

Water Resources Data Maryland and Delaware Water Year 1994

Volume 1. Surface-Water Data



U.S. GEOLOGICAL SURVEY WATER-DATA REPORT MD-DE-94-1
Prepared in cooperation with the States of Maryland and Delaware
and with other agencies

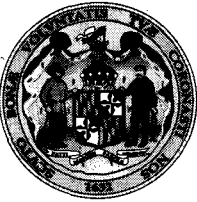
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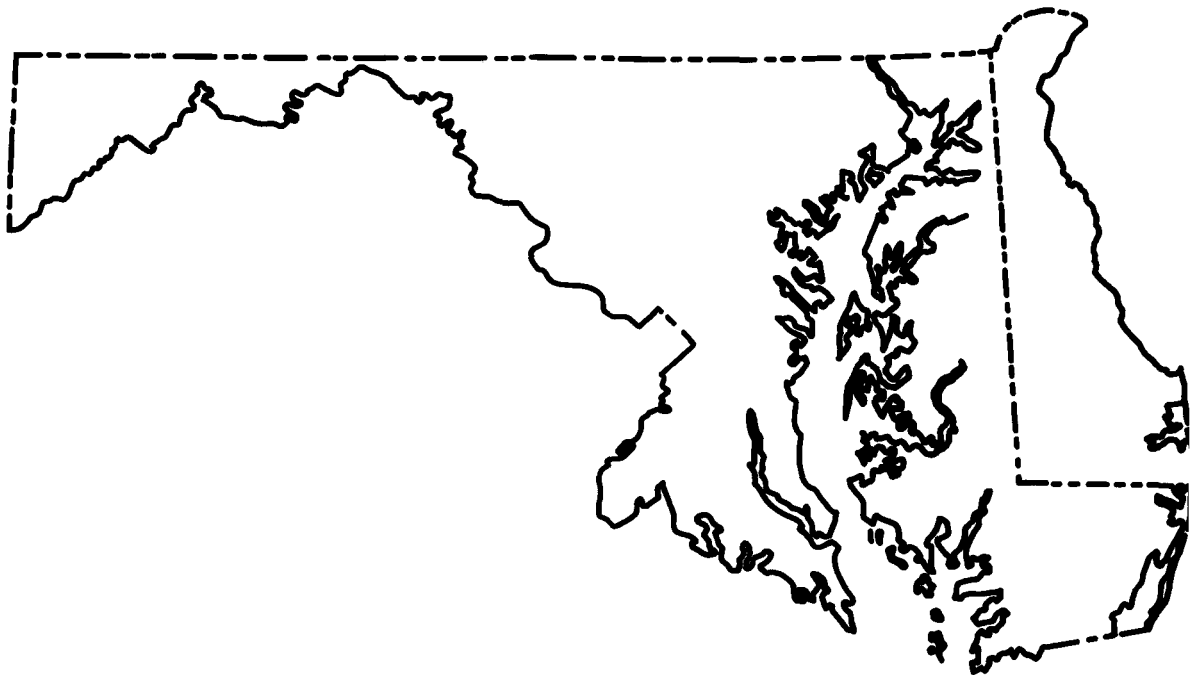
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Volume 1. Surface-Water Data

by R.W. James, R.H. Simmons, and B.F. Strain



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UNITED STATES DEPARTMENT OF THE INTERIOR

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U.S. GEOLOGICAL SURVEY

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PREFACE

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

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REPORT DOCUMENTATION PAGE	1. REPORT NO. USGS/WRD/HD-95/286	2.	3. Recipient's Accession No.
4. Title and Subtitle Water Resources Data - Maryland and Delaware, Water Year 1994 Volume 1. Surface-Water Data		5. Report Date MAY 1995	
7. Author(s) R. W. James, Jr., R. H. Simmons, and B. F. Strain		8. Performing Organization Rept. No. USGS-WDR-MD-DE-94-1	
9. Performing Organization Name and Address U.S. Geological Survey, Water Resources Division 208 Carroll Building 8600 LaSalle Road Towson, Maryland 21286		10. Project/Task/Work/Unit No.	
12. Sponsoring Organization Name and Address U.S. Geological Survey, Water Resources Division 208 Carroll Building 8600 LaSalle Road Towson, Maryland 21286		11. Contract(C) or Grant(G) No. (C) (G)	
		13. Type of Report & Period Covered Annual - Oct. 1, 1993 to Sept. 30, 1994	
15. Supplementary Notes Prepared in cooperation with the states of Maryland and Delaware and with other agencies.		14.	
16. Abstract (Limit: 200 words) Water resources data for the 1994 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 102 gaging stations; stage and contents 1 reservoir; and water quality at 55 gaging stations. Also included are data for 3 crest-stages and 6 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.			
17. Document Analysis a. Descriptors *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.			
b. Identifiers/Open-Ended Terms			
c. COSATI Field/Group			
18. Availability Statement: No restriction on distribution. This report may be purchased from: National Technical Information Service Springfield, VA 22161		19. Security Class (This Report) UNCLASSIFIED	21. No. of Pages 442
		20. Security Class (This Page) UNCLASSIFIED	22. Price

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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]

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Delaware River:		
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Christina River at Coochs Bridge, DE (d).....	01478000	32
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Mill Creek at Mill Creek Road at Hockessin, DE (d).....	01479197	36
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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]

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MONONGAHELA RIVER BASIN

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DISCONTINUED SURFACE-WATER DISCHARGE STATIONS, LISTED IN DOWNSTREAM ORDER

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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.

	Station number	Drainage area (mi ²)	Period of record
<u>NORTH ATLANTIC SLOPE BASINS</u>			
<u>DELAWARE RIVER BASIN</u>			
Delaware River:			
Christina River near Bear, DE	01478040	40.6	1977-81
White Clay Creek above Newark, DE	01478500	66.7	1952-59 1962-80
Mill Creek at Stanton, DE	01479500	12.4	1931-33
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
Drawyer Creek tributary near Odessa, MD	01483170	4.68	1978-80
<u>LEIPSIC RIVER BASIN</u>			
Leipsic River near Cheswold, DE	01483500	9.35	1931-33 1943-57
<u>MURDERKILL RIVER BASIN</u>			
Murderkill River near Felton, DE	01484000	13.6	1931-33 1960-85
<u>BROADKILL RIVER BASIN</u>			
Broadkill River:			
Beaverdam Creek near Milton, DE	01484270	6.10	1971-80
Sowbridge Branch (head of Frimshook Creek) near Milton, DE	01484300	7.08	1957-78
<u>INDIAN RIVER BASIN</u>			
Cow Bridge Branch (head of Indian River):			
Vines Creek at Omar, DE	01484548	13.6	1985-88
<u>WICOMICO RIVER BASIN</u>			
Andrews Branch (head of Wicomico River):			
Beaverdam Creek near Salisbury, MD	01486500	19.5	1930-32 1938-75
<u>NANTICOKE RIVER BASIN</u>			
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
<u>TRANSQUAKING RIVER BASIN</u>			
Transquaking River:			
Chicamacomico River near Salem, MD	01490000	15.0	1951-80
<u>CHOPTANK RIVER BASIN</u>			
Tappahanna Ditch (head of Choptank River):			
Tidy Island Creek (continuation of Tappahanna Ditch):			
Culbreth Marsh Ditch near Chapelton, 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
<u>WYE RIVER BASIN</u>			
Wye River:			
Wye East River:			
Sallie Harris Creek near Carmichael, MD	01492500	4.60	1951-56
<u>CHESTER RIVER BASIN</u>			
Chester River:			
Southeast Creek at Church Hill, MD	01494000	12.5	1951-56
<u>SASSAFRAS RIVER BASIN</u>			
Sassafras River:			
Jacobs Creek near Sassafras, MD	01494500	5.39	1951-56
<u>ELK RIVER BASIN</u>			
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
<u>NORTHEAST RIVER BASIN</u>			
Northeast Creek (head of Northeast River) at Leslie, MD	01496000	24.3	1949-84
<u>PRINCIPIO CREEK BASIN</u>			
Principio Creek near Principio Furnace, MD	01496200	9.03	1967-92

DISCONTINUED SURFACE-WATER DISCHARGE STATIONS, LISTED IN DOWNSTREAM ORDER

	Station number	Drainage area (mi ²)	Period of record
<u>NORTH ATLANTIC SLOPE BASINS--Continued</u>			
<u>SUSQUEHANNA RIVER BASIN</u>			
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
<u>BUSH RIVER BASIN</u>			
Bynum Run (head of Bush River) near Bel Air, MD	01581000	7.50	1951-55
Bynum Run at Bel Air, MD	01581500	8.52	1944-51 1955-70
Church Creek:			
Cranberry Run at Aberdeen, MD	01581657	4.16	1988-89
Cranberry Run at Perryman, MD	01581658	5.22	1987-89
<u>GUNPOWDER RIVER BASIN</u>			
Gunpowder Falls (head of Gunpowder River):			
Western Run:			
Delaware Run:			
Slade Run near Glyndon, MD	01583000	2.09	1947-81
Piney Run at Dover, MD	01583100	12.3	1982-88
Beaverdam Run:			
Baisman Run:			
Pond Branch at Oregon Ridge, MD	01583570	0.16	1983-86
Baisman Run at Broadmoor, MD	01583580	1.47	1964-69
Gunpowder Falls near Carney, MD	01584000	314	1949-64
Little Gunpowder Falls at Laurel Brook, MD	01584500	36.1	1927-70
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
<u>BACK RIVER BASIN</u>			
Herring Run (head of Back River):			
West Branch Herring Run at Idlewylde, MD	01585200	2.13	1957-65 1966-87
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
<u>PATAPSCO RIVER BASIN</u>			
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
West Branch Herbert Run:			
East Branch Herbert Run at Arbutus, MD			
Gwynns Falls near Owings Mills, MD	01589200	2.47	1957-89
Gwynns Falls at Villa Nova, MD	01589300	4.90	1958-75
Dead Run at Franklinton, MD	01589330	32.5	1957-88
Jones Falls at Sorrento, MD	01589440	5.52	1960-87
Jones Falls at Maryland Avenue at Baltimore, MD	01589478	25.2	1966-88
Jones Falls near mouth at Baltimore, MD	01589480	58.3	1981-82
Curtis Creek:			
Furnace Creek:			
Marley Creek at Harundale, MD	01589522	60.4	1981-82
<u>SEVERN RIVER BASIN</u>			
Severn Run (head of Severn River)			
South Fork Jabez Branch at Millersville, MD	01589795		(a)1989-90
<u>SOUTH RIVER BASIN</u>			
North River (head of South River) near Annapolis, MD			
Bacon Ridge Branch at Chesterfield, MD	01590500	8.50	1932-74
		6.92	1943-52 1975-90
<u>RHODE RIVER BASIN</u>			
Rhode River:			
Muddy Creek:			
North Fork Muddy Creek at South River, MD	01590700	0.88	1972-76
<u>PATUXENT RIVER BASIN</u>			
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:			
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
St. Leonard Creek near St. Leonard, MD	01594800	6.73	1957-68

DISCONTINUED SURFACE-WATER DISCHARGE STATIONS, LISTED IN DOWNSTREAM ORDER

	Station number	Drainage area (mi ²)	Period of record
<u>NORTH ATLANTIC SLOPE BASINS--Continued</u>			
<u>POTOMAC RIVER BASIN</u>			
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
Sideling Hill Creek at Bellegrove, MD	01610155	102	1967-77
Little Tonoloway Creek near Hancock, MD	01612500	16.9	1947-63
Potomac River at Shepherdstown, WV	01618000	5,936	1928-53 (a)1954-63 1964-92
Antietam Creek near Waynesboro, MD	01619000	93.5	1948-51 1966-81
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:			
Hunting Creek tributary near Foxville, MD	01640970	4.01	1982-91
Hunting Creek near Thurmont, MD	01640975	7.08	1982-86
Hunting Creek at Jintown, MD	01641000	18.4	1950-92
Fishing Creek near Lewistown, MD	01641500	7.29	1948-84
Monocacy River near Frederick, MD	01642000	665	1896-1930
Linganore Creek near Frederick, MD	01642500	82.3	1932 1934-82
Broad Run at Elmer, MD	01643615	14	(a)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
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
Northwest Branch Anacostia River near Colesville, MD	01650500	21.1	1924-83
Anacostia River:			
Beaverdam Branch Anacostia River at Kenilworth Avenue, Washington, D.C.	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	1959-72
Wicomico River:			
Chaptico Creek at Chaptico, MD	01661000	10.4	1947-72
<u>OHIO RIVER BASIN</u>			
<u>MONONGAHELA RIVER BASIN</u>			
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

* Currently operated as a crest-stage partial-record station.

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

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.

	Station number	Drainage area (mi ²)	Type of record	Period of record
<u>NORTH ATLANTIC SLOPE BASINS</u>				
<u>DELAWARE RIVER BASIN</u>				
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	1947-80
<u>CHOPTANK RIVER BASIN</u>				
Choptank River near Greensboro, MD	01491000	113	SC, T	1975-91
			SED	1981-91
<u>SUSQUEHANNA RIVER BASIN</u>				
Susquehanna River at Conowingo, MD	01578310	27,100	SC, T	1979-81
				1984-92
			SED	1980-81
				1984-92
<u>RHODE RIVER BASIN</u>				
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
<u>PATUXENT RIVER BASIN</u>				
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
<u>POTOMAC RIVER BASIN</u>				
North Branch Potomac River:				
Laurel Run at Dobbin Road near Wilson, MD	01594930	8.23	SC, T	1981-88
			pH	1984-88
South Fork Sand Run near Wilson, MD	01594934	1.55	SC, pH, T	1981-86
Nouth Fork Sand Run near Wilson, MD	01594936	1.91	SC, T	1981-88
			pH	1985-88
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	01603000	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:				
Monocacy River at Bridgeport, MD	01639000	173	T, SED	1990-93
Hunting Creek:				
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
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
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
<u>OHIO RIVER BASIN</u>				
<u>MONONGAHELA RIVER BASIN</u>				
Monongahela River:				
Youghiogheny River at Friendsville, MD	03076500	295	T	1963-75

LOW-FLOW, PARTIAL-RECORD STATIONS, LISTED IN DOWNSTREAM ORDER

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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.

	Station number	Drainage area (mi ²)	Period of record
<u>NORTH ATLANTIC SLOPE BASINS</u>			
<u>DELAWARE RIVER BASIN</u>			
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 Glasgow, DE	01478009	3.35	1978-81
Muddy Run at Glasgow, 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 Odessa, DE	01483165	1.79	1978-80
<u>SMYRNA RIVER BASIN</u>			
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
<u>ST. JONES RIVER BASIN</u>			
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
<u>MURDERKILL RIVER BASIN</u>			
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
<u>MISSPILLION RIVER BASIN</u>			
Beaverdam Branch (head of Misspillion River):			
Cedar Creek near Lincoln, DE	01484200	7.21	1955-60 1962-63 1966, 1968-69

	Station number	Drainage area (mi ²)	Period of record
<u>NORTH ATLANTIC SLOPE BASINS--Continued</u>			
<u>BROADKILL RIVER BASIN</u>			
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
<u>INDIAN RIVER BASIN</u>			
Indian River:			
Sheep Pen Ditch near Shortly, DE	01484510	a5.4	1986-88
Iron Branch at Millsboro, DE	01484530	a8.0	1985-88
Whartons Branch near Millsboro, DE	01484531*	a5.8	1968-69 1971, 1985-88
Swan Creek near Warwick, DE	01484535	a7.2	1985-88
Pepper Creek at Dagsboro, DE	01484550*	8.78	1955-71 1985-88
Blackwater Creek near Clarkesville, DE	01484600*	a3.5	1968-69 1971, 1985-88
Love Creek at Robinsonville, DE	01484655	a12	1985-88
Chapel Branch at Angola, DE	01484677	a8.0	1985-88
<u>DIRICKSON CREEK BASIN</u>			
Bearhole Ditch (head of Dirickson Creek) at Bunting, DE	01484700	a6.4	1968-71 1985-88
<u>WICOMICO RIVER BASIN</u>			
Andrews Branch (head of Wicomico River):			
Leonard Pond Run near Delmar, MD	01486200	13.4	1950-51 1964, 1969-71
<u>NANTICOKE RIVER BASIN</u>			
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
<u>CHOPTANK RIVER BASIN</u>			
Choptank River near Choptank, MD	01490550	a58	1985-87
Forge Branch at Greensboro, MD	01491060	9.84	1952-53
Watts Creek near Denton, MD	01491180	a11	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
<u>WYE RIVER BASIN</u>			
Wye River:			
Wye East River:			
Skipton Creek:			
Mill Creek near Wye Mills, MD	01492560	5.72	1952-53
<u>CHESTER RIVER BASIN</u>			
Andover Branch (head of Chester River):			
Cypress Branch at Millington, MD	01492980	a38	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

	Station number	Drainage area (mi ²)	Period of record
<u>NORTH ATLANTIC SLOPE BASINS--Continued</u>			
<u>SASSAFRAS RIVER BASIN</u>			
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
<u>WORTON CREEK BASIN</u>			
Mill Creek (head of Worton Creek) at Hanesville, MD	01494600	4.63	1953-54 1968-71
<u>ELK RIVER BASIN</u>			
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	a6.0	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
<u>NORTHEAST RIVER BASIN</u>			
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	a14	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
<u>PRINCIPIO CREEK BASIN</u>			
Principio Creek:			
Principio Creek tributary at Belvedere, MD	01496225	2.08	1982-83
<u>MILL CREEK BASIN</u>			
Mill Creek at Jackson, MD	01496250	3.73	1982-83
<u>SUSQUEHANNA RIVER BASIN</u>			
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	a25	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
<u>SWAN CREEK BASIN</u>			
Swan Creek at Swan Creek, MD	01580700	13.2	1956-59 1962-63 1966
<u>BUSH RIVER BASIN</u>			
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

	Station number	Drainage area (mi ²)	Period of record
<u>NORTH ATLANTIC SLOPE BASINS--Continued</u>			
<u>GUNPOWDER RIVER BASIN</u>			
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 Bently 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:			
Blackrock Run at Coopersville, MD	01583200	9.38	1956-59 1962-63 1966
Little Gunpowder Falls at Hess, MD	01584200	16.5	1956-59 1962-63 1966
<u>PATAPSCO RIVER BASIN</u>			
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	a9.4	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 Ecclestone, MD	01589370	2.86	1976-79
<u>SEVERN RIVER BASIN</u>			
Severn Run (head of Severn River) at Benfield, MD	01589800	a24	1964-67
<u>PATUXENT RIVER BASIN</u>			
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
Towers Branch at Conoways, MD	01594300	5.69	1975-80

LOW-FLOW, PARTIAL-RECORD STATIONS, LISTED IN DOWNSTREAM ORDER

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	Station number	Drainage area (mi ²)	Period of record
<u>NORTH ATLANTIC SLOPE BASINS--Continued</u>			
<u>PATUXENT RIVER BASIN--Continued</u>			
Patuxent River--Continued			
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	a14	1964-66 1982
Lyons Creek at Lyons Creek, MD	01594545	a15	1964-67
<u>POTOMAC RIVER BASIN</u>			
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
<u>POTOMAC RIVER BASIN--Continued</u>			
Potomac River:			
Wills Creek at Eilerslie, MD	01601100	185	1979-82
Jennings Run:			
North Branch Jennings Run at Barreelsville, MD	01601300	a12	1964-74
Jennings Run at Corriganville, MD	01601325	37.7	1975-79
Collier Run at Spring Gap, MD	01604150	a11	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
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 Conococheague Creek near Charlton, MD	01614050	18.1	1985-87
Rockdale Run at Fairview, MD	01614525	9.67	1976-79 1981-82
Rush Run near Huyett, MD	01614575	5.20	1985-87 1976-79 1981-82
Meadow Brook at Conococheague, MD	01614625	6.77	1985-87 1976-79 1981-82
Conococheague Creek tributary near Huyett, MD	01614675	7.94	1985-87 1977-79 1981-82
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

<u>NORTH ATLANTIC SLOPE BASINS--Continued</u>	Station number	Drainage area (mi ²)	Period of record
<u>POTOMAC RIVER BASIN--Continued</u>			
<u>Potomac River--Continued</u>			
<u>Antietam Creek:</u>			
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	a31	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	a24	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
<u>Catoctin Creek:</u>			
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
<u>Monocacy River:</u>			
Piney Creek at Taneytown, MD	01639100	22.9	1956-59 1961-63 1966
Piney Creek near Keysville, MD	01639150	34.4	1982-83
<u>Toms Creek:</u>			
Friends Creek near Emmitsburg, MD	01639325	12.2	1977-83
Toms Creek near Keysville, MD	01639390	88.1	1982-83
<u>Double Pipe Creek:</u>			
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
<u>Little Pipe Creek:</u>			
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	a29	1964-66 1975-79 1982-83

LOW-FLOW, PARTIAL-RECORD STATIONS, LISTED IN DOWNSTREAM ORDER

xix

	Station number	Drainage area (mi ²)	Period of record
<u>NORTH ATLANTIC SLOPE BASINS--Continued</u>			
<u>POTOMAC RIVER BASIN--Continued</u>			
Monocacy River--Continued:			
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	a17.5	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	a21	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	a4.8	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	a5.6	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	a32	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
<u>OHIO RIVER BASIN</u>			
<u>MONONGAHELA RIVER BASIN</u>			
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

a Approximately.

