mi northeast of Robinsonville, and about 2.8 mi upstream from mouth.	11.1 (Revised)	1985-88, 1997-99	02-10-99	4.19
					03-09-99	5.12
					04-08-99	6.99
					05-03-99	6.74
					06-10-99	3.38
					07-08-99	2.96
					08-09-99	2.14
					09-03-99	2.61
01484677	Chapel Branch at Angola, De.	Lat 38°40'18", long 75°11'10", Sussex County, Hydrologic Unit 02060010, at bridge on State Highway 24, at Angola, and 0.3 mi upstream from mouth.	8.0	1985-88, 1997-99	02-10-99	3.26
					03-09-99	3.00
					04-08-99	6.14
					05-03-99	5.64
					06-10-99	1.65
					07-08-99	0.90
					08-09-99	0.70
01484678	Unity Branch at Angola, De.	Lat 38°39'53", long 75°12'11", Sussex County, Hydrologic Unit 02060010, at bridge on road No. 302, 0.7 mi southeast of Angola, and 0.7 mi upstream from mouth.	4.2	1999	02-10-99	2.87
					03-09-99	3.16
					04-08-99	5.57
					05-03-99	4.78
					06-10-99	2.40
					07-08-99	1.92
					08-09-99	1.26
					09-03-99	1.46

Discharge measurements made at low-flow partial-record stations during water year 1999

Station No.	Station Name	Location	Drainage area (mi^2)	Period of record	Measurements Date	Measurements Discharge (ft^3/s)
		ST. MARTIN RIVER BASIN				
01484710	Buntings Branch near Selbyville, De.	Lat 38°27'20", long 75°12'25", Sussex County, Hydrologic Unit 02060010, 50 ft upstream from bridge on State Highway 54, 0.8 mi east of Selbyville.	4.15	1999	02-23-99	5.17
01484714	Taylorville Creek near Berlin, Md.	Lat 38°21'09", long 75°11'40", Worcester County, Hydrologic Unit 02060010, upstream from culvert on Friendship Road, 0.6 mi northeast of Berlin, and 2.4 mi upstream from mouth.	0.94	1999	02-23-99	0.61
		TRAPPE CREEK BASIN				
01484716	Bottle Branch at Berlin, Md.	Lat 38°19'01", long 75°12'59", Worcester County, Hydrologic Unit 02060010, 600 ft upstream from culvert on U.S. Highway 113, 0.5 mi south of Berlin and 1.3 mi upstream from Kitts Branch.	0.35	1999	01-27-99	1.46
		NEWPORT CREEK BASIN				
01484717	Newport Creek near Berlin, Md.	Lat 38°18'08", long 75°12'41", Worcester County, Hydrologic Unit 02060010, 20 ft upstream from culvert on Harrison Road, 1.5 mi southeast of Berlin, and 3.4 mi upstream from mouth.	0.51	1999	01-13-99	0.05
01484718	Beaverdam Creek at Ironshire, Md.	Lat 38°16'57", long 75°13'23", Worcester County, Hydrologic Unit 02060010, 50 ft upstream from culvert on Beaverdam Creek Road, 0.2 mi east of Ironshire, and 0.8 mi upstream from mouth.	1.33	1999	01-13-99	0.83
		BASSETT CREEK BASIN				
01484719	Bassett Creek near Ironshire, Md.	Lat 38°16'04", long 75°14'41", Worcester County, Hydrologic Unit 02060010, 100 ft upstream from bridge on U.S. Highway 113, 1.4 mi south of Ironshire, and 1.8 mi upstream from Catbird Creek.	1.22	1999	01-28-99	1.49
01484720	Porter Creek near Newark, Md.	Lat 38°15'32", long 75°15'32", Worcester County, Hydrologic Unit 02060010, 250 ft upstream from culvert on U.S. Highway 113, 2.0 mi northeast of Newark, and 2.0 mi upstream from mouth.	0.76	1999	01-28-99	0.85
		MARSHALL CREEK BASIN				
01484721	Marshall Creek at Newark, Md.	Lat 38°14'19", long 75°16'59", Worcester County, Hydrologic Unit 02060010, 100 ft upstream from culvert on Langmaid Road, 1.0 mi southeast of Newark, and 1.4 mi upstream from Icehouse Branch.	1.30	1999	01-28-99	0.60
01484722	Massey Branch near Newark, Md.	Lat 38°15'41", long 75°16'21", Worcester County, Hydrologic Unit 02060010, 70 ft upstream from culvert on Newark Road, 1.3 mi northeast of Newark, and 2.1 mi upstream from mouth.	0.54	1999	01-27-99	0.55

Discharge measurements made at low-flow partial-record stations during water year 1999

Station No.	Station Name	Location	Drainage area (mi^2)	Period of record	Measurements Date	Measurements Discharge (ft^3/s)
		WATERWORKS CREEK BASIN				
01484723	Waterworks Creek Tributary near Cedartown, Md.	Lat 38°13'06", long 75°17'40", Worcester County, Hydrologic Unit 02060010, 3 ft upstream from culvert on Basket Switch Road, 0.9 mi upstream from mouth, and 1.6 mi north of Cedartown.	0.09	1999	01-28-99	0.14
		SCARBORO CREEK BASIN				
01484725	Scarboro Creek at Spence, Md.	Lat 38°09'56", long 75°18'23", Worcester County, Hydrologic Unit 02060010, 2 ft upstream from culvert on Taylor Road, 0.3 mi north of Spence, and 2.0 mi upstream from mouth.	0.27	1999	02-11-99	0.10
		PAWPAW CREEK BASIN				
01484726	Pawpaw Creek at Spence, Md.	Lat 38°09'07", long 75°19'02", Worcester County, Hydrologic Unit 02060010, 100 ft upstream from culvert on Pawpaw Creek Road, 0.8 mi south of Spence, and 2.0 mi upstream from mouth.	1.48	1999	01-29-99	0.01
		TANHOUSE CREEK BASIN				
01484727	Tanhouse Creek near Boxiron, Md.	Lat 38°07'59", long 75°19'37", Worcester County, Hydrologic Unit 02060010, 10 ft upstream from culvert on Pawpaw Creek Road, 1.7 mi northeast of Boxiron, and 2.3 mi upstream from mouth.	0.45	1999	02-11-99	0.73
		BROCKATONORTON BAY BASIN				
01484728	Boxiron Creek at Boxiron, Md.	Lat 38°07'42", long 75°20'53", Worcester County, Hydrologic Unit 02060010, 50 ft upstream from culvert on Ayres Lane Road, 0.9 mi north of Boxiron, and 2.1 mi upstream from mouth.	0.41	1999	01-29-99	0.13
01484729	Brockatonorton Bay Tributary at Boxiron, Md.	Lat 38°06'13", long 75°21'24", Worcester County, Hydrologic Unit 02060010, 40 ft upstream from culvert on Hudson Road, 0.9 mi south of Boxiron, and 1.0 mi upstream from mouth.	0.26	1999	02-11-99	0.09
		PIKES CREEK BASIN				
01484730	Pikes Creek near Stockton, Md.	Lat 38°04'24", long 75°24'12", Worcester County, Hydrologic Unit 02060010, 20 ft upstream from culvert on State Highway 12, 1.4 mi north of Stockton, and 3.0 mi upstream from mouth.	0.86	1999	02-10-99	0.44
		RILEY CREEK BASIN				
01484731	Riley Creek at Stockton, Md.	Lat 38°03'11", long 75°24'37", Worcester County, Hydrologic Unit 02060010, 10 ft downstream from culvert on State Highway 12, 0.1 mi south of Stockton, and 2.7 mi upstream from mouth.	0.12	1999	02-10-99	0.06

Discharge measurements made at low-flow partial-record stations during water year 1999

Station No.	Station Name	Location	Drainage area (mi^2)	Period of record	Measurements Date	Measurements Discharge (ft^3/s)
		SWANS GUT CREEK BASIN				
01484732	Little Mill Creek near Stockton, Md.	Lat 38°02'39", long 75°26'49", Worcester County, Hydrologic Unit 02060010, 40 ft upstream from culvert on Little Mill Road, 0.4 mi upstream from Marshall Mill Run, and 2.1 mi west of Stockton.	0.81	1999	02-10-99	0.43
01484733	Marshall Ditch near Stockton, Md.	Lat 38°02'02", long 75°29'02", Worcester County, Hydrologic Unit 02060010, at upstream side of culvert on Sheephouse Road, 1.3 mi upstream from Little Mill Run, and 4.2 mi west of Stockton.	0.28	1999	02-10-99	0.46
		LITTLE MOSQUITO CREEK BASIN				
0148473510	Wattsville Branch Tributary No. 1 at Wattsville, Va.	Lat 37°55'50", long 75°30'03", Accomack County, Hydrologic Unit 02060010, 20 ft upstream from culvert on State Highway 679, 0.2 mi south of Wattsville, and 0.3 mi upstream from mouth.	0.34	1999	02-09-99	0.21
0148474010	Snead Branch near Horntown, Va.	Lat 37°58'24", long 75°29'21", Accomack County, Hydrologic Unit 02060010, 50 ft upstream from culvert on State Highway 709, 1.5 mi west of Horntown, and 1.9 mi upstream from mouth.	0.77	1999	02-10-99	0.17

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.

Maximum discharge at crest-stage partial-record stations

			Water year 1999 maximum			Period of record maximum		
Station name and number	Location and drainage area	Period of record	Date	Gage height (ft)	Discharge (ft^3/s)	Date	Gage height (ft)	Discharge (ft^3/s)
	POTOMAC RIVER BASIN							
North Branch Potomac River at Kitzmiller, Md. (01595500)	Lat 39°23'38", long 79°10'55", Garrett County, Hydrologic Unit 02070002, on left bank 0.6 mi downstream from bridge on State Highway 38 in Kitzmiller. Drainage area is 225 mi^2.	1950-85¼≠, 1986-99	01-23-99	6.15	3,060	10-15-54	**a**13.73	33,400
North Branch Potomac River at Barnum, W. Va. (01595800)	Lat 39°26'44", long 79°06'39", Garrett County, Hydrologic Unit 02070002, on right bank at highway bridge at Barnum. Drainage area is 266 mi^2.	1967-85¼≠, 1986-99	04-13-99	5.61	2,270	7-03-78	13.37	27,100
North Branch Potomac River at Pinto, Md. (01600000)	Lat 39°26'44", long 79°06'39", Mineral County, W. Va., Hydrologic Unit 02070002, on right bank at downstream side of Western Maryland railroad bridge at Pinto, 2.8 mi downstream from Mill Run. Drainage area is 596 mi^2.	1939-85¼≠, 1986-99	03-18-99	5.37	3,240	10-16-54	23.23	37,000

¼≠ Operated as a continuous-record station.
a From floodmark

Tidal crest-stage partial-record stations

The following table contains annual maximum stages for tidal crest-stage stations. The informaton is obtained from a crest-stage gage or a water-stage recorder located at each site. A crest-stage gage is a device which will register the peak stage occurring between inspections of the gage. All stages are elevations above National Geodetic Vertical Datum of l929. Only the maximum stage is given. Information on some other high stages may have been obtained but is not published herein. The years given in the period of record represent water years for which the annual maximum has been determined.

Annual maximum stage at tidal crest-stage partial-record stations during water year 1999

Station No.	Station Name	Location	Period of Record	Annual Maximum Date	Annual Maximum Elevation, in feet NGVD
		DELAWARE RIVER BASIN			
01480065	Christina River at Newport, De.	Lat 39°42'38", long 75°36'33", New Castle County, Hydrologic Unit 02040205, on downstream side of bridge on James Street, at Newport and 7.5 mi upstream from the confluence with Delaware River.	1995-99	9-17-99	8.07
01481602	Delaware River below Christina River, at Wilmington, De.	Lat 39°43'00", long 75°31'03", New Castle County, Hydrologic Unit 02040205, on right bank, 1,000 ft from mouth of Christina River at the Wilmington Marine Terminal, 2.0 mi upstream of Delaware Memorial Bridge, and at river mi 69.70.	1983-91, 1995-99	9-16-99	5.76
		MURDERKILL RIVER BASIN			
01484085	Murderkill River at Bowers, De.	Lat 39°03'30", long 75°23'51", Kent County, Hydrologic Unit 02040207, at Faulkner’s Landing in Bowers, on left bank 10 ft southeast of south-west corner of Faulkner’s Pier nr near public boat ramp.	1966-86, 1997-99	1- 3-99	6.12
		INDIAN RIVER BASIN			
01484540	Indian River at Rosedale Beach, De.	Lat 38°35'29", long 75°12'44", Sussex County, Hydrologic Unit 02060010, on left bank attached to a privately owned fishing pier, at Seals Point, 1.9 mi west of Oak Orchard.	1992-99	3-15-99	4.51
01484683	Indian River Bay at Indian River Inlet near Bethany Beach, De.	Lat 38°36'35", long 75°04'06", Sussex County, Hydrologic Unit 02060010, 0.3 mi northwest of the Indian River Inlet, 0.2 mi west of State Highway 1, 4.9 mi north of Bethany Beach and at the Indian River Coast Guard Station.	1992-99	8-30-99	4.55

Water-quality partial-record stations are particular sites where chemical-quality, biological, and/or sediment data are collected systematically over a period of years for use in hydrologic analyses. The data are collected usually less than quarterly. Samples collected at sites other than gaging stations and partial-record stations to give better areal coverage in a river basin are referred to as miscellaneous sites.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

INDIAN RIVER BASIN

383930075123101 - PHILLIPS BRANCH NEAR FAIRMOUNT, DE

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)
AUG												
30...	1030	.23	760	7.8	6.1	112	21.0	16.4	6.3	2.2	1.5	9.2

ALKA-LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	BICAR-BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)
11	12	11	<.10	21	3.6	<.020	E.10	.20	4.82

NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	ALUM-INUM, DIS-SOLVED (UG/L AS AL) (01106)	ANTI-MONY, DIS-SOLVED (UG/L AS SB) (01095)	ARSENIC DIS-SOLVED (UG/L AS AS) (01000)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)
<.010	.013	<.010	.015	83	<10	<1.0	<1	E6.8	11

MERCURY DIS-SOLVED (UG/L AS HG) (71890)	SELE-NIUM, DIS-SOLVED (UG/L AS SE) (01145)	CARBON, ORGANIC DIS-SOLVED (MG/L AS C) (00681)	CARBON, ORGANIC SUS-PENDED TOTAL (MG/L AS C) (00689)	2,6-DI-ETHYL ANILINE WAT FLT 0.7 U GF, REC (UG/L) (82660)	ACETO-CHLOR, WATER FLTRD REC (UG/L) (49260)	ALA-CHLOR, WATER, DISS, REC, (UG/L) (46342)	ALPHA BHC DIS-SOLVED (UG/L) (34253)	ATRA-ZINE, WATER, DISS, REC (UG/L) (39632)	BEN-FLUR-ALIN WAT FLD 0.7 U GF, REC (UG/L) (82673)	BUTYL-ATE, WATER, DISS, REC (UG/L) (04028)
<.1	<1	.90	<.20	<.0030	<.0020	<.002	<.0020	.007	<.0020	<.0020

CAR-BARYL WATER FLTRD 0.7 U GF, REC (UG/L) (82680)	CARBO-FURAN WATER FLTRD 0.7 U GF, REC (UG/L) (82674)	CHLOR-PYRIFOS DIS-SOLVED (UG/L) (38933)	CYANA-ZINE, WATER, DISS, REC (UG/L) (04041)	DCPA WATER FLTRD 0.7 U GF, REC (UG/L) (82682)	DEETHYL ATRA-ZINE, WATER, DISS, REC (UG/L) (04040)	DIAZ-INON D10 SRG WAT FLT 0.7 U GF, REC PERCENT (91063)	DI-AZINON, DIS-SOLVED (UG/L) (39572)	DI-ELDRIN DIS-SOLVED (UG/L) (39381)	DISUL-FOTON WATER FLTRD 0.7 U GF, REC (UG/L) (82677)	EPTC WATER FLTRD 0.7 U GF, REC (UG/L) (82668)
<.0030	<.0030	<.0040	<.0040	<.0020	E.0343	105	<.002	<.001	<.0170	<.0300

ETHAL-FLUR-ALIN WAT FLT 0.7 U GF, REC (UG/L) (82663)	ETHO-PROP WATER FLTRD 0.7 U GF, REC (UG/L) (82672)	FONOFOS WATER DISS REC (UG/L) (04095)	HCH ALPHA D6 SRG WAT FLT 0.7 U GF, REC PERCENT (91065)	LINDANE DIS-SOLVED (UG/L) (39341)	LIN-URON WATER FLTRD 0.7 U GF, REC (UG/L) (82666)	MALA-THION, DIS-SOLVED (UG/L) (39532)	METHYL AZIN-PHOS WAT FLT 0.7 U GF, REC (UG/L) (82686)	METHYL PARA-THION WAT FLT 0.7 U GF, REC (UG/L) (82667)	METO-LACHLOR WATER DISSOLV (UG/L) (39415)	METRI-BUZIN SENCOR WATER DISSOLV (UG/L) (82630)
<.0040	<.0030	<.0030	103	<.004	<.0020	<.005	<.0010	<.0060	.045	<.004

E Estimated

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

INDIAN RIVER BASIN--Continued

383930075123101 - PHILLIPS BRANCH NEAR FAIRMOUNT, DE--Continued

DATE	TIME	MOL- INATE WATER FLTRD 0.7 U GF, REC (UG/L) (82671)	NAPROP- AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82684)	P,P' DDE DISSOLV (UG/L) (34653)	PARA- THION, DIS- SOLVED (UG/L) (39542)	PEB- ULATE WATER FILTRD 0.7 U GF, REC (UG/L) (82669)	PENDI- METH- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82683)	PER- METHRIN CIS WAT FLT 0.7 U GF, REC (UG/L) (82687)	PHORATE WATER FLTRD 0.7 U GF, REC (UG/L) (82664)	PRO- METON, WATER, DISS, REC (UG/L) (04037)	PRON- AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82676)	PROP- CHLOR, WATER, DISS, REC (UG/L) (04024)
AUG												
30...		<.0040	<.0030	<.0060	<.004	<.0040	<.0040	<.0050	<.0020	<.0180	<.0030	<.0070

DATE	TIME	PRO- PANIL WATER FLTRD 0.7 U GF, REC (UG/L) (82679)	PRO- PARGITE WATER FLTRD 0.7 U GF, REC (UG/L) (82685)	SI- MAZINE, WATER, DISS, REC (UG/L) (04035)	TEBU- THIURON WATER FLTRD 0.7 U GF, REC (UG/L) (82670)	TER- BACIL WATER FLTRD 0.7 U GF, REC (UG/L) (82665)	TER- BUFOS WATER FLTRD 0.7 U GF, REC (UG/L) (82675)	THIO- BENCARB WATER FLTRD 0.7 U GF, REC (UG/L) (82681)	TRIAL- LATE WATER FLTRD 0.7 U GF, REC (UG/L) (82678)	TRI- FLUR- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82661)
AUG										
30...		<.0040	<.0130	<.0050	<.0100	<.0070	<.0130	<.0020	<.0010	<.0020

DIRICKSON CREEK BASIN

0148469995 - BEARHOLE DITCH TRIBUTARY NEAR BUNTING, DE

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (MG/L) (00300)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)
FEB												
24...	0930	.89	771	11.0	6.6	192	1.5	3.7	22	5.8	11	17

DATE	TIME	ANC WATER UNFLTRD FET FIELD MG/L AS CACO3 (00410)	ANC WATER UNFLTRD FET FIELD MG/L AS HCO3 (00440)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)
FEB										
24...	0930	21	26	32	<.10	10	42	1.11	2.0	2.1

DATE	TIME	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C) (00681)
FEB										
24...	0930	8.04	.026	.021	.013	.050	206	400	86	9.8

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

ST MARTIN RIVER BASIN

01484710 - BUNTINGS BRANCH NEAR SELBYVILLE, DE

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)
FEB												
23...	1545	5.2	771	12.6	7.1	142	.0	3.2	16	6.1	7.2	11

ANC WATER UNFLTRD FET FIELD MG/L AS CACO3 (00410)	ANC WATER UNFLTRD FET FIELD MG/L AS HCO3 (00440)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)
9	11	24	<.10	9.0	29	.065	.75	.73

NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	CARBON, ORGANIC DIS-SOLVED (MG/L AS C) (00681)
6.28	.013	.011	.012	.038	157	280	48	9.3

01484714 - TAYLORVILLE CREEK NEAR BERLIN, MD

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)
FEB											
23...	1300	.61	771	13.8	6.7	107	1.0	1.8	7.4	4.8	3.4

SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	ANC UNFLTRD TIT 4.5 LAB (MG/L AS CACO3) (90410)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)
15	9.3	27	<.10	4.3	26	<.020	.30	.34	.674

NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	CARBON, ORGANIC DIS-SOLVED (MG/L AS C) (00681)
<.010	.012	<.010	.020	112	54	11	5.7

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

TRAPPE CREEK BASIN

01484716 - BOTTLE BRANCH AT BERLIN, MD

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)
JAN												
27...	1430	1.5	764	11.4	7.7	153	7.7	11.0	19	7.1	3.0	8.4

ANC UNFLTRD TIT 4.5 LAB (MG/L AS CACO3) (90410)	ALKA-LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	BICAR-BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)
51	50	6	11	<.10	8.4	28	.036	.37	.61

NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	CARBON, ORGANIC DIS-SOLVED (MG/L AS C) (00681)
.897	.013	.057	.037	.131	131	120	35	6.0

NEWPORT CREEK BASIN

01484717 - NEWPORT CREEK NEAR BERLIN, MD

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)
JAN												
13...	1100	.05	766	6.8	6.3	261	13.5	4.6	11	7.9	2.5	20

ANC UNFLTRD TIT 4.5 LAB (MG/L AS CACO3) (90410)	ALKA-LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	BICAR-BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)
6.8	6	7	35	<.10	11	47	.020	.26	.30

NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	CARBON, ORGANIC DIS-SOLVED (MG/L AS C) (00681)
.204	<.010	.008	<.010	.015	164	76	42	6.4

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

NEWPORT CREEK BASIN--Continued

01484718 - BEAVERDAM CREEK AT IRONSHIRE, MD

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)
JAN												
13...	1630	.83	765	8.3	6.7	167	10.5	10.6	8.2	4.1	1.7	15

ANC UNFLTRD TIT 4.5 LAB (MG/L AS CACO3) (90410)	ALKA-LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	BICAR-BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)
15	13	16	18	<.10	21	11	.035	.11	.39

NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	CARBON, ORGANIC DIS-SOLVED (MG/L AS C) (00681)
4.97	.013	.017	.022	.040	114	37	16	1.7

BASSETT CREEK BASIN

01484719 - BASSETT CREEK NEAR IRONSHIRE, MD

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)
JAN												
28...	0930	1.5	760	9.8	6.0	116	12.0	8.1	8.5	6.9	3.6	9.3

ANC UNFLTRD TIT 4.5 LAB (MG/L AS CACO3) (90410)	ALKA-LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	BICAR-BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)
6.1	4	4	17	<.10	11	32	.027	.67	.69

NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	CARBON, ORGANIC DIS-SOLVED (MG/L AS C) (00681)
1.12	<.010	.027	.015	.055	129	390	65	15

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

BASSETT CREEK BASIN--Continued

01484720 - PORTER CREEK NEAR NEWARK, MD

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (MG/L) (00300)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)
JAN												
28...	1130	.85	760	8.4	6.4	152	20.0	10.2	12	8.9	4.2	10

ANC UNFLTRD TIT 4.5 LAB (MG/L AS CACO3) (90410)	ALKA- LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)
8.7	7	8	17	<.10	15	42	.025	.53	.54

NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C) (00681)
3.70	.012	.082	.072	.114	148	140	89	11

MARSHALL CREEK BASIN

01484721 - MARSHALL CREEK AT NEWARK, MD

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (MG/L) (00300)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)
JAN											
28...	1400	.60	762	7.8	4.7	130	19.0	10.1	8.2	5.6	2.4

SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	ANC UNFLTRD TIT 4.5 LAB (MG/L AS CACO3) (90410)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)
13	1.4	13	<.10	20	47	.023	.42	.42	.082

NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C) (00681)
<.010	.007	<.010	.021	138	330	32	11

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

MARSHALL CREEK BASIN--Continued

01484722 - MASSEY BRANCH NEAR NEWARK, MD

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	OXYGEN, DIS-SOLVED (MG/L) (00300)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)
JAN											
27...	1630	.55	6.9	6.3	101	9.0	8.5	6.9	4.4	2.2	11

DATE	ANC WATER UNFLTRD FET FIELD MG/L AS CACO3 (00410)	ANC WATER UNFLTRD FET FIELD MG/L AS HCO3 (00440)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)
JAN 27...	8	10	17	<.10	15	24	.036	.48	.77

DATE	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	CARBON, ORGANIC DIS-SOLVED (MG/L AS C) (00681)
JAN 27...	.234	.015	.026	.014	.076	119	440	43	15

WATERWORKS CREEK BASIN

01484723 - WATERWORKS CREEK TRIBUTARY NEAR CEDARTOWN, MD

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)
JAN										
28...	1630	.14	760	4.6	4.9	98	19.0	12.5	6.9	4.2

DATE	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	ANC UNFLTRD TIT 4.5 LAB (MG/L AS CACO3) (90410)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)
JAN 28...	3.8	8.1	3.7	<.10	12	.020	1.1	1.1	.224

DATE	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	CARBON, ORGANIC DIS-SOLVED (MG/L AS C) (00681)
JAN 28...	.012	.094	.068	.109	168	440	67	39

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

SCARBORO CREEK BASIN

01484725 - SCARBORO CREEK AT SPENCE, MD

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)
FEB												
11...	1230	.10	771	12.4	5.3	52	12.5	10.5	7.2	5.1	2.6	10

ANC WATER UNFLTRD FET FIELD MG/L AS CACO3 (00410)	ANC WATER UNFLTRD FET FIELD MG/L AS HCO3 (00440)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)
1	1	17	<.10	11	33	.024	.33	.50

NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	CARBON, ORGANIC DIS-SOLVED (MG/L AS C) (00681)
.461	<.010	.025	.018	.054	110	130	74	8.7

PAW PAW CREEK BASIN

01484726 - PAWPAW CREEK AT SPENCE, MD

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	OXYGEN, DIS-SOLVED (MG/L) (00300)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)
JAN											
29...	1000	.73	9.1	5.6	72	8.0	7.7	12	7.1	4.8	9.7

ANC WATER UNFLTRD FET FIELD MG/L AS CACO3 00410)	ANC WATER UNFLTRD FET FIELD MG/L AS HCO3 (00440)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)
2	2	21	<.10	8.8	33	<.020	.54	.55

NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	CARBON, ORGANIC DIS-SOLVED (MG/L AS C) (00681)
4.20	<.010	.008	<.010	.017	126	56	44	8.5

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

TANHOUSE CREEK BASIN

01484727 - TANHOUSE CREEK NEAR BOXIRON, MD

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)
FEB											
11...	1100	.01	771	5.8	4.1	124	12.5	7.9	6.6	6.5	1.8

DATE	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)
FEB 11...	11	14	<.10	14	54	<.020	.16	.21	<.050

DATE	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	CARBON, ORGANIC DIS-SOLVED (MG/L AS C) (00681)
FEB 11...	<.010	.005	<.010	.008	120	140	46	6.4

BROCKATONORTON BAY BASIN

01484728 - BOXIRON CREEK AT BOXIRON, MD

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)
JAN											
29...	1130	.13	769	5.2	4.9	113	11.0	8.8	7.4	4.7	2.3

DATE	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	ANC UNFLTRD TIT 4.5 LAB (MG/L AS CACO3) (90410)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)
JAN 29...	11	1.5	15	<.10	12	36	<.020	.32	.32	<.050

DATE	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	CARBON, ORGANIC DIS-SOLVED (MG/L AS C) (00681)
JAN 29...	.011	.016	.011	.028	110	210	49	9.4

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

BROCKATONORTON BAY BASIN--Continued

01484729 - BROCKATONORTON BAY TRIBUTARY AT BOXIRON, MD

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)
FEB												
11...	0930	.09	771	8.4	6.1	157	10.0	5.7	15	9.4	5.5	11

ANC WATER UNFLTRD FET FIELD MG/L AS CACO3 (00410)	ANC WATER UNFLTRD FET FIELD MG/L AS HCO3 (00440)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)
8	10	24	<.10	12	54	.065	.51	.55

NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	CARBON, ORGANIC DIS-SOLVED (MG/L AS C) (00681)
1.25	<.010	.029	.018	.045	161	160	35	7.1

PIKES CREEK BASIN

01484730 - PIKES CREEK NEAR STOCKTON, MD

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)
FEB												
10...	1615	.44	766	11.7	5.7	132	12.0	8.6	13	6.0	2.5	9.6

ANC WATER UNFLTRD FET FIELD MG/L AS CACO3 00410)	ANC WATER UNFLTRD FET FIELD MG/L AS HCO3 (00440)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)
2	2	15	<.10	15	46	<.020	.33	.32

NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	CARBON, ORGANIC DIS-SOLVED (MG/L AS C) (00681)
1.51	<.010	.008	.016	.014	126	59	44	5.5

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

RILEY CREEK BASIN

01484731 - RILEY CREEK AT STOCKTON, MD

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)
FEB												
10...	1500	.06	766	9.8	6.9	284	12.0	7.7	32	12	7.2	22

ANC WATER UNFLTRD FET FIELD MG/L AS CACO3 (00410)	ANC WATER UNFLTRD FET FIELD MG/L AS HCO3 (00440)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)
28	34	41	<.10	11	77	.030	.59	.69

NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	CARBON, ORGANIC DIS-SOLVED (MG/L AS C) (00681)
3.84	.019	.094	.097	.134	260	48	30	6.7

SWANS GUT CREEK BASIN

01484732 - LITTLE MILL CREEK NEAR STOCKTON, MD

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)
FEB												
10...	1315	.43	766	10.2	6.6	191	11.0	8.4	16	12	3.2	14

ANC WATER UNFLTRD FET FIELD MG/L AS CACO3 (00410)	ANC WATER UNFLTRD FET FIELD MG/L AS HCO3 (00440)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)
11	13	25	<.10	13	56	<.020	.27	.32

NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	CARBON, ORGANIC DIS-SOLVED (MG/L AS C) (00681)
3.98	<.010	.011	.019	.025	171	120	28	4.2

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

SWANS GUT CREEK BASIN--Continued

01484733 - MARSHALL DITCH NEAR STOCKTON, MD

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)
FEB												
10...	1145	.46	766	10.8	5.1	176	12.0	9.1	19	8.1	5.2	8.7

ANC WATER UNFLTRD FET FIELD MG/L AS CACO3 (00410)	ANC WATER UNFLTRD FET FIELD MG/L AS HCO3 (00440)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)
2	2	20	<.10	11	52	.094	.56	.60

NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	CARBON, ORGANIC DIS-SOLVED (MG/L AS C) (00681)
5.29	.011	.005	.014	.034	145	190	69	5.7

LITTLE MOSQUITO CREEK BASIN

0148473510 - WATTSVILLE BRANCH TRIBUTARY NO. 1 AT WATTSVILLE, VA

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)
FEB												
09...	1600	.21	764	8.3	6.7	178	11.5	10.3	15	10	3.2	11

ANC WATER UNFLTRD FET FIELD MG/L AS CACO3 (00410)	ANC WATER UNFLTRD FET FIELD MG/L AS HCO3 (00440)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)
16	19	18	<.10	14	45	.030	.16	.31

NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	CARBON, ORGANIC DIS-SOLVED (MG/L AS C) (00681)
4.57	.010	.013	.020	.024	144	66	34	2.9

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

POCOMOKE RIVER BASIN

0148498080 - UNAMED DITCH TO NORTH FORK GREEN RUN NEAR WHITESVILLE, DE

DATE	TIME	OXYGEN, DIS- SOLVED (MG/L) (00300)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)
MAR									
23...	1030	16.5	4.2	224	7.0	7.6	.022	.84	--
SEP									
24...	1000	.8	6.6	135	20.0	17.8	<.020	2.2	3.3

DATE	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)
MAR					
23...	14.2	<.010	E.033	<.010	--
SEP					
24...	<.050	<.010	1.26	1.21	.887

01484981 - NORTH FORK GREEN RUN NEAR WHITESVILLE, DE

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (MG/L) (00300)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)
MAR												
25...	1600	--	--	7.8	6.3	144	12.5	15.2	--	--	--	--
SEP												
22...	0930	5.9	754	5.2	5.9	160	23.0	15.8	10	3.1	6.9	10
29...	1230	--	--	5.5	6.3	136	31.0	21.7	--	--	--	--

DATE	ALKA- LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)
MAR											
25...	--	--	--	--	--	--	.055	.47	--	5.23	<.010
SEP											
22...	15	18	14	<.10	17	19	.184	.91	1.2	2.95	.022
29...	--	--	--	--	--	--	.050	.33	.44	2.30	.012

DATE	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106)	ANTI- MONY, DIS- SOLVED (UG/L AS SB) (01095)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)
MAR									
25...	E.032	.029	--	--	--	--	--	--	--
SEP									
22...	.082	.066	3.28	143	92	<1.0	2	540	76
29...	.015	.017	2.88	--	--	--	--	--	--

E Estimated

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

POCOMOKE RIVER BASIN--Continued

01484981 - NORTH FORK GREEN RUN NEAR WHITESVILLE, DE--Continued

DATE	MERCURY DIS-SOLVED (UG/L AS HG) (71890)	SELE-NIUM, DIS-SOLVED (UG/L AS SE) (01145)	CARBON, ORGANIC DIS-SOLVED (MG/L AS C) (00681)	2,6-DI-ETHYL ANILINE WAT FLT 0.7 U GF, REC (UG/L) (82660)	ACETO-CHLOR, WATER FLTRD REC (UG/L) (49260)	ALA-CHLOR, WATER, DISS, REC, (UG/L) (46342)	ALPHA BHC DIS-SOLVED (UG/L) (34253)	ATRA-ZINE, WATER, DISS, REC (UG/L) (39632)	BEN-FLUR-ALIN WAT FLD 0.7 U GF, REC (UG/L) (82673)	BUTYL-ATE, WATER, DISS, REC (UG/L) (04028)	CAR-BARYL WATER FLTRD 0.7 U GF, REC (UG/L) (82680)
MAR											
25...	--	--	--	--	--	--	--	--	--	--	--
SEP											
22...	<.1	<1	11	<.0030	.0120	.008	<.0020	.067	<.0020	<.0020	E.0043
29...	--	--	--	--	--	--	--	--	--	--	--

DATE	CARBO-FURAN WATER FLTRD 0.7 U GF, REC (UG/L) (82674)	CHLOR-PYRIFOS DIS-SOLVED (UG/L) (38933)	CYANA-ZINE, WATER, DISS, REC (UG/L) (04041)	DCPA WATER FLTRD 0.7 U GF, REC (UG/L) (82682)	DEETHYL ATRA-ZINE, WATER, DISS, REC (UG/L) (04040)	DIAZ-INON D10 SRG WAT FLT 0.7 U GF, REC PERCENT (91063)	DI-AZINON, DIS-SOLVED (UG/L) (39572)	DI-ELDRIN DIS-SOLVED (UG/L) (39381)	DISUL-FOTON WATER FLTRD 0.7 U GF, REC (UG/L) (82677)	EPTC WATER FLTRD 0.7 U GF, REC (UG/L) (82668)	ETHAL-FLUR-ALIN WAT FLT 0.7 U GF, REC (UG/L) (82663)
MAR											
25...	--	--	--	--	--	--	--	--	--	--	--
SEP											
22...	<.0030	<.0040	<.0040	<.0020	E.0227	112	<.002	<.001	<.0170	<.0020	<.0040
29...	--	--	--	--	--	--	--	--	--	--	--

DATE	ETHO-PROP WATER FLTRD 0.7 U GF, REC (UG/L) (82672)	FONOFOS WATER DISS REC (UG/L) (04095)	HCH ALPHA D6 SRG WAT FLT 0.7 U GF, REC PERCENT (91065)	LINDANE DIS-SOLVED (UG/L) (39341)	LIN-URON WATER FLTRD 0.7 U GF, REC (UG/L) (82666)	MALA-THION, DIS-SOLVED (UG/L) (39532)	METHYL AZIN-PHOS WAT FLT 0.7 U GF, REC (UG/L) (82686)	METHYL PARA-THION WAT FLT 0.7 U GF, REC (UG/L) (82667)	METO-LACHLOR WATER DISSOLV (UG/L) (39415)	METRI-BUZIN SENCOR WATER DISSOLV (UG/L) (82630)	MOL-INATE WATER FLTRD 0.7 U GF, REC (UG/L) (82671)
MAR											
25...	--	--	--	--	--	--	--	--	--	--	--
SEP											
22...	<.0030	<.0030	113	<.004	<.0020	<.005	<.0010	<.0060	.157	<.004	<.0040
29...	--	--	--	--	--	--	--	--	--	--	--

DATE	NAPROP-AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82684)	P,P' DDE DISSOLV (UG/L) (34653)	PARA-THION, DIS-SOLVED (UG/L) (39542)	PEB-ULATE WATER FILTRD 0.7 U GF, REC (UG/L) (82669)	PENDI-METH-ALIN WAT FLT 0.7 U GF, REC (UG/L) (82683)	PER-METHRIN CIS WAT FLT 0.7 U GF, REC (UG/L) (82687)	PHORATE WATER FLTRD 0.7 U GF, REC (UG/L) (82664)	PRO-METON, WATER, DISS, REC (UG/L) (04037)	PRON-AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82676)	PROP-CHLOR, WATER, DISS, REC (UG/L) (04024)
MAR										
25...	--	--	--	--	--	--	--	--	--	--
SEP										
22...	<.0030	<.0060	<.004	<.0040	<.0040	<.0050	<.0020	E.0098	<.0030	<.0070
29...	--	--	--	--	--	--	--	--	--	--

DATE	PRO-PANIL WATER FLTRD 0.7 U GF, REC (UG/L) (82679)	PRO-PARGITE WATER FLTRD 0.7 U GF, REC (UG/L) (82685)	SI-MAZINE, WATER, DISS, REC (UG/L) (04035)	TEBU-THIURON WATER FLTRD 0.7 U GF, REC (UG/L) (82670)	TER-BACIL WATER FLTRD 0.7 U GF, REC (UG/L) (82665)	TER-BUFOS WATER FLTRD 0.7 U GF, REC (UG/L) (82675)	THIO-BENCARB WATER FLTRD 0.7 U GF, REC (UG/L) (82681)	TRIAL-LATE WATER FLTRD 0.7 U GF, REC (UG/L) (82678)	TRI-FLUR-ALIN WAT FLT 0.7 U GF, REC (UG/L) (82661)
MAR									
25...	--	--	--	--	--	--	--	--	--
SEP									
22...	<.0040	<.0130	.0105	.0105	<.0070	<.0130	<.0020	<.0010	<.0020
29...	--	--	--	--	--	--	--	--	--

E Estimated

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

POCOMOKE RIVER BASIN--Continued

01484983 - SOUTH FORK GREEN RUN NEAR WHITESVILLE, DE

DATE TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)
SEP 22... 1400	4.7	754	5.6	5.8	157	20.0	18.1	9.9	3.5	8.1	9.5

DATE TIME	ALKA-LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	BICAR-BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)
SEP 22... 1400	10	13	16	<.10	11	23	.086	1.1	1.3	1.73	.021

DATE TIME	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	ALUM-INUM, DIS-SOLVED (UG/L AS AL) (01106)	ANTI-MONY, DIS-SOLVED (UG/L AS SB) (01095)	ARSENIC DIS-SOLVED (UG/L AS AS) (01000)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)
SEP 22... 1400	.128	.099	.167	136	421	<1.0	1	340	56

DATE TIME	MERCURY DIS-SOLVED (UG/L AS HG) (71890)	SELE-NIUM, DIS-SOLVED (UG/L AS SE) (01145)	CARBON, ORGANIC DIS-SOLVED (MG/L AS C) (00681)	CARBON, ORGANIC SUS-PENDED TOTAL (MG/L AS C) (00689)	2,6-DI-ETHYL ANILINE WAT FLT 0.7 U GF, REC (UG/L) (82660)	ACETO-CHLOR, WATER FLTRD REC (UG/L) (49260)	ALA-CHLOR, WATER, DISS, REC, (UG/L) (46342)	ALPHA BHC DIS-SOLVED (UG/L) (34253)	ATRA-ZINE, WATER, DISS, REC (UG/L) (39632)	BEN-FLUR-ALIN WAT FLD 0.7 U GF, REC (UG/L) (82673)	BUTYL-ATE, WATER, DISS, REC (UG/L) (04028)
SEP 22... 1400	<.1	1	20	E.50	<.0030	<.0020	<.005	<.0020	.040	<.0020	<.0020

DATE TIME	CAR-BARYL WATER FLTRD 0.7 U GF, REC (UG/L) (82680)	CARBO-FURAN WATER FLTRD 0.7 U GF, REC (UG/L) (82674)	CHLOR-PYRIFOS DIS-SOLVED (UG/L) (38933)	CYANA-ZINE, WATER, DISS, REC (UG/L) (04041)	DCPA WATER FLTRD 0.7 U GF, REC (UG/L) (82682)	DEETHYL ATRA-ZINE, WATER, DISS, REC (UG/L) (04040)	DIAZ-INON D10 SRG WAT FLT 0.7 U GF, REC PERCENT (91063)	DI-AZINON, DIS-SOLVED (UG/L) (39572)	DI-ELDRIN DIS-SOLVED (UG/L) (39381)	DISUL-FOTON WATER FLTRD 0.7 U GF, REC (UG/L) (82677)	EPTC WATER FLTRD 0.7 U GF, REC (UG/L) (82668)
SEP 22... 1400	<.0030	<.0030	<.0040	<.0040	<.0020	E.0248	110	<.002	<.001	<.0170	<.0020

DATE TIME	ETHAL-FLUR-ALIN WAT FLT 0.7 U GF, REC (UG/L) (82663)	ETHO-PROP WATER FLTRD 0.7 U GF, REC (UG/L) (82672)	FONOFOS WATER DISS REC (UG/L) (04095)	HCH ALPHA D6 SRG WAT FLT 0.7 U GF, REC PERCENT (91065)	LINDANE DIS-SOLVED (UG/L) (39341)	LIN-URON WATER FLTRD 0.7 U GF, REC (UG/L) (82666)	MALA-THION, DIS-SOLVED (UG/L) (39532)	METHYL AZIN-PHOS WAT FLT 0.7 U GF, REC (UG/L) (82686)	METHYL PARA-THION WAT FLT 0.7 U GF, REC (UG/L) (82667)	METO-LACHLOR WATER DISSOLV (UG/L) (39415)	METRI-BUZIN SENCOR WATER DISSOLV (UG/L) (82630)
SEP 22... 1400	<.0040	<.0030	<.0030	108	<.004	<.0020	<.005	<.0010	<.0060	.072	<.004

E Estimated

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

POCOMOKE RIVER BASIN--Continued

01484983 - SOUTH FORK GREEN RUN NEAR WHITESVILLE, DE--Continued

DATE	MOLINATE WATER FLTRD 0.7 U GF, REC (UG/L) (82671)	NAPROPAMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82684)	P,P' DDE DISSOLV (UG/L) (34653)	PARATHION, DISSOLVED (UG/L) (39542)	PEBULATE WATER FILTRD 0.7 U GF, REC (UG/L) (82669)	PENDIMETHALIN WAT FLT 0.7 U GF, REC (UG/L) (82683)	PERMETHRIN CIS WAT FLT 0.7 U GF, REC (UG/L) (82687)	PHORATE WATER FLTRD 0.7 U GF, REC (UG/L) (82664)	PROMETON, WATER, DISS, REC (UG/L) (04037)	PRONAMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82676)	PROPCHLOR, WATER, DISS, REC (UG/L) (04024)
SEP											
22...	<.0040	<.0030	<.0060	<.004	<.0040	<.0040	<.0050	<.0020	.0698	<.0030	<.0070

PROPANIL WATER FLTRD 0.7 U GF, REC (UG/L) (82679)	PROPARGITE WATER FLTRD 0.7 U GF, REC (UG/L) (82685)	SIMAZINE, WATER, DISS, REC (UG/L) (04035)	TEBUTHIURON WATER FLTRD 0.7 U GF, REC (UG/L) (82670)	TERBACIL WATER FLTRD 0.7 U GF, REC (UG/L) (82665)	TERBUFOS WATER FLTRD 0.7 U GF, REC (UG/L) (82675)	THIOBENCARB WATER FLTRD 0.7 U GF, REC (UG/L) (82681)	TRIALLATE WATER FLTRD 0.7 U GF, REC (UG/L) (82678)	TRIFLURALIN WAT FLT 0.7 U GF, REC (UG/L) (82661)
<.0040	<.0130	.0393	<.0100	<.0070	<.0130	<.0020	<.0010	<.0020

01484985 - GREEN RUN NEAR CAREYTOWN, MD

DATE	TIME	DISCHARGE, INST. CUBIC FEET PER SECOND (00061)	BAROMETRIC PRESSURE (MM OF HG) (00025)	OXYGEN, DISSOLVED (MG/L) (00300)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)	SPECIFIC CONDUCTANCE (US/CM) (00095)	TEMPERATURE AIR (DEG C) (00020)	TEMPERATURE WATER (DEG C) (00010)	CALCIUM DISSOLVED (MG/L AS CA) (00915)	MAGNESIUM, DISSOLVED (MG/L AS MG) (00925)	POTASSIUM, DISSOLVED (MG/L AS K) (00935)	SODIUM, DISSOLVED (MG/L AS NA) (00930)
SEP												
23...	0900	14	759	4.8	6.0	176	24.0	15.1	12	3.9	7.9	11
30...	1200	--	--	3.4	6.3	150	19.0	20.9	--	--	--	--

DATE	ALKALINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	BICARBONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	CHLORIDE, DISSOLVED (MG/L AS CL) (00940)	FLUORIDE, DISSOLVED (MG/L AS F) (00950)	SILICA, DISSOLVED (MG/L AS SIO2) (00955)	SULFATE DISSOLVED (MG/L AS SO4) (00945)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N) (00608)	NITROGEN, AMMONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N) (00631)	NITROGEN, NITRITE DISSOLVED (MG/L AS N) (00613)
SEP											
23...	16	19	16	<.10	18	25	.069	1.0	.94	3.11	.024
30...	--	--	--	--	--	--	.144	.64	.88	1.12	.014

DATE	PHOSPHORUS DISSOLVED (MG/L AS P) (00666)	PHOSPHORUS ORTHO, DISSOLVED (MG/L AS P) (00671)	PHOSPHORUS TOTAL (MG/L AS P) (00665)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L) (70300)	ALUMINUM, DISSOLVED (UG/L AS AL) (01106)	ANTIMONY, DISSOLVED (UG/L AS SB) (01095)	ARSENIC DISSOLVED (UG/L AS AS) (01000)	IRON, DISSOLVED (UG/L AS FE) (01046)
SEP								
23...	.040	.025	.096	140	132	<1.0	<1	440
30...	.023	.026	.129	--	--	--	--	--

DATE	MANGANESE, DISSOLVED (UG/L AS MN) (01056)	MERCURY DISSOLVED (UG/L AS HG) (71890)	SELENIUM, DISSOLVED (UG/L AS SE) (01145)	CARBON, ORGANIC DISSOLVED (MG/L AS C) (00681)	CARBON, ORGANIC SUSPENDED TOTAL (MG/L AS C) (00689)	2,6-DIETHYL ANILINE WAT FLT 0.7 U GF, REC (UG/L) (82660)	ACETOCHLOR, WATER FLTRD REC (UG/L) (49260)	ALACHLOR, WATER, DISS, REC, (UG/L) (46342)	ALPHA BHC DISSOLVED (UG/L) (34253)	ATRAZINE, WATER, DISS, REC (UG/L) (39632)	BENFLURALIN WAT FLD 0.7 U GF, REC (UG/L) (82673)
SEP											
23...	36	<.1	<1	14	E.70	<.0030	<.0020	<.002	<.0020	.044	<.0020
30...	--	--	--	--	--	--	--	--	--	--	--

E Estimated

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

POCOMOKE RIVER BASIN--Continued

01484985 - GREEN RUN NEAR CAREYTOWN, MD--Continued

DATE	BUTYL- ATE, WATER, DISS, REC (UG/L) (04028)	CAR- BARYL WATER FLTRD 0.7 U GF, REC (UG/L) (82680)	CARBO- FURAN WATER FLTRD 0.7 U GF, REC (UG/L) (82674)	CHLOR- PYRIFOS DIS- SOLVED (UG/L) (38933)	CYANA- ZINE, WATER, DISS, REC (UG/L) (04041)	DCPA WATER FLTRD 0.7 U GF, REC (UG/L) (82682)	DEETHYL ATRA- ZINE, WATER, DISS, REC (UG/L) (04040)	DIAZ- INON D10 SRG WAT FLT 0.7 U GF, REC PERCENT (91063)	DI- AZINON, DIS- SOLVED (UG/L) (39572)	DI- ELDRIN DIS- SOLVED (UG/L) (39381)	DISUL- FOTON WATER FLTRD 0.7 U GF, REC (UG/L) (82677)
SEP											
23...	<.0020	<.0030	<.0030	<.0040	<.0040	<.0020	E.0167	104	<.002	<.001	<.0170
30...	--	--	--	--	--	--	--	--	--	--	--

DATE	EPTC WATER FLTRD 0.7 U GF, REC (UG/L) (82668)	ETHAL- FLUR- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82663)	ETHO- PROP WATER FLTRD 0.7 U GF, REC (UG/L) (82672)	FONOFOS WATER DISS REC (UG/L) (04095)	HCH ALPHA D6 SRG WAT FLT 0.7 U GF, REC PERCENT (91065)	LINDANE DIS- SOLVED (UG/L) (39341)	LIN- URON WATER FLTRD 0.7 U GF, REC (UG/L) (82666)	MALA- THION, DIS- SOLVED (UG/L) (39532)	METHYL AZIN- PHOS WAT FLT 0.7 U GF, REC (UG/L) (82686)	METHYL PARA- THION WAT FLT 0.7 U GF, REC (UG/L) (82667)	METO- LACHLOR WATER DISSOLV (UG/L) (39415)
SEP											
23...	<.0020	<.0040	<.0030	<.0030	98.8	<.004	<.0020	<.005	<.0010	<.0060	.090
30...	--	--	--	--	--	--	--	--	--	--	--

DATE	METRI- BUZIN SENCOR WATER DISSOLV (UG/L) (82630)	MOL- INATE WATER FLTRD 0.7 U GF, REC (UG/L) (82671)	NAPROP- AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82684)	P,P' DDE DISSOLV (UG/L) (34653)	PARA- THION, DIS- SOLVED (UG/L) (39542)	PEB- ULATE WATER FILTRD 0.7 U GF, REC (UG/L) (82669)	PENDI- METH- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82683)	PER- METHRIN CIS WAT FLT 0.7 U GF, REC (UG/L) (82687)	PHORATE WATER FLTRD 0.7 U GF, REC (UG/L) (82664)	PRO- METON, WATER, DISS, REC (UG/L) (04037)	PRON- AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82676)
SEP											
23...	<.004	<.0040	<.0030	<.0060	<.004	<.0040	<.0040	<.0050	<.0020	.0310	<.0030
30...	--	--	--	--	--	--	--	--	--	--	--

DATE	PROP- CHLOR, WATER, DISS, REC (UG/L) (04024)	PRO- PANIL WATER FLTRD 0.7 U GF, REC (UG/L) (82679)	PRO- PARGITE WATER FLTRD 0.7 U GF, REC (UG/L) (82685)	SI- MAZINE, WATER, DISS, REC (UG/L) (04035)	TEBU- THIURON WATER FLTRD 0.7 U GF, REC (UG/L) (82670)	TER- BACIL WATER FLTRD 0.7 U GF, REC (UG/L) (82665)	TER- BUFOS WATER FLTRD 0.7 U GF, REC (UG/L) (82675)	THIO- BENCARB WATER FLTRD 0.7 U GF, REC (UG/L) (82681)	TRIAL- LATE WATER FLTRD 0.7 U GF, REC (UG/L) (82678)	TRI- FLUR- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82661)
SEP										
23...	<.0070	<.0040	<.0130	.0187	E.0035	<.0070	<.0130	<.0020	<.0010	<.0020
30...	--	--	--	--	--	--	--	--	--	--

01484989 - DAVIS DITCH NEAR CAREYTOWN, MD

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (MG/L) (00300)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE WATER (DEG C) (00010)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	ALKA- LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)
SEP													
24...	0800	.09	761	3.1	6.0	318	14.1	25	7.9	14	15	20	25

CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)
27	.11	14	59	.154	2.0	2.1	4.16	.059	.053	.041	.097

E Estimated

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

POCOMOKE RIVER BASIN--Continued

01484989 - DAVIS DITCH NEAR CAREYTOWN, MD--Continued

DATE	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106)	ANTI- MONY, DIS- SOLVED (UG/L AS SB) (01095)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C) (00681)	CARBON, ORGANIC SUS- PENDED TOTAL (MG/L AS C) (00689)	2,6-DI- ETHYL ANILINE WAT FLT 0.7 U GF, REC (UG/L) (82660)	ACETO- CHLOR, WATER FLTRD REC (UG/L) (49260)
SEP												
24...	239	192	<1.0	<1	590	136	<.1	<1	23	E.20	<.0030	<.0020

ALA- CHLOR, WATER, DISS, REC, (UG/L) (46342)	ALPHA BHC DIS- SOLVED (UG/L) (34253)	ATRA- ZINE, WATER, DISS, REC (UG/L) (39632)	BEN- FLUR- ALIN WAT FLD 0.7 U GF, REC (UG/L) (82673)	BUTYL- ATE, WATER, DISS, REC (UG/L) (04028)	CAR- BARYL WATER FLTRD 0.7 U GF, REC (UG/L) (82680)	CARBO- FURAN WATER FLTRD 0.7 U GF, REC (UG/L) (82674)	CHLOR- PYRIFOS DIS- SOLVED (UG/L) (38933)	CYANA- ZINE, WATER, DISS, REC (UG/L) (04041)	DCPA WATER FLTRD 0.7 U GF, REC (UG/L) (82682)	DEETHYL ATRA- ZINE, WATER, DISS, REC (UG/L) (04040)	DIAZ- INON D10 SRG WAT FLT 0.7 U GF, REC PERCENT (91063)
<.002	<.0020	.015	<.0020	<.0020	<.0030	<.0030	<.0040	<.0040	<.0020	E.0105	93.7

DI- AZINON, DIS- SOLVED (UG/L) (39572)	DI- ELDRIN DIS- SOLVED (UG/L) (39381)	DISUL- FOTON WATER FLTRD 0.7 U GF, REC (UG/L) (82677)	EPTC WATER FLTRD 0.7 U GF, REC (UG/L) (82668)	ETHAL- FLUR- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82663)	ETHO- PROP WATER FLTRD 0.7 U GF, REC (UG/L) (82672)	FONOFOS WATER DISS REC (UG/L) (04095)	HCH ALPHA D6 SRG WAT FLT 0.7 U GF, REC PERCENT (91065)	LINDANE DIS- SOLVED (UG/L) (39341)	LIN- URON WATER FLTRD 0.7 U GF, REC (UG/L) (82666)	MALA- THION, DIS- SOLVED (UG/L) (39532)	METHYL AZIN- PHOS WAT FLT 0.7 U GF, REC (UG/L) (82686)
<.002	<.001	<.0170	<.0020	<.0040	<.0030	<.0030	97.7	<.004	<.0020	<.005	<.0010

METHYL PARA- THION WAT FLT 0.7 U GF, REC (UG/L) (82667)	METO- LACHLOR WATER DISSOLV (UG/L) (39415)	METRI- BUZIN SENCOR WATER DISSOLV (UG/L) (82630)	MOL- INATE WATER FLTRD 0.7 U GF, REC (UG/L) (82671)	NAPROP- AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82684)	P,P' DDE DISSOLV (UG/L) (34653)	PARA- THION, DIS- SOLVED (UG/L) (39542)	PEB- ULATE WATER FILTRD 0.7 U GF, REC (UG/L) (82669)	PENDI- METH- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82683)	PER- METHRIN CIS WATER FLTRD 0.7 U GF, REC (UG/L) (82687)	PHORATE WATER FLTRD 0.7 U GF, REC (UG/L) (82664)	PRO- METON, WATER, DISS, REC (UG/L) (04037)
<.0060	.039	<.004	<.0040	<.0030	<.0060	<.004	<.0040	<.0040	<.0050	<.0020	.0253

PRON- AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82676)	PROP- CHLOR, WATER, DISS, REC (UG/L) (04024)	PRO- PANIL WATER FLTRD 0.7 U GF, REC (UG/L) (82679)	PRO- PARGITE WATER FLTRD 0.7 U GF, REC (UG/L) (82685)	SI- MAZINE, WATER, DISS, REC (UG/L) (04035)	TEBU- THIURON WATER FLTRD 0.7 U GF, REC (UG/L) (82670)	TER- BACIL WATER FLTRD 0.7 U GF, REC (UG/L) (82665)	TER- BUFOS WATER FLTRD 0.7 U GF, REC (UG/L) (82675)	THIO- BENCARB WATER FLTRD 0.7 U GF, REC (UG/L) (82681)	TRIAL- LATE WATER FLTRD 0.7 U GF, REC (UG/L) (82678)	TRI- FLUR- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82661)
<.0030	<.0070	<.0040	<.0130	<.0050	<.0100	<.0070	<.0130	<.0020	<.0010	<.0020

01484990 - DAVIS DITCH AT CAREYTOWN, MD

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (MG/L) (00300)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)
SEP												
23...	1400	1.4	759	3.7	5.9	224	24.0	17.3	17	5.4	10	11

ALKA- LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)
17	21	18	<.10	14	42	.123	1.4	1.3	2.44	.028

E Estimated

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

POCOMOKE RIVER BASIN--Continued

01484990 - DAVIS DITCH AT CAREYTOWN, MD--Continued

DATE	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	ALUM-INUM, DIS-SOLVED (UG/L AS AL) (01106)	ANTI-MONY, DIS-SOLVED (UG/L AS SB) (01095)	ARSENIC DIS-SOLVED (UG/L AS AS) (01000)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	MERCURY DIS-SOLVED (UG/L AS HG) (71890)	SELE-NIUM, DIS-SOLVED (UG/L AS SE) (01145)
SEP											
23...	.063	.043	.138	175	144	<1.0	1	520	41	<.1	<1

DATE	CARBON, ORGANIC DIS-SOLVED (MG/L AS C) (00681)	CARBON, ORGANIC SUS-PENDED TOTAL (MG/L AS C) (00689)	2,6-DI-ETHYL ANILINE WAT FLT 0.7 U GF, REC (UG/L) (82660)	ACETO-CHLOR, WATER FLTRD REC (UG/L) (49260)	ALA-CHLOR, WATER, DISS, REC, (UG/L) (46342)	ALPHA BHC DIS-SOLVED (UG/L) (34253)	ATRA-ZINE, WATER, DISS, REC (UG/L) (39632)	BEN-FLUR-ALIN WAT FLD 0.7 U GF, REC (UG/L) (82673)	BUTYL-ATE, WATER, DISS, REC (UG/L) (04028)	CAR-BARYL WATER FLTRD 0.7 U GF, REC (UG/L) (82680)	CARBO-FURAN WATER FLTRD 0.7 U GF, REC (UG/L) (82674)
SEP 23...	19	E.40	<.0030	<.0020	<.002	<.0020	.038	<.0020	<.0020	<.0030	<.0030

DATE	CHLOR-PYRIFOS DIS-SOLVED (UG/L) (38933)	CYANA-ZINE, WATER, DISS, REC (UG/L) (04041)	DCPA WATER FLTRD 0.7 U GF, REC (UG/L) (82682)	DEETHYL ATRA-ZINE, WATER, DISS, REC (UG/L) (04040)	DIAZ-INON D10 SRG WAT FLT 0.7 U GF, REC PERCENT (91063)	DI-AZINON, DIS-SOLVED (UG/L) (39572)	DI-ELDRIN DIS-SOLVED (UG/L) (39381)	DISUL-FOTON WATER FLTRD 0.7 U GF, REC (UG/L) (82677)	EPTC WATER FLTRD 0.7 U GF, REC (UG/L) (82668)	ETHAL-FLUR-ALIN WAT FLT 0.7 U GF, REC (UG/L) (82663)	ETHO-PROP WATER FLTRD 0.7 U GF, REC (UG/L) (82672)
SEP 23...	<.0040	<.0040	<.0020	E.0201	102	<.002	<.001	<.0170	<.0020	<.0040	<.0030

DATE	FONOFOS WATER DISS REC (UG/L) (04095)	HCH ALPHA D6 SRG WAT FLT 0.7 U GF, REC PERCENT (91065)	LINDANE DIS-SOLVED (UG/L) (39341)	LIN-URON WATER FLTRD 0.7 U GF, REC (UG/L) (82666)	MALA-THION, DIS-SOLVED (UG/L) (39532)	METHYL AZIN-PHOS WAT FLT 0.7 U GF, REC (UG/L) (82686)	METHYL PARA-THION WAT FLT 0.7 U GF, REC (UG/L) (82667)	METO-LACHLOR WATER DISSOLV (UG/L) (39415)	METRI-BUZIN SENCOR WATER DISSOLV (UG/L) (82630)	MOL-INATE WATER FLTRD 0.7 U GF, REC (UG/L) (82671)
SEP 23...	<.0030	99.5	<.004	<.0020	<.005	<.0010	<.0060	.068	<.004	<.0040

DATE	NAPROP-AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82684)	P,P' DDE DISSOLV (UG/L) (34653)	PARA-THION, DIS-SOLVED (UG/L) (39542)	PEB-ULATE WATER FILTRD 0.7 U GF, REC (UG/L) (82669)	PENDI-METH-ALIN WAT FLT 0.7 U GF, REC (UG/L) (82683)	PER-METHRIN CIS WAT FLT 0.7 U GF, REC (UG/L) (82687)	PHORATE WATER FLTRD 0.7 U GF, REC (UG/L) (82664)	PRO-METON, WATER, DISS, REC (UG/L) (04037)	PRON-AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82676)	PROP-CHLOR, WATER, DISS, REC (UG/L) (04024)
SEP 23...	<.0030	<.0060	<.004	<.0040	<.0040	<.0050	<.0020	E.0092	<.0030	<.0070

DATE	PRO-PANIL WATER FLTRD 0.7 U GF, REC (UG/L) (82679)	PRO-PARGITE WATER FLTRD 0.7 U GF, REC (UG/L) (82685)	SI-MAZINE, WATER, DISS, REC (UG/L) (04035)	TEBU-THIURON WATER FLTRD 0.7 U GF, REC (UG/L) (82670)	TER-BACIL WATER FLTRD 0.7 U GF, REC (UG/L) (82665)	TER-BUFOS WATER FLTRD 0.7 U GF, REC (UG/L) (82675)	THIO-BENCARB WATER FLTRD 0.7 U GF, REC (UG/L) (82681)	TRIAL-LATE WATER FLTRD 0.7 U GF, REC (UG/L) (82678)	TRI-FLUR-ALIN WAT FLT 0.7 U GF, REC (UG/L) (82661)
SEP 23...	<.0040	<.0130	.0132	<.0100	<.0070	<.0130	<.0020	<.0010	<.0020