* Also a crest-stage partial-record station.

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WATER RESOURCES DATA - MARYLAND AND DELAWARE, 1994

VOLUME 1. SURFACE WATER SURFACE-WATER-QUALITY 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 102 gaging stations; stage and contents at 1 reservoir; and water quality at 55 gaging stations. Also included are data for 3 crest-stages, and 6 tidal crest-gage partial-record stations. Locations of these sites are shown on figure 3. Additional water data were collected at various sites not involved in 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 the 1961 water year with a report 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 1975 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 thru 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 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 Books and Open-File Reports Section, Federal Center, Bldg. 41, Box 25286, Denver, CO 80225.

Publications similar to this report are published annually by the 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-94-1." For archiving and general distribution, the reports for 1971-74 water years also are identified as water-data reports. These water-data reports are for sale in paper copy or in microfiche by the National Technical Information Service, U.S. Department of Commerce, Springfield, VA 22161. Beginning with the 1990 water year, all water-data reports will also be available on Compact Disc - Read Only Memory (CD-ROM). All data reports published for the current water year for the entire Nation, including Puerto Rico and the Trust Territories, will be reproduced on a single CD-ROM disc.

Additional information, including current prices, for ordering specific reports may be obtained from the District Chief at the address given on the back of the title page or by telephone (301) 828-1535. A limited number of CD-ROM discs will be available for sale by the Books and Open-File Reports Section, U.S. Geological Survey, Federal Center, Box 25286, Denver, Colorado 80225.

COOPERATION

The U.S. Geological Survey and agencies of the State of Maryland have had cooperative agreements for the collection of water-resource records from 1896 to 1909 and since 1924. Similar cooperative agreements have been had 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, E. T. Cleaves, director.

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

Maryland Department of Environment; Chesapeake Bay and Special Projects Program, R. M. Summers, division chief.

District of Columbia Department of Public Works, William B. Johnson, director.

Maryland State Highway Administration, Hal Kasshoff, administrator.

Assistance with funds or services was given by the U.S. Army Corps of Engineers for collecting records at 15 gaging stations and 5 water-quality stations throughout Maryland and Delaware.

The following organizations aided in collecting records:

Delaware: State 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 City, Prince Georges
County.

Organizations that provided data are acknowledged in station descriptions.

SUMMARY OF HYDROLOGIC CONDITIONS

Streamflow at the start of the 1994 water year was in the normal range except for the Eastern Shore which remained in the deficient range (lower 25 percent of the record) following below normal rainfall (0.5 to 1.7 inches) during September 1993. During October 1993 flows were the normal range throughout the bi-state area except for the Eastern Shore which remained in the deficient range. November 1993 flows remained in the normal range, except for central Maryland where flows moved into the excessive range (upper 25 percent of the record) following above normal rainfall (2 to 4 inches) and the Eastern Shore flows remained in the deficient range. During December 1993, flows remained unchanged except in the Washington, D.C. area where flows moved into the excessive range following above-normal rainfall (1 to 3 inches). Flows were in the normal range during January 1994 in western Maryland, fell from the excessive range to the normal range in the Washington, D.C. area and on the Eastern Shore, and remained in the excessive range in central Maryland. In February and March 1994, flows were in the excessive range throughout the bi-state area following above normal rainfall (1 to 4 inches and 1.5 to 8 inches respectively). Flows in April 1994 remained in the excessive range, except for western Maryland where flows returned to the normal range following below normal rainfall (1 inch). In May flows returned to the normal range throughout the bi-state area following below-normal rainfall (1 to 2.5 inches). Flows in June remained in the normal range except for western Maryland and the Washington, D.C. area which moved into the deficient range, following below-normal rainfall (1 to 3 inches). July flows increased throughout the bi-state area and moved from the deficient to the normal range in western Maryland, and the Washington, D.C. area, from the normal into the excessive range in central Maryland, and remained normal elsewhere. For the month of August flows increased throughout the bi-state area and moved or remained in the excessive range, following above normal rainfall (1 to 6 inches). In September all areas moved into the normal range except for the Eastern Shore which remained in the excessive range.

During the 1994 water year, flows were in the excessive range at all four index stations: Potomac River at Paw Paw, W.Va. in western Maryland, Potomac River near Washington, D.C. in central Maryland and Seneca Creek at Dawsonville in central Maryland, and Choptank River at Greensboro on the Eastern Shore of Maryland. Several record maximum monthly and daily means were set during the 1994 water year. At the Potomac River at Paw Paw new monthly means were set for February and March 1994. The new record monthly means were 13 and 2 percent greater than the previous records set in 1939 and 1963. Also a new record yearly mean was set which is 4 percent greater than the record set in 1973. New maximum daily means were set at Seneca Creek during November and December 1993. The new record daily means were 195 and 59 percent greater than the records set in 1952 and 1992. Also a new record monthly mean was set in November, which was 22 percent greater than the record set in 1972. At the Potomac River near Washington, D.C., the second highest monthly mean of record was set for March which is 12 percent less than March 1936. A new maximum daily mean was set at Choptank River during March which was 65 percent greater than the record set in 1978. Also a new record monthly mean was set in March, which was 48 percent greater than the record set in 1978.

Monthly and annual mean discharges in water year 1994 are 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 mi² (square mile) area, of which 21.6 mi² is in Delaware in the central part of the Delmarva peninsula.

Average freshwater inflow to the Chesapeake Bay was estimated to be 106,300 ft³/s (cubic feet per second), on the basis of flows of the James, Potomac, and Susquehanna Rivers. This is 139 percent of the long-term average during the reference period 1951-94. Flows for October averaged 43 percent below normal. During November and December flows averaged 35 percent and 55 percent above normal. For January flows averaged 16 percent below normal. Flows in February averaged 46 percent above normal. After heavy rains at the beginning of March, flows were 195 percent above normal and 55 percent above normal for April. In May, flows were 10 percent below normal. Flows for June averaged 27 percent below normal. The months of July, August and September were above normal 23, 168, and 25 percent respectively.

The combined storage in the three major water-supply reservoirs in the Baltimore City Municipal System (combined usable capacity of 85,340 million gallons) remained at 94 percent of capacity from September 1993, to the end of September 1994.

WATER RESOURCES DATA – MARYLAND AND DELAWARE, 1994

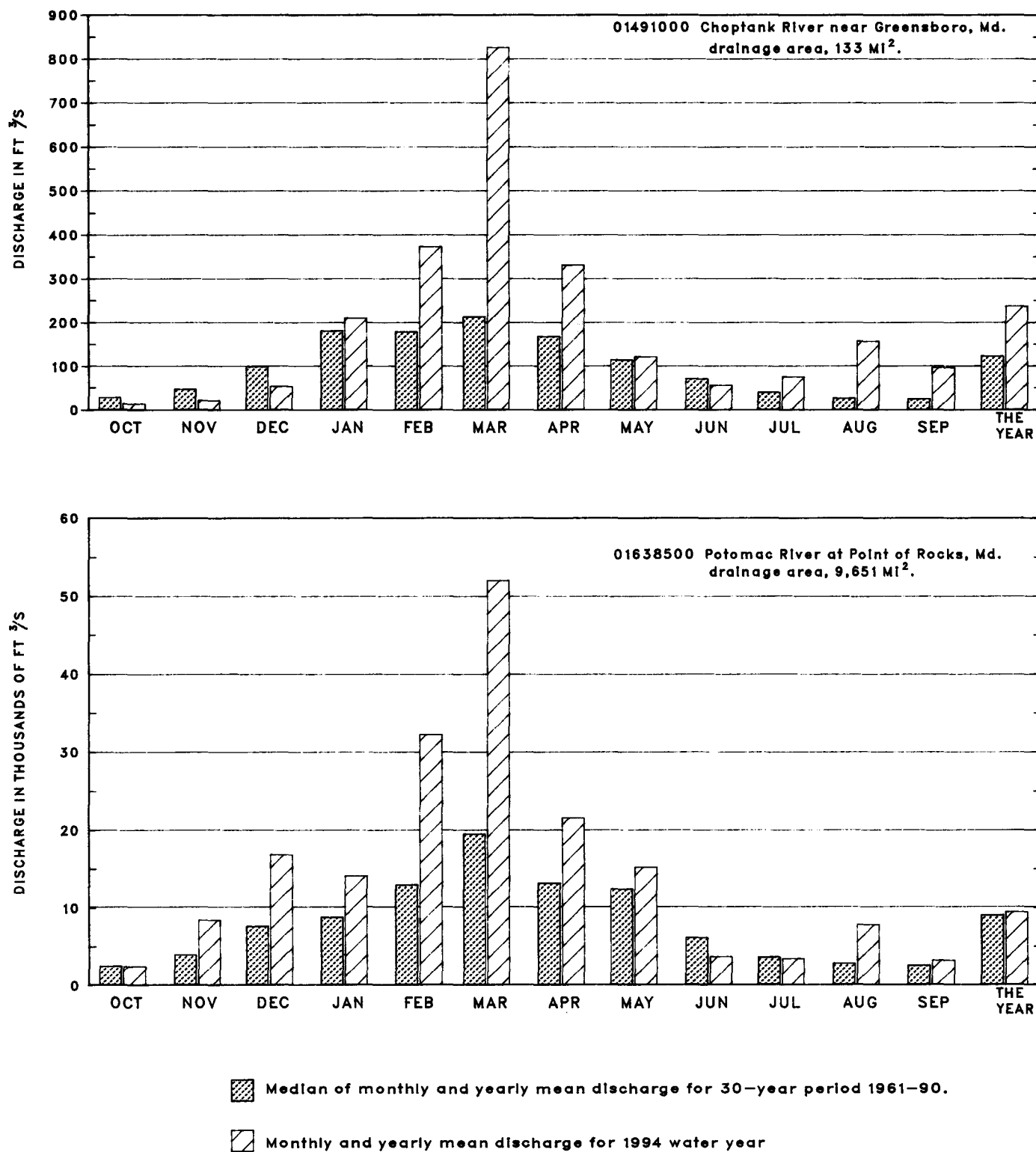


FIGURE 1. COMPARISON OF DISCHARGE AT TWO LONG-TERM REPRESENTATIVE GAGING STATIONS DURING THE 1994 WATER YEAR WITH MEDIAN DISCHARGE FOR INDICATED PERIOD.

SPECIAL NETWORKS AND PROGRAMS

National Stream Quality Accounting Network (NASQAN) is a nationwide data-collection network designed by the U.S. Geological Survey to meet many of the information needs of government agencies and other groups involved in natural or regional water-quality planning and management. The 284 sites in NASQAN are generally located at the downstream ends of hydrologic accounting units designated by the U.S. Geological Survey Office of Water Data Coordination in consultation with the Water Resources Council. The objectives of NASQAN are: (1) to obtain information on the quality and quantity of water moving within and from the United States through a systematic and uniform process of data collection, summarization, analysis, and reporting such that the data may be used for; (2) description of the areal variability of water quality in the Nation's rivers through analysis of data from this and other programs; (3) detection of changes or trends with time in the pattern of occurrence of water-quality characteristics; and (4) providing a nationally consistent data base useful for water-quality assessment and hydrologic research.

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, and to identify, describe, and explain the major natural and human factors that affect these observed conditions and trends.

Assessment activities have begun in about two-thirds of the study units and ultimately will be conducted in 60 study units (major watersheds and aquifer systems) that represent a wide range of environmental settings nationwide and that 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.

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

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

EXPLANATION OF THE RECORDS

The surface-water and ground-water records published in this report are for the 1994 water year that began October 1, 1993, and ended September 30, 1994. 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, water-quality data for surface and ground water, and ground-water-level data. The locations of the stations and wells where the data were collected are shown in figure 3. The following sections of the 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, whether streamsite or well, 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 and for ground-water well sites differ, but both are based on geographic location. The "downstream order" system is used for regular surface-water stations and the "latitude-longitude" system is used for wells and, in Maryland and Delaware, 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.)

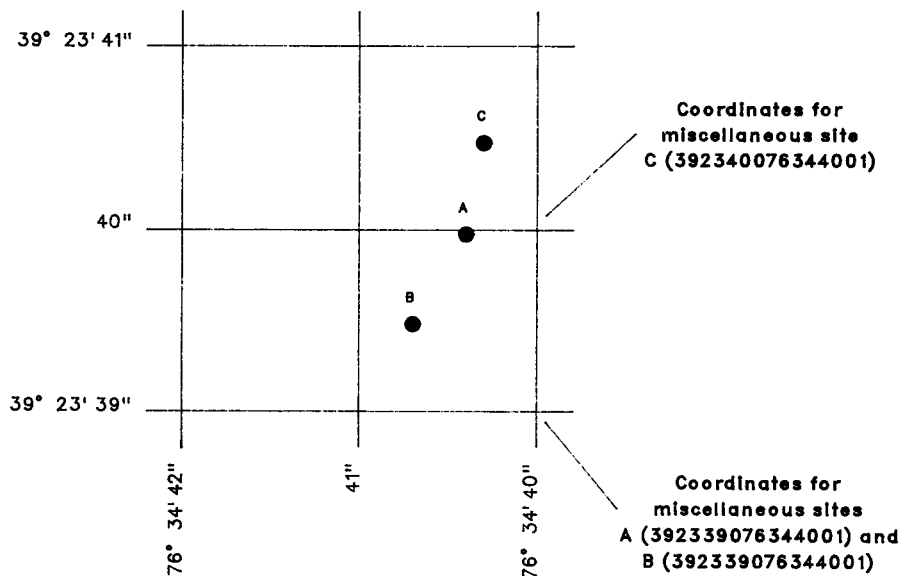


Figure 2.--System for numbering miscellaneous sites (latitude and longitude)

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 daily mean 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 as partial records, but they are presented separately in this report. Location 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 relationships 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 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, Chapter 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 from surveys, curves or tables defining the relationship of stage and content. The application of stage to the stage-content curves or tables gives the contents from which daily, monthly, or yearly changes then are determined. If the stage-content relationship changes because of deposition of sediment in a lake or reservoir, periodic resurveys may be necessary to redefine the relationship. Even when this is done, the contents computed may become increasingly in error as the lapsed time since the last survey increases. Discharges over lake or reservoir spillways are computed from stage-discharge relationships much as 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, under various headings, descriptive information, 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 to 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 with respect to the cultural and physical features in the vicinity and with respect 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 type of maps available varies from one drainage basin to another, the accuracy of drainage areas likewise 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 at it can 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, 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 here 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 occurring during the current year is given as well as any secondary peaks. 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, occasionally the records of a discontinued gaging station may need revision. Because, for these stations, there would be no current or, possibly, future station manuscript published 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. Of course, if the data for a discontinued station were obtained by computer retrieval, the data would be current and there would be no need to check because any published revision of data is always accompanied by 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 noncontributing 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 will be expressed as "FOR WATER YEARS _____, BY WATER YEAR (WY).", and will list the first and last water years of the range of years selected from the **PERIOD OF RECORD** paragraph in the station manuscript. It 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 will be 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 will be 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 to follow 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 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 (INCHES) 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 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.

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 for values less than 1 ft³/s; to the nearest tenth between 1.0 and 10 ft³/s; to whole numbers between 10 and 1,000 ft³/s; and to 3 significant figures for more than 1,000 ft³/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 incident to use and control. Evaporation from a reservoir is not included in the adjustments for changes in reservoir contents, unless it is so stated. Even at those stations where adjustments are made, large errors in computed runoff may occur if adjustments or losses are large in comparison with the observed discharge.

Other 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 Mid-Atlantic Programs. Also, 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 at 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 needs to be assuring that the data obtained represent the in situ quality of the water. To assure this, certain measurements, such as water temperature, pH, and dissolved oxygen, need to be made onsite 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 onsite 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" 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 Geological Survey Maryland and Delaware offices.

One sample can define adequately the water quality at a given time if the mixture of solutes throughout the stream cross section is homogeneous. However, the concentration of solutes at different locations in the cross section may vary widely with different rates of water discharge, depending on the source of material and the turbulence and mixing of the stream. Some streams must be sampled through several vertical sections to obtain a representative sample needed for an accurate mean concentration and for use in calculating load. 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 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 follow closely the changes in air temperature. Some streams may be affected by waste-heat discharges.

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

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 the periods, and suspended-sediment loads for other periods of similar discharge. Methods used in the computation of sediment records are described 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 represent conditions only at the time of observations, 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 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 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 that follow clarify 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 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 data-report series or elsewhere, potential users of U.S. Geological Survey water-quality data are encouraged to obtain all required data from the appropriate computer file to insure the most recent updates.

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:

<u>PRINTED OUTPUT</u>	<u>REMARK</u>
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

ACCESS TO WATSTORE DATA

The U.S. Geological Survey is the principal Federal water-data agency and, as such, collects and disseminates about 70 percent of the water data currently being used by numerous State, local, private, and other Federal agencies to develop and manage our water resources. As part of the Geological Survey's program of releasing water data to the public, a large-scale computerized system has been developed for the storage and retrieval of water data collected through its activities. The National Water Data Storage and Retrieval System (WATSTORE) was established in 1972 to provide an effective and efficient means for the processing and maintenance of water data collected through the activities of the U.S. Geological Survey and to facilitate release of the data to the public. A variety of useful products, ranging from data tables to complex statistical analyses such as Log Pearson Type III, can be produced using WATSTORE. The system resides on the central computer facilities of the U.S. Geological Survey at its National Center in Reston, Virginia, and consists of related files and data bases.

- * **Station Header File** - Contains descriptive information on more than 440,000 sites throughout the United States and its territories where the U.S. Geological Survey collects or has collected data.
- * **Daily Values File** - Contains more than 220 million daily values of stream flows, stages, reservoir contents, water temperature, specific conductance, sediment concentrations, sediment discharges, and ground-water levels.
- * **Peak Flow File** - Contains approximately 500,000 maximum (peak) streamflow and gage-height values at surface-water sites.
- * **Water Quality File** - Contains approximately 2 million analyses of water samples that describe the chemical, physical, biological, radio-chemical characteristics of both surface and ground water.
- * **Ground-Water Site Inventory Data Base** - Contains inventory data for more than 900,000 well, springs, and other sources of ground water. The data includes site location, geohydrologic characteristics, well-construction history, and one-time field measurements such as water temperature.

In 1976, the U.S. Geological Survey opened WATSTORE to the public for direct access. The signing of a Memorandum of Agreement with the Survey is required to obtain direct access to WATSTORE. The system can be accessed either synchronously or asynchronously. The requestor will be expected to pay all computer costs he/she incurs. Direct access may be obtained by contacting:

U.S. Geological Survey
National Water Data Exchange
421 USGS National Center
Reston, Virginia 22092

In addition to providing direct access to WATSTORE, data can be provided in various machine-readable formats on magnetic tape or 5-1/4 inch floppy disk; and, as noted in the introduction, on CD-ROM discs. Beginning with the 1990 water year, all water-data reports will also be available on Compact Disc - Read Only Memory (CD-ROM). All data reports published for the current water year for the entire Nation, including Puerto Rico and the Trust Territories, will be reproduced on a single CD-ROM disc. 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's District offices. (See address on the back of the title page.) A limited number of CD-ROM discs will be available for sale by the Books and Open-File Reports Section, U.S. Geological Survey, Federal Center, Box 25286, Denver, Colorado 80225.

DEFINITION OF TERMS

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

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

Adenosine triphosphate (ATP) is 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.

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 reuse by plants.

Total coliform bacteria are a particular group of bacteria that are used as indicators of possible sewage pollution. They are characterized as aerobic or facultative anaerobic, gram-negative, nonspore-forming, rod-shaped bacteria which ferment lactose with gas formation within 48 hours at 35°C. In the laboratory these bacteria are defined as 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 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 found also 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.

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

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

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

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

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 chloro-platinate ion. Color is expressed in units of the platinum-cobalt scale.

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

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

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

Cubic feet per second per square mile [$(\text{ft}^3/\text{s})/\text{mi}^2$] is the average number of cubic feet of water flowing per second from each square mile of area drained, assuming that the runoff is distributed uniformly in time and area.