E Estimated

POCOMOKE RIVER BASIN--Continued

01485400 - POCOMOKE RIVER AT SNOW HILL, MD

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)
SEP												
16...	1245	1130	--	--	6.1	123	22.0	23.0	--	--	--	--
17...	0845	1480	--	--	6.1	114	17.5	20.5	--	--	--	--
17...	1300	1920	--	--	6.1	114	25.0	21.0	--	--	--	--
21...	1500	1060	764	4.8	5.9	142	--	19.4	8.4	3.5	5.3	8.8

DATE	ALKA-LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	BICAR-BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)
SEP											
16...	24	30	--	--	--	--	.084	.42	.49	.314	<.010
17...	--	--	--	--	--	--	.027	.40	.55	.394	<.010
17...	16	20	--	--	--	--	<.020	.45	.73	.558	<.010
21...	15	18	13	<.10	14	23	--	--	--	--	--

DATE	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	SEDI-MENT SUS-PENDED (MG/L) (80154)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
SEP									
16...	.059	.042	.131	--	--	--	7	21	90
17...	.064	.047	.121	--	--	--	12	48	64
17...	.073	.054	.146	--	--	--	17	88	72
21...	--	--	--	123	460	74	--	--	--

01485700 - REHOBETH BRANCH NEAR KINGSTON, MD

DATE	TIME	OXYGEN, DIS-SOLVED (MG/L) (00300)	TEMPER-ATURE WATER (DEG C) (00010)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) 00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)
FEB									
12...	1545	8.9	12.0	16	7.6	4.8	17	27	<.10

SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	ALUM-INUM, DIS-SOLVED (UG/L AS AL) (01106)	ANTI-MONY, DIS-SOLVED (UG/L AS SB) (01095)	BARIUM, DIS-SOLVED (UG/L AS BA) (01005)	BERYL-LIUM, DIS-SOLVED (UG/L AS BE) (01010)	CADMIUM DIS-SOLVED (UG/L AS CD) (01025)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR) (01030)	COBALT, DIS-SOLVED (UG/L AS CO) (01035)
15	50	131	<1.0	73	<1.0	<1.0	1.6	4.9

COPPER, DIS-SOLVED (UG/L AS CU) (01040)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	LEAD, DIS-SOLVED (UG/L AS PB) (01049)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO) (01060)	NICKEL, DIS-SOLVED (UG/L AS NI) (01065)	SILVER, DIS-SOLVED (UG/L AS AG) (01075)	ZINC, DIS-SOLVED (UG/L AS ZN) (01090)	URANIUM NATURAL DIS-SOLVED (UG/L AS U) (22703)
2.1	98	<1.0	109	<1.0	6.2	<1.0	46	<1.0

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

POCOMOKE RIVER BASIN--Continued

01485705 - POCOMOKE RIVER NEAR KINGSTON, MD

DATE	TIME	OXYGEN, DIS- SOLVED (MG/L) (00300)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE WATER (DEG C) (00010)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)
FEB										
12...		9.1	6.5	353	8.0	9.2	8.2	6.2	45	83

FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106)	ANTI- MONY, DIS- SOLVED (UG/L AS SB) (01095)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE) (01010)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	COBALT, DIS- SOLVED (UG/L AS CO) (01035)
<.10	14	32	87	<1.0	33	<1.0	<1.0	1.4	<1.0

COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)	URANIUM NATURAL DIS- SOLVED (UG/L AS U) (22703)
2.2	260	<1.0	47	<1.0	1.3	<1.0	6.0	<1.0

01485722 - UNNAMED DITCH NEAR KINGSTON, MD

DATE	TIME	OXYGEN, DIS- SOLVED (MG/L) (00300)	TEMPER- ATURE WATER (DEG C) (00010)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) 00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)
FEB									
12...	1415	11.8	16.0	70	112	32	898	1600	.30

SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106)	ANTI- MONY, DIS- SOLVED (UG/L AS SB) (01095)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE) (01010)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	COBALT, DIS- SOLVED (UG/L AS CO) (01035)
7.3	250	263	<1.0	151	<1.0	<1.0	3.3	5.8

COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)	URANIUM NATURAL DIS- SOLVED (UG/L AS U) (22703)
2.6	58	<1.0	185	<1.0	9.4	<1.0	63	<1.0

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

POCOMOKE RIVER BASIN--Continued

01485725 - FAIR ISLAND CANAL NEAR KINGSTON, MD

DATE	TIME	OXYGEN, DIS- SOLVED (MG/L) (00300)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE WATER (DEG C) (00010)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) 00940)
FEB										
12...	1000	10.1	7.3	13300	8.8	110	328	100	2800	4500

FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106)	ANTI- MONY, DIS- SOLVED (UG/L AS SB) (01095)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE) (01010)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	COBALT, DIS- SOLVED (UG/L AS CO) (01035)
.21	7.0	630	9.4	<1.0	40	<1.0	<1.0	6.6	<1.0

COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)	URANIUM NATURAL DIS- SOLVED (UG/L AS U) (22703)
5.1	<100	<1.0	42	3.2	3.7	<1.0	6.1	<1.0

01485750 - MARUMSCO CREEK TRIBUTARY NEAR KINGSTON, MD

DATE	TIME	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) 00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)
FEB									
12...	1245	63	171	38	1350	2300	.22	11	290

ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106)	ANTI- MONY, DIS- SOLVED (UG/L AS SB) (01095)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE) (01010)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	COBALT, DIS- SOLVED (UG/L AS CO) (01035)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)
2640	<1.0	143	1.7	<1.0	5.4	11	2.8

IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)	URANIUM NATURAL DIS- SOLVED (UG/L AS U) (22703)
210	<1.0	210	<1.0	16	<1.0	102	<1.0

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

NANTICOKE RIVER BASIN

01486800 - NANTICOKE RIVER NEAR GREENWOOD, DE

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (MG/L) (00300)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE WATER (DEG C) (00010)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	
OCT												
20...	1030	<1.0	762	7.6	6.5	122	15.5	7.2	2.2	2.4	9.4	17

ANC WATER UNFLTRD IT FIELD MG/L AS CACO3 (00419)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)
17	11	<.10	26	7.8	.025	.23	.31	2.78	.006	<.006

PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	OXYGEN DEMAND, CHEM- ICAL (LOW LEVEL) (MG/L) (00335)	RESIDUE TOTAL AT 105 DEG. C, SUS- PENDED (MG/L) (00530)	TUR- BID- ITY (NTU) (00076)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C) (00681)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)	SEDI- MENT, SUS- PENDED (MG/L) (80154)
.004	.017	<10	1	5.8	230	51	2.2	2.4	3

01486815 - NANTICOKE RIVER AT GREENWOOD, DE

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (MG/L) (00300)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)
OCT												
20...	0915	<1.0	762	8.1	6.4	130	17.0	15.0	7.1	2.7	2.7	9.1

ANC WATER UNFLTRD IT FIELD MG/L AS CACO3 (00419)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)
15	13	<.10	23	7.7	.008	.15	.21	3.49	.003

PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	OXYGEN DEMAND, CHEM- ICAL (LOW LEVEL) (MG/L) (00335)	RESIDUE TOTAL AT 105 DEG. C, SUS- PENDED (MG/L) (00530)	TUR- BID- ITY (NTU) (00076)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C) (00681)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)	SEDI- MENT, SUS- PENDED (MG/L) (80154)
<.004	<.003	.015	<10	<1	2.7	48	32	1.9	2.1	2

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

NANTICOKE RIVER BASIN--Continued

01486820 - CART BRANCH AT GREENWOOD, DE

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)
OCT												
20...	0800	<1.0	762	8.2	6.5	234	14.5	14.0	9.4	3.4	3.3	27

DATE	ANC WATER UNFLTRD IT FIELD MG/L AS CACO3 (00419)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)
OCT 20...	26	34	<.10	21	12	.034	.22	.34	2.61	.006

DATE	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	OXYGEN DEMAND, CHEM-ICAL (LOW LEVEL) (MG/L) (00335)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (MG/L) (00530)	TUR-BID-ITY (NTU) (00076)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	CARBON, ORGANIC DIS-SOLVED (MG/L AS C) (00681)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)	SEDI-MENT, SUS-PENDED (MG/L) (80154)
OCT 20...	<.007	.008	.044	<10	2	4.2	32	81	2.4	2.5	4

01486983 - TOMS DAM BRANCH NEAR BRIDGEVILLE, DE

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE WATER (DEG C) (00010)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)
OCT											
19...	1600	<1.0	760	9.0	6.4	102	17.0	5.0	2.7	2.7	7.1

DATE	ANC WATER UNFLTRD IT FIELD MG/L AS CACO3 (00419)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)
OCT 19...	10	10	<.10	17	2.6	.014	.11	.12	4.13	.004	.016

DATE	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	OXYGEN DEMAND, CHEM-ICAL (LOW LEVEL) (MG/L) (00335)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (MG/L) (00530)	TUR-BID-ITY (NTU) (00076)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	CARBON, ORGANIC DIS-SOLVED (MG/L AS C) (00681)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)	SEDI-MENT, SUS-PENDED (MG/L) (80154)
OCT 19...	.004	.019	<10	<1	2.7	35	23	2.0	2.1	3

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

NANTICOKE RIVER BASIN--Continued

01486985 - GUM BRANCH NEAR OAKLEY, DE

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)
OCT												
19...	1400	1.0	760	8.6	6.6	74	18.0	17.5	3.7	1.2	2.1	6.3

ANC WATER UNFLTRD IT FIELD MG/L AS CACO3 (00419)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)
11	7.3	<.10	20	3.2	.024	.18	.22	.151	.006	.020

PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	OXYGEN DEMAND, CHEM-ICAL (LOW LEVEL) (MG/L) (00335)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (MG/L) (00530)	TUR-BID-ITY (NTU) (00076)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	CARBON, ORGANIC DIS-SOLVED (MG/L AS C) (00681)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)	SEDI-MENT, SUS-PENDED (MG/L) (80154)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY) (80155)
<.002	.027	10	<1	4.5	170	174	1.9	2.0	5	.01

01486987 - WEST BRANCH NEAR GULLY CAMP, DE

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)
OCT												
19...	1500	<1.0	760	9.7	6.0	46	20.0	18.0	1.7	.57	1.7	5.1

ANC WATER UNFLTRD IT (FIELD MG/L AS CACO3 (00419)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)
11	5.0	<.10	16	1.5	.010	.11	.26	.144	.003

PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	OXYGEN DEMAND, CHEM-ICAL (LOW LEVEL) (MG/L) (00335)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (MG/L) (00530)	TUR-BID-ITY (NTU) (00076)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	CARBON, ORGANIC DIS-SOLVED (MG/L AS C) (00681)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)	SEDI-MENT, SUS-PENDED (MG/L) (80154)
.039	.005	.055	<10	1	7.7	260	26	2.0	2.5	5

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

NANTICOKE RIVER BASIN--Continued

01486998 - GUM BRANCH AT GULLY CAMP, DE

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)
OCT												
19...	1300	3.9	760	9.1	6.5	105	21.5	16.0	5.4	2.7	2.6	6.6

DATE	ANC WATER UNFLTRD IT FIELD MG/L AS CACO3 (00419)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)
OCT 19...	9	10	<.10	15	2.9	.011	<.10	.14	4.64	.005	.014

DATE	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	OXYGEN DEMAND, CHEM-ICAL (LOW LEVEL) (MG/L) (00335)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (MG/L) (00530)	TUR-BID-ITY (NTU) (00076)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	CARBON, ORGANIC DIS-SOLVED (MG/L AS C) (00681)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)	SEDI-MENT, SUS-PENDED (MG/L) (80154)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY) (80155)
OCT 19...	<.002	.029	<10	<1	2.3	49	19	1.8	1.9	3	.03

BUSH RIVER BASIN

01581750 - WINTERS RUN NEAR BEL AIR, MD

DATE	TIME	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE WATER (DEG C) (00010)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	ANC WATER UNFLTRD IT FIELD MG/L AS CACO3 00419)
JAN									
27...	1010	6.5	156	2.9	9.6	5.4	2.2	10	43

DATE	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)
JAN 27...	21	<.10	14	8.7	97	96	39

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

POTOMAC RIVER BASIN

01647997 - PORTAL BRANCH AT NORTH PORTAL DRIVE, WASHINGTON, DC

DATE	TIME	CALCIUM BOT MAT <63U WS FIELD PERCENT (34830)	MAGNE-SIUM BOT MAT <63U WS FIELD PERCENT (34900)	POTAS-SIUM BOT MAT <63U WS FIELD PERCENT (34940)	SODIUM BOT MAT <63U WS FIELD PERCENT (34960)	SULFUR BOT MAT <63U WS FIELD PERCENT (34970)	PHOS-PHORUS BOT MAT <63U WS FIELD PERCENT (34935)	CARBON, INORG, SED, BM WS,<2MM DW, REC (G/KG) (49270)	CARBON, INORG, SED, BM WS,<63U DW, REC (PER-CENT) (49269)	CARBON, ORG + INORG SED, BM WS,<2MM DW, REC (G/KG) (49272)	CARBON, ORG + INORG, SED, BM WS,<63U DW, REC PERCENT (49267)	ALUM-INUM BOT MAT <63U WS FIELD PERCENT (34790)	ANTI-MONY BOT MAT <63U WS FIELD (UG/G) (34795)
AUG													
19...	1130	.75	.86	1.7	.31	.14	.12	.900	.11	5.70	2.81	9.0	2.3

DATE	TIME	ARSENIC BOT MAT <63U WS FIELD (UG/G) (34800)	BARIUM BOT MAT <63U WS FIELD (UG/G) (34805)	BERYL-LIUM BOT MAT <63U WS FIELD (UG/G) (34810)	BISMUTH BOT MAT <180UWS FIELD (UG/G) (34816)	CADMIUM BOT MAT <63U WS FIELD (UG/G) (34825)	CERIUM BOT MAT <63U WS FIELD (UG/G) (34835)	CHRO-MIUM BOT MAT <63U WS FIELD (UG/G) (34840)	COBALT BOT MAT <63U WS FIELD (UG/G) (34845)	COPPER BOT MAT <63U WS FIELD (UG/G) (34850)	EURO-PIUM BOT MAT <63U WS FIELD (UG/G) (34855)	GALLIUM BOT MAT <63U WS FIELD (UG/G) (34860)	GOLD BOT MAT <63U WS FIELD (UG/G) (34870)
AUG 19...	1130	5.7	590	4	<1	1.3	180	110	25	150	3	23	<1

DATE	TIME	HOLMIUM BOT MAT <63U WS FIELD (UG/G) (34875)	IRON BOT MAT <63U WS FIELD PERCENT (34880)	LANTHA-NUM BOT MAT <63U WS FIELD (UG/G) (34885)	LEAD BOT MAT <63U WS FIELD (UG/G) (34890)	LITHIUM BOT MAT <63U WS FIELD (UG/G) (34895)	MANGA-NESE BOT MAT <63U WS FIELD (UG/G) (34905)	MERCURY BOT MAT <63U WS FIELD (UG/G) (34910)	MOLYB-DENUM BOT MAT <63U WS FIELD (UG/G) (34915)	NEODYM-IUM BOT MAT <63U WS FIELD (UG/G) (34920)	NICKEL BOT MAT <63U WS FIELD (UG/G) (34925)	NIOBIUM BOT MAT <63U WS FIELD (UG/G) (34930)	SCAN-DIUM BOT MAT <63U WS FIELD (UG/G) (34945)
AUG 19...	1130	3	5.4	97	110	46	790	.21	12	85	70	13	16

DATE	TIME	SELE-NIUM BOT MAT <63U WS FIELD (UG/G) (34950)	SILVER BOT MAT <63U WS FIELD (UG/G) (34955)	STRON-TIUM BOT MAT <63U WS FIELD (UG/G) (34965)	TANTA-LUM BOT MAT <63U WS FIELD (UG/G) (34975)	THAL-LIUM BED MAT D SIEVE <63 U TOTAL (UG/G) (04064)	TIN BOT MAT <63U WS FIELD (UG/G) (34985)	TITA-NIUM, SED, BM WS,<63U DRY WGT REC PERCENT (49274)	VANA-DIUM BOT MAT <63U WS FIELD (UG/G) (35005)	YTTER-BIUM BOT MAT <63U WS FIELD (UG/G) (35015)	YTTRIUM BOT MAT <63U WS FIELD (UG/G) (35010)	ZINC BOT MAT <63U WS FIELD (UG/G) (35020)	CARBON, ORGANIC SED, BM WS,<2MM DW, REC (G/KG) (49271)
AUG 19...	1130	.8	.5	100	3	<1.0	7	.540	120	7	72	410	4.80

DATE	TIME	CARBON, ORGANIC SED, BM WS,<63U DW, REC (PER-CENT) (49266)	2,2'-BI QUINO-LINE, SED, BM WS,<2MM DW, REC (UG/KG) (49391)	3,5-XYLENOL SED, BM WS,<2MM DW, REC (UG/KG) (49421)	4-BROMO PHNPHNL ETHER SED, BM WS,<2MM DW, REC (UG/KG) (49454)	4CHLORO PHNPHN LETHER SED, BM WS,<2MM DW, REC (UG/KG) (49455)	4HCYPEN PHENAN THRENE SED, BM WS,<2MM DW, REC (UG/KG) (49411)	9,10-ANTHRA-QUINONE SED, BM WS,<2MM DW, REC (UG/KG) (49437)	9H-FLU-ORENE, 1METHYL SED, BM WS,<2MM DW, REC (UG/KG) (49398)	9H-FLU-ORENE SED, BM WS,<2MM DW, REC (UG/KG) (49399)	ACENAPH THENE SED, BM WS,<2MM DW, REC (UG/KG) (49429)	ACENAPH THYLENE SED, BM WS,<2MM DW, REC (UG/KG) (49428)	ACRI-DINE SED, BM WS,<2MM DW, REC (UG/KG) (49430)
AUG 19...	1130	2.70	<50	<50	<50	<50	E24	97	<50	E4.4	<50	E41	<50

DATE	TIME	ALDRIN, SED, BM WS,<2MM DW, REC (UG/KG) (49319)	ALPHA-BHC, D6 SURROGT SED, BM WS,<2MM DW, REC PERCENT (49275)	ALPHA-BHC, SED, BM WS,<2MM DW, REC (UG/KG) (49338)	ANTHRA-CENE,2-METHYL-SED, BM WS,<2MM DW, REC (UG/KG) (49435)	ANTHRA-CENE SED, BM WS,<2MM DW, REC (UG/KG) (49434)	AZO-BENZENE SED, BM WS,<2MM DW, REC (UG/KG) (49443)	BENZ(A) ANTHRA-CENE SED, BM WS,<2MM DW, REC (UG/KG) (49436)	BENZENE 124TRI-CHLORO-SED, BM WS,<2MM DW, REC (UG/KG) (49438)	BENZENE HEXA-CHLORO-SED, BM WS,<2MM DW, REC (UG/KG) (49343)	BENZENE M-DI-CHLORO-SED, BM WS,<2MM DW, REC (UG/KG) (49441)	BENZENE NITRO-SED, BM WS,<2MM DW, REC (UG/KG) (49444)	BENZENE NITROD5 SURROGT SED, BM WS,<2MM DW, REC PERCENT (49280)
AUG 19...	1130	<1.00	74.0	<1.00	E8.2	59	<50	210	<50	<1.00	<50	<50	43.3

E Estimated

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

POTOMAC RIVER BASIN--Continued

01647997 - PORTAL BRANCH AT NORTH PORTAL DRIVE, WASHINGTON, DC--Continued

DATE	BENZENE O-DI-CHLORO- SED, BM WS,<2MM DW, REC (UG/KG) (49439)	BENZENE P-DI-CHLORO- SED, BM WS,<2MM DW, REC (UG/KG) (49442)	BENZENE PNTCHLR NITRO- SED, BM WS,<2MM DW, REC (UG/KG) (49446)	BENZO (A) PYRENE SED, BM WS,<2MM DW, REC (UG/KG) (49389)	BENZOB FLUOR-ANTHENE SED, BM WS,<2MM DW, REC (UG/KG) (49458)	BENZO(G HI)PERY LENE SED, BM WS,<2MM DW, REC (UG/KG) (49408)	BENZO K FLUOR-ANTHENE SED, BM WS,<2MM DW, REC (UG/KG) (49397)	BENZOCI NNOLINE BED MAT WS <2MM DRY WGT REC (UG/KG) (49468)	BETA-BHC, SED, BM WS,<2MM DW, REC (UG/KG) (49339)	BIPHENL 2FLUORO SURROGT SED, BM WS,<2MM DW, REC PERCENT (49279)	BIS2CHL ETHYL ETHER SED, BM WS,<2MM DW, REC (UG/KG) (49456)	CARBA-ZOLE SED, BM WS,<2MM DW, REC (UG/KG) (49449)
AUG												
19...	<50	<50	<50	240	270	140	160	<50	<1.00	51.0	<50	E14