Cubic foot per second (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 or 0.02832 cubic meters per second.

Cubic-foot-per-second 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 2,445 cubic meters.

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

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

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

Dissolved refers to that material in a representative water sample which passes through a 0.45 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 specified location is that area, measured in a horizontal plane, enclosed by a topographic divide from which direct surface runoff from precipitation normally drains by gravity into the stream above the specified point. Figures of drainage area given herein include all closed basins, or 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.

Gage height (G.H.) is the water-surface elevation referred to some arbitrary gage datum. Gage height is often used interchangeably with the more general term "stage," although gage height is more appropriate when used with a reading on a gage.

Gaging station is a particular site on a stream, canal, lake, or reservoir where systematic observations of hydrologic data are obtained.

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

Hydrologic Bench-Mark Network is a network of 57 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 the activities of man.

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

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

Milligrams per liter (MG/L, mg/L) is a unit for expressing the concentration of chemical constituents in solution. Milligrams per liter 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.

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) is a nationwide data-collection network designed by the U.S. Geological Survey to meet many of the information needs of government agencies and other groups involved in natural or regional water-quality planning and management. The 500 or so sites in NASQAN are generally located at the downstream ends of hydrologic accounting units designated by the U.S. Geological Survey Office of Water Data Coordination in consultation with the Water Resources Council. The objectives of NASQAN are (1) to obtain information on the quality and quantity of water moving within and from the United States through a systematic and uniform process of data collection, summarization, analysis, and reporting such that the data may be used for, (2) description of the areal variability of water quality in the Nation's rivers through analysis of data from this and other programs, (3) detection of changes or trends with time in the pattern of occurrence of water-quality characteristics, and (4) providing a nationally consistent data base useful for water-quality assessment and hydrologic research.

The **National Trends Network (NTN)** is a 150-station network for sampling atmospheric deposition in the United States. The purpose of the network is to determine the variability, both in location and in time, of the composition of atmospheric deposition, which includes snow, rain, dust particles, aerosols, and gases. The core from which the NTN was built was the already-existing deposition-monitoring network of the National Atmospheric Deposition Program (NADP).

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, and to identify, describe, and explain the major natural and human factors that affect these observed conditions and trends.

Assessment activities have begun in more than one-third of the study units and ultimately will be conducted in 60 study units (major watersheds and aquifer systems) that represent a wide range of environmental settings nationwide and that 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.

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, **WATSTORE**, to uniquely identify a specific constituent. The codes used in **WATSTORE** 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 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:

<u>Classification</u>	<u>Size (mm)</u>	<u>Method of analysis</u>
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 microorganisms 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.

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

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

Milligrams of oxygen per area or volume per unit time [$\text{mg O}_2/(\text{m}^2 \cdot \text{time})$] for periphyton and macrophytes and [$\text{mg O}_2/(\text{m}^3 \cdot \text{time})$] for phytoplankton are the units for expressing primary productivity. They define production and respiration rates as estimated from changes in the measured dissolved-oxygen concentration. The oxygen light and dark bottle method is preferred if the rate of primary production is sufficient for accurate measurements to be made within 24 hours. Unit time may be either the hour or day, depending on the incubation period.

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 hydrological event of a given or greater magnitude, usually expressed in years. May also be called recurrence interval.

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 ft 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 (ft³/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.

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.

7-day 10-year low flow (7 Q₁₀) is the discharge at the 10-year recurrence interval taken from a frequency curve of annual values of the lowest mean discharge for 7 consecutive days (the 7-day low flow).

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

Surficial bed material is 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 um 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 um membrane filter. This term is used only when the analytical procedure assures measurement of at least 95 percent of the constituent determined. A knowledge of the expected form of the constituent in the sample, as well as the analytical methodology used, is required to determine when the results should be reported as "suspended, total."

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

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

Kingdom.....	Animal
Phylum.....	Arthropoda
Class.....	Insecta
Order.....	Ephemeroptera
Family.....	Ephemeridae
Genus.....	<i>Hexagenia</i>
Species.....	<i>Hexagenia limbata</i>

Thermograph is an instrument that continuously records variations of temperature on a chart. The more general term "temperature recorder" is used in the table headings and refers to any instrument that records temperature whether on a chart, a tape, or any other medium.

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" does double duty here, indicating both 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.

Water year in 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 abbreviation for "Water-Supply Paper" in reference to previously published reports.

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PUBLICATIONS ON TECHNIQUES OF WATER-RESOURCES INVESTIGATIONS

The U.S. Geological Survey 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. Geological Survey, Books and Open-File Reports Section, Federal Center, Box 25286, 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. When ordering or inquiring about prices for any of these publications, please give the title, book number, chapter number, and "U.S. Geological Survey Techniques of Water-Resources Investigations."

- 1-D1. **Water temperature--influential factors, field 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.
- 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.
- 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 geophysics applied to ground-water investigations**, by W. S. Keys: USGS--TWRI Book 2, Chapter E2. 1990. 150 pages.
- 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.
- 3-A1. **General field and office procedures for indirect discharge measurements**, by M. A. Benson and Tate Dalrymple: USGS--TWRI Book 3, Chapter A1. 1967. 30 pages.
- 3-A2. **Measurement of peak discharge by the slope-area method**, by Tate Dalrymple and M. A. Benson: USGS--TWRI Book 3, Chapter A2. 1967. 12 pages.
- 3-A3. **Measurement of peak discharge at culverts by indirect methods**, by G. L. Bodhaine: USGS--TWRI Book 3, Chapter A3. 1968. 60 pages.
- 3-A4. **Measurement of peak discharge at width contractions by indirect methods**, by H. F. Matthai: USGS--TWRI Book 3, Chapter A4. 1967. 44 pages.
- 3-A5. **Measurement of peak discharge at dams by indirect methods**, by Harry Hulsing: USGS--TWRI Book 3, Chapter A5. 1967. 29 pages.
- 3-A6. **General procedure for gaging streams**, by R. W. Carter and Jacob Davidian: USGS--TWRI Book 3, Chapter A6. 1968. 13 pages.
- 3-A7. **Stage measurements at gaging stations**, 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.
- 3-A12. **Fluorimetric procedures for dye tracing**, by J. F. Wilson, Jr., E. D. Cobb, and F. A. Kilpatrick: USGS--TWRI Book 3, Chapter A12. 1986. 41 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.
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- 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.
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- 7-C3. **A model for simulation of flow in singular and interconnected channels**, by R. W. Schaffranek, R. A. Baltzer, and D. E. Goldberg: USGS--TWRI Book 7, Chapter C3. 1981. 110 pages.
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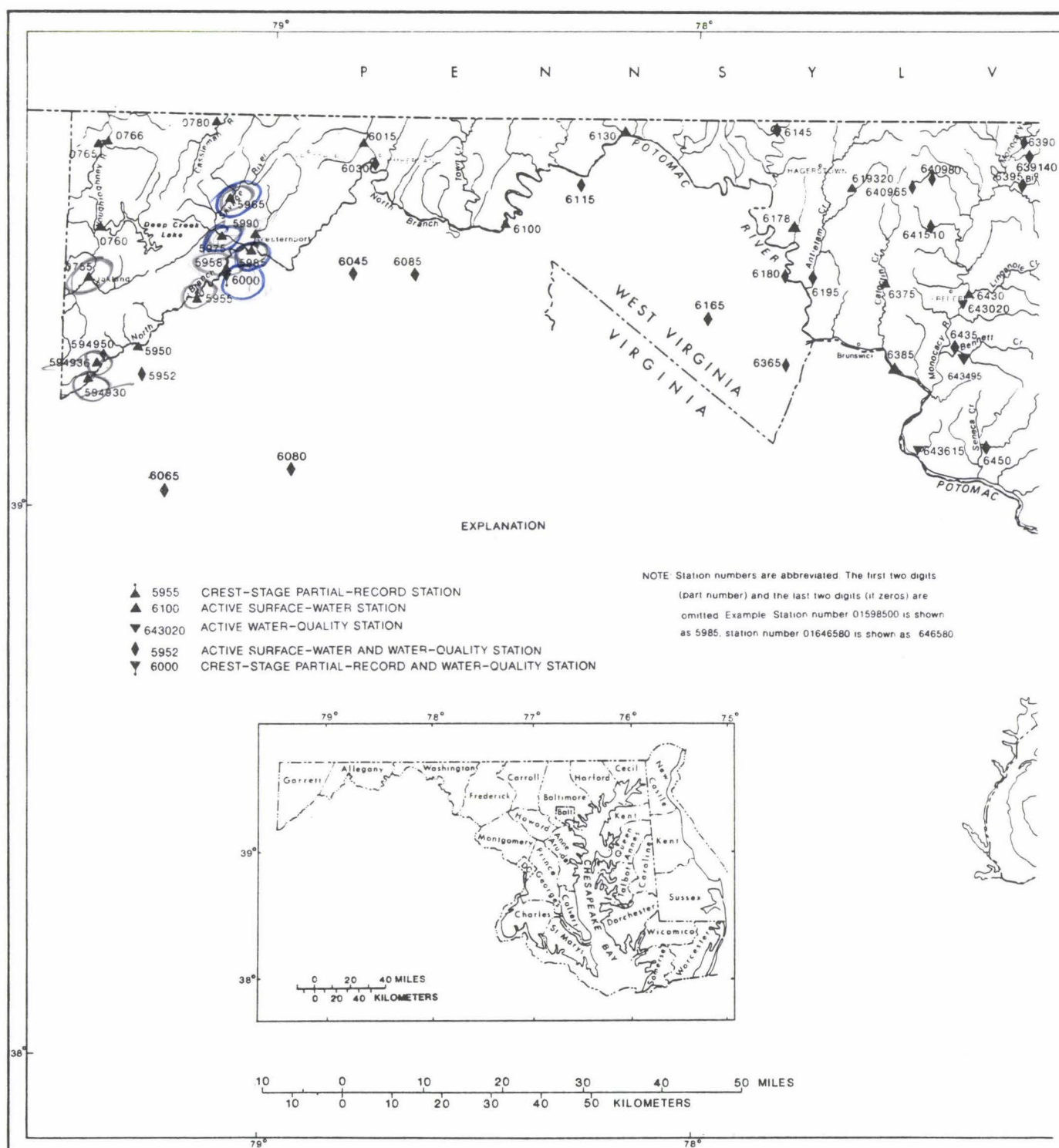
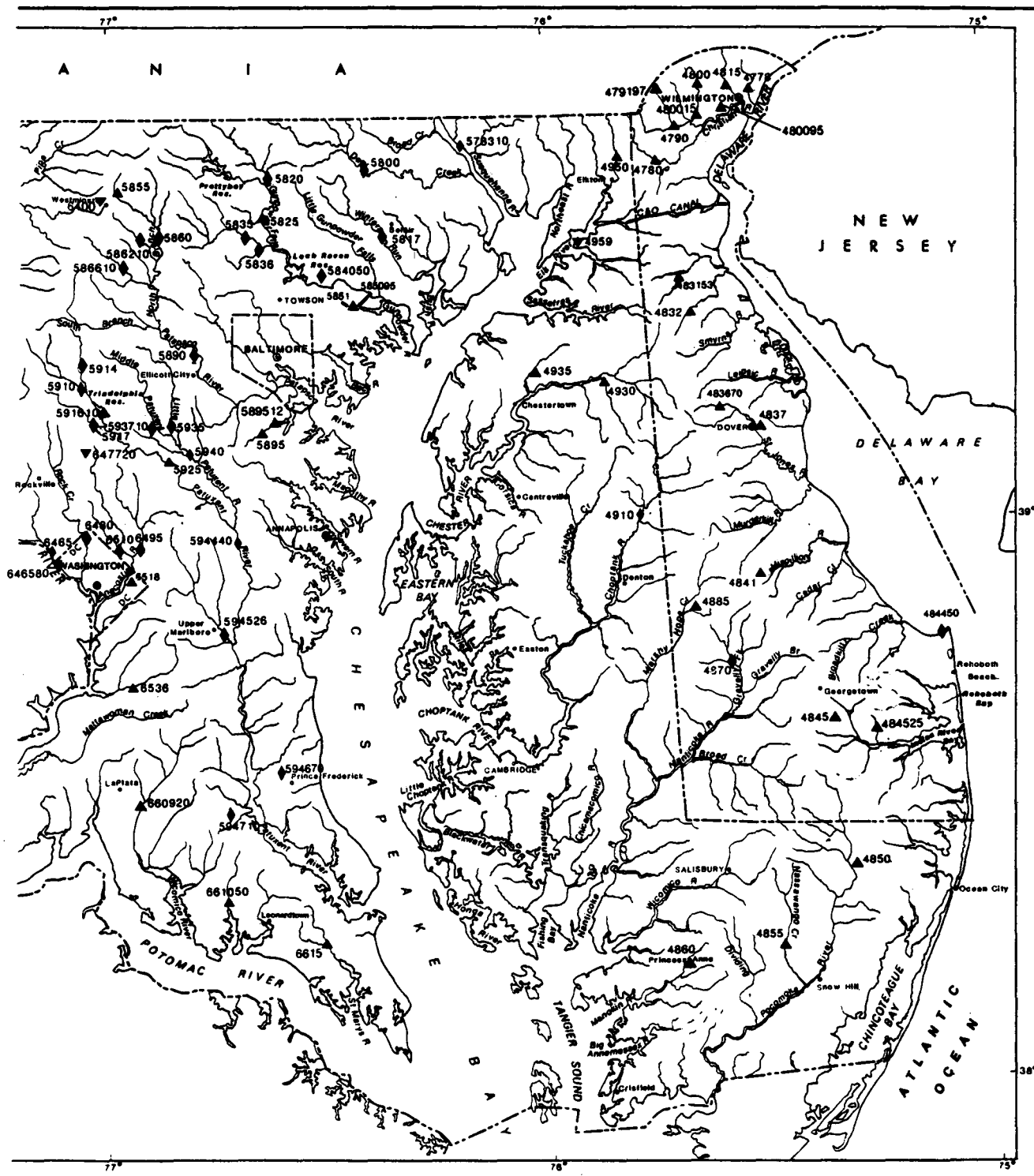


Figure 3. Map of Maryland and Delaware showing location of surface-water, water-quality, and crest-stage partial-record stations.



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

REMARK CODES

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

<u>PRINTED OUTPUT</u>	<u>REMARK</u>
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.

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 in water year 1994. Full implementation of the protocols will take place during the 1995 water year.

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 mi².

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 ft³/s and above 4,000 ft³/s, except those for estimated daily discharges (Nov. 9-11, Dec. 8-27, intake lag; ice effect) and those between 100 and 4,000 ft³/s, 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.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,000 ft³/s and maximum (*):

		Discharge	Gage height			Discharge	Gage height
Date	Time	(ft ³ /s)	(ft)	Date	Time	(ft ³ /s)	(ft)
Nov. 28	0735	1,480	5.20	July 26	1655	*3,830	*8.26
Jan. 28	1300	1,810	5.74	July 27	2320	1,110	4.53
July 14	1815	2,590	6.80	July 28	1005	1,680	5.55

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.7	9.5	3.2	2.8	e3.4	4.0	7.9	4.8	1.8	1.5	7.2	2.6
2	1.5	3.5	3.1	5.5	e3.3	4.3	6.1	3.3	1.6	1.2	3.2	2.4
3	2.4	2.8	3.3	3.7	e3.1	8.8	5.6	2.9	1.5	1.5	2.4	2.3
4	1.3	2.5	32	25	e2.9	9.7	5.4	5.7	1.5	1.1	2.1	2.3
5	1.2	12	272	5.4	2.7	33	4.9	4.8	1.5	1.0	14	2.3
6	1.1	4.9	20	4.0	3.7	15	7.8	3.4	1.6	1.0	3.4	2.3
7	1.1	2.9	9.8	11	4.0	44	19	29	1.7	.95	2.5	2.2
8	1.2	2.3	e4.2	20	2.9	45	5.7	33	1.5	2.6	2.7	2.1
9	1.1	e2.0	e3.9	e4.9	2.9	28	4.7	5.1	1.4	.86	2.6	2.1
10	1.0	e1.8	e4.1	3.2	2.2	331	31	3.7	1.3	1.7	2.5	1.8
11	.97	e1.6	e16	3.1	2.2	26	13	3.2	1.3	.84	3.8	1.9
12	19	e1.5	e3.2	30	2.5	14	6.4	8.8	2.1	.77	3.7	1.7
13	2.2	2.4	e3.0	8.8	3.0	14	96	3.5	1.7	.75	2.3	1.6
14	1.3	4.5	e3.1	9.2	3.1	15	21	3.0	1.4	220	26	1.6
15	1.2	1.7	e4.0	4.7	3.0	18	7.8	15	1.6	9.9	5.2	1.7
16	1.2	1.7	e3.7	3.9	4.4	10	21	47	1.4	2.3	2.5	1.7
17	1.2	3.2	e3.2	50	5.7	6.3	7.0	4.1	1.3	1.7	89	2.0
18	1.2	6.3	e2.9	e35	10	6.4	5.8	3.8	1.3	41	9.0	5.7
19	1.3	2.0	e8.4	e5.9	29	5.7	5.2	5.9	15	2.9	4.2	1.8
20	11	1.7	e2.7	3.7	75	5.3	4.1	7.6	2.7	1.9	3.3	1.6
21	22	1.5	e23	3.7	68	69	3.9	3.5	1.3	1.5	17	1.5
22	4.5	2.0	e7.0	3.7	37	40	3.7	3.1	1.3	35	67	18
23	1.9	1.4	e4.4	e3.4	102	9.1	3.7	2.9	1.1	12	8.0	15
24	1.5	1.5	e3.4	14	116	7.0	3.6	3.1	2.4	2.4	4.2	2.2
25	1.4	1.5	e2.8	10	17	9.1	3.4	15	2.8	1.7	3.4	1.5
26	1.5	1.4	e2.5	e21	8.9	5.9	3.3	20	1.1	287	3.8	15
27	1.9	1.5	e2.4	e4.7	e5.8	61	5.8	6.6	27	63	3.0	56
28	2.5	217	2.6	379	e5.2	111	3.6	2.7	5.7	162	2.8	4.1
29	2.4	7.1	2.3	23	---	98	13	2.3	8.7	7.4	3.9	2.6
30	25	3.8	2.1	7.8	---	15	5.2	2.0	5.4	4.3	2.9	1.7
31	27	---	2.1	5.4	---	8.8	---	2.0	---	5.0	2.3	---
TOTAL	145.77	309.5	460.4	715.5	528.9	1077.4	334.6	260.8	102.0	876.77	309.9	161.3
MEAN	4.70	10.3	14.9	23.1	18.9	34.8	11.2	8.41	3.40	28.3	10.0	5.38
MAX	27	217	272	379	116	331	96	47	27	287	89	56
MIN	.97	1.4	2.1	2.8	2.2	4.0	3.3	2.0	1.1	.75	2.1	1.5
CFSM	.63	1.38	1.99	3.09	2.53	4.66	1.50	1.13	.46	3.79	1.34	.72
IN.	.73	1.54	2.30	3.57	2.64	5.37	1.67	1.30	.51	4.37	1.55	.80

e Estimated

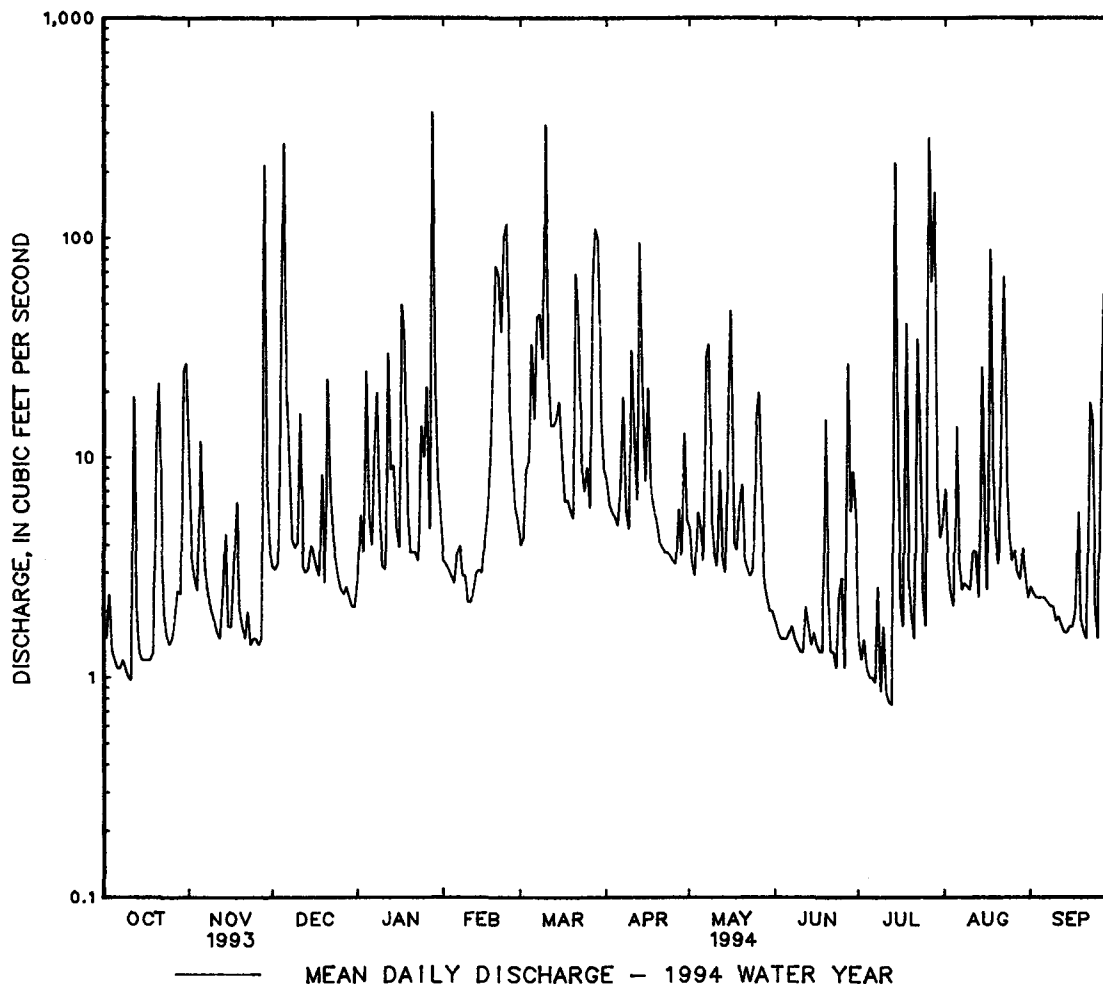
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1946 - 1994. BY WATER YEAR (WY)

MEAN	4.60	8.66	11.5	12.3	13.3	15.6	13.1	10.9	7.12	8.56	7.08	6.67
MAX	20.2	27.7	30.5	37.9	34.1	41.4	32.7	31.5	34.8	69.5	62.8	58.3
(WY)	1972	1973	1968	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

01477800 SHELLPOT CREEK AT WILMINGTON, DE--Continued

SUMMARY STATISTICS	FOR 1993 CALENDAR YEAR	FOR 1994 WATER YEAR	WATER YEARS 1946 - 1994
ANNUAL TOTAL	5049.95	5282.84	
ANNUAL MEAN	13.8	14.5	9.78
HIGHEST ANNUAL MEAN			16.1
LOWEST ANNUAL MEAN			5.52
HIGHEST DAILY MEAN	336 Mar 4	379 Jan 28	1310 Jul 5 1989
LOWEST DAILY MEAN	.59 Sep 3	.75 Jul 13	.09 (a)
ANNUAL SEVEN-DAY MINIMUM	.66 Aug 31	1.1 Oct 5	.10 Aug 27 1966
INSTANTANEOUS PEAK FLOW		3830 Jul 26	(b)8040 Jul 5 1989
INSTANTANEOUS PEAK STAGE		8.26 Jul 26	13.76 Jul 5 1989
INSTANTANEOUS LOW FLOW		.67 Jul 12	.09 Oct 2 1968
ANNUAL RUNOFF (CFSM)	1.85	1.94	1.31
ANNUAL RUNOFF (INCHES)	25.18	26.34	17.81
10 PERCENT EXCEEDS	24	28	18
50 PERCENT EXCEEDS	3.2	3.6	2.8
90 PERCENT EXCEEDS	1.0	1.4	.79

a Oct. 2, 4, 1968.

b From rating curve extended above 200 ft³/s on basis of culvert and flow-over-road measurements at gage heights 9.10 and 11.91 ft.

01478000 CHRISTINA RIVER AT COOCHS BRIDGE, DE

LOCATION.--Lat 39°38'14", long 75°43'43", New Castle County, Hydrologic Unit 02040205, on right bank 60 ft downstream 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 mi².

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 (intake lag, ice effect), which are fair. Low and medium flow regulated by mill upstream from station. 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.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 28	1130	1,570	11.36	Mar. 10	1230	1,360	10.98
Dec. 5	0700	1,480	11.19	July 3	1730	1,540	11.31
Jan. 28	1230	*2,340	*12.19				

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.8	e26	19	12	29	21	32	20	13	6.8	14	5.6
2	8.3	e13	18	17	21	22	27	18	12	5.0	11	6.2
3	8.1	11	16	15	19	136	25	16	12	379	8.6	5.7
4	7.6	10	44	86	18	78	24	20	11	51	8.9	5.0
5	7.1	e19	714	32	18	147	22	24	11	18	22	5.0
6	6.6	e14	64	17	23	79	25	18	11	15	13	5.5
7	6.6	e11	26	27	28	134	e37	46	11	14	8.0	5.7
8	6.7	e9.9	19	83	22	126	e23	114	9.8	12	7.8	5.0
9	6.8	9.4	17	25	18	80	21	25	7.7	32	7.9	4.9
10	6.8	9.3	17	16	16	708	49	19	8.5	24	8.2	4.9
11	6.2	9.1	28	13	16	96	e35	17	8.6	13	8.1	4.8
12	42	8.9	16	73	17	47	27	20	9.6	7.5	11	4.8
13	15	8.8	15	45	18	42	190	17	9.3	9.1	7.0	4.8
14	8.6	e11	14	30	19	45	e76	15	8.4	69	23	4.9
15	7.8	e9.6	14	e20	17	43	e41	15	8.1	40	14	4.8
16	7.3	e8.5	14	15	22	37	e58	49	7.6	11	7.7	4.8
17	7.1	11	13	28	26	27	e32	17	7.7	9.0	83	4.9
18	7.3	20	12	174	37	24	e26	15	7.2	57	20	9.0
19	7.3	9.7	15	33	89	24	e24	15	6.8	13	12	4.8
20	19	9.0	13	18	239	23	e22	19	6.4	9.2	9.5	4.6
21	61	8.4	150	14	208	105	e21	15	6.2	8.3	23	4.4
22	36	8.2	31	13	150	204	e20	14	6.3	27	41	42
23	11	8.2	18	13	249	39	e20	14	5.8	37	e12	37
24	8.8	8.2	15	29	340	30	e19	14	13	22	9.4	10
25	8.2	8.1	15	37	69	32	e19	23	6.7	10	8.4	7.1
26	8.0	8.0	14	94	42	25	19	100	5.1	9.0	8.4	7.6
27	7.9	8.0	12	24	28	150	27	53	9.0	17	8.0	9.8
28	8.8	586	12	965	24	293	21	17	14	155	7.6	7.3
29	8.1	52	12	217	---	257	44	15	21	19	11	7.6
30	e35	24	12	64	---	64	30	14	24	13	8.2	5.0
31	e49	---	12	39	---	37	---	13	---	23	6.3	---
TOTAL	442.8	957.3	1411	2288	1822	3175	1056	811	297.8	1134.9	448.0	243.5
MEAN	14.3	31.9	45.5	73.8	65.1	102	35.2	26.2	9.93	36.6	14.5	8.12
MAX	61	586	714	965	340	708	190	114	24	379	83	42
MIN	6.2	8.0	12	12	16	21	19	13	5.1	5.0	6.3	4.4
CFSM	.70	1.56	2.22	3.60	3.17	5.00	1.72	1.28	.48	1.79	.70	.40
IN.	.80	1.74	2.56	4.15	3.31	5.76	1.92	1.47	.54	2.06	.81	.44

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1943 - 1994, BY WATER YEAR (WY)

	13.9	24.5	34.3	39.5	43.3	47.3	37.3	31.8	21.3	22.6	17.6	15.2
MEAN	13.9	24.5	34.3	39.5	43.3	47.3	37.3	31.8	21.3	22.6	17.6	15.2
MAX	62.9	82.8	97.9	165	154	121	107	77.6	76.5	165	117	53.6
(WY)	1972	1973	1984	1979	1979	1978	1983	1990	1972	1989	1967	1960
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

DELAWARE RIVER BASIN

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01478000 CHRISTINA RIVER AT COOCHS BRIDGE, DE--Continued

SUMMARY STATISTICS

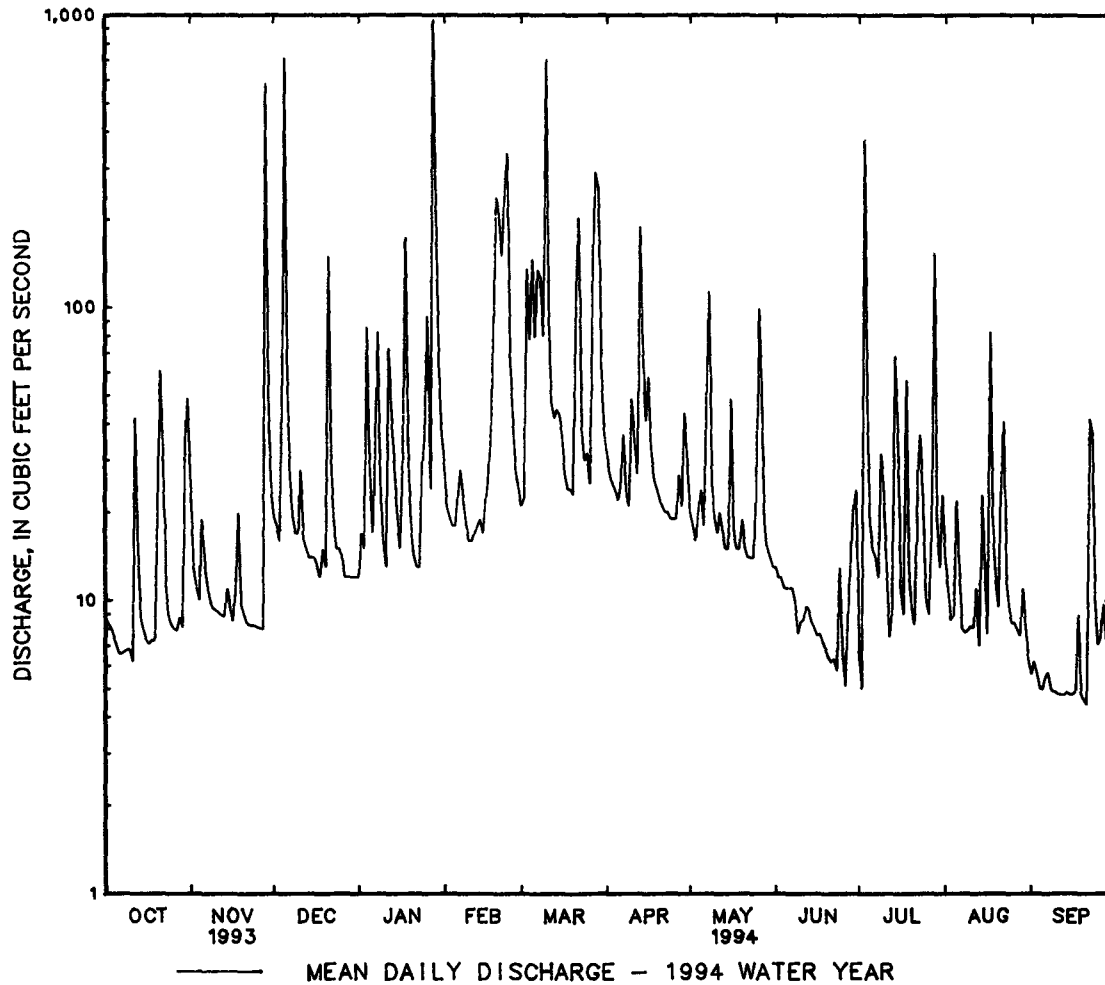
FOR 1993 CALENDAR YEAR

FOR 1994 WATER YEAR

WATER YEARS 1943 - 1994

ANNUAL TOTAL	13850.7		14087.3				
ANNUAL MEAN	37.9		38.6			29.0	
HIGHEST ANNUAL MEAN						53.4	1978
LOWEST ANNUAL MEAN						14.2	1981
HIGHEST DAILY MEAN	714	Dec 5	965	Jan 28	2000	Jul 5	1989
LOWEST DAILY MEAN	3.7	Sep 7	4.4	Sep 21	.20	(a)	
ANNUAL SEVEN-DAY MINIMUM	4.4	Sep 1	4.8	Sep 10	.50	Aug 25	1966
INSTANTANEOUS PEAK FLOW			2340	Jan 28	5530	Jul 5	1989
INSTANTANEOUS PEAK STAGE			12.19	Jan 28	13.12	Jul 5	1989
INSTANTANEOUS LOW FLOW			2.2	Jun 23	UNKNOWN		
ANNUAL RUNOFF (CFSM)	1.85		1.88		1.41		
ANNUAL RUNOFF (INCHES)	25.13		25.56		19.19		
10 PERCENT EXCEEDS	57		74		49		
50 PERCENT EXCEEDS	16		16		13		
90 PERCENT EXCEEDS	6.5		6.8		4.4		

a Aug. 7, 14, 18, 21, 27, 28, 1966.



LOCATION.--Lat 39°41'47", long 75°40'33", 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 mi².

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

REMARKS.--Records good except those for estimated daily discharges (ice effect; intake lag), which are fair. Slight diurnal fluctuation at low flow caused by mills upstream from station. Records do not include a negligible diversion upstream from station by E. I. du Pont de Nemours & Co. 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.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,000 ft³/s and maximum (*):

		Discharge	Gage height			Discharge	Gage height
Date	Time	(ft ³ /s)	(ft)	Date	Time	(ft ³ /s)	(ft)
Nov. 28	1130	3.100	13.22	Jan. 28	2015	*6,370	*15.18
Dec. 5	0900	3.130	13.25	Mar. 10	1615	4.380	14.28

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	52	135	96	e76	e140	e140	189	112	78	50	89	29
2	50	76	88	e86	e128	e141	167	108	74	45	49	26
3	51	64	82	78	e120	e229	157	99	72	203	44	26
4	46	60	120	168	e110	e160	149	105	71	59	39	26
5	43	76	1900	99	e105	281	138	122	69	42	61	26
6	41	74	324	e86	e170	319	142	102	69	39	51	25
7	42	60	156	100	236	429	180	137	70	37	37	24
8	42	55	120	187	e195	703	141	344	67	34	32	23
9	42	50	105	115	e108	445	128	e129	65	42	30	23
10	41	50	101	e100	e104	2490	172	113	63	32	29	23
11	38	49	119	e91	e100	606	e229	103	65	27	29	23
12	111	49	90	234	e98	393	e145	104	69	26	34	21
13	92	49	83	225	e97	381	363	108	67	27	31	21
14	54	63	82	123	e97	427	381	96	62	155	53	20
15	49	55	82	135	e98	365	e178	94	60	131	42	20
16	47	50	80	207	e100	e250	197	274	58	47	31	21
17	47	52	74	e187	e100	e196	168	e114	56	39	225	21
18	46	76	73	509	166	e170	141	104	55	132	112	29
19	44	54	83	e135	277	154	132	99	53	52	49	24
20	68	50	75	e102	808	160	127	111	50	39	41	20
21	240	47	413	e95	969	302	120	109	49	35	59	19
22	238	46	152	e89	765	714	116	97	51	61	118	70
23	73	47	102	e83	930	235	113	91	47	71	68	93
24	59	45	92	e150	1240	198	112	87	55	52	42	41
25	53	47	89	e220	455	184	110	98	51	37	36	30
26	50	46	83	439	262	156	107	213	49	38	37	38
27	51	47	e81	211	e200	348	117	e118	56	54	36	60
28	53	1250	e79	e2270	e160	677	113	e95	61	326	37	38
29	47	213	e78	1110	---	711	e123	88	78	69	39	28
30	91	120	e78	352	---	289	e116	84	67	52	34	25
31	170	---	e77	236	---	212	---	79	---	63	30	---
TOTAL	2171	3155	5257	8298	8338	12465	4771	3737	1857	2116	1644	913
MEAN	70.0	105	170	268	298	402	159	121	61.9	68.3	53.0	30.4
MAX	240	1250	1900	2270	1240	2490	381	344	78	326	225	93
MIN	38	45	73	76	97	140	107	79	47	26	29	19
CFSM	.79	1.18	1.90	3.00	3.34	4.51	1.78	1.35	.69	.77	.60	.34
IN.	.91	1.32	2.19	3.46	3.48	5.20	1.99	1.56	.78	.88	.69	.38

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1932 - 1994, BY WATER YEAR (WY)

MEAN	63.4	92.3	114	144	164	174	152	130	98.6	97.7	80.1	72.7
MAX	230	221	304	493	542	402	342	265	311	540	301	231
(WY)	1972	1973	1984	1979	1979	1994	1983	1989	1972	1975	1967	1979
MIN	17.6	28.4	28.1	32.8	52.4	57.5	59.7	42.3	37.9	16.6	13.6	15.0
(WY)	1964	1966	1966	1966	1934	1981	1963	1955	1963	1963	1966	1932

DELAWARE RIVER BASIN

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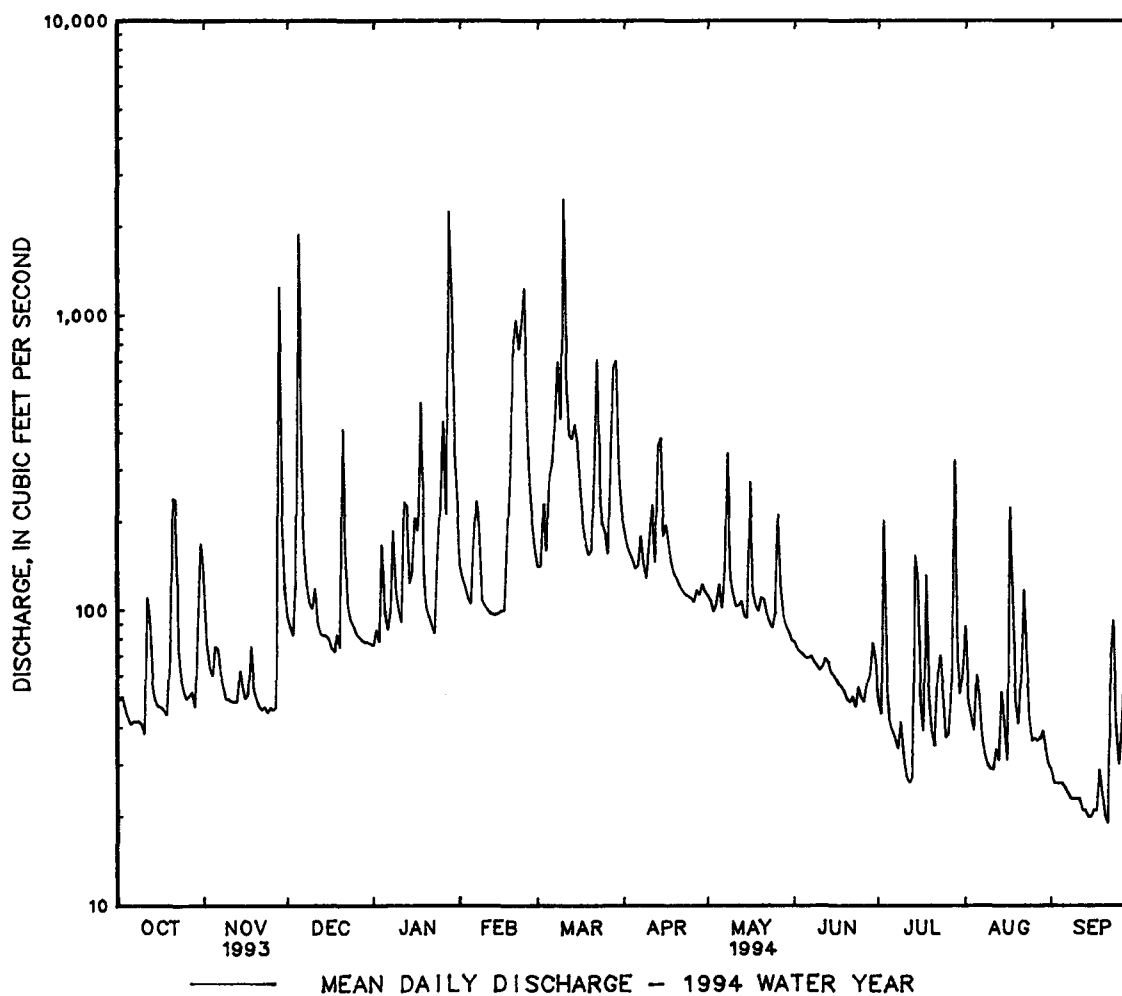
01479000 WHITE CLAY CREEK NEAR NEWARK, DE--Continued

SUMMARY STATISTICS	FOR 1993 CALENDAR YEAR		FOR 1994 WATER YEAR		WATER YEARS 1932 - 1994	
ANNUAL TOTAL	52703		54722		115	
ANNUAL MEAN	144		150		193	
HIGHEST ANNUAL MEAN					55.9	
LOWEST ANNUAL MEAN					1975	
HIGHEST DAILY MEAN	1900	Dec 5	2490	Mar 10	5220	Jan 26 1978
LOWEST DAILY MEAN	22	Sep 7	19	Sep 21	5.0	Sep 10 1966
ANNUAL SEVEN-DAY MINIMUM	24	Sep 1	21	Sep 11	5.7	Sep 7 1966
INSTANTANEOUS PEAK FLOW			6370	Jan 28	(a)11600	Jul 5 1989
INSTANTANEOUS PEAK STAGE			15.18	Jan 28	(b)17.74	Jun 22 1972
INSTANTANEOUS LOW FLOW			18	(c)	4.7	Sep 11 1966
ANNUAL RUNOFF (CFSM)	1.62		1.68		1.29	
ANNUAL RUNOFF (INCHES)	22.00		22.85		17.54	
10 PERCENT EXCEEDS	260		279		190	
50 PERCENT EXCEEDS	84		84		77	
90 PERCENT EXCEEDS	37		34		33	

a From rating curve extended above 6,700 ft³/s on basis of contracted-opening and flow-over-road measurement of peak flow.

b At previous site and datum.

c Sept. 21, 22.