DATE	CHLORO-NEB, SED, BM WS,<2MM DW, REC (UG/KG) (49322)	CHRY-SENE SED, BM WS,<2MM DW, REC (UG/KG) (49450)	CIS-CHLOR-DANE, SED, BM WS,<2MM DW, REC (UG/KG) (49320)	CIS-NONA-CHLOR, SED, BM WS,<2MM DW, REC (UG/KG) (49316)	CIS-PER-METHRIN SED, BM WS,<2MM DW, REC (UG/KG) (49349)	DCPA, SED, BM WS,<2MM DW, REC (UG/KG) (49324)	DIBENZ (AH),AN THRACEN SED, BM WS,<2MM DW, REC (UG/KG) (49461)	DIEL-DRIN, SED, BM WS,<2MM DW, REC (UG/KG) (49331)	DIPHNYL AMINE,N NITROSO SED, BM WS,<2MM DW, REC (UG/KG) (49433)	DPROPYL AMINE,N NITROSO SED, BM WS,<2MM DW, REC (UG/KG) (49431)	ENDO-SULFAN I, SED, BM WS,<2MM DW, REC (UG/KG) (49332)	ENDRIN, SED, BM WS,<2MM DW, REC (UG/KG) (49335)
AUG 19...	<5.00	260	1.90	<1.00	<5.00	<5.00	E36	2.20	<50	<50	<1.00	<2.00

DATE	FLUOR-ANTHENE BED MAT WS <2MM DRY WGT REC (UG/KG) (49466)	HEPTA-CHLOR EPOXIDE SED, BM WS,<2MM DW, REC (UG/KG) (49342)	HEPTA-CHLOR, SED, BM WS,<2MM DW, REC (UG/KG) (49341)	INDENO 123-CD PYRENE SED, BM WS,<2MM DW, REC (UG/KG) (49390)	ISODRIN SED, BM WS,<2MM DW, REC (UG/KG) (49344)	ISOPHOR ONE SED, BM WS,<2MM DW, REC (UG/KG) (49400)	ISO-QUINO-LINE, SED, BM WS,<2MM DW, REC (UG/KG) (49394)	LINDANE SED, BM WS,<2MM DW, REC (UG/KG) (49345)	M-CRE-SOL, 4-CHLORO-SED, BM WS,<2MM DW, REC (UG/KG) (49422)	METHANE 2CHLORO ETHOXY SED, BM WS,<2MM DW, REC (UG/KG) (49401)	METHOXY CHLOR, O,P'-, SED, BM WS,<2MM DW, REC (UG/KG) (49347)	METHOXY CHLOR P,P'-, SED, BM WS,<2MM DW, REC (UG/KG) (49346)
AUG 19...	500	<1.00	<1.00	180	<1.00	<50	<50	<1.00	<50	<50	<5.00	<5.00

DATE	MIREX, SED, BM WS,<2MM DW, REC (UG/KG) (49348)	NAPTHAL ENE, 12 DIMETHL SED, BM WS,<2MM DW, REC (UG/KG) (49403)	NAPTHAL ENE, 16 DIMETHL SED, BM WS,<2MM DW, REC (UG/KG) (49404)	NAPTHAL ENE,236 TRIMETH SED, BM WS,<2MM DW, REC (UG/KG) (49405)	NAPTHAL ENE, 26 DIMETHL SED, BM WS,<2MM DW, REC (UG/KG) (49406)	NAPTHAL ENE, 2-CHLORO-SED, BM WS,<2MM DW, REC (UG/KG) (49407)	NAPTHAL ENE, 2-ETHYL-SED BM WS <2MM DW REC (UG/KG) (49948)	NAPHTH-ALENE, SED, BM WS,<2MM DW, REC (UG/KG) (49402)	O, P'-DDD, SED, BM WS,<2MM DW, REC (UG/KG) (49325)	O, P'-DDE, SED, BM WS,<2MM DW, REC (UG/KG) (49327)	O, P'-DDT, SED, BM WS,<2MM DW, REC (UG/KG) (49329)	OXY-CHLOR-DANE, SED, BM WS,<2MM DW, REC (UG/KG) (49318)
AUG 19...	<1.00	<50	<50	<50	<50	<50	<50.0	<50	<1.00	<1.00	<2.00	<1.00

DATE	P, P'-DDD, SED, BM WS,<2MM DW, REC (UG/KG) (49326)	P, P'-DDE, SED, BM WS,<2MM DW, REC (UG/KG) (49328)	P, P'-DDT, SED, BM WS,<2MM DW, REC (UG/KG) (49330)	PCB, SED, BM WS,<2MM DW, REC (UG/KG) (49459)	P-CRESOL SED, BM WS,<2MM DW, REC (UG/KG) (49451)	PENTA-CHLORO-ANISOLE SED, BM WS,<2MM DW, REC (UG/KG) (49460)	PHENAN THRENE 1METHYL SED, BM WS,<2MM DW, REC (UG/KG) (49410)	PHENAN THRENE SED, BM WS,<2MM DW, REC (UG/KG) (49409)	PHENAN-THRI-DINE SED, BM WS,<2MM DW, REC (UG/KG) (49393)	PHENOL C8-ALKYL-SED, BM WS,<2MM DW, REC (UG/KG) (49424)	PHENOL, 2CHLORO BED MAT WS <2MM DRY WGT REC (UG/KG) (49467)
AUG 19...	E1.60	2.30	6.70	<50	<50	<1.0	<50	240	<50	<50	<50

DATE	PHENOL SED, BM WS,<2MM DW, REC (UG/KG) (49413)	PHTHALA TE,BIS2 ETHHEXL SED, BM WS,<2MM DW, REC (UG/KG) (49426)	PHTHALA TEBUTYL BENZYL-SED, BM WS,<2MM DW, REC (UG/KG) (49427)	PHTHAL-ATE, DIBUTYL SED, BM WS,<2MM DW, REC (UG/KG) (49381)	PHTHAL-ATE, D IETHYL SED, BM WS,<2MM DW, REC (UG/KG) (49383)	PHTHAL-ATE,DI-METHYL SED, BM WS,<2MM DW, REC (UG/KG) (49384)	PHTHAL ATE, D IOCTYL SED, BM WS,<2MM DW, REC (UG/KG) (49382)	PYRENE, 1-METHYL, SED, BM WS,<2MM DW, REC (UG/KG) (49388)	PYRENE, SED, BM WS,<2MM DW, REC (UG/KG) (49387)	QUINO-LINE, SED, BM WS,<2MM DW, REC (UG/KG) (49392)	TERPHEN YL D14-SURROGT SED, BM WS,<2MM DW, REC PERCENT (49278)
AUG 19...	<50	420	1300	E33	E14	<50	56	E16	410	<50	82.6

DATE	THIOPH ENE,DI-BENZO-SED, BM WS,<2MM DW, REC (UG/KG) (49452)	TOLUENE 2,4-DI-NITRO-SED, BM WS,<2MM DW, REC (UG/KG) (49395)	TOLUENE 2,6-DI-NITRO-SED, BM WS,<2MM DW, REC (UG/KG) (49396)	TOXA-PHENE SED, BM WS,<2MM DW, REC (UG/KG) (49351)	TRANS-CHLOR-DANE, SED, BM WS,<2MM DW, REC (UG/KG) (49321)	TRANS-NONA-CHLOR, SED, BM WS,<2MM DW, REC (UG/KG) (49317)	TRANS-PER-METHRIN SED, BM WS,<2MM DW, REC (UG/KG) (49350)	THORIUM BOT MAT <63U WS FIELD (UG/G) (34980)	URANIUM BOT MAT <63U WS FIELD (UG/G) (35000)
AUG 19...	E23	<50	<50	<200	1.70	1.20	<5.00	20	5.0

E Estimated

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

POTOMAC RIVER BASIN--Continued

01647998 - ROCK CREEK BELOW WEST BEACH DRIVE WASHINGTON, DC

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	OXYGEN, DIS-SOLVED (MG/L) (00300)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)
JUN													
23...	1800	18	7.2	7.9	367	23.5	21.7	28	9.6	3.3	25	56	.21

DATE	TIME	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	IRON, DIS-SOLVED (UG/L AS FE) (01046)
JUN 23...	1800	10	18	.066	.38	.39	.611	.022	.025	.023	.058	258	180

DATE	TIME	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	2,4,5-T DIS-SOLVED (UG/L) (39742)	2,4-D, DIS-SOLVED (UG/L) (39732)	2,4-DB WATER, FLTRD, GF 0.7U REC (UG/L) (38746)	2,6-DI-ETHYL ANILINE WAT FLT 0.7 U GF, REC (UG/L) (82660)	3HYDRXY CARBO-FURAN WAT,FLT GF 0.7U REC (UG/L) (49308)	ACETO-CHLOR, WATER FLTRD REC (UG/L) (49260)	ACIFL-UORFEN WATER, FLTRD, GF 0.7U REC (UG/L) (49315)	ALA-CHLOR, WATER, DISS, REC, (UG/L) (46342)	ALDI-CARB SULFONE WAT,FLT GF 0.7U REC (UG/L) (49313)	ALDICA-RB SUL-FOXIDE, WAT,FLT GF 0.7U REC (UG/L) (49314)	ALDI-CARB, WATER, FLTRD, GF 0.7U REC (UG/L) (49312)
JUN 23...	1800	104	<.0350	<.150	<.240	<.0030	<.290	<.0020	<.0350	<.002	<.380	<.300	<3.17

DATE	TIME	ALPHA BHC DIS-SOLVED (UG/L) (34253)	ATRA-ZINE, WATER, DISS, REC (UG/L) (39632)	BDMC, SURROG, WATER, UNFLTRD REC PERCENT (99835)	BEN-FLUR-ALIN WAT FLD 0.7 U GF, REC (UG/L) (82673)	BENTA-ZON, WATER, FLTRD, GF 0.7U REC (UG/L) (38711)	BRO-MACIL, WATER, DISS, REC (UG/L) (04029)	BRO-MOXYNIL WATER, FLTRD, GF 0.7U REC (UG/L) (49311)	BUTYL-ATE, WATER, DISS, REC (UG/L) (04028)	CAR-BARYL, WATER, FLTRD, GF 0.7U REC (UG/L) (49310)	CAR-BARYL WATER FLTRD 0.7 U GF, REC (UG/L) (82680)	CARBO-FURAN, WATER, FLTRD, GF 0.7U REC (UG/L) (49309)	CARBO-FURAN WATER FLTRD 0.7 U GF, REC (UG/L) (82674)
JUN 23...	1800	<.0020	.042	97.0	<.0020	<.0140	<.440	<.0350	<.0020	<.0080	E.0285	<.120	<.0030

DATE	TIME	CHLOR-AMBEN, WATER, FLTRD, GF 0.7U REC (UG/L) (49307)	CHLORO-THALO-NIL, WAT,FLT GF 0.7U REC (UG/L) (49306)	CHLOR-PYRIFOS DIS-SOLVED (UG/L) (38933)	CLOPYR-ALID, WATER, FLTRD, GF 0.7U REC (UG/L) (49305)	CYANA-ZINE, WATER, DISS, REC (UG/L) (04041)	DACTHAL MONO-ACID, WAT,FLT GF 0.7U REC (UG/L) (49304)	DCPA WATER FLTRD 0.7 U GF, REC (UG/L) (82682)	DEETHYL ATRA-ZINE, WATER, DISS, REC (UG/L) (04040)	DIAZ-INON D10 SRG WAT FLT 0.7 U GF, REC PERCENT (91063)	DI-AZINON, DIS-SOLVED (UG/L) (39572)	DICAMBA WATER, FLTRD, GF 0.7U REC (UG/L) (38442)	DICHLO-BENIL, WATER, FLTRD, GF 0.7U REC (UG/L) (49303)
JUN 23...	1800	<.420	<.480	.0045	<.230	<.0040	<.0170	<.0020	E.0430	99.0	.063	<.0350	<1.20

DATE	TIME	DICHLOR PROP, WATER, FLTRD, GF 0.7U REC (UG/L) (49302)	DI-ELDRIN DIS-SOLVED (UG/L) (39381)	DINOSEB WATER, FLTRD, GF 0.7U REC (UG/L) (49301)	DISUL-FOTON WATER FLTRD 0.7 U GF, REC (UG/L) (82677)	DIURON, WATER, FLTRD, GF 0.7U REC (UG/L) (49300)	DNOC WAT,FLT GF 0.7U REC (UG/L) (49299)	EPTC WATER FLTRD 0.7 U GF, REC (UG/L) (82668)	ETHAL-FLUR-ALIN WAT FLT 0.7 U GF, REC (UG/L) (82663)	ETHO-PROP WATER FLTRD 0.7 U GF, REC (UG/L) (82672)	FEN-URON, WATER, FLTRD, GF 0.7U REC (UG/L) (49297)	FLUO-METURON WATER, FLTRD, GF 0.7U REC (UG/L) (38811)	FONOFOS WATER DISS REC (UG/L) (04095)
JUN 23...	1800	<.0320	<.001	<.0350	<.0170	<.170	<.420	<.0020	<.0040	<.0030	<.100	<.0350	<.0030

DATE	TIME	HCH ALPHA D6 SRG WAT FLT 0.7 U GF, REC PERCENT (91065)	LINDANE DIS-SOLVED (UG/L) (39341)	LINURON WATER, FLTRD, GF 0.7U REC (UG/L) (38478)	LIN-URON WATER FLTRD 0.7 U GF, REC (UG/L) (82666)	MALA-THION, DIS-SOLVED (UG/L) (39532)	MCPA, WATER, FLTRD, GF 0.7U REC (UG/L) (38482)	MCPB, WATER, FLTRD, GF 0.7U REC (UG/L) (38487)	METHIO-CARB, WATER, FLTRD, GF 0.7U REC (UG/L) (38501)	METH-OMYL, WATER, FLTRD, GF 0.7U REC (UG/L) (49296)	METHYL AZIN-PHOS WAT FLT 0.7 U GF, REC (UG/L) (82686)	METHYL PARA-THION WAT FLT 0.7 U GF, REC (UG/L) (82667)
JUN 23...	1800	101	<.004	<.0180	<.0020	<.005	<.170	<.140	<.0260	<.640	<.0010	<.0060

E Estimated

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

POTOMAC RIVER BASIN--Continued

01647998 - ROCK CREEK BELOW WEST BEACH DRIVE WASHINGTON, DC--Continued

DATE	METOLACHLOR WATER DISSOLV (UG/L) (39415)	METRIBUZIN SENCOR WATER DISSOLV (UG/L) (82630)	MOLINATE WATER FLTRD 0.7 U GF, REC (UG/L) (82671)	NAPROPAMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82684)	NEBURON, WATER, FLTRD, GF 0.7U REC (UG/L) (49294)	NORFLURAZON, WATER, FLTRD, GF 0.7U REC (UG/L) (49293)	ORYZALIN, WATER, FLTRD, GF 0.7U REC (UG/L) (49292)	OXAMYL, WATER, FLTRD, GF 0.7U REC (UG/L) (38866)	P,P' DDE DISSOLV (UG/L) (34653)	PARATHION, DISSOLVED (UG/L) (39542)	PEBULATE WATER FILTRD 0.7 U GF, REC (UG/L) (82669)
JUN 23...	.020	<.004	<.0040	<.0030	<.0150	<.0240	<.310	<.0170	<.0060	<.004	<.0040

DATE	PENDIMETHALIN WAT FLT 0.7 U GF, REC (UG/L) (82683)	PERMETHRIN CIS WAT FLT 0.7 U GF, REC (UG/L) (82687)	PHORATE WATER FLTRD 0.7 U GF, REC (UG/L) (82664)	PICLORAM, WATER, FLTRD, GF 0.7U REC (UG/L) (49291)	PROMETON, WATER, DISS, REC (UG/L) (04037)	PRONAMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82676)	PROPCHLOR, WATER, DISS, REC (UG/L) (04024)	PROPANIL WATER FLTRD 0.7 U GF, REC (UG/L) (82679)	PROPARGITE WATER FLTRD 0.7 U GF, REC (UG/L) (82685)	PROPHAM, WATER, FLTRD, GF 0.7U REC (UG/L) (49236)	PROPOXUR, WATER, FLTRD, GF 0.7U REC (UG/L) (38538)
JUN 23...	<.0040	<.0050	<.0020	<.0500	.0222	<.0030	<.0070	<.0040	<.0130	<.110	<.0350

DATE	SILVEX, DISSOLVED (UG/L) (39762)	SIMAZINE, WATER, DISS, REC (UG/L) (04035)	TEBUTHIURON WATER FLTRD 0.7 U GF, REC (UG/L) (82670)	TERBACIL WATER FLTRD 0.7 U GF, REC (UG/L) (82665)	TERBUFOS WATER FLTRD 0.7 U GF, REC (UG/L) (82675)	THIOBENCARB WATER FLTRD 0.7 U GF, REC (UG/L) (82681)	TRIALLATE WATER FLTRD 0.7 U GF, REC (UG/L) (82678)	TRICLOPYR, WATER, FLTRD, GF 0.7U REC (UG/L) (49235)	TRIFLURALIN WAT FLT 0.7 U GF, REC (UG/L) (82661)
JUN 23...	<.0210	.0378	<.0100	<.0070	<.0130	<.0020	<.0010	<.250	<.0020

01648004 - PINEHURST CREEK AT OREGON AVENUE WASHINGTON, DC

DATE	TIME	DISCHARGE, INST. CUBIC FEET PER SECOND (00061)	OXYGEN, DISSOLVED (MG/L) (00300)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)	SPECIFIC CONDUCTANCE (US/CM) (00095)	TEMPERATURE AIR (DEG C) (00020)	TEMPERATURE WATER (DEG C) (00010)	CALCIUM DISSOLVED (MG/L AS CA) (00915)	MAGNESIUM, DISSOLVED (MG/L AS MG) (00925)	POTASSIUM, DISSOLVED (MG/L AS K) (00935)	SODIUM, DISSOLVED (MG/L AS NA) (00930)	CHLORIDE, DISSOLVED (MG/L AS CL) (00940)	FLUORIDE, DISSOLVED (MG/L AS F) (00950)
JUN 24...	1510	.07	4.3	7.5	503	22.7	19.6	46	15	4.3	22	62	.13

DATE	SILICA, DISSOLVED (MG/L AS SIO2) (00955)	SULFATE DISSOLVED (MG/L AS SO4) (00945)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N) (00608)	NITROGEN,AMMONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITROGEN,AMMONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N) (00631)	NITROGEN, NITRITE DISSOLVED (MG/L AS N) (00613)	PHOSPHORUS DISSOLVED (MG/L AS P) (00666)	PHOSPHORUS ORTHO, DISSOLVED (MG/L AS P) (00671)	PHOSPHORUS TOTAL (MG/L AS P) (00665)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L) (70300)	IRON, DISSOLVED (UG/L AS FE) (01046)
JUN 24...	23	33	.044	.28	.32	.584	.014	.085	.064	.100	312	11

DATE	MANGANESE, DISSOLVED (UG/L AS MN) (01056)	2,4,5-T DISSOLVED (UG/L) (39742)	2,4-D, DISSOLVED (UG/L) (39732)	2,4-DB WATER, FLTRD, GF 0.7U REC (UG/L) (38746)	2,6-DIETHYL ANILINE WAT FLT 0.7 U GF, REC (UG/L) (82660)	3HYDRXY CARBOFURAN WAT,FLT GF 0.7U REC (UG/L) (49308)	ACETOCHLOR, WATER FLTRD REC (UG/L) (49260)	ACIFLUORFEN WATER, FLTRD, GF 0.7U REC (UG/L) (49315)	ALACHLOR, WATER, DISS, REC, (UG/L) (46342)	ALDICARB SULFONE WAT,FLT GF 0.7U REC (UG/L) (49313)	ALDICARB SULFOXIDE, WAT,FLT GF 0.7U REC (UG/L) (49314)	ALDICARB, WATER, FLTRD, GF 0.7U REC (UG/L) (49312)
JUN 24...	56	<.0350	<.150	<.240	<.0030	<.0140	<.0020	<.0350	<.002	<.100	<.0210	<.550

DATE	ALPHA BHC DISSOLVED (UG/L) (34253)	ATRAZINE, WATER, DISS, REC (UG/L) (39632)	BDMC, SURROG, WATER, UNFLTRD REC PERCENT (99835)	BENFLURALIN WAT FLD 0.7 U GF, REC (UG/L) (82673)	BENTAZON, WATER, FLTRD, GF 0.7U REC (UG/L) (38711)	BROMACIL, WATER, DISS, REC (UG/L) (04029)	BROMOXYNIL WATER, FLTRD, GF 0.7U REC (UG/L) (49311)	BUTYLATE, WATER, DISS, REC (UG/L) (04028)	CARBARYL, WATER, FLTRD, GF 0.7U REC (UG/L) (49310)	CARBARYL WATER FLTRD 0.7 U GF, REC (UG/L) (82680)	CARBOFURAN, WATER, FLTRD, GF 0.7U REC (UG/L) (49309)	CARBOFURAN WATER FLTRD 0.7 U GF, REC (UG/L) (82674)
JUN 24...	<.0020	.011	88.0	<.0030	<.0140	<.0350	<.0350	<.0020	.0500	E.0879	<.120	<.0030

E Estimated

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

POTOMAC RIVER BASIN--Continued

01648004 - PINEHURST CREEK AT OREGON AVENUE WASHINGTON, DC--Continued

DATE	CHLOR- AMBEN, WATER, FLTRD, GF 0.7U REC (UG/L) (49307)	CHLORO- THALO- NIL, WAT,FLT GF 0.7U REC (UG/L) (49306)	CHLOR- PYRIFOS DIS- SOLVED (UG/L) (38933)	CLOPYR- ALID, WATER, FLTRD, GF 0.7U REC (UG/L) (49305)	CYANA- ZINE, WATER, DISS, REC (UG/L) (04041)	DACTHAL MONO- ACID, WAT,FLT GF 0.7U REC (UG/L) (49304)	DCPA WATER FLTRD 0.7 U GF, REC (UG/L) (82682)	DEETHYL ATRA- ZINE, WATER, DISS, REC (UG/L) (04040)	DIAZ- INON D10 SRG WAT FLT 0.7 U GF, REC PERCENT (91063)	DI- AZINON, DIS- SOLVED (UG/L) (39572)	DICAMBA WATER, FLTRD, GF 0.7U REC (UG/L) (38442)	DICHLO- BENIL, WATER, FLTRD, GF 0.7U REC (UG/L) (49303)
JUN 24...	<.420	<.480	E.0031	<.230	<.0040	<.0170	<.0020	E.0060	74.2	.036	<.0350	<1.20

DATE	DICHLOR PROP, WATER, FLTRD, GF 0.7U REC (UG/L) (49302)	DI- ELDRIN DIS- SOLVED (UG/L) (39381)	DINOSEB WATER, FLTRD, GF 0.7U REC (UG/L) (49301)	DISUL- FOTON WATER FLTRD 0.7 U GF, REC (UG/L) (82677)	DIURON, WATER, FLTRD, GF 0.7U REC (UG/L) (49300)	DNOC WAT,FLT GF 0.7U REC (UG/L) (49299)	EPTC WATER FLTRD 0.7 U GF, REC (UG/L) (82668)	ETHAL- FLUR- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82663)	ETHO- PROP WATER FLTRD 0.7 U GF, REC (UG/L) (82672)	FEN- URON, WATER, FLTRD, GF 0.7U REC (UG/L) (49297)	FLUO- METURON WATER, FLTRD, GF 0.7U REC (UG/L) (38811)	FONOFOS WATER DISS REC (UG/L) (04095)
JUN 24...	<.0320	.006	<.0350	<.0170	<.0200	<.420	<.0020	<.0040	<.0030	<.0130	<.0350	<.0030

DATE	HCH ALPHA D6 SRG WAT FLT 0.7 U GF, REC PERCENT (91065)	LINDANE DIS- SOLVED (UG/L) (39341)	LINURON WATER, FLTRD, GF 0.7U REC (UG/L) (38478)	LIN- URON WATER FLTRD 0.7 U GF, REC (UG/L) (82666)	MALA- THION, DIS- SOLVED (UG/L) (39532)	MCPA, WATER, FLTRD, GF 0.7U REC (UG/L) (38482)	MCPB, WATER, FLTRD, GF 0.7U REC (UG/L) (38487)	METHIO- CARB, WATER, FLTRD, GF 0.7U REC (UG/L) (38501)	METH- OMYL, WATER, FLTRD, GF 0.7U REC (UG/L) (49296)	METHYL AZIN- PHOS WAT FLT 0.7 U GF, REC (UG/L) (82686)	METHYL PARA- THION WAT FLT 0.7 U GF, REC (UG/L) (82667)	METO- LACHLOR WATER DISSOLV (UG/L) (39415)
JUN 24...	115	<.004	<.0180	<.0020	<.005	<.170	<.140	<.0260	<.0170	<.0010	<.0060	.007

DATE	METRI- BUZIN SENCOR WATER DISSOLV (UG/L) (82630)	MOL- INATE WATER FLTRD 0.7 U GF, REC (UG/L) (82671)	NAPROP- AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82684)	NEB- URON, WATER, FLTRD, GF 0.7U REC (UG/L) (49294)	NORFLUR AZON, WATER, FLTRD, GF 0.7U REC (UG/L) (49293)	ORY- ZALIN, WATER, FLTRD, GF 0.7U REC (UG/L) (49292)	OXAMYL, WATER, FLTRD, GF 0.7U REC (UG/L) (38866)	P,P' DDE DISSOLV (UG/L) (34653)	PARA- THION, DIS- SOLVED (UG/L) (39542)	PEB- ULATE WATER FILTRD 0.7 U GF, REC (UG/L) (82669)	PENDI- METH- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82683)	PER- METHRIN CIS WAT FLT 0.7 U GF, REC (UG/L) (82687)
JUN 24...	<.004	<.0040	<.0030	<.0150	<.0240	<.310	<.0180	<.0060	<.004	<.0040	E.0117	<.0050

DATE	PHORATE WATER FLTRD 0.7 U GF, REC (UG/L) (82664)	PIC- LORAM, WATER, FLTRD, GF 0.7U REC (UG/L) (49291)	PRO- METON, WATER, DISS, REC (UG/L) (04037)	PRON- AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82676)	PROP- CHLOR, WATER, DISS, REC (UG/L) (04024)	PRO- PANIL WATER FLTRD 0.7 U GF, REC (UG/L) (82679)	PRO- PARGITE WATER FLTRD 0.7 U GF, REC (UG/L) (82685)	PRO- PHAM, WATER, FLTRD, GF 0.7U REC (UG/L) (49236)	PRO- POXUR, WATER, FLTRD, GF 0.7U REC (UG/L) (38538)	SILVEX, DIS- SOLVED (UG/L) (39762)	SI- MAZINE, WATER, DISS, REC (UG/L) (04035)
JUN 24...	<.0020	<.0500	E.0073	<.0030	<.0070	<.0040	<.0130	<.100	<.0350	<.0210	.0072

DATE	TEBU- THIURON WATER FLTRD 0.7 U GF, REC (UG/L) (82670)	TER- BACIL WATER FLTRD 0.7 U GF, REC (UG/L) (82665)	TER- BUFOS WATER FLTRD 0.7 U GF, REC (UG/L) (82675)	THIO- BENCARB WATER FLTRD 0.7 U GF, REC (UG/L) (82681)	TRIAL- LATE WATER FLTRD 0.7 U GF, REC (UG/L) (82678)	TRI- CLOPYR, WATER, FLTRD, GF 0.7U REC (UG/L) (49235)	TRI- FLUR- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82661)
JUN 24...	<.0100	<.0070	<.0130	<.0020	<.0010	<.250	E.0032

E Estimated

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

POTOMAC RIVER BASIN--Continued

01648006 - ROCK CREEK TRIBUTARY AT GOLF COURSE WASHINGTON, DC

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (MG/L) (00300)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)
JUN													
24...	1010	.01	761	8.3	7.3	92	18.9	15.7	8.0	2.4	1.7	5.1	4.2

FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)
<.10	17	2.7	<.020	E.10	.11	1.54	<.010	.021	.023	.024	103

IRON, DIS- SOLVED (UG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	2,4,5-T DIS- SOLVED (UG/L) (39742)	2,4-D, DIS- SOLVED (UG/L) (39732)	2,4-DB WATER, FLTRD, GF 0.7U REC (UG/L) (38746)	2,6-DI- ETHYL ANILINE WAT FLT 0.7 U GF, REC (UG/L) (82660)	3HYDRXY CARBO- FURAN WAT,FLT GF 0.7U REC (UG/L) (49308)	ACETO- CHLOR, WATER FLTRD REC (UG/L) (49260)	ACIFL- UORFEN WATER, FLTRD, GF 0.7U REC (UG/L) (49315)	ALA- CHLOR, WATER, DISS, REC, (UG/L) (46342)	ALDI- CARB SULFONE WAT,FLT GF 0.7U REC (UG/L) (49313)	ALDICA- RB SUL- FOXIDE, WAT,FLT GF 0.7U REC (UG/L) (49314)
15	E2.2	<.0350	<.150	<.240	<.0030	<.0140	<.0020	<.0350	<.002	<.100	<.0210

ALDI- CARB, WATER, FLTRD, GF 0.7U REC (UG/L) (49312)	ALPHA BHC DIS- SOLVED (UG/L) (34253)	ATRA- ZINE, WATER, DISS, REC (UG/L) (39632)	BDMC, SURROG, WATER, UNFLTRD REC PERCENT (99835)	BEN- FLUR- ALIN WAT FLD 0.7 U GF, REC (UG/L) (82673)	BENTA- ZON, WATER, FLTRD, GF 0.7U REC (UG/L) (38711)	BRO- MACIL, WATER, DISS, REC (UG/L) (04029)	BRO- MOXYNIL WATER, FLTRD, GF 0.7U REC (UG/L) (49311)	BUTYL- ATE, WATER, DISS, REC (UG/L) (04028)	CAR- BARYL, WATER, FLTRD, GF 0.7U REC (UG/L) (49310)	CAR- BARYL WATER FLTRD 0.7 U GF, REC (UG/L) (82680)	CARBO- FURAN, WATER, FLTRD, GF 0.7U REC (UG/L) (49309)
<.550	<.0020	<.001	90.0	<.0020	<.0140	<.0350	<.0350	<.0020	<.0080	<.0030	<.120

CARBO- FURAN WATER FLTRD 0.7 U GF, REC (UG/L) (82674)	CHLOR- AMBEN, WATER, FLTRD, GF 0.7U REC (UG/L) (49307)	CHLORO- THALO- NIL, WAT,FLT GF 0.7U REC (UG/L) (49306)	CHLOR- PYRIFOS DIS- SOLVED (UG/L) (38933)	CLOPYR- ALID, WATER, FLTRD, GF 0.7U REC (UG/L) (49305)	CYANA- ZINE, WATER, DISS, REC (UG/L) (04041)	DACTHAL MONO- ACID, WAT,FLT GF 0.7U REC (UG/L) (49304)	DCPA WATER FLTRD 0.7 U GF, REC (UG/L) (82682)	DEETHYL ATRA- ZINE, WATER, DISS, REC (UG/L) (04040)	DIAZ- INON D10 SRG WAT FLT 0.7 U GF, REC PERCENT (91063)	DI- AZINON, DIS- SOLVED (UG/L) (39572)	DICAMBA WATER, FLTRD, GF 0.7U REC (UG/L) (38442)
<.0030	<.420	<.480	<.0040	<.230	<.0040	<.0170	<.0020	<.0020	112	<.002	<.0350

DICHLO- BENIL, WATER, FLTRD, GF 0.7U REC (UG/L) (49303)	DICHLOR PROP, WATER, FLTRD, GF 0.7U REC (UG/L) (49302)	DI- ELDRIN DIS- SOLVED (UG/L) (39381)	DINOSEB WATER, FLTRD, GF 0.7U REC (UG/L) (49301)	DISUL- FOTON WATER FLTRD 0.7 U GF, REC (UG/L) (82677)	DIURON, WATER, FLTRD, GF 0.7U REC (UG/L) (49300)	DNOC WAT,FLT GF 0.7U REC (UG/L) (49299)	EPTC WATER FLTRD 0.7 U GF, REC (UG/L) (82668)	ETHAL- FLUR- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82663)	ETHO- PROP WATER FLTRD 0.7 U GF, REC (UG/L) (82672)	FEN- URON, WATER, FLTRD, GF 0.7U REC (UG/L) (49297)	FLUO- METURON WATER, FLTRD, GF 0.7U REC (UG/L) (38811)
<1.20	<.0320	<.001	<.0350	<.0170	<.0200	<.420	<.0020	<.0040	<.0030	<.0130	<.0350

FONOFOS WATER DISS REC (UG/L) (04095)	HCH ALPHA D6 SRG WAT FLT 0.7 U GF, REC PERCENT (91065)	LINDANE DIS- SOLVED (UG/L) (39341)	LINURON WATER, FLTRD, GF 0.7U REC (UG/L) (38478)	LIN- URON WATER FLTRD 0.7 U GF, REC (UG/L) (82666)	MALA- THION, DIS- SOLVED (UG/L) (39532)	MCPA, WATER, FLTRD, GF 0.7U REC (UG/L) (38482)	MCPB, WATER, FLTRD, GF 0.7U REC (UG/L) (38487)	METHIO- CARB, WATER, FLTRD, GF 0.7U REC (UG/L) (38501)	METH- OMYL, WATER, FLTRD, GF 0.7U REC (UG/L) (49296)	METHYL AZIN- PHOS WAT FLT 0.7 U GF, REC (UG/L) (82686)	METHYL PARA- THION WAT FLT 0.7 U GF, REC (UG/L) (82667)
<.0030	88.5	<.004	<.0180	<.0020	<.005	<.170	<.140	<.0260	<.0170	<.0010	<.0060

E Estimated

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

POTOMAC RIVER BASIN--Continued

01648006 - ROCK CREEK TRIBUTARY AT GOLF COURSE WASHINGTON, DC--Continued

DATE	METO-LACHLOR WATER DISSOLV (UG/L) (39415)	METRI-BUZIN SENCOR WATER DISSOLV (UG/L) (82630)	MOL-INATE WATER FLTRD 0.7 U GF, REC (UG/L) (82671)	NAPROP-AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82684)	NEB-URON, WATER, FLTRD, GF 0.7U REC (UG/L) (49294)	NORFLUR AZON, WATER, FLTRD, GF 0.7U REC (UG/L) (49293)	ORY-ZALIN, WATER, FLTRD, GF 0.7U REC (UG/L) (49292)	OXAMYL, WATER, FLTRD, GF 0.7U REC (UG/L) (38866)	P,P' DDE DISSOLV (UG/L) (34653)	PARA-THION, DIS-SOLVED (UG/L) (39542)	PEB-ULATE WATER FILTRD 0.7 U GF, REC (UG/L) (82669)	PENDI-METH-ALIN WAT FLT 0.7 U GF, REC (UG/L) (82683)
JUN												
24...	<.002	<.004	<.0040	<.0030	<.0150	<.0240	<.310	<.0180	<.0060	<.004	<.0040	<.0040

DATE	PER-METHRIN CIS WAT FLT 0.7 U GF, REC (UG/L) (82687)	PHORATE WATER FLTRD 0.7 U GF, REC (UG/L) (82664)	PIC-LORAM, WATER, FLTRD, GF 0.7U REC (UG/L) (49291)	PRO-METON, WATER, DISS, REC (UG/L) (04037)	PRON-AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82676)	PROP-CHLOR, WATER, DISS, REC (UG/L) (04024)	PRO-PANIL WATER FLTRD 0.7 U GF, REC (UG/L) (82679)	PRO-PARGITE WATER FLTRD 0.7 U GF, REC (UG/L) (82685)	PRO-PHAM, WATER, FLTRD, GF 0.7U REC (UG/L) (49236)	PRO-POXUR, WATER, FLTRD, GF 0.7U REC (UG/L) (38538)	SILVEX, DIS-SOLVED (UG/L) (39762)	SI-MAZINE, WATER, DISS, REC (UG/L) (04035)
JUN 24...	<.0050	<.0020	<.0500	<.0180	<.0030	<.0070	<.0040	<.0130	<.0350	<.0350	<.0210	<.0050

DATE	TEBU-THIURON WATER FLTRD 0.7 U GF, REC (UG/L) (82670)	TER-BACIL WATER FLTRD 0.7 U GF, REC (UG/L) (82665)	TER-BUFOS WATER FLTRD 0.7 U GF, REC (UG/L) (82675)	THIO-BENCARB WATER FLTRD 0.7 U GF, REC (UG/L) (82681)	TRIAL-LATE WATER FLTRD 0.7 U GF, REC (UG/L) (82678)	TRI-CLOPYR, WATER, FLTRD, GF 0.7U REC (UG/L) (49235)	TRI-FLUR-ALIN WAT FLT 0.7 U GF, REC (UG/L) (82661)
JUN 24...	<.0100	<.0070	<.0130	<.0020	<.0010	<.250	<.0020

01648010 - ROCK CREEK AT JOYCE ROAD WASHINGTON, DC

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)
JUN													
25...	0930	11	758	7.3	7.8	381	23.7	20.9	29	10	3.4	25	57
JUL													
14...	0920	6.1	764	8.4	7.6	481	19.0	20.9	--	--	--	--	--
FEB													
18...	1115	415	755	10.7	7.5	268	5.5	7.4	--	--	--	--	--
MAR													
09...	1018	39	766	12.4	7.0	380	-3.0	2.6	--	--	--	--	--
MAY													
04...	1130	24	760	9.8	8.1	402	17.5	13.9	--	--	--	--	--
23...	0045	103	756	9.2	6.9	382	17.0	19.5	--	--	--	--	--
24...	1100	430	746	6.8	7.0	207	21.0	19.1	--	--	--	--	--
24...	1145	480	746	5.5	7.0	232	21.0	19.6	--	--	--	--	--

DATE	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)
JUN											
25...	.25	11	18	.053	.37	.35	.633	.022	.020	.021	.047
JUL											
14...	--	--	--	--	--	--	--	--	--	--	--
FEB											
18...	--	--	--	--	--	--	--	--	--	--	--
MAR											
09...	--	--	--	--	--	--	--	--	--	--	--
MAY											
04...	--	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--	--

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

POTOMAC RIVER BASIN--Continued

01648010 - ROCK CREEK AT JOYCE ROAD WASHINGTON, DC--Continued

DATE	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	2,4,5-T DIS-SOLVED (UG/L) (39742)	2,4-D, DIS-SOLVED (UG/L) (39732)	2,4-DB WATER, FLTRD, GF 0.7U REC (UG/L) (38746)	2,6-DI-ETHYL ANILINE WAT FLT 0.7 U GF, REC (UG/L) (82660)	3HYDRXY CARBO-FURAN WAT,FLT GF 0.7U REC (UG/L) (49308)	ACETO-CHLOR, WATER FLTRD REC (UG/L) (49260)	ACIFL-UORFEN WATER, FLTRD, GF 0.7U REC (UG/L) (49315)	ALA-CHLOR, WATER, DISS, REC, (UG/L) (46342)
JUN											
25...	235	68	104	<.0350	<.150	<.240	<.0030	<.0600	<.0020	<.0350	<.002
JUL											
14...	--	--	--	<.0350	<.150	<.240	<.0030	<.690	<.0020	<.0350	<.002
FEB											
18...	--	--	--	<.0350	<.400	<.240	<.0030	<.0140	<.0020	<.0350	<.002
MAR											
09...	--	--	--	<.0350	.100	<.240	<.0030	<.0140	<.0020	<.0350	<.002
MAY											
04...	--	--	--	<.0350	<.150	<.240	<.0030	<.450	<.0020	<.0350	<.002
23...	--	--	--	<.0350	<.760	<.240	<.0030	<.440	<.0020	<.0350	<.002
24...	--	--	--	<.0350	<.810	<.240	<.0030	<.620	<.0020	<.0350	<.012
24...	--	--	--	<.0350	<.950	<.240	<.0030	<.240	<.0020	<.0350	<.014

DATE	ALDI-CARB SULFONE WAT,FLT GF 0.7U REC (UG/L) (49313)	ALDICA-RB SUL-FOXIDE, WAT,FLT GF 0.7U REC (UG/L) (49314)	ALDI-CARB, WATER, FLTRD, GF 0.7U REC (UG/L) (49312)	ALPHA BHC DIS-SOLVED (UG/L) (34253)	ATRA-ZINE, WATER, DISS, REC (UG/L) (39632)	BDMC, SURROG, WATER, UNFLTRD REC PERCENT (99835)	BEN-FLUR-ALIN WAT FLD 0.7 U GF, REC (UG/L) (82673)	BENTA-ZON, WATER, FLTRD, GF 0.7U REC (UG/L) (38711)	BRO-MACIL, WATER, DISS, REC (UG/L) (04029)	BRO-MOXYNIL WATER, FLTRD, GF 0.7U REC (UG/L) (49311)	BUTYL-ATE, WATER, DISS, REC (UG/L) (04028)
JUN											
25...	<.100	<.0210	<.550	<.0020	.041	150	<.0020	<.0140	<.180	<.0350	<.0020
JUL											
14...	<.100	<.0210	<.550	<.0020	.087	66.0	<.0020	<.0140	<.450	<.0350	<.0020
FEB											
18...	<.100	<.0210	<.550	<.0020	.010	94.0	<.0020	<.0140	<.400	<.0350	<.0020
MAR											
09...	<.100	<.0210	<.550	<.0020	.017	E131	<.0020	<.0140	<.0350	<.0350	<.0020
MAY											
04...	<.770	<.0210	<.550	<.0020	.023	56.0	<.0020	<.0140	<.130	<.0350	<.0020
23...	<.880	<.0210	<.550	<.0020	.058	73.0	<.0020	<.0140	<1.09	<.0350	<.0020
24...	<.100	<.0210	<.890	<.0020	.064	127	E.0023	<.0140	<.500	<.0350	<.0020
24...	<.100	<.0210	<.550	<.0020	.065	124	E.0027	<.0140	<.100	<.0350	<.0020