DELAWARE RIVER BASIN

01479197 MILL CREEK AT MILL CREEK ROAD AT HOCKESSIN, DE

LOCATION.--Lat 39°46'48", long 75°41'49", New Castle County, Hydrologic Unit 02040205, on right bank at downstream side of highway bridge on Mill Creek Road, at Hockessin, and 6.8 mi upstream from mouth.

DRAINAGE AREA.--3.66 mi².

PERIOD OF RECORD.--October 1989 to current year.

GAGE.--Water-stage recorder. Concrete control since February 12, 1990. Datum of gage is 224.56 ft above sea level.

REMARKS.--Records good except those for estimated daily discharges, (no gage-height record), 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.--Flood of July 5, 1989 reached a stage of about 8 ft, from floodmarks; discharge, about 1,000 ft³/s.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 150 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 28	0745	*595	*6.26	Mar. 10	UNKNOWN	293	5.20
Dec. 5	0430	365	5.52	Mar. 21	2115	157	4.44
Jan. 28	UNKNOWN	381	(a)5.6	May 15	2315	186	4.61
Feb. 23	1400	162	4.47	July 14	1830	213	4.76
Feb. 24	1445	160	4.46	July 28	0830	186	4.61

a From floodmark.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.0	3.8	1.6	1.8	e2.2	2.7	4.3	3.9	1.3	.68	.91	.41
2	.87	1.6	1.5	2.5	e2.1	2.6	3.4	2.1	1.1	.57	1.1	.39
3	1.2	1.4	1.3	2.0	e2.0	e5.0	3.2	1.8	1.1	4.1	.47	.38
4	.94	1.3	11	6.7	e1.9	e5.6	3.3	3.6	1.1	.77	.43	.37
5	.85	4.3	115	2.5	e1.8	e14	3.1	2.4	1.1	.53	2.7	.37
6	.83	2.2	7.3	1.9	e2.7	e11	3.5	2.0	1.2	.54	.58	.36
7	.83	1.5	3.1	5.6	e3.5	e20	5.0	11	1.2	.58	.49	.35
8	.84	1.2	2.4	9.2	e2.6	e21	2.7	10	.95	.57	.44	.34
9	.74	1.2	2.1	2.5	e1.9	e17	2.5	2.7	.86	.43	.42	.38
10	.71	1.2	2.5	2.5	e1.4	e140	12	2.1	.82	.39	.41	.44
11	.78	1.2	3.3	2.3	e1.4	13	4.9	1.8	.85	.35	.41	.34
12	6.2	.98	1.6	16	e1.6	7.9	3.0	4.0	.88	.35	.46	.18
13	1.3	1.6	1.6	4.3	e1.7	8.2	19	1.9	.85	.32	.41	.17
14	.94	1.6	1.7	5.6	e1.8	8.4	7.6	1.6	.81	22	.37	.16
15	.91	1.0	2.0	1.8	e1.8	9.1	3.5	13	.75	2.0	.39	.16
16	.86	1.0	2.1	e1.9	e1.9	5.3	6.7	15	.76	.55	.34	.18
17	.86	2.3	1.9	e24	e2.0	3.4	3.2	2.4	.75	.48	16	.19
18	.83	2.3	1.9	e17	e2.8	3.3	2.7	2.1	.71	2.2	1.3	.43
19	.81	1.4	2.3	e5.4	e2.9	3.2	2.6	2.4	.66	.87	.65	.16
20	4.0	1.0	1.6	e2.4	e33	3.1	2.4	3.3	.61	1.5	.52	.15
21	21	.92	27	e2.2	e27	26	2.3	2.1	.64	1.3	1.2	.15
22	3.5	.95	3.4	e2.2	e24	14	2.0	1.7	.63	3.5	6.4	5.4
23	1.5	1.0	2.7	e2.1	e93	5.5	1.8	1.8	.64	2.7	.76	2.8
24	1.1	1.0	2.2	e7.1	55	4.3	1.8	1.6	1.1	1.8	.52	e.40
25	1.0	.88	2.1	e5.0	8.8	4.1	1.8	6.6	.81	1.5	.50	e.12
26	.92	.93	1.9	e11	4.8	3.4	1.7	7.4	.58	1.7	.79	e16
27	.93	1.2	1.8	e2.9	3.0	20	2.4	2.9	2.2	6.2	.50	e1.5
28	.94	95	1.8	e170	2.9	33	2.1	1.6	.81	25	.47	e.60
29	.87	4.4	1.7	e12	---	30	3.1	1.6	2.1	1.4	.51	e.25
30	9.5	2.0	1.7	e5.4	---	7.5	2.3	1.4	1.3	.84	.46	e.13
31	9.3	---	1.7	e3.0	---	5.2	---	1.4	---	.73	.42	---
TOTAL	76.86	142.36	215.8	340.8	291.5	456.8	119.9	119.2	29.17	86.45	41.33	33.26
MEAN	2.48	4.75	6.96	11.0	10.4	14.7	4.00	3.85	.97	2.79	1.33	1.11
MAX	21	95	115	170	93	140	19	15	2.2	25	16	16
MIN	.71	.88	1.3	1.8	1.4	2.6	1.7	1.4	.58	.32	.34	.12
CFSM	.70	1.34	1.97	3.11	2.94	4.16	1.13	1.09	.27	.79	.38	.31
IN.	.81	1.50	2.27	3.58	3.06	4.80	1.26	1.25	.31	.91	.43	.35

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1990 - 1994, BY WATER YEAR (WY)

	1990	1991	1992	1993	1994
MEAN	2.35	3.06	4.92	5.54	4.43
MAX	5.95	4.75	6.96	11.0	10.4
(WY)	1990	1994	1994	1994	1994
MIN	.45	1.49	1.77	1.19	1.90
(WY)	1993	1992	1990	1992	1990

DELAWARE RIVER BASIN

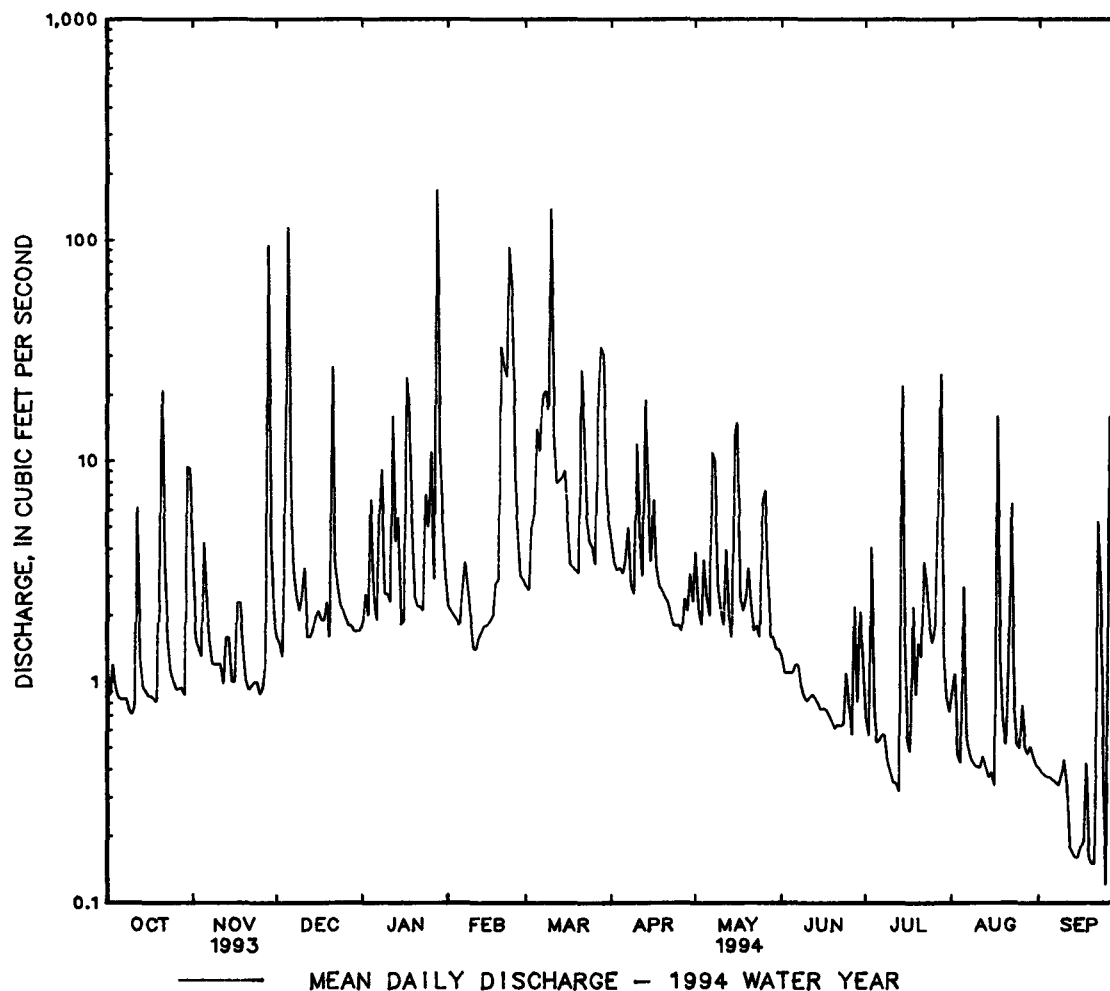
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01479197 MILL CREEK AT MILL CREEK ROAD AT HOCKESSIN, DE--Continued

SUMMARY STATISTICS	FOR 1993 CALENDAR YEAR	FOR 1994 WATER YEAR	WATER YEARS 1990 - 1994
ANNUAL TOTAL	1858.40	1953.43	
ANNUAL MEAN	5.09	5.35	3.92
HIGHEST ANNUAL MEAN			5.35
LOWEST ANNUAL MEAN			2.22
HIGHEST DAILY MEAN	115 Dec 5	170 Jan 28	170 Jan 28 1994
LOWEST DAILY MEAN	.19 (a)	.12 Sep 25	.11 Jul 22 1992
ANNUAL SEVEN-DAY MINIMUM	.23 Sep 1	.20 Sep 11	.20 Sep 11 1994
INSTANTANEOUS PEAK FLOW		595 Nov 28	595 Nov 28 1993
INSTANTANEOUS PEAK STAGE		6.26 Nov 28	6.26 Nov 28 1993
INSTANTANEOUS LOW FLOW		.08 Sep 15	.07 (b)
ANNUAL RUNOFF (CFSM)	1.44	1.51	1.11
ANNUAL RUNOFF (INCHES)	19.53	20.53	15.03
10 PERCENT EXCEEDS	9.9	11	7.4
50 PERCENT EXCEEDS	1.8	1.8	1.6
90 PERCENT EXCEEDS	.60	.43	.48

a Sept. 6, 7.

b July 21, 22 1992.



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.

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 except those for estimated daily discharges (ice effect), which are fair. 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.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,200 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 28	1100	1,930	5.92	Jan. 28	1800	*4,080	*8.92
Dec. 5	0115	1,460	5.19	Mar. 10	1430	2,790	7.12

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
MEAN DAILY VALUES

[illegible]

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1943 - 1994, BY WATER YEAR (WY)

MEAN	36.0	50.1	63.3	77.0	89.1	93.5	85.9	74.7	57.2	52.1	43.8	40.7
MAX	129	115	147	232	237	209	167	156	147	279	180	180
(WY)	1972	1973	1984	1979	1979	1994	1958	1958	1972	1975	1955	1971
MIN	11.1	18.8	18.9	16.8	33.3	27.3	35.1	24.2	21.7	12.7	9.79	13.7
(WY)	1964	1966	1966	1981	1969	1981	1985	1955	1966	1963	1966	1964

e Estimated

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

* Adjusted for inflow.

DELAWARE RIVER BASIN

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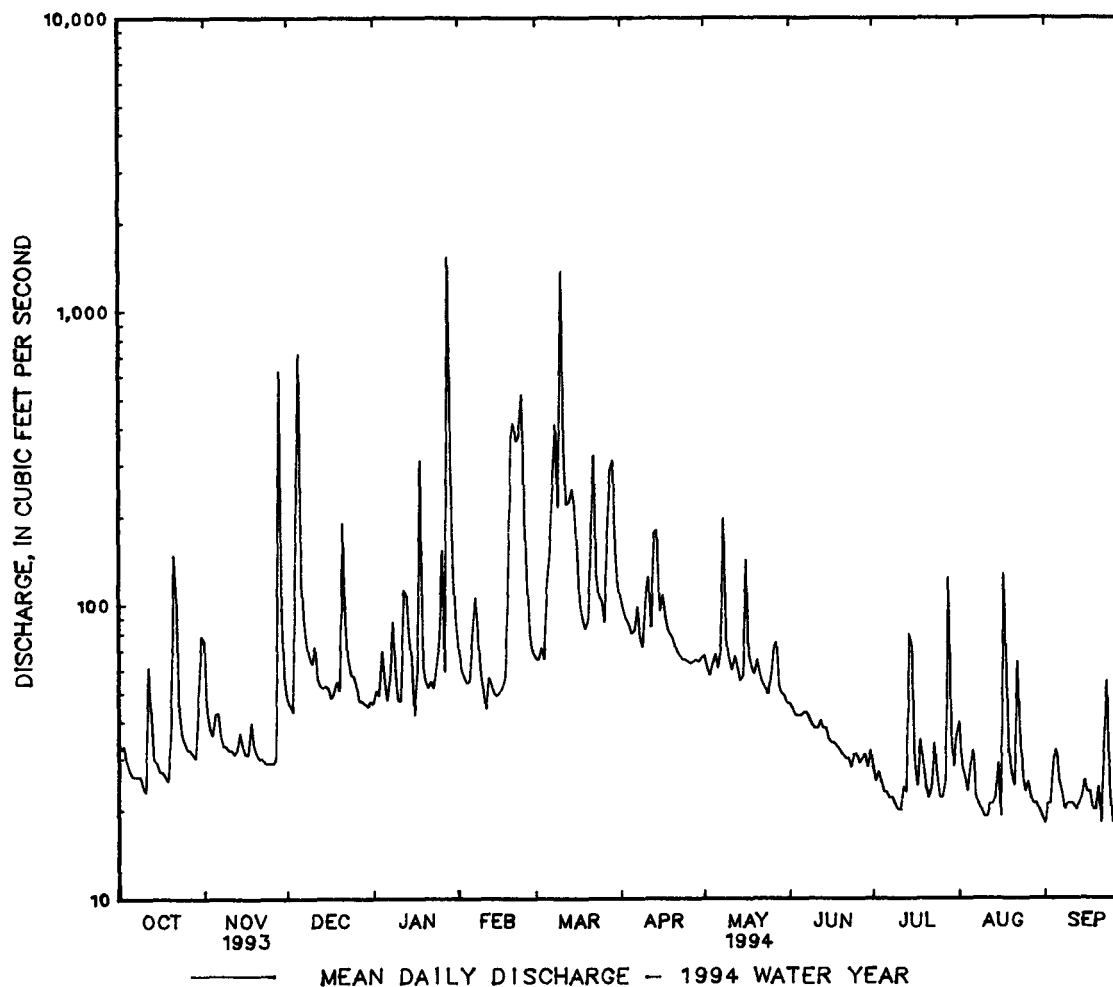
01480000 RED CLAY CREEK AT WOODDALE, DE--Continued

SUMMARY STATISTICS	FOR 1993 CALENDAR YEAR		FOR 1994 WATER YEAR		WATER YEARS 1943 - 1994	
ANNUAL TOTAL	26352		28560			
ANNUAL MEAN	72.2		78.2		63.5	
ANNUAL MEAN*	--		77.6		63.5	
HIGHEST ANNUAL MEAN					104	
LOWEST ANNUAL MEAN					32.3	
HIGHEST DAILY MEAN	723	Dec 5	1540	Jan 28	2430	Sep 12 1960
LOWEST DAILY MEAN	16	(a)	18	(b)	4.5	Sep 4 1966
ANNUAL SEVEN-DAY MINIMUM	20	Jul 29	20	Aug 28	4.9	Sep 7 1966
INSTANTANEOUS PEAK FLOW			4080	Jan 28	(c)5010	Jul 21 1975
INSTANTANEOUS PEAK STAGE			8.92	Jan 28	10.32	Jul 21 1975
INSTANTANEOUS LOW FLOW			13	Sep 21	2.9	Sep 4 1966
ANNUAL RUNOFF (CFSM)	1.54		1.66		1.35	
ANNUAL RUNOFF (INCHES)	20.86		22.60		18.36	
10 PERCENT EXCEEDS	129		136		108	
50 PERCENT EXCEEDS	47		49		44	
90 PERCENT EXCEEDS	23		22		20	

* Adjusted for inflow since June 1994.

a Sept. 12, 13.

b Sept. 1, 21, 25.

c From rating curve extended above 3,900 ft³/s on basis of contracted-opening measurement at gage height 9.93 ft.

DELAWARE RIVER BASIN

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 mi².

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), 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.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,300 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 28	1130	2,390	15.49	Jan. 28	2015	*5,110	*19.11
Dec. 5	0800	1,960	14.74	Mar. 10	1500	3,280	16.84

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	40	90	54	54	e89	73	108	71	49	32	47	20
2	37	48	50	53	e68	76	102	66	47	29	31	21
3	38	41	47	51	e64	90	96	62	45	42	29	21
4	33	39	64	78	e62	82	93	67	45	29	26	31
5	31	49	1080	59	71	128	88	74	45	27	33	33
6	28	49	185	48	85	151	91	65	45	26	36	28
7	29	39	101	59	121	250	107	76	46	25	25	23
8	29	36	81	100	e94	363	85	193	44	24	23	20
9	29	35	72	e64	e66	207	80	80	42	25	23	21
10	28	35	68	e54	e54	1710	111	69	40	23	22	22
11	26	34	79	e52	e68	325	131	64	41	22	21	21
12	80	33	59	118	e62	207	91	72	42	25	22	20
13	53	35	55	128	e58	206	173	67	41	25	23	20
14	35	43	54	79	e56	225	187	60	40	107	31	22
15	33	37	54	e70	e58	196	102	61	39	89	31	23
16	32	34	54	e54	e60	156	113	151	37	34	22	24
17	31	35	49	160	e61	110	97	72	38	28	121	25
18	32	46	48	326	69	101	88	65	36	42	76	24
19	31	36	54	e90	120	95	84	63	35	33	35	21
20	46	34	50	e67	421	99	81	70	33	27	28	25
21	161	31	210	e59	440	150	77	63	32	25	31	18
22	140	32	95	e58	364	362	74	58	34	32	73	38
23	48	31	68	e57	459	130	71	56	31	38	42	62
24	39	31	60	e67	663	112	71	55	34	32	29	29
25	36	31	58	113	216	108	69	68	34	25	26	22
26	35	30	55	190	124	94	68	88	32	33	26	29
27	36	32	54	108	89	176	71	85	34	33	25	70
28	34	882	e53	2370	e79	317	69	59	38	146	24	31
29	31	120	e52	619	---	341	74	56	38	43	23	25
30	55	67	e51	165	---	151	71	54	37	32	23	22
31	100	---	e50	111	---	116	---	51	---	37	21	---
TOTAL	1436	2115	3164	5681	4241	6907	2823	2261	1174	1190	1048	811
MEAN	46.3	70.5	102	183	151	223	94.1	72.9	39.1	38.4	33.8	27.0
MAX	161	882	1080	2370	663	1710	187	193	49	146	121	70
MIN	26	30	47	48	54	73	68	51	31	22	21	18
CFSM	.88	1.35	1.95	3.50	2.89	4.25	1.80	1.39	.75	.73	.65	.52
IN	1.02	1.50	2.25	4.03	3.01	4.90	2.00	1.61	.83	.84	.74	.58
(†)	---	---	---	---	---	---	---	---	---	-0.4	---	-5.3
MEAN#	---	---	---	---	---	---	---	---	---	38.0	---	21.7
CFSM#	---	---	---	---	---	---	---	---	---	.73	---	.41
IN#	---	---	---	---	---	---	---	---	---	.84	---	.46

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1989 - 1994, BY WATER YEAR (WY)

	MEAN	44.8	59.1	67.8	93.6	78.2	120	97.3	89.0	65.2	73.2	46.1	54.0
MAX	103	75.9	102	183	151	223	191	138	101	246	90.0	115	
(WY)	1990	1990	1994	1994	1994	1994	1993	1989	1989	1989	1989	1989	
MIN	25.4	33.0	42.1	37.9	40.8	65.0	48.0	56.2	39.1	31.3	28.3	27.0	
(WY)	1993	1992	1989	1992	1992	1990	1992	1991	1994	1992	1993	1994	

e Estimated

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

Adjusted for inflow.