DATE	CAR-BARYL, WATER, FLTRD, GF 0.7U REC (UG/L) (49310)	CAR-BARYL WATER FLTRD 0.7 U GF, REC (UG/L) (82680)	CARBO-FURAN, WATER, FLTRD, GF 0.7U REC (UG/L) (49309)	CARBO-FURAN WATER FLTRD 0.7 U GF, REC (UG/L) (82674)	CHLOR-AMBEN, WATER, FLTRD, GF 0.7U REC (UG/L) (49307)	CHLORO-THALO-NIL, WAT,FLT GF 0.7U REC (UG/L) (49306)	CHLOR-PYRIFOS DIS-SOLVED (UG/L) (38933)	CLOPYR-ALID, WATER, FLTRD, GF 0.7U REC (UG/L) (49305)	CYANA-ZINE, WATER, DISS, REC (UG/L) (04041)	DACTHAL MONO-ACID, WAT,FLT GF 0.7U REC (UG/L) (49304)	DCPA WATER FLTRD 0.7 U GF, REC (UG/L) (82682)
JUN											
25...	<.0080	E.102	<.120	<.0030	<.420	<.480	.0042	<.230	<.0040	<.0170	<.0020
JUL											
14...	E.0300	E.137	<.120	<.0030	<.420	<.480	.0086	<.230	<.0040	<.0170	<.0020
FEB											
18...	<.0080	<.0030	<.260	<.0030	<.420	<.480	.0173	<.230	<.0040	<.0170	<.0020
MAR											
09...	<.0080	<.0030	<.120	<.0030	<.420	<.480	<.0040	<.230	<.0040	<.0170	<.0020
MAY											
04...	<.0080	E.0078	<.120	<.0030	<.420	<.480	E.0029	<.230	<.0040	<.0170	<.0020
23...	<.0080	E.0412	<.120	<.0030	<.420	<.480	<.0040	<.230	.0083	<.0170	<.0020
24...	.120	E.168	<.120	<.0030	<.420	<.480	<.0170	<.230	.0094	<.0170	<.0020
24...	.240	E.412	<.120	<.0030	<.420	<.480	<.0200	<.230	<.0040	<.130	<.0020

E Estimated

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

POTOMAC RIVER BASIN--Continued

01648010 - ROCK CREEK AT JOYCE ROAD WASHINGTON, DC--Continued

DATE	DEETHYL ATRA- ZINE, WATER, DISS, REC (UG/L) (04040)	DIAZ- INON D10 SRG WAT FLT 0.7 U GF, REC PERCENT (91063)	DI- AZINON, DIS- SOLVED (UG/L) (39572)	DICAMBA WATER, FLTRD, GF 0.7U REC (UG/L) (38442)	DICHLO- BENIL, WATER, FLTRD, GF 0.7U REC (UG/L) (49303)	DICHLOR PROP, WATER, FLTRD, GF 0.7U REC (UG/L) (49302)	DI- ELDRIN DIS- SOLVED (UG/L) (39381)	DINOSEB WATER, FLTRD, GF 0.7U REC (UG/L) (49301)	DISUL- FOTON WATER FLTRD 0.7 U GF, REC (UG/L) (82677)	DIURON, WATER, FLTRD, GF 0.7U REC (UG/L) (49300)	DNOC WAT,FLT GF 0.7U REC (UG/L) (49299)
JUN											
25...	E.0701	104	.038	<.0350	<1.20	<.0320	<.001	<.0350	<.0170	.0400	<.420
JUL											
14...	E.0630	134	.028	<.0350	<1.20	<.0320	<.001	<.0350	<.0170	<.0200	<.420
FEB											
18...	E.0102	91.2	.007	<.0350	<1.20	<.530	<.001	<.0350	<.0170	<.0200	E.330
MAR											
09...	E.0426	92.4	E.003	<.0350	<1.20	<.0320	<.001	<.0350	<.0170	<.0200	<.420
MAY											
04...	E.0839	98.2	.006	<.0350	<1.20	<.0320	<.001	<.0350	<.0170	<.0200	<.420
23...	E.0645	105	.120	<.0350	<1.20	<.0320	<.001	<.0350	<.0170	<.0200	<.420
24...	E.0298	101	.152	<.0350	<1.20	<.110	<.001	<.0350	<.0170	<.0200	<.420
24...	E.0439	93.8	.127	<.0350	<1.20	<.0320	<.001	<.0350	<.0170	<.0200	<.420

DATE	EPTC WATER FLTRD 0.7 U GF, REC (UG/L) (82668)	ETHAL- FLUR- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82663)	ETHO- PROP WATER FLTRD 0.7 U GF, REC (UG/L) (82672)	FEN- URON, WATER, FLTRD, GF 0.7U REC (UG/L) (49297)	FLUO- METURON WATER, FLTRD, GF 0.7U REC (UG/L) (38811)	FONOFOS WATER DISS REC (UG/L) (04095)	HCH ALPHA D6 SRG WAT FLT 0.7 U GF, REC PERCENT (91065)	LINDANE DIS- SOLVED (UG/L) (39341)	LINURON WATER, FLTRD, GF 0.7U REC (UG/L) (38478)	LIN- URON WATER FLTRD 0.7 U GF, REC (UG/L) (82666)	MALA- THION, DIS- SOLVED (UG/L) (39532)
JUN											
25...	<.0020	<.0040	<.0030	<.0130	<.0350	<.0030	90.9	<.004	<.0180	<.0020	<.005
JUL											
14...	<.0020	<.0040	<.0030	<.0130	<.0350	<.0030	93.9	<.004	<.0180	<.0020	<.005
FEB											
18...	<.0020	<.0040	<.0030	<.0130	<.370	<.0030	85.2	<.004	<.0180	<.0020	<.025
MAR											
09...	<.0020	<.0040	<.0030	<.0130	<.0350	<.0030	70.2	<.004	<.0180	<.0020	<.005
MAY											
04...	<.0020	<.0040	<.0030	<.0130	<.0350	<.0030	97.8	<.004	<.0180	<.0020	<.005
23...	<.0060	<.0040	<.0030	<.0130	<.0350	<.0030	96.8	<.004	<.0180	<.0020	<.005
24...	<.0180	<.0040	<.0030	<3.40	<.0350	<.0030	84.0	<.004	<.180	<.0020	.020
24...	<.0100	<.0040	<.0030	<2.44	<.0350	<.0030	78.5	<.004	<.0180	<.0020	.031

DATE	MCPA, WATER, FLTRD, GF 0.7U REC (UG/L) (38482)	MCPB, WATER, FLTRD, GF 0.7U REC (UG/L) (38487)	METHIO- CARB, WATER, FLTRD, GF 0.7U REC (UG/L) (38501)	METH- OMYL, WATER, FLTRD, GF 0.7U REC (UG/L) (49296)	METHYL AZIN- PHOS WAT FLT 0.7 U GF, REC (UG/L) (82686)	METHYL PARA- THION WAT FLT 0.7 U GF, REC (UG/L) (82667)	METO- LACHLOR WATER DISSOLV (UG/L) (39415)	METRI- BUZIN SENCOR WATER DISSOLV (UG/L) (82630)	MOL- INATE WATER FLTRD 0.7 U GF, REC (UG/L) (82671)	NAPROP- AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82684)	NEB- URON, WATER, FLTRD, GF 0.7U REC (UG/L) (49294)
JUN											
25...	<.170	<.140	<.0260	<.0170	<.0010	<.0060	.019	<.004	<.0040	<.0030	<.0150
JUL											
14...	<.170	<.140	<.0260	<.870	<.0010	<.0060	.033	<.004	<.0040	<.0030	<.0150
FEB											
18...	<.170	<.140	<.0260	<.0170	<.0010	<.0060	.018	<.004	<.0040	<.0030	<.0150
MAR											
09...	<.170	<.140	<.0260	<.0170	<.0010	<.0060	.013	<.004	<.0040	<.0030	<.0150
MAY											
04...	<.170	<.140	<.0260	<.120	<.0010	<.0060	.014	<.004	<.0040	<.0030	<.0150
23...	<.170	<.140	<.0260	<1.06	<.0190	<.0060	.032	<.004	<.0040	<.0030	<.0150
24...	<.170	<.140	<.0260	<1.13	<.0280	<.0060	.058	<.004	<.0040	.0331	<.160
24...	<.170	<.140	<.0260	<.400	<.0250	<.0060	.060	<.004	<.0040	--	<.220

E Estimated

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

POTOMAC RIVER BASIN--Continued

01648010 - ROCK CREEK AT JOYCE ROAD WASHINGTON, DC--Continued

DATE	NORFLURAZON, WATER, FLTRD, GF 0.7U REC (UG/L) (49293)	ORYZALIN, WATER, FLTRD, GF 0.7U REC (UG/L) (49292)	OXAMYL, WATER, FLTRD, GF 0.7U REC (UG/L) (38866)	P,P' DDE DISSOLV (UG/L) (34653)	PARATHION, DISSOLVED (UG/L) (39542)	PEBULATE WATER FILTRD 0.7 U GF, REC (UG/L) (82669)	PENDIMETHALIN WAT FLT 0.7 U GF, REC (UG/L) (82683)	PERMETHRIN CIS WAT FLT 0.7 U GF, REC (UG/L) (82687)	PHORATE WATER FLTRD 0.7 U GF, REC (UG/L) (82664)	PICLORAM, WATER, FLTRD, GF 0.7U REC (UG/L) (49291)	PROMETON, WATER, DISS, REC (UG/L) (04037)
JUN											
25...	<.0240	<.310	<.0180	<.0060	<.004	<.0040	<.0040	<.0050	<.0020	<.0500	.0182
JUL											
14...	<.0240	<.460	<.0180	<.0060	<.004	<.0040	<.0040	<.0050	<.0020	<.0500	.0285
FEB											
18...	<.0240	<.310	<.0180	<.0060	<.004	<.0040	<.0040	<.0050	<.0020	<.0500	E.0046
MAR											
09...	<.0240	<.310	<.0180	<.0060	<.004	<.0040	<.0040	<.0050	<.0020	<.0500	E.0042
MAY											
04...	<.0240	<.310	<.0180	<.0060	<.004	<.0040	<.0040	<.0050	<.0020	<.0500	E.004
23...	<.0240	<.310	<.0180	<.0060	<.004	<.0040	<.0040	<.0050	<.0020	<.370	E.0087
24...	<.0240	<.310	<.590	<.0060	<.004	<.0040	<.0190	<.0050	<.0020	<.180	.0217
24...	<.0240	<.400	<.0180	<.0060	<.004	<.0040	<.0180	<.0050	<.0020	<.0500	.0324

DATE	PRONAMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82676)	PROPCHLOR, WATER, DISS, REC (UG/L) (04024)	PROPANIL WATER FLTRD 0.7 U GF, REC (UG/L) (82679)	PROPARGITE WATER FLTRD 0.7 U GF, REC (UG/L) (82685)	PROPHAM, WATER, FLTRD, GF 0.7U REC (UG/L) (49236)	PROPOXUR, WATER, FLTRD, GF 0.7U REC (UG/L) (38538)	SILVEX, DISSOLVED (UG/L) (39762)	SIMAZINE, WATER, DISS, REC (UG/L) (04035)	TEBUTHIURON WATER FLTRD 0.7 U GF, REC (UG/L) (82670)	TERBACIL WATER FLTRD 0.7 U GF, REC (UG/L) (82665)	TERBUFOS WATER FLTRD 0.7 U GF, REC (UG/L) (82675)
JUN											
25...	<.0030	<.0070	<.0040	<.0130	<.0350	<.0350	<.0210	.0335	<.0100	<.0070	<.0130
JUL											
14...	<.0030	<.0070	<.0040	<.0130	<.0350	<.0350	<.0210	.0829	<.0100	<.0070	<.0130
FEB											
18...	<.0030	<.0070	<.0040	<.0130	<.0350	<.110	<.0210	.0088	<.0100	<.0070	<.0130
MAR											
09...	<.0030	<.0070	<.0040	<.0130	<.0350	<.0350	<.0210	.0095	E.0064	<.0070	<.0130
MAY											
04...	<.0030	<.0070	<.0040	<.0130	<.0350	<.0350	<.0210	.0089	.0103	<.0070	<.0130
23...	<.0030	<.0070	<.0040	<.0130	<.150	<.980	<.0210	.0210	<.0160	<.0070	<.0130
24...	<.0030	<.0070	<.0040	<.0130	<.920	<.550	<.0210	.0208	<.0100	<.0070	<.0130
24...	<.0030	<.0070	<.0040	<.0130	<.200	<.0350	<.0210	.0221	<.0100	<.0070	<.0130

DATE	TERBUTHYLAZINE SURROGT WAT FLT 0.7 U GF, REC PERCENT (91064)	THIOBENCARB WATER FLTRD 0.7 U GF, REC (UG/L) (82681)	TRIALLATE WATER FLTRD 0.7 U GF, REC (UG/L) (82678)	TRICLOPYR, WATER, FLTRD, GF 0.7U REC (UG/L) (49235)	TRIFLURALIN WAT FLT 0.7 U GF, REC (UG/L) (82661)	SEDIMENT, SUSPENDED (MG/L) (80154)	SEDIMENT, DISCHARGE, SUSPENDED (T/DAY) (80155)
JUN							
25...	--	<.0020	<.0010	<.250	<.0020	--	--
JUL							
14...	--	<.0020	<.0010	<.670	<.0020	15	.24
FEB							
18...	94.1	<.0020	<.0010	<.250	<.0020	--	--
MAR							
09...	95.0	<.0020	<.0010	<.250	E.0019	--	--
MAY							
04...	115	<.0020	<.0010	<.250	E.0019	--	--
23...	--	<.0020	<.0010	<.250	<.0020	--	--
24...	--	<.0020	<.0010	<.250	E.0026	--	--
24...	--	<.0020	<.0010	<.250	E.0027	--	--

E Estimated

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

POTOMAC RIVER BASIN--Continued

01648998 - ROCK CREEK ABOVE Q STREET WASHINGTON, DC

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	CALCIUM BOT MAT <63U WS FIELD PERCENT (34830)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	MAGNE-SIUM BOT MAT <63U WS FIELD PERCENT (34900)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)
JUN													
23...	1150	21	768	8.3	7.8	289	26.0	20.4	25	--	7.6	--	3.7
AUG													
17...	1115	--	758	--	7.6	341	--	25.3	--	1.4	--	1.5	--

DATE	POTAS-SIUM BOT MAT <63U WS FIELD PERCENT (34940)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	SODIUM BOT MAT <63U WS FIELD PERCENT (34960)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	SULFUR BOT MAT <63U WS FIELD PERCENT (34970)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)
JUN												
23...	--	16	--	34	.18	8.4	17	--	.037	.28	.33	.531
AUG												
17...	1.3	--	.36	--	--	--	--	.25	--	--	--	--

DATE	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	PHOS-PHORUS BOT MAT <63U WS FIELD PERCENT (34935)	CARBON, INORG, SED, BM WS,<2MM DW, REC (G/KG) (49270)	CARBON, INORG, SED, BM WS,<63U DW, REC (PER-CENT) (49269)	CARBON, ORG + INORG SED, BM WS,<2MM DW, REC (G/KG) (49272)	CARBON, ORG + INORG, SED, BM WS,<63U DW, REC PERCENT (49267)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	ALUM-INUM BOT MAT <63U WS FIELD PERCENT (34790)	ANTI-MONY BOT MAT <63U WS FIELD (UG/G) (34795)
JUN												
23...	.016	.031	.025	.044	--	--	--	--	--	193	--	--
AUG												
17...	--	--	--	--	.17	.800	.13	27.0	5.82	--	8.1	3.3

DATE	ARSENIC BOT MAT <63U WS FIELD (UG/G) (34800)	BARIUM BOT MAT <63U WS FIELD (UG/G) (34805)	BERYL-LIUM BOT MAT <63U WS FIELD (UG/G) (34810)	BISMUTH BOT MAT <180UWS FIELD (UG/G) (34816)	CADMIUM BOT MAT <63U WS FIELD (UG/G) (34825)	CERIUM BOT MAT <63U WS FIELD (UG/G) (34835)	CHRO-MIUM BOT MAT <63U WS FIELD (UG/G) (34840)	COBALT BOT MAT <63U WS FIELD (UG/G) (34845)	COPPER BOT MAT <63U WS FIELD (UG/G) (34850)	EURO-PIUM BOT MAT <63U WS FIELD (UG/G) (34855)	GALLIUM BOT MAT <63U WS FIELD (UG/G) (34860)	GOLD BOT MAT <63U WS FIELD (UG/G) (34870)
JUN												
23...	--	--	--	--	--	--	--	--	--	--	--	--
AUG												
17...	7.4	500	4	<1	1.5	120	160	32	170	2	20	<1

DATE	HOLMIUM BOT MAT <63U WS FIELD (UG/G) (34875)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	IRON BOT MAT <63U WS FIELD PERCENT (34880)	LANTHA-NUM BOT MAT <63U WS FIELD (UG/G) (34885)	LEAD BOT MAT <63U WS FIELD (UG/G) (34890)	LITHIUM BOT MAT <63U WS FIELD (UG/G) (34895)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	MANGA-NESE BOT MAT <63U WS FIELD (UG/G) (34905)	MERCURY BOT MAT <63U WS FIELD (UG/G) (34910)	MOLYB-DENUM BOT MAT <63U WS FIELD (UG/G) (34915)	NEODYM-IUM BOT MAT <63U WS FIELD (UG/G) (34920)	NICKEL BOT MAT <63U WS FIELD (UG/G) (34925)
JUN												
23...	--	130	--	--	--	--	53	--	--	--	--	--
AUG												
17...	2	--	5.6	64	150	32	--	1900	.32	8	55	99

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

POTOMAC RIVER BASIN--Continued

01648998 - ROCK CREEK ABOVE Q STREET WASHINGTON, DC--Continued

DATE	NIOBIUM BOT MAT <63U WS FIELD (UG/G) (34930)	SCAN- DIUM BOT MAT <63U WS FIELD (UG/G) (34945)	SELE- NIUM BOT MAT <63U WS FIELD (UG/G) (34950)	SILVER BOT MAT <63U WS FIELD (UG/G) (34955)	STRON- TIUM BOT MAT <63U WS FIELD (UG/G) (34965)	TANTA- LUM BOT MAT <63U WS FIELD (UG/G) (34975)	THAL- LIUM BED MAT D SIEVE <63 U TOTAL (UG/G) (04064)	TIN BOT MAT <63U WS FIELD (UG/G) (34985)	TITA- NIUM, SED, BM WS,<63U DRY WGT REC PERCENT (49274)	VANA- DIUM BOT MAT <63U WS FIELD (UG/G) (35005)	YTTER- BIUM BOT MAT <63U WS FIELD (UG/G) (35015)	YTTRIUM BOT MAT <63U WS FIELD (UG/G) (35010)
JUN												
23...	--	--	--	--	--	--	--	--	--	--	--	--
AUG												
17...	10	22	1.0	.5	110	2	<1.0	8	.430	140	4	47

DATE	ZINC BOT MAT <63U WS FIELD (UG/G) (35020)	CARBON, ORGANIC SED, BM WS,<2MM DW, REC (G/KG) (49271)	CARBON, ORGANIC SED, BM WS,<63U DW, REC (PER- CENT) (49266)	2,2'-BI QUINO- LINE, SED, BM WS,<2MM DW, REC (UG/KG) (49391)	2,4,5-T DIS- SOLVED (UG/L) (39742)	2,4-D, DIS- SOLVED (UG/L) (39732)	2,4-DB WATER, FLTRD, GF 0.7U REC (UG/L) (38746)	2,6-DI- ETHYL ANILINE WAT FLT 0.7 U GF, REC (UG/L) (82660)	3,5- XYLENOL SED, BM WS,<2MM DW, REC (UG/KG) (49421)	3HYDRXY CARBO- FURAN WAT,FLT GF 0.7U REC (UG/L) (49308)	4-BROMO PHNPHNL ETHER SED, BM WS,<2MM DW, REC (UG/KG) (49454)	4CHLORO PHNPHN LETHER SED, BM WS,<2MM DW, REC (UG/KG) (49455)
JUN												
23...	--	--	--	--	<.0350	<.150	<.240	<.0030	--	<.520	--	--
AUG												
17...	450	26.0	5.69	<100	--	--	--	--	<100	--	<100	<100

DATE	4HCYPEN PHENAN THRENE SED, BM WS,<2MM DW, REC (UG/KG) (49411)	9,10- ANTHRA- QUINONE SED, BM WS,<2MM DW, REC (UG/KG) (49437)	9H-FLU- ORENE, 1METHYL SED, BM WS,<2MM DW, REC (UG/KG) (49398)	9H-FLU- ORENE SED, BM WS,<2MM DW, REC (UG/KG) (49399)	ACENAPH THENE SED, BM WS,<2MM DW, REC (UG/KG) (49429)	ACENAPH THYLENE SED, BM WS,<2MM DW, REC (UG/KG) (49428)	ACETO- CHLOR, WATER FLTRD REC (UG/L) (49260)	ACIFL- UORFEN WATER, FLTRD, GF 0.7U REC (UG/L) (49315)	ACRI- DINE SED, BM WS,<2MM DW, REC (UG/KG) (49430)	ALA- CHLOR, WATER, DISS, REC, (UG/L) (46342)	ALDI- CARB SULFONE WAT,FLT GF 0.7U REC (UG/L) (49313)	ALDICA- RB SUL- FOXIDE, WAT,FLT GF 0.7U REC (UG/L) (49314)
JUN												
23...	--	--	--	--	--	--	<.0020	<.0350	--	<.002	<.100	<.0210
AUG												
17...	120	280	<100	E40	E27	E60	--	--	E40	--	--	--