DELAWARE RIVER BASIN

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01480015 RED CLAY CREEK NEAR STANTON, DE--Continued

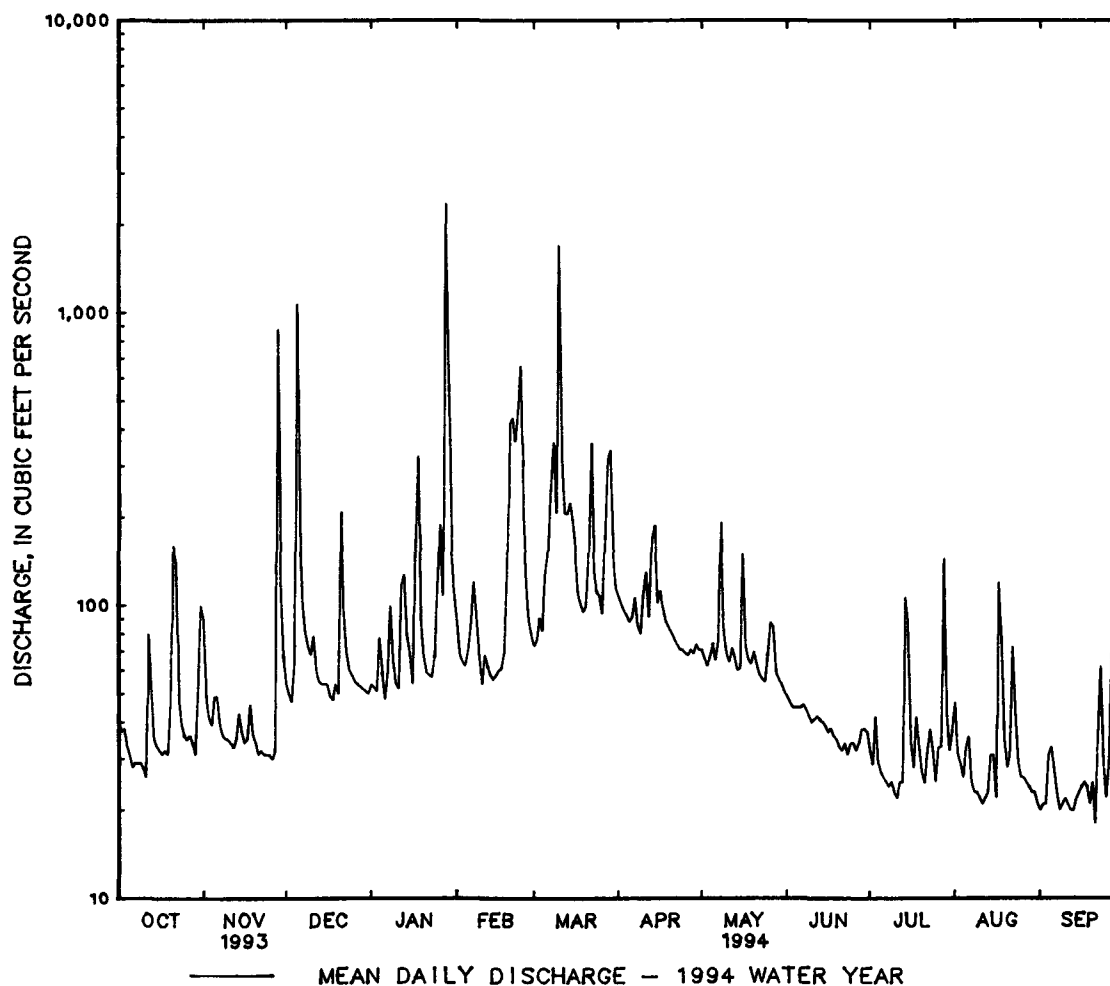
SUMMARY STATISTICS	FOR 1993 CALENDAR YEAR		FOR 1994 WATER YEAR		WATER YEARS 1989 - 1994	
ANNUAL TOTAL	31155		32851			
ANNUAL MEAN	85.4		90.0		74.1	
ANNUAL MEAN*	--		89.6		74.0	
HIGHEST ANNUAL MEAN					94.7	
LOWEST ANNUAL MEAN					42.3	
HIGHEST DAILY MEAN	1080	Dec 5	2370	Jan 28	2480	Jul 5 1989
LOWEST DAILY MEAN	18	(a)	18	Sep 21	15	(b)
ANNUAL SEVEN-DAY MINIMUM	21	Jul 30	21	Sep 8	17	Sep 7 1991
INSTANTANEOUS PEAK FLOW			5110	Jan 28	5320	Jul 5 1989
INSTANTANEOUS PEAK STAGE			19.11	Jan 28	19.35	Jul 5 1989
INSTANTANEOUS LOW FLOW			13	(c)	13	(c)
ANNUAL RUNOFF (CFSM)	1.63		1.72		1.41	
ANNUAL RUNOFF (INCHES)	22.12		23.32		19.21	
10 PERCENT EXCEEDS	160		151		126	
50 PERCENT EXCEEDS	53		54		53	
90 PERCENT EXCEEDS	26		25		25	

* Adjusted for inflow since June 1994.

a Aug. 4, Sept. 13.

b Sept. 12, 13, 1991.

c Sept. 12, 19, 20.



DELAWARE RIVER BASIN

01480095 LITTLE MILL CREEK NEAR NEWPORT, DE

LOCATION.--Lat 39°43'54", long 75°36'14", New Castle County, Hydrologic Unit 02040205, on left bank at downstream side of railroad bridge at the Wilsmere Yards, 0.5 mi downstream from Chestnut Run, 1.2 mi northeast Newport, and 3.1 mi upstream from mouth.

DRAINAGE AREA.--5.24 mi².

PERIOD OF RECORD.--October 1990 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 58.74 ft above sea level.

REMARKS.--Records good below 400 ft³/s, except those for estimated daily discharges (no gage-height record) and those above 400 ft³/s, which are poor. Several measurements of water temperature were made during the year.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 400 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 28	0630	683	4.77	July 28	0910	536	4.17
Jan. 28	1250	772	4.78	July 31	1555	*1,320	*5.87
July 14	1825	1,190	5.63	Aug. 17	1355	523	4.13
July 26	1610	638	4.45				

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e2.7	8.0	e6.3	e3.3	e4.7	e5.5	11	6.4	2.9	2.3	8.6	2.1
2	e2.4	3.5	e5.7	e4.5	e4.5	e5.8	8.2	4.0	2.6	2.0	4.0	1.8
3	e3.5	3.2	e5.2	e4.2	e4.3	e11	7.2	3.2	2.5	23	3.0	1.6
4	e2.0	3.0	e20	e17	e4.1	e12	6.9	5.8	2.4	3.9	2.6	2.0
5	e1.8	7.9	e144	e7.3	e3.9	e21	6.6	4.6	2.3	2.3	16	1.7
6	1.8	4.2	e9.4	e5.4	e4.2	e16	9.5	3.8	2.5	2.0	3.8	1.6
7	1.8	3.0	e5.2	e9.0	e4.7	e29	16	23	2.6	1.9	2.6	1.5
8	1.8	2.6	e4.8	e14	e4.1	e30	6.1	27	2.4	1.8	2.3	1.5
9	1.9	2.6	e4.5	e8.0	e4.0	e26	5.6	6.1	2.5	2.0	2.0	1.5
10	1.8	2.6	e4.8	e4.5	e3.5	145	24	5.5	2.3	2.0	2.0	1.4
11	1.8	2.6	e11	e4.3	e3.4	e24	11	4.8	2.0	1.7	2.1	1.3
12	13	2.6	e4.5	e20	e3.5	e15	7.1	9.6	2.1	1.5	2.6	1.3
13	3.4	3.6	e4.0	e6.4	e3.6	e14	52	4.0	2.1	1.3	2.2	1.4
14	2.4	4.2	e4.2	e6.6	e3.5	e15	20	3.4	2.0	138	25	1.3
15	2.2	2.8	e4.8	e5.6	e3.4	e16	8.6	7.9	1.8	15	5.1	1.4
16	2.2	2.5	e4.5	e5.2	e3.6	e11	18	26	1.8	3.7	2.5	1.4
17	2.2	4.1	e4.2	e33	e5.4	e8.8	8.0	4.8	1.9	2.5	81	1.3
18	2.2	5.4	e4.0	e27	e11	e8.6	6.6	4.0	1.8	20	11	3.0
19	2.2	2.9	e6.2	e8.0	e28	e7.9	6.1	5.7	1.7	3.3	4.5	1.2
20	8.8	2.5	e3.9	e4.9	e50	e7.3	5.7	6.9	1.6	3.7	3.2	1.3
21	15	2.4	e14	e4.8	e45	e43	5.2	4.0	1.5	3.0	18	1.2
22	6.0	2.5	e8.0	e4.7	e36	e33	5.2	3.4	1.5	22	47	21
23	3.0	2.6	e5.2	e4.6	e66	e13	4.7	3.5	1.5	8.4	6.2	9.7
24	2.7	2.6	e4.3	e9.6	71	e9.0	4.7	3.3	3.2	3.6	3.9	2.7
25	2.6	2.6	e3.8	e9.0	e23	12	4.3	21	2.3	2.2	3.1	2.0
26	2.5	2.6	e3.5	e15	e10	8.2	3.6	29	1.6	49	3.8	16
27	2.7	2.6	e3.3	e6.4	e6.9	41	12	8.7	19	22	2.8	7.9
28	3.2	e143	e3.2	e200	e6.1	75	5.6	3.9	8.0	81	2.7	2.5
29	2.9	e7.8	e3.1	e22	---	72	18	3.3	18	6.9	3.8	2.3
30	16	e6.6	e3.0	e11	---	20	7.7	3.0	5.6	4.1	2.6	1.7
31	16	---	e2.9	e7.0	---	14	---	2.9	---	75	2.1	---
TOTAL	134.5	249.1	315.5	492.3	421.4	769.1	315.2	252.5	106.0	511.1	282.1	98.6
MEAN	4.34	8.30	10.2	15.9	15.0	24.8	10.5	8.15	3.53	16.5	9.10	3.29
MAX	16	143	144	200	71	145	52	29	19	138	81	21
MIN	1.8	2.4	2.9	3.3	3.4	5.5	3.6	2.9	1.5	1.3	2.0	1.2
CFSM	.83	1.58	1.94	3.03	2.87	4.73	2.01	1.55	.67	3.15	1.74	.63
IN.	.95	1.77	2.24	3.49	2.99	5.46	2.24	1.79	.75	3.63	2.00	.70

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1991 - 1994, BY WATER YEAR (WY)

	1991	1992	1993	1994
MEAN	3.13	5.34	9.22	10.3
MAX	4.34	8.30	11.1	15.9
(WY)	1994	1994	1991	1994
MIN	1.99	3.06	6.85	3.66
(WY)	1993	1992	1992	1991

DELAWARE RIVER BASIN

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01480095 LITTLE MILL CREEK NEAR NEWPORT, DE--Continued

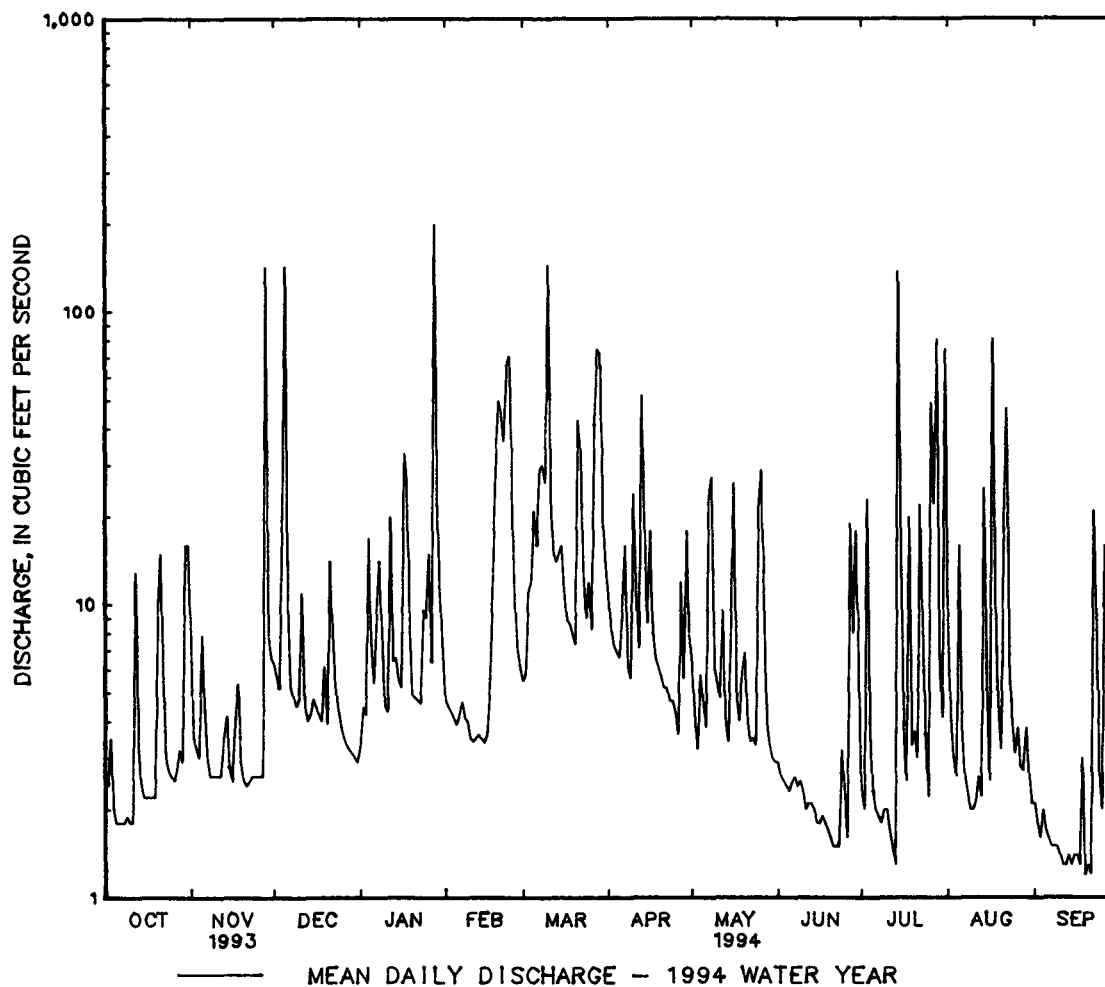
SUMMARY STATISTICS	FOR 1993 CALENDAR YEAR	FOR 1994 WATER YEAR	WATER YEARS 1991 - 1994
ANNUAL TOTAL	3400.6	3947.4	
ANNUAL MEAN	9.32	10.8	8.04
HIGHEST ANNUAL MEAN			10.8
LOWEST ANNUAL MEAN			5.28
HIGHEST DAILY MEAN	144 Dec 5	(e)200 Jan 28	(e)200 Jan 28 1994
LOWEST DAILY MEAN	(e)1.0 Sep 6	1.2 (a)	(e)1.0 Sep 6 1993
ANNUAL SEVEN-DAY MINIMUM	1.1 Aug 31	1.3 Sep 11	1.1 Aug 31 1993
INSTANTANEOUS PEAK FLOW		(b)1320 Jul 31	(b)1320 Jul 31 1994
INSTANTANEOUS PEAK STAGE		5.87 Jul 31	6.51 Jan 11 1991
INSTANTANEOUS LOW FLOW		1.2 (c)	UNKNOWN
ANNUAL RUNOFF (CFSM)	1.78	2.06	1.54
ANNUAL RUNOFF (INCHES)	24.14	28.02	20.86
10 PERCENT EXCEEDS	16	22	17
50 PERCENT EXCEEDS	4.1	4.2	3.6
90 PERCENT EXCEEDS	1.7	1.8	1.6

e Estimated.

a Sept. 19, 21.

b From rating curve extended above 400 ft³/s.

c Sept. 19-22.



DELAWARE RIVER BASIN

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 mi².

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.--Records good. 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 13, 1960. Several measurements of water temperature were made during the year. Water-quality records for some prior periods have been collected at this location.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 4,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 28	1930	5,090	7.73	Feb. 22	0100	4,100	6.99
Dec. 6	0115	10,800	10.34	Mar. 10	2245	8,750	9.50
Jan. 29	0300	*11,700	*10.69	Mar. 22	1015	4,680	7.48

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	235	596	406	361	918	611	1200	591	345	222	254	187
2	171	392	363	373	807	586	1080	581	326	210	223	174
3	194	332	345	361	542	599	974	547	314	304	208	164
4	177	268	370	397	462	576	932	526	306	208	191	162
5	157	283	4900	377	477	662	873	587	302	191	204	157
6	339	289	4710	334	492	879	858	507	329	191	234	154
7	357	263	1290	370	565	916	1020	526	596	189	186	151
8	170	243	1040	447	591	1830	915	1610	360	195	170	145
9	126	221	872	353	403	1700	793	800	316	177	159	141
10	129	219	544	340	417	5580	948	632	301	164	157	153
11	124	206	625	345	316	4290	1190	566	294	156	156	143
12	259	199	517	463	457	2030	872	547	303	151	157	137
13	476	195	464	622	494	1880	1230	535	351	149	160	135
14	225	241	417	464	450	2550	2110	473	314	597	186	132
15	191	250	400	391	404	2890	1030	466	278	710	231	135
16	204	220	394	268	422	2370	1240	711	264	263	176	135
17	228	220	375	374	419	1380	1170	492	261	217	398	138
18	186	264	358	976	421	1190	875	456	252	267	873	166
19	155	260	383	485	538	1060	814	444	259	242	294	169
20	215	237	373	347	1380	1070	785	487	266	204	227	141
21	391	214	969	289	2740	1380	731	455	247	185	216	134
22	379	204	978	305	2950	3600	706	425	246	197	970	159
23	246	201	551	359	2220	2220	637	407	241	231	662	317
24	207	201	453	375	2390	2010	619	401	222	353	316	211
25	187	199	416	453	1750	1730	603	419	230	214	259	165
26	178	185	397	605	968	1240	582	548	221	244	245	175
27	173	190	334	488	734	1480	578	573	247	372	241	379
28	169	3420	e360	3990	624	2410	596	415	277	1050	228	249
29	163	1550	e350	6550	---	3030	562	383	252	370	217	187
30	216	511	e350	1440	---	1920	576	373	229	270	223	165
31	598	---	354	859	---	1350	---	361	---	246	190	---
TOTAL	7225	12273	24658	24161	25351	57019	27099	16844	8749	8739	8611	5160
MEAN	233	409	795	779	905	1839	903	543	292	282	278	172
MAX	598	3420	4900	6550	2950	5580	2110	1610	596	1050	970	379
MIN	124	185	334	268	316	576	562	361	221	149	156	132
(†)	-16.3	+8.9	-8.3	+16.4	-5.2	+7.5	+4.5	-1.1	-7.6	+9.8	0.2	-2.9
MEAN#	217	418	787	795	900	1846	908	542	284	292	278	169
CFSM#	0.69	1.33	2.51	2.53	2.87	5.88	2.89	1.73	0.91	0.93	0.89	0.54
IN#	0.80	1.48	2.89	2.92	2.99	6.78	3.22	1.99	1.02	1.07	1.03	0.60

† 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.

DELAWARE RIVER BASIN

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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 - 1994, BY WATER YEAR (WY)

	285	361	521	618	649	752	728	622	459	415	269	297
MEAN	285	361	521	618	649	752	728	622	459	415	269	297
MAX	918	793	1306	1868	1610	1839	1773	1168	1079	1243	502	1095
(WY)	1980	1980	1984	1979	1979	1994	1983	1989	1975	1975	1989	1979
MIN	125	157	145	119	246	230	223	304	172	161	137	108
(WY)	1987	1982	1981	1981	1992	1981	1985	1977	1985	1986	1987	1980

SUMMARY STATISTICS FOR 1993 CALENDAR YEAR FOR 1994 WATER YEAR WATER YEARS 1974 - 1994

ANNUAL TOTAL	204873		225889	
ANNUAL MEAN	561		619	497
ANNUAL MEAN#	561		620	498
HIGHEST ANNUAL MEAN				835
LOWEST ANNUAL MEAN				228
HIGHEST DAILY MEAN	6190	Mar 5	6550	Jan 29
LOWEST DAILY MEAN	97	Sep 3	124	Oct 11
ANNUAL SEVEN-DAY MINIMUM	118	Jul 30	136	Sep 11
INSTANTANEOUS PEAK FLOW			11700	Jan 29
INSTANTANEOUS PEAK STAGE			10.69	Jan 29
INSTANTANEOUS LOW FLOW			88	Sep 11
ANNUAL RUNOFF (CFSM)	1.79		1.97	1.58
ANNUAL RUNOFF (CFSM)#	1.79		1.97	1.59
ANNUAL RUNOFF (INCHES)	24.27		26.74	21.52
ANNUAL RUNOFF (INCHES)#	24.27		26.74	21.54
10 PERCENT EXCEEDS	1190		1260	923
50 PERCENT EXCEEDS	347		361	353
90 PERCENT EXCEEDS	132		168	143

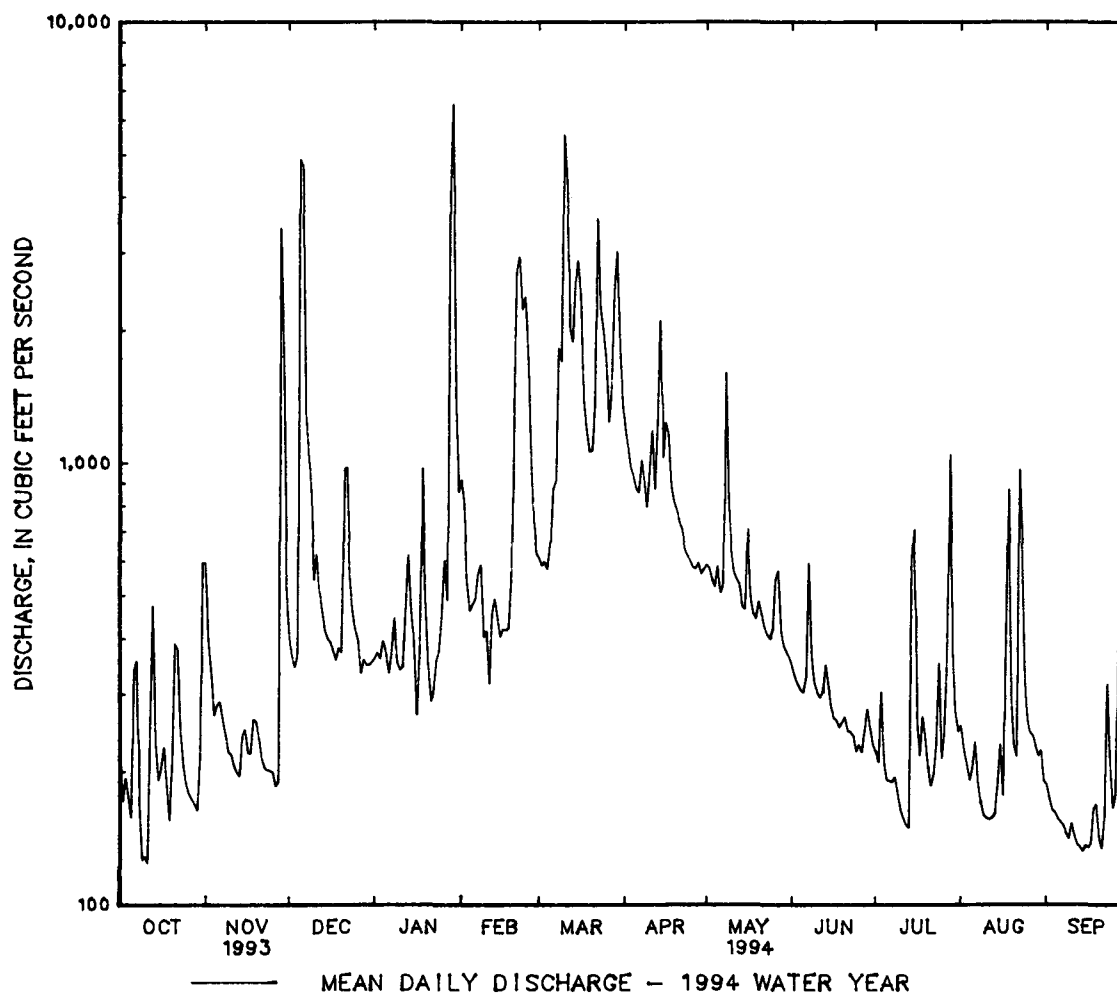
a From rating curve extended above 18,000 ft³/s.

b During period of ice effect.

Adjusted for change in reservoir contents since November 1973.

DELAWARE RIVER BASIN

01481500 BRANDYWINE CREEK AT WILMINGTON, DE--Continued



DELAWARE RIVER BASIN

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01483153 NOXONTOWN LAKE OUTLET NEAR MIDDLETOWN, DE

LOCATION.-- Lat 39°26'00", long 75°41'01", New Castle County, Hydrologic Unit 02040205, on right bank just upstream from Noxontown Lake Dam, 15 ft upstream from bridge on State Road 38, 2.0 mi southwest of Odessa, 2.4 mi southeast of Middletown, 10.1 mi upstream from mouth of Appoquinimink River.

DRAINAGE AREA.--8.85 mi².

PERIOD OF RECORD.--October 1992 to September 1994 (Discontinued).

GAGE.--Water-stage recorder and concrete control. Elevation of gage is 5 ft above sea level, from topographic map.

REMARKS.--Records good except those for estimated daily discharges (Oct. 15 to Nov. 27, backwater from leaves; frozen float), which are poor. Outflow from lake controlled by stop logs at outlet. No stop logs were removed during the water year. Several measurements of water temperature were made during the year.

PEAK DISCHARGE FOR CURRENT YEAR.--Peak discharge, 602 ft³/s, Mar. 3, gage height, 2.92 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.7	13	8.7	7.2	7.9	12	20	11	7.0	12	59	7.5
2	2.6	8.5	8.2	9.6	8.0	30	14	9.7	6.1	8.2	26	6.2
3	2.7	e5.6	8.1	9.8	8.1	359	11	9.5	5.6	6.7	15	5.6
4	2.8	e5.4	10	20	8.1	66	9.9	12	5.6	7.3	10	5.6
5	2.0	11	28	19	8.2	29	12	16	5.7	6.0	9.6	5.6
6	2.2	10	27	13	8.2	20	14	14	6.3	6.2	8.5	5.7
7	2.3	e8.0	16	13	8.2	16	22	13	6.0	5.3	5.6	6.0
8	2.5	e6.1	12	22	10	17	19	20	5.5	4.0	3.6	5.8
9	3.9	e5.6	10	17	14	17	15	16	5.6	2.6	2.5	5.8
10	2.8	e5.0	10	12	9.7	79	16	13	5.6	2.7	2.2	5.7
11	2.3	e4.7	11	9.7	15	65	15	11	5.6	2.2	3.1	5.5
12	7.2	e4.6	8.7	14	12	31	14	11	5.8	2.2	8.4	5.6
13	8.3	e4.5	8.0	18	9.7	21	20	10	5.6	2.2	6.2	5.6
14	7.0	9.9	8.1	15	8.6	16	37	9.6	5.3	6.9	12	5.6
15	e3.6	e6.4	8.6	11	8.2	12	22	9.8	4.4	20	28	5.6
16	e3.7	e5.6	9.9	e7.0	8.1	8.8	23	12	4.4	11	14	5.7
17	e3.9	e5.2	8.6	e10	8.2	6.9	20	10	4.6	8.1	32	7.2
18	e3.2	10	8.2	e19	8.3	6.6	15	9.9	4.7	8.0	35	8.7
19	e3.1	e8.6	8.2	e15	13	8.0	13	11	5.5	7.2	16	7.3
20	e3.3	e6.8	8.2	e12	74	8.9	12	11	6.4	6.0	8.6	5.9
21	12	e5.8	17	e10	120	11	12	10	5.6	5.6	8.3	5.6
22	12	e5.6	15	e8.0	89	18	11	9.5	4.6	5.0	17	12
23	e6.6	e5.6	11	e7.8	140	15	11	9.5	3.6	6.1	13	24
24	e4.7	e5.4	9.5	e15	176	12	11	9.5	3.5	5.6	9.7	13
25	e3.9	e5.4	9.4	e18	70	13	11	10	5.3	5.5	8.2	8.2
26	e3.6	e5.2	8.1	e27	31	12	10	10	4.0	4.9	9.0	10
27	e7.0	e6.0	7.0	e20	19	17	11	9.1	4.5	6.4	8.2	16
28	e5.4	27	7.5	e120	15	65	11	8.3	7.1	12	8.1	9.4
29	e5.8	21	8.4	109	---	91	11	7.5	7.1	9.1	10	7.6
30	e8.2	12	8.3	33	---	50	12	7.4	21	7.0	11	4.9
31	15	---	7.1	13	---	27	---	7.2	---	14	9.0	---
TOTAL	156.3	243.5	333.8	654.1	915.5	1160.2	454.9	337.5	177.6	216.0	416.8	232.9
MEAN	5.04	8.12	10.8	21.1	32.7	37.4	15.2	10.9	5.92	6.97	13.4	7.76
MAX	15	27	28	120	176	359	37	20	21	20	59	24
MIN	2.0	4.5	7.0	7.0	7.9	6.6	9.9	7.2	3.5	2.2	2.2	4.9
CFSM	.57	.92	1.22	2.38	3.69	4.23	1.71	1.23	.67	.79	1.52	.88
IN.	.66	1.02	1.40	2.75	3.85	4.88	1.91	1.42	.75	.91	1.75	.98

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1993 - 1994, BY WATER YEAR (WY)

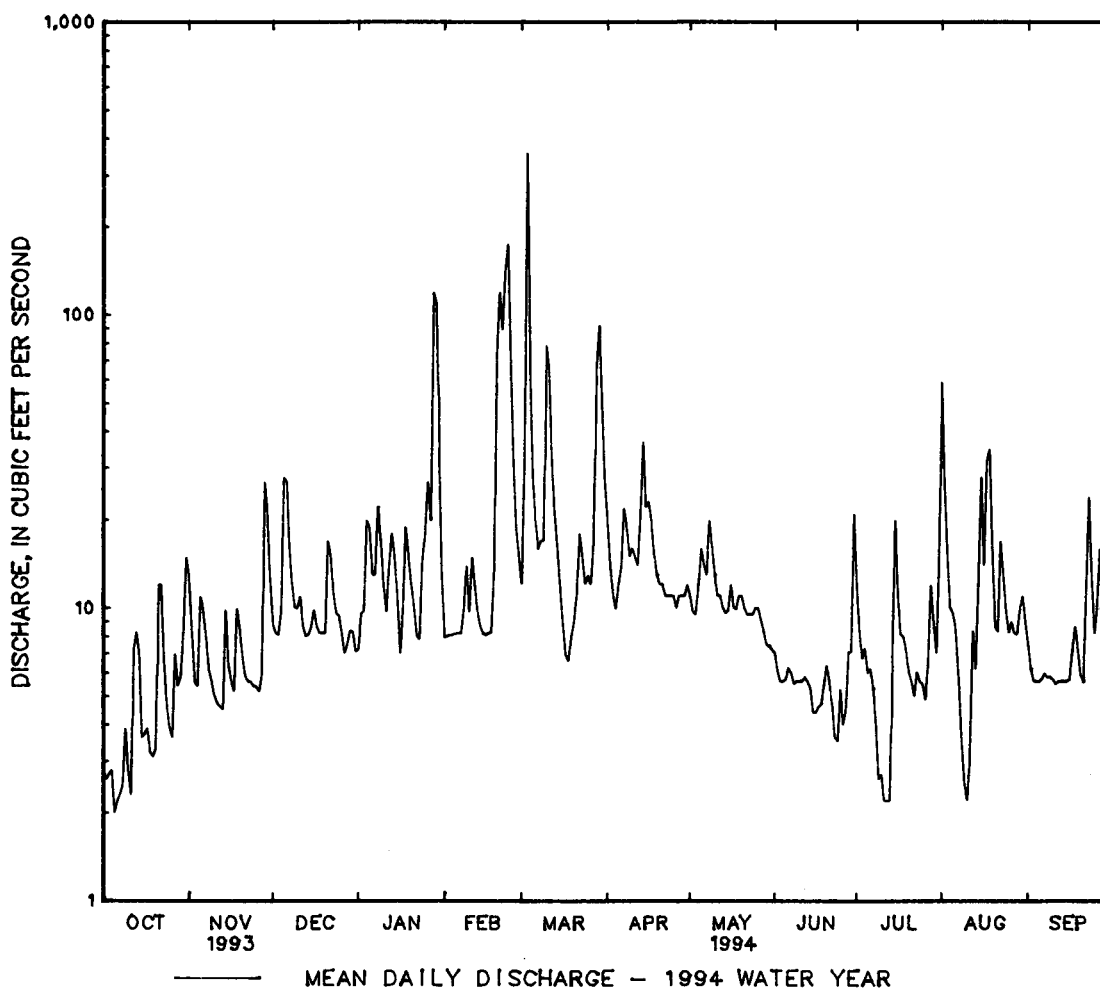
	4.54	8.34	13.7	16.1	23.0	34.1	21.5	13.3	7.74	6.03	9.05	6.43
MEAN	4.54	8.34	13.7	16.1	23.0	34.1	21.5	13.3	7.74	6.03	9.05	6.43
MAX	5.04	8.57	16.7	21.1	32.7	37.4	27.9	15.7	9.55	6.97	13.4	7.76
(WY)	1994	1993	1993	1994	1994	1994	1993	1993	1993	1994	1994	1994
MIN	4.03	8.12	10.8	11.1	13.4	30.8	15.2	10.9	5.92	5.08	4.65	5.10
(WY)	1993	1994	1994	1993	1993	1993	1994	1994	1994	1993	1993	1993

DELAWARE RIVER BASIN

01483153 NOXONTOWN LAKE OUTLET NEAR MIDDLETOWN, DE--Continued

SUMMARY STATISTICS	FOR 1993 CALENDAR YEAR		FOR 1994 WATER YEAR		WATER YEARS 1993 - 1994	
ANNUAL TOTAL	4474.9		5299.1			
ANNUAL MEAN	12.3		14.5		13.6	
HIGHEST ANNUAL MEAN					14.5	
LOWEST ANNUAL MEAN					12.7	
HIGHEST DAILY MEAN	99	Mar 5	359	Mar 3	359	Mar 3 1994
LOWEST DAILY MEAN	1.7	Sep 16	2.0	Oct 5	1.7	Sep 16 1993
ANNUAL SEVEN-DAY MINIMUM	2.4	Oct 2	2.4	Oct 2	2.4	Oct 2 1993
INSTANTANEOUS PEAK FLOW			602	Mar 3	602	Mar 3 1994
INSTANTANEOUS PEAK STAGE			2.92	Mar 3	2.92	Mar 3 1994
INSTANTANEOUS LOW FLOW			(a).38	Jun 19	(a).38	Jun 19 1994
ANNUAL RUNOFF (CFSM)	1.39		1.64		1.54	
ANNUAL RUNOFF (INCHES)	18.81		22.27		20.90	
10 PERCENT EXCEEDS	23		21		23	
50 PERCENT EXCEEDS	8.4		8.9		8.6	
90 PERCENT EXCEEDS	2.8		4.6		3.6	

a Wind effect.



DELAWARE RIVER BASIN

49

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 downstream 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 mi².

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(F).

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. 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.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 50 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jan. 28	1930	130	3.32	Mar. 3	0630	*242	*4.27
Feb. 20	2300	72	2.62	Mar. 28	1415	88	2.85
Feb. 23	2115	105	3.05	July 3	2245	139	3.41

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.75	2.7	1.7	1.9	4.3	5.9	13	4.4	1.8	3.6	9.7	1.9
2	.61	1.6	1.6	3.1	3.5	15	12	3.7	1.6	1.6	2.8	1.7
3	.47	1.1	1.5	3.1	3.2	120	11	3.5	1.6	27	2.1	1.7
4	.43	1.0	1.9	11	3.2	21	10	6.0	1.5	33	1.7	1.7
5	.37	1.8	15	8.6	3.4	13	9.4	10	1.5	4.0	2.1	1.6
6	.32	2.8	13	3.5	3.3	10	9.7	5.5	1.6	2.0	3.4	1.5
7	.27	1.6	5.1	4.5	3.2	9.2	12	5.7	1.7	1.5	1.7	1.5
8	.28	1.2	2.6	e13	3.4	9.9	11	11	1.9	1.3	1.5	1.4
9	.25	1.1	2.2	7.0	3.5	10	8.9	6.7	1.7	1.2	1.5	1.4
10	.19	.94	2.1	3.0	2.8	34	9.7	4.5	1.5	1.1	1.4	1.3
11	.16	.91	3.4	2.7	2.9	20	10	3.8	1.5	1.2	1.4	1.2
12	.23	.87	2.6	5.2	2.9	11	8.8	3.8	1.7	1.2	2.7	1.2
13	.94	.85	2.0	6.3	3.0	9.6	12	3.5	1.5	1.2	1.9	1.2
14	.74	1.1	2.0	4.3	3.1	9.0	17	3.0	1.4	1.2	6.0	1.2
15	.55	1.0	2.1	3.0	2.9	8.4	11	3.0	1.3	2.3	25	1.1
16	.56	.88	2.7	1.9	3.1	7.8	15	5.5	1.3	1.6	4.0	1.2
17	.57	1.0	2.2	3.2	3.3	6.4	13	3.2	1.3	1.4	16	1.3
18	.50	1.7	1.9	10	4.1	6.1	9.5	3.0	1.4	1.4	17	1.6
19	.50	1.5	1.9	6.5	11	5.9	8.3	3.9	1.5	1.4	4.1	1.4
20	.54	1.2	1.8	4.0	31	5.5	7.3	3.8	1.6	1.4	2.5	1.1
21	1.2	1.0	7.6	2.8	32	6.6	6.4	3.3	1.6	1.4	7.2	1.1
22	1.9	1.0	5.9	2.2	20	12	5.9	2.8	1.5	1.3	27	4.5
23	1.2	1.0	2.8	2.2	40	8.0	5.5	2.5	1.5	1.5	10	14
24	.82	1.0	2.3	5.3	48	6.2	5.5	2.3	1.5	1.6	3.6	4.2
25	.66	.95	2.2	6.5	18	8.5	5.2	3.7	1.4	1.5	2.6	2.1
26	.63	.95	2.0	17	11	7.4	4.8	5.4	1.3	1.6	2.9	2.7
27	.73	1.2	1.8	9.8	7.6	11	4.7	2.8	1.2	1.9	2.6	5.4
28	1.2	13	1.8	47	5.9	59	4.8	2.4	.70	13	2.3	2.5
29	1.1	9.2	1.9	24	---	50	4.6	2.2	1.8	4.9	2.6	1.8
30	1.3	2.8	1.9	9.3	---	22	5.0	2.0	17	1.9	2.9	1.6
31	2.9	---	1.8	5.4	---	13	---	1.9	---	3.8	2.1	---
TOTAL	22.87	58.95	101.3	237.3	283.6	541.4	271.0	128.8	60.40	125.0	174.3	68.1
MEAN	.74	1.96	3.27	7.65	10.1	17.5	9.03	4.15	2.01	4.03	5.62	2.27
MAX	2.9	13	15	47	48	120	17	11	17	33	27	14
MIN	.16	.85	1.5	1.9	2.8	5.5	4.6	1.9	.70	1.1	1.4	1.1
CFSM	.19	.51	.85	1.99	2.63	4.54	2.35	1.08	.52	1.05	1.46	.59
IN.	.22	.57	.98	2.29	2.74	5.23	2.62	1.24	.58	1.21	1.68	.66