DATE	ALDI- CARB, WATER, FLTRD, GF 0.7U REC (UG/L) (49312)	ALDRIN, SED, BM WS,<2MM DW, REC (UG/KG) (49319)	ALPHA BHC DIS- SOLVED (UG/L) (34253)	ALPHA- BHC, D6 SURROGT SED, BM WS,<2MM DW, REC PERCENT (49275)	ALPHA- BHC, SED, BM WS,<2MM DW, REC (UG/KG) (49338)	ANTHRA- CENE,2- METHYL- SED, BM WS,<2MM DW, REC (UG/KG) (49435)	ANTHRA- CENE SED, BM WS,<2MM DW, REC (UG/KG) (49434)	ATRA- ZINE, WATER, DISS, REC (UG/L) (39632)	AZO- BENZENE SED, BM WS,<2MM DW, REC (UG/KG) (49443)	BDMC, SURROG, WATER, UNFLTRD REC PERCENT (99835)	BEN- FLUR- ALIN WAT FLD 0.7 U GF, REC (UG/L) (82673)	BENTA- ZON, WATER, FLTRD, GF 0.7U REC (UG/L) (38711)
JUN												
23...	<4.47	--	<.0020	--	--	--	--	.033	--	90.0	<.0020	<.0140
AUG												
17...	--	<1.00	--	57.0	<1.00	E21	190	--	<100	--	--	--

DATE	BENZ(A) ANTHRA- CENE SED, BM WS,<2MM DW, REC (UG/KG) (49436)	BENZENE 124TRI- CHLORO- SED, BM WS,<2MM DW, REC (UG/KG) (49438)	BENZENE HEXA- CHLORO- SED, BM WS,<2MM DW, REC (UG/KG) (49343)	BENZENE M-DI- CHLORO- SED, BM WS,<2MM DW, REC (UG/KG) (49441)	BENZENE NITRO- SED, BM WS,<2MM DW, REC (UG/KG) (49444)	BENZENE NITROD5 SURROGT SED, BM WS,<2MM DW, REC PERCENT (49280)	BENZENE O-DI- CHLORO- SED, BM WS,<2MM DW, REC (UG/KG) (49439)	BENZENE P-DI- CHLORO- SED, BM WS,<2MM DW, REC (UG/KG) (49442)	BENZENE PNTCHLR NITRO- SED, BM WS,<2MM DW, REC (UG/KG) (49446)	BENZO (A) PYRENE SED, BM WS,<2MM DW, REC (UG/KG) (49389)	BENZOB FLUOR- ANTHENE SED, BM WS,<2MM DW, REC (UG/KG) (49458)	BENZO(G HI)PERY LENE SED, BM WS,<2MM DW, REC (UG/KG) (49408)
JUN												
23...	--	--	--	--	--	--	--	--	--	--	--	--
AUG												
17...	660	<100	<1.00	<100	<100	50.9	<100	<100	<100	810	1200	420

E Estimated

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

POTOMAC RIVER BASIN--Continued

01648998 - ROCK CREEK ABOVE Q STREET WASHINGTON, DC--Continued

DATE	BENZO K FLUOR- ANTHENE SED, BM WS,<2MM DW, REC (UG/KG) (49397)	BENZOCI NNOLINE BED MAT WS <2MM DRY WGT REC (UG/KG) (49468)	BETA- BHC, SED, BM WS,<2MM DW, REC (UG/KG) (49339)	BIPHENL 2FLUORO SURROGT SED, BM WS,<2MM DW, REC PERCENT (49279)	BIS2CHL ETHYL ETHER SED, BM WS,<2MM DW, REC (UG/KG) (49456)	BRO- MACIL, WATER, DISS, REC (UG/L) (04029)	BRO- MOXYNIL WATER, FLTRD, GF 0.7U REC (UG/L) (49311)	BUTYL- ATE, WATER, DISS, REC (UG/L) (04028)	CAR- BARYL, WATER, FLTRD, GF 0.7U REC (UG/L) (49310)	CAR- BARYL WATER FLTRD 0.7 U GF, REC (UG/L) (82680)	CARBA- ZOLE SED, BM WS,<2MM DW, REC (UG/KG) (49449)	CARBO- FURAN, WATER, FLTRD, GF 0.7U REC (UG/L) (49309)
JUN 23...	--	--	--	--	--	<.490	<.130	<.0020	<.0080	E.0494	--	<.120
AUG 17...	880	<50	<1.00	52.3	<100	--	--	--	--	--	110	--

DATE	CARBO- FURAN WATER FLTRD 0.7 U GF, REC (UG/L) (82674)	CHLOR- AMBEN, WATER, FLTRD, GF 0.7U REC (UG/L) (49307)	CHLORO- NEB, SED, BM WS,<2MM DW, REC (UG/KG) (49322)	CHLORO- THALO- NIL, WAT,FLT GF 0.7U REC (UG/L) (49306)	CHLOR- PYRIFOS DIS- SOLVED (UG/L) (38933)	CHRY- SENE SED, BM WS,<2MM DW, REC (UG/KG) (49450)	CIS- CHLOR- DANE, SED, BM WS,<2MM DW, REC (UG/KG) (49320)	CIS- NONA- CHLOR, SED, BM WS,<2MM DW, REC (UG/KG) (49316)	CIS- PER- METHRIN SED, BM WS,<2MM DW, REC (UG/KG) (49349)	CLOPYR- ALID, WATER, FLTRD, GF 0.7U REC (UG/L) (49305)	CYANA- ZINE, WATER, DISS, REC (UG/L) (04041)	DACTHAL MONO- ACID, WAT,FLT GF 0.7U REC (UG/L) (49304)
JUN 23...	<.0030	<.420	--	<.480	<.0040	--	--	--	--	<.230	<.0040	<.0170
AUG 17...	--	--	<5.00	--	--	1000	7.40	1.90	<5.00	--	--	--

DATE	DCPA, SED, BM WS,<2MM DW, REC (UG/KG) (49324)	DCPA WATER FLTRD 0.7 U GF, REC (UG/L) (82682)	DEETHYL ATRA- ZINE, WATER, DISS, REC (UG/L) (04040)	DIAZ- INON D10 SRG WAT FLT 0.7 U GF, REC PERCENT (91063)	DI- AZINON, DIS- SOLVED (UG/L) (39572)	DIBENZ (AH),AN THRACEN SED, BM WS,<2MM DW, REC (UG/KG) (49461)	DICAMBA WATER, FLTRD, GF 0.7U REC (UG/L) (38442)	DICHLO- BENIL, WATER, FLTRD, GF 0.7U REC (UG/L) (49303)	DICHLOR PROP, WATER, FLTRD, GF 0.7U REC (UG/L) (49302)	DI- ELDRIN DIS- SOLVED (UG/L) (39381)	DIEL- DRIN, SED, BM WS,<2MM DW, REC (UG/KG) (49331)	DINOSEB WATER, FLTRD, GF 0.7U REC (UG/L) (49301)
JUN 23...	--	<.0020	E.0205	105	.083	--	<.0350	<1.20	<.0320	<.001	--	<.0350
AUG 17...	<5.00	--	--	--	--	210	--	--	--	--	2.90	--

DATE	DIPHNYL AMINE,N NITROSO SED, BM WS,<2MM DW, REC (UG/KG) (49433)	DPROPYL AMINE,N NITROSO SED, BM WS,<2MM DW, REC (UG/KG) (49431)	DISUL- FOTON WATER FLTRD 0.7 U GF, REC (UG/L) (82677)	DIURON, WATER, FLTRD, GF 0.7U REC (UG/L) (49300)	DNOC WAT,FLT GF 0.7U REC (UG/L) (49299)	ENDO- SULFAN I, SED, BM WS,<2MM DW, REC (UG/KG) (49332)	ENDRIN, SED, BM WS,<2MM DW, REC (UG/KG) (49335)	EPTC WATER FLTRD 0.7 U GF, REC (UG/L) (82668)	ETHAL- FLUR- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82663)	ETHO- PROP WATER FLTRD 0.7 U GF, REC (UG/L) (82672)	FEN- URON, WATER, FLTRD, GF 0.7U REC (UG/L) (49297)	FLUO- METURON WATER, FLTRD, GF 0.7U REC (UG/L) (38811)
JUN 23...	--	--	<.0170	<.0200	<.420	--	--	<.0020	<.0040	<.0030	<.110	<.0350
AUG 17...	<100	<100	--	--	--	<1.00	<2.00	--	--	--	--	--

DATE	FLUOR- ANTHENE BED MAT WS <2MM DRY WGT REC (UG/KG) (49466)	FONOFOS WATER DISS REC (UG/L) (04095)	HCH ALPHA D6 SRG WAT FLT 0.7 U GF, REC PERCENT (91065)	HEPTA- CHLOR EPOXIDE SED, BM WS,<2MM DW, REC (UG/KG) (49342)	HEPTA- CHLOR, SED, BM WS,<2MM DW, REC (UG/KG) (49341)	INDENO 123-CD PYRENE SED, BM WS,<2MM DW, REC (UG/KG) (49390)	ISODRIN SED, BM WS,<2MM DW, REC (UG/KG) (49344)	ISOPHOR ONE SED, BM WS,<2MM DW, REC (UG/KG) (49400)	ISO- QUINO- LINE, SED, BM WS,<2MM DW, REC (UG/KG) (49394)	LINDANE DIS- SOLVED (UG/L) (39341)	LINDANE SED, BM WS,<2MM DW, REC (UG/KG) (49345)	LINURON WATER, FLTRD, GF 0.7U REC (UG/L) (38478)
JUN 23...	--	<.0030	105	--	--	--	--	--	--	<.004	--	<.0180
AUG 17...	1600	--	--	1.80	<1.00	550	<1.00	<100	<100	--	<1.00	--

E Estimated

01648998 - ROCK CREEK ABOVE Q STREET WASHINGTON, DC--Continued

DATE	LIN- URON WATER FLTRD 0.7 U GF, REC (UG/L) (82666)	MALA- THION, DIS- SOLVED (UG/L) (39532)	MCPA, WATER, FLTRD, GF 0.7U REC (UG/L) (38482)	MCPB, WATER, FLTRD, GF 0.7U REC (UG/L) (38487)	M-CRE- SOL, 4- CHLORO- SED, BM WS,<2MM DW, REC (UG/KG) (49422)	METHANE 2CHLORO ETHOXY SED, BM WS,<2MM DW, REC (UG/KG) (49401)	METHIO- CARB, WATER, FLTRD, GF 0.7U REC (UG/L) (38501)	METH- OMYL, WATER, FLTRD, GF 0.7U REC (UG/L) (49296)	METHOXY CHLOR, O,P'-, SED, BM WS,<2MM DW, REC (UG/KG) (49347)	METHOXY CHLOR P,P'-, SED, BM WS,<2MM DW, REC (UG/KG) (49346)	METHYL AZIN- PHOS WAT FLT 0.7 U GF, REC (UG/L) (82686)	METHYL PARA- THION WAT FLT 0.7 U GF, REC (UG/L) (82667)
JUN												
23...	<.0020	<.005	<.170	<.140	--	--	<.0260	<.390	--	--	<.0010	<.0060
AUG												
17...	--	--	--	--	<100	<100	--	--	<5.00	<5.00	--	--

DATE	METO- LACHLOR WATER DISSOLV (UG/L) (39415)	METRI- BUZIN SENCOR WATER DISSOLV (UG/L) (82630)	MIREX, SED, BM WS,<2MM DW, REC (UG/KG) (49348)	MOL- INATE WATER FLTRD 0.7 U GF, REC (UG/L) (82671)	NAPTHAL ENE, 12 DIMETHL SED, BM WS,<2MM DW, REC (UG/KG) (49403)	NAPTHAL ENE, 16 DIMETHL SED, BM WS,<2MM DW, REC (UG/KG) (49404)	NAPTHAL ENE,236 TRIMETH SED, BM WS,<2MM DW, REC (UG/KG) (49405)	NAPTHAL ENE, 26 DIMETHL SED, BM WS,<2MM DW, REC (UG/KG) (49406)	NAPTHAL ENE, 2- CHLORO- SED, BM WS,<2MM DW, REC (UG/KG) (49407)	NAPTHAL ENE, 2- ETHYL- SED BM WS <2MM DW REC (UG/KG) (49948)	NAPHTH- ALENE, SED, BM WS,<2MM DW, REC (UG/KG) (49402)	NAPROP- AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82684)
JUN												
23...	.020	<.004	--	<.0040	--	--	--	--	--	--	--	<.0030
AUG												
17...	--	--	<1.00	--	<100	<100	<100	E36	<100	<100	<100	--

DATE	NEB- URON, WATER, FLTRD, GF 0.7U REC (UG/L) (49294)	NORFLUR AZON, WATER, FLTRD, GF 0.7U REC (UG/L) (49293)	O, P'- DDD, SED, BM WS,<2MM DW, REC (UG/KG) (49325)	O, P'- DDE, SED, BM WS,<2MM DW, REC (UG/KG) (49327)	O, P'- DDT, SED, BM WS,<2MM DW, REC (UG/KG) (49329)	ORY- ZALIN, WATER, FLTRD, GF 0.7U REC (UG/L) (49292)	OXAMYL, WATER, FLTRD, GF 0.7U REC (UG/L) (38866)	OXY- CHLOR- DANE, SED, BM WS,<2MM DW, REC (UG/KG) (49318)	P,P' DDE DISSOLV (UG/L) (34653)	P, P'- DDD, SED, BM WS,<2MM DW, REC (UG/KG) (49326)	P, P'- DDE, SED, BM WS,<2MM DW, REC (UG/KG) (49328)
JUN											
23...	<.0150	<.0240	--	--	--	<.430	<.0180	--	<.0060	--	--
AUG											
17...	--	--	<1.00	<1.00	<2.00	--	--	2.00	--	E6.20	6.80

DATE	P, P'- DDT, SED, BM WS,<2MM DW, REC (UG/KG) (49330)	PARA- THION, DIS- SOLVED (UG/L) (39542)	PCB, SED, BM WS,<2MM DW, REC (UG/KG) (49459)	P- CRESOL SED, BM WS,<2MM DW, REC (UG/KG) (49451)	PEB- ULATE WATER FILTRD 0.7 U GF, REC (UG/L) (82669)	PENDI- METH- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82683)	PENTA- CHLORO- ANISOLE SED, BM WS,<2MM DW, REC (UG/KG) (49460)	PER- METHRIN CIS WAT FLT 0.7 U GF, REC (UG/L) (82687)	PHENAN THRENE 1METHYL SED, BM WS,<2MM DW, REC (UG/KG) (49410)	PHENAN THRENE SED, BM WS,<2MM DW, REC (UG/KG) (49409)	PHENAN- THRI- DINE SED, BM WS,<2MM DW, REC (UG/KG) (49393)
JUN											
23...	--	<.004	--	--	<.0040	<.0040	--	<.0050	--	--	--
AUG											
17...	7.80	--	53	400	--	--	<1.0	--	E33	830	<100

DATE	PHENOL C8- ALKYL- SED, BM WS,<2MM DW, REC (UG/KG) (49424)	PHENOL, 2CHLORO BED MAT WS <2MM DRY WGT REC (UG/KG) (49467)	PHENOL SED, BM WS,<2MM DW, REC (UG/KG) (49413)	PHORATE WATER FLTRD 0.7 U GF, REC (UG/L) (82664)	PHTHALA TE,BIS2 ETHHEXL SED, BM WS,<2MM DW, REC (UG/KG) (49426)	PHTHALA TEBUTYL BENZYL- SED, BM WS,<2MM DW, REC (UG/KG) (49427)	PHTHAL- ATE, DIBUTYL SED, BM WS,<2MM DW, REC (UG/KG) (49381)	PHTHAL- ATE, D IETHYL SED, BM WS,<2MM DW, REC (UG/KG) (49383)	PHTHAL- ATE,DI- METHYL SED, BM WS,<2MM DW, REC (UG/KG) (49384)	PHTHAL ATE, D IOCTYL SED, BM WS,<2MM DW, REC (UG/KG) (49382)	PIC- LORAM, WATER, FLTRD, GF 0.7U REC (UG/L) (49291)
JUN											
23...	--	--	--	<.0020	--	--	--	--	--	--	<.0500
AUG											
17...	<100	<100	E36	--	2100	120	E45	<100	<100	180	--

E Estimated

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

POTOMAC RIVER BASIN--Continued

01648998 - ROCK CREEK ABOVE Q SREETT WASHINGTON, DC--Continued

DATE	PRO- METON, WATER, DISS, REC (UG/L) (04037)	PRON- AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82676)	PROP- CHLOR, WATER, DISS, REC (UG/L) (04024)	PRO- PANIL WATER FLTRD 0.7 U GF, REC (UG/L) (82679)	PRO- PARGITE WATER FLTRD 0.7 U GF, REC (UG/L) (82685)	PRO- PHAM, WATER, FLTRD, GF 0.7U REC (UG/L) (49236)	PRO- POXUR, WATER, FLTRD, GF 0.7U REC (UG/L) (38538)	PYRENE, 1- METHYL, SED, BM WS,<2MM DW, REC (UG/KG) (49388)	PYRENE, SED, BM WS,<2MM DW, REC (UG/KG) (49387)	QUINO- LINE, SED, BM WS,<2MM DW, REC (UG/KG) (49392)	SILVEX, DIS- SOLVED (UG/L) (39762)
JUN											
23...	.0294	<.0030	<.0070	<.0040	<.0130	<.130	<.130	--	--	--	<.0210
AUG											
17...	--	--	--	--	--	--	--	E44	1200	<100	--

DATE	SI- MAZINE, WATER, DISS, REC (UG/L) (04035)	TEBU- THIURON WATER FLTRD 0.7 U GF, REC (UG/L) (82670)	TER- BACIL WATER FLTRD 0.7 U GF, REC (UG/L) (82665)	TER- BUFOS WATER FLTRD 0.7 U GF, REC (UG/L) (82675)	TERPHEN YL D14- SURROGT SED, BM WS,<2MM DW, REC PERCENT (49278)	THIO- BENCARB WATER FLTRD 0.7 U GF, REC (UG/L) (82681)	THIOPH ENE,DI- BENZO- SED, BM WS,<2MM DW, REC (UG/KG) (49452)	TOLUENE 2,4-DI- NITRO- SED, BM WS,<2MM DW, REC (UG/KG) (49395)	TOLUENE 2,6-DI- NITRO- SED, BM WS,<2MM DW, REC (UG/KG) (49396)	TOXA- PHENE SED, BM WS,<2MM DW, REC (UG/KG) (49351)	TRANS- CHLOR- DANE, SED, BM WS,<2MM DW, REC (UG/KG) (49321)
JUN											
23...	.0458	<.0100	<.0070	<.0130	--	<.0020	--	--	--	--	--
AUG											
17...	--	--	--	--	62.3	--	E48	<100	<100	<200	6.50

DATE	TRANS- NONA- CHLOR, SED, BM WS,<2MM DW, REC (UG/KG) (49317)	TRANS- PER- METHRIN SED, BM WS,<2MM DW, REC (UG/KG) (49350)	TRIAL- LATE WATER FLTRD 0.7 U GF, REC (UG/L) (82678)	TRI- CLOPYR, WATER, FLTRD, GF 0.7U REC (UG/L) (49235)	TRI- FLUR- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82661)	THORIUM BOT MAT <63U WS FIELD (UG/G) (34980)	URANIUM BOT MAT <63U WS FIELD (UG/G) (35000)
JUN							
23...	--	--	<.0010	<.250	<.0020	--	--
AUG							
17...	4.40	17.0	--	--	--	12	3.3

E Estimated

INDEX

CONVERSION FACTORS AND VERTICAL DATUM

Multiply	By	To obtain
	Length	
inch (in.)	2.54×10^{1}	millimeter
	2.54×10^{-2}	meter
foot (ft)	3.048×10^{-1}	meter
mile (mi)	1.609×10^{0}	kilometer
	Area	
acre	4.047×10^{3}	square meter
	4.047×10^{-1}	square hectometer
	4.047×10^{-3}	square kilometer
square mile (mi^2)	2.590×10^{0}	square kilometer
	Volume	
gallon (gal)	3.785×10^{0}	liter
	3.785×10^{0}	cubic decimeter
	3.785×10^{-3}	cubic meter
million gallons (Mgal)	3.785×10^{3}	cubic meter
	3.785×10^{-3}	cubic hectometer
cubic foot (ft^3)	2.832×10^{1}	cubic decimeter
	2.832×10^{-2}	cubic meter
cubic-foot-per-second day [(ft^3/s) d]	2.447×10^{3}	cubic meter
	2.447×10^{-3}	cubic hectometer
acre-foot (acre-ft)	1.233×10^{3}	cubic meter
	1.233×10^{-3}	cubic hectometer
	1.233×10^{-6}	cubic kilometer
	Flow	
cubic foot per second (ft^3/s)	2.832×10^{1}	liter per second
	2.832×10^{1}	cubic decimeter per second
	2.832×10^{-2}	cubic meter per second
gallon per minute (gal/min)	6.309×10^{-2}	liter per second
	6.309×10^{-2}	cubic decimeter per second
	6.309×10^{-5}	cubic meter per second
million gallons per day (Mgal/d)	4.381×10^{1}	cubic decimeter per second
	4.381×10^{-2}	cubic meter per second
	Mass	
ton (short)	9.072×10^{-1}	megagram or metric ton

Sea level: In this report “sea level” refers to the National Geodetic Vertical Datum of 1929 (NGVD of 1929)—a geodetic datum derived from a general adjustment for the first-order level nets of both the United States and Canada, formerly called Sea Level Datum of 1929.

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U.S. Geological Survey
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