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1957 - 1994, BY WATER YEAR (WY)

	2.37	3.46	4.87	6.23	7.19	8.56	7.59	5.45	3.58	2.93	1.98	2.16
MEAN	2.37	3.46	4.87	6.23	7.19	8.56	7.59	5.45	3.58	2.93	1.98	2.16
MAX	8.83	10.4	14.8	18.1	19.2	20.3	21.0	13.9	24.4	17.0	6.80	12.2
(WY)	1972	1957	1973	1978	1979	1958	1983	1989	1972	1989	1971	1960
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

DELAWARE RIVER BASIN

01483200 BLACKBIRD CREEK AT BLACKBIRD, DE--Continued

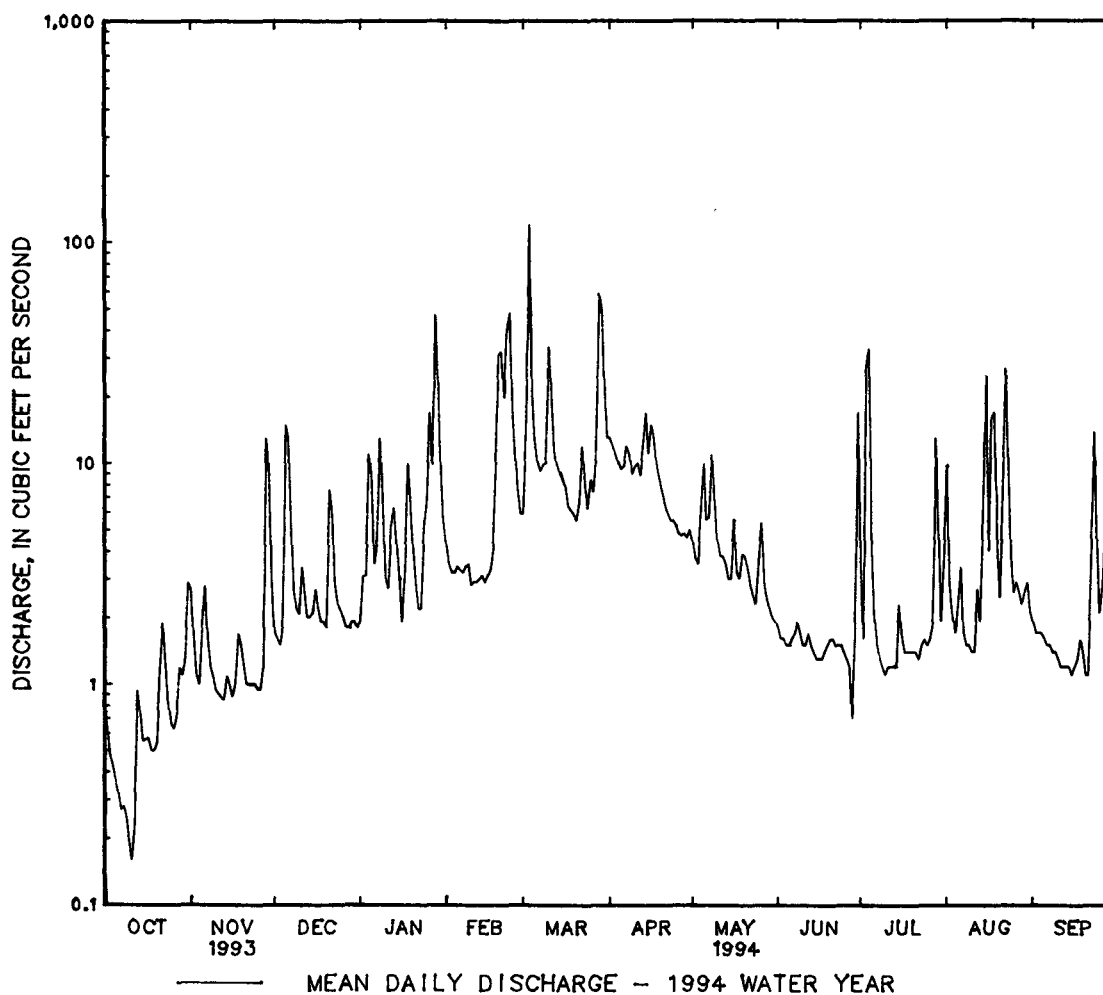
SUMMARY STATISTICS	FOR 1993 CALENDAR YEAR	FOR 1994 WATER YEAR	WATER YEARS 1957 - 1994
ANNUAL TOTAL	1729.72	2073.02	
ANNUAL MEAN	4.74	5.68	4.68
HIGHEST ANNUAL MEAN			9.05
LOWEST ANNUAL MEAN			1.40
HIGHEST DAILY MEAN	45 Mar 17	120 Mar 3	338 Jun 22 1972
LOWEST DAILY MEAN	.09 (a)	.16 Oct 11	.00 (b)
ANNUAL SEVEN-DAY MINIMUM	.09 Sep 9	.24 Oct 6	.00 Jul 17 1966
INSTANTANEOUS PEAK FLOW		242 Mar 3	(c) 712 Jun 22 1972
INSTANTANEOUS PEAK STAGE		4.27 Mar 3	5.04 Jun 22 1972
INSTANTANEOUS LOW FLOW		.13 Oct 12	.00 (d)
ANNUAL RUNOFF (CFSM)	1.23	1.48	1.22
ANNUAL RUNOFF (INCHES)	16.71	20.03	16.53
10 PERCENT EXCEEDS	12	12	9.6
50 PERCENT EXCEEDS	2.0	2.7	2.7
90 PERCENT EXCEEDS	.29	1.0	.54

a Sept. 11-15.

b Sept. 11, 1965; July 12-15, 17-31, Aug. 1-12, 14, 15, 18-31, Sept. 1-20, 1966.

c From rating curve extended above 200 ft³/s on basis of Type III culvert measurement of peak flow.

d No flow at times during 1964-66, 1969.



LOCATION.-- Lat. 39°10'37", long. 75°34'25", Kent County, Hydrologic Unit 02040207, on right bank at downstream side of bridge on State Highway 15, at Chestnut Grove, 1.5 mi upstream from Cahoon Branch, 1.9 mi upstream from mouth, and 2.9 mi northwest of Dover.

PERIOD OF RECORD.--October 1992 to September 1994 (Discontinued).

GAGE.--Water-stage recorder and concrete control. Datum of gage is 24.99 ft above sea level.

REMARKS.--Records good except those for estimated daily discharges (no gage-height record), which are poor.
Several measurements of water temperature were made during the year.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 75 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jan. 28	1815	108	4.46	Mar. 11	0530	90	4.24
Feb. 20	1745	88	4.21	Mar. 28	1930	303	5.65
Feb. 24	1100	128	4.68	Aug. 6	0245	101	4.38
Mar. 3	1515	*346	*5.80	Aug. 22	1500	102	4.39

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.58	e2.8	2.5	e2.8	9.7	14	50	7.1	3.1	3.8	1.7	3.4
2	.52	2.0	2.2	6.5	8.1	22	41	6.2	2.7	2.1	1.8	3.0
3	.52	1.6	2.0	5.1	e7.8	268	28	5.6	2.5	2.3	2.1	2.9
4	.52	1.4	2.3	12	e7.6	159	22	9.3	2.4	3.4	1.7	2.8
5	.52	1.4	14	8.2	e7.4	77	19	22	2.4	2.1	37	2.6
6	.60	1.9	16	4.9	e7.1	46	18	12	2.5	1.8	68	2.5
7	.60	2.1	5.3	5.5	e7.1	31	27	11	2.8	1.4	7.3	2.4
8	.57	1.5	3.7	18	e8.0	26	28	22	17	1.3	3.6	2.3
9	.60	1.3	3.2	e12	9.3	25	18	16	6.1	1.1	2.8	2.1
10	e.89	1.2	2.9	e7.8	e8.2	46	17	9.6	3.9	.96	2.4	2.0
11	e.65	1.1	4.4	e5.5	e8.6	78	20	7.8	3.2	.86	2.4	1.8
12	e3.0	1.1	3.5	7.6	e7.0	47	16	7.2	3.3	.80	7.1	1.7
13	e2.4	1.1	2.9	8.9	e7.9	29	22	6.7	3.0	.81	3.7	1.7
14	e1.5	1.2	2.8	e11	8.7	22	52	5.6	2.6	1.5	4.5	1.6
15	e1.0	1.2	3.2	e8.4	7.8	20	37	5.3	2.3	4.7	16	1.6
16	e.90	1.1	4.8	e5.3	9.8	19	30	5.9	2.2	1.9	4.5	1.7
17	e1.1	1.2	3.4	e6.1	13	16	41	5.1	2.2	1.4	22	1.9
18	e.68	2.4	3.0	e22	21	15	22	5.8	2.3	2.1	60	5.2
19	e2.2	1.8	3.0	e16	45	15	16	9.6	2.5	2.5	19	2.7
20	e3.0	1.5	2.8	e10	74	14	14	10	2.8	1.6	6.0	2.2
21	e3.4	1.3	10	e6.4	60	14	12	7.8	1.9	1.3	10	1.9
22	e2.0	1.2	5.9	e5.8	41	30	10	6.1	1.7	1.1	81	14
23	e1.6	1.2	4.2	e5.6	44	24	9.8	5.2	1.5	2.7	59	63
24	e1.8	1.2	3.6	e20	110	17	9.1	4.7	3.5	3.8	23	30
25	e1.2	1.1	3.5	e28	79	19	8.8	8.8	1.9	1.8	8.3	6.6
26	e.92	1.1	3.1	e40	44	23	8.1	7.9	1.4	1.7	7.0	5.5
27	e1.4	1.1	e2.8	e35	23	22	7.6	5.6	2.6	3.1	6.1	15
28	e1.0	16	e2.7	e55	15	205	7.8	4.6	2.9	6.6	5.1	11
29	e1.5	12	e3.2	72	---	255	7.0	4.1	1.7	3.0	4.5	4.9
30	e2.6	3.4	e2.7	29	---	131	7.3	3.8	2.9	2.7	4.4	3.8
31	e3.8	---	e2.5	13	---	66	---	3.5	---	2.0	3.8	---
TOTAL	43.57	70.5	132.1	493.4	699.1	1795	625.5	251.9	93.8	68.23	485.8	203.8
MEAN	1.41	2.35	4.26	15.9	25.0	57.9	20.8	8.13	3.13	2.20	15.7	6.79
MAX	3.8	16	16	72	110	268	52	22	17	6.6	81	63
MIN	.52	1.1	2.0	2.8	7.0	14	7.0	3.5	1.4	.80	1.7	1.6
CFSM	.16	.26	.48	1.78	2.79	6.46	2.33	.91	.35	.25	1.75	.76
IN.	.18	.29	.55	2.05	2.90	7.45	2.60	1.05	.39	.28	2.02	.88

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1993 - 1994, BY WATER YEAR (WY)

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DELAWARE RIVER BASIN

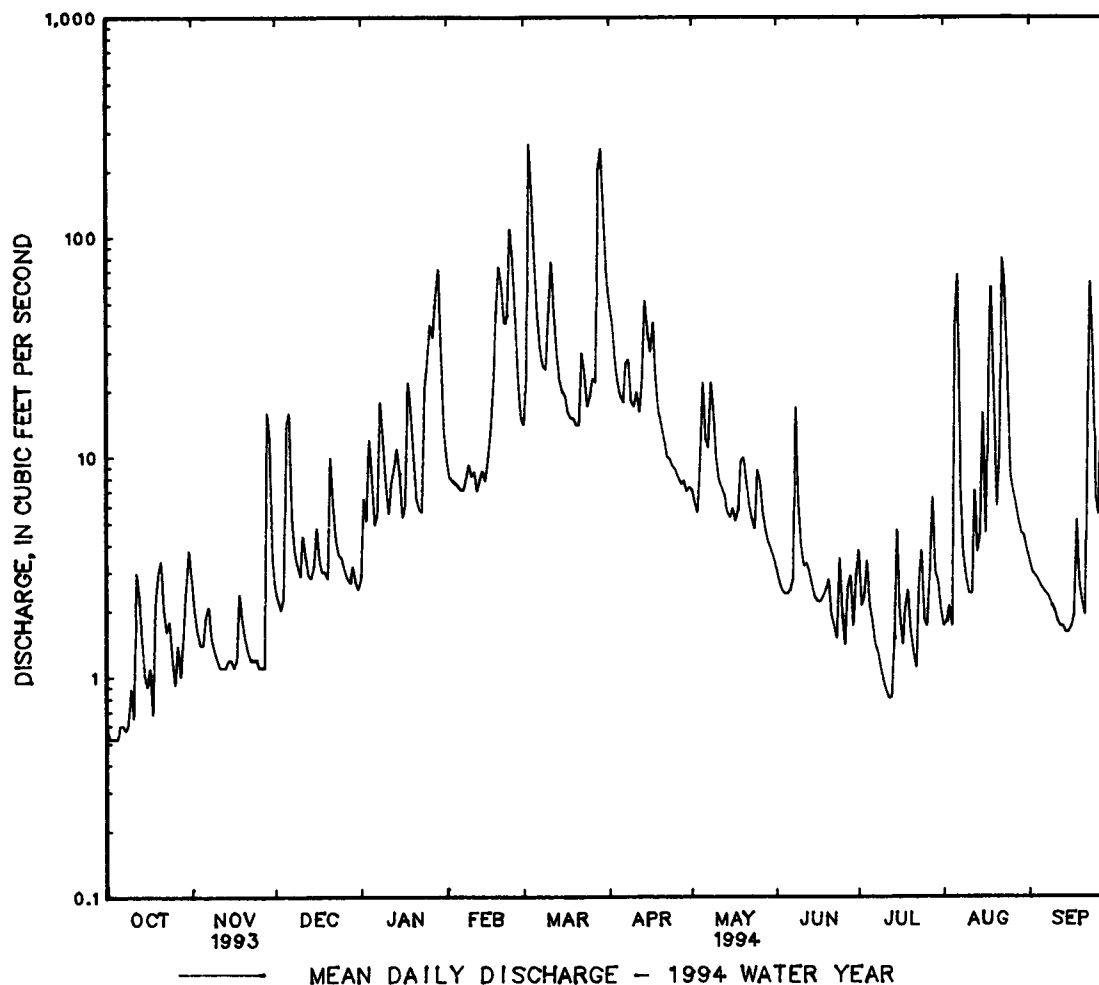
01483670 MUDSTONE BRANCH AT CHESTNUT GROVE, DE--Continued

SUMMARY STATISTICS	FOR 1993 CALENDAR YEAR		FOR 1994 WATER YEAR		WATER YEARS 1993 - 1994	
ANNUAL TOTAL	3132.38		4962.70		11.6	
ANNUAL MEAN	8.58		13.6		13.6	
HIGHEST ANNUAL MEAN					9.56	
LOWEST ANNUAL MEAN					268	
HIGHEST DAILY MEAN	136	Mar 18	268	Mar 3	268	Mar 3 1994
LOWEST DAILY MEAN	.26	(a)	.52	(b)	.26	(a)
ANNUAL SEVEN-DAY MINIMUM	.33	Aug 28	.55	Oct 2	.33	Aug 28 1993
INSTANTANEOUS PEAK FLOW			346	Mar 3	346	Mar 3 1994
INSTANTANEOUS PEAK STAGE			5.80	Mar 3	5.80	Mar 3 1994
INSTANTANEOUS LOW FLOW			.44	Oct 8	.21	(c)
ANNUAL RUNOFF (CFSM)	.96		1.52		1.29	
ANNUAL RUNOFF (INCHES)	13.00		20.60		17.56	
10 PERCENT EXCEEDS	21		30		26	
50 PERCENT EXCEEDS	2.8		4.7		4.8	
90 PERCENT EXCEEDS	.52		1.2		.73	

a Aug. 5, Sept. 2, 3, 16, 1993.

b Oct. 2-5.

c Sept. 4, 14, 15, 1993.



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.

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

REMARKS.--Records good except those for estimated daily discharges (backwater from tides), 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.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
MEAN DAILY VALUES

e Estimated

MEAN	19.0	24.7	36.0	50.1	58.5	74.4	58.3	37.1	27.6	18.6	23.9	20.2
MAX	93.5	103	131	156	141	187	180	117	122	88.6	144	128
(WY)	1972	1973	1973	1978	1961	1994	1983	1989	1989	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

ST. JONES RIVER BASIN

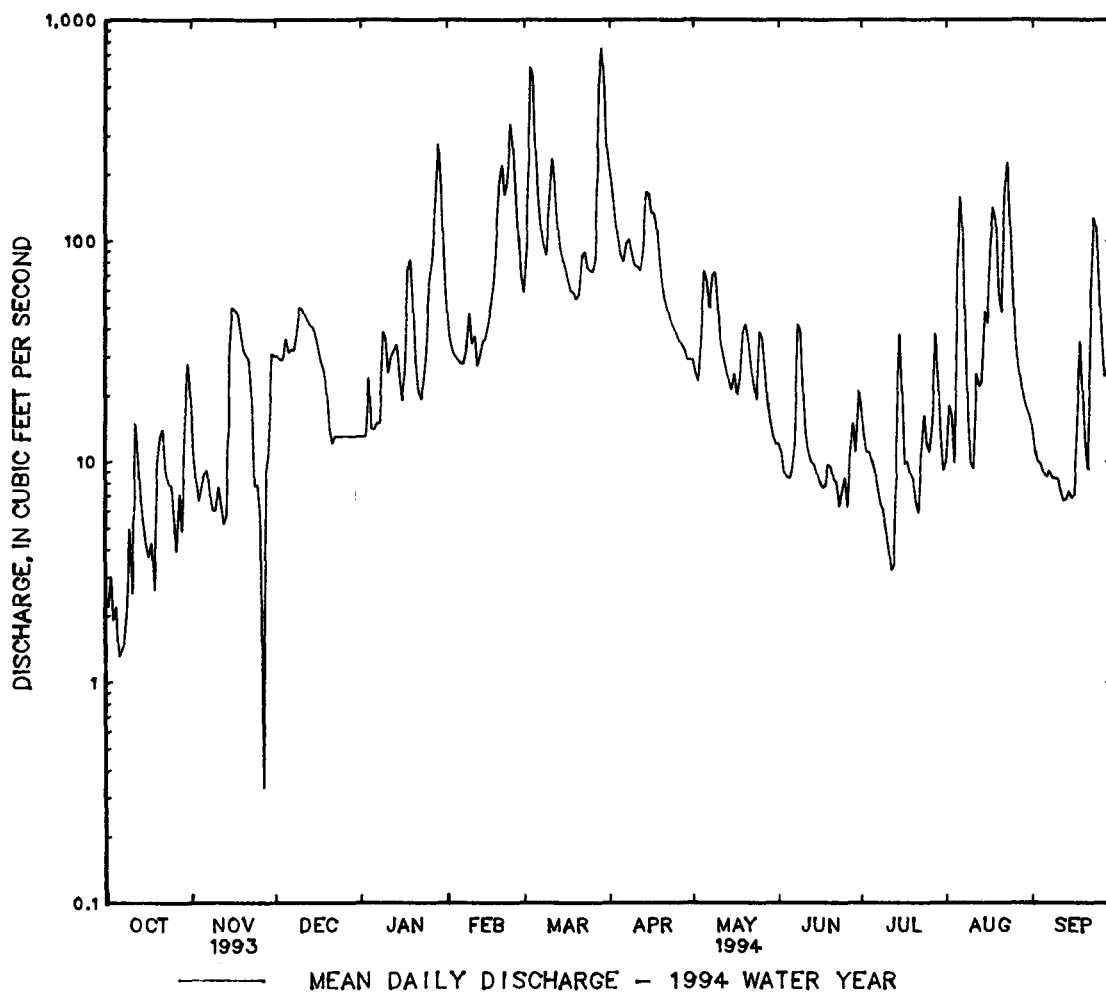
01483700 ST. JONES RIVER AT DOVER, DE--Continued

SUMMARY STATISTICS	FOR 1993 CALENDAR YEAR	FOR 1994 WATER YEAR	WATER YEARS 1958 - 1994
ANNUAL TOTAL	13092.03	18259.23	
ANNUAL MEAN	35.9	50.0	36.4
HIGHEST ANNUAL MEAN			69.3
LOWEST ANNUAL MEAN			6.14
HIGHEST DAILY MEAN	474 Mar 18	751 Mar 29	1460 Sep 13 1960
LOWEST DAILY MEAN	.33 Nov 27	.33 Nov 27	.00 (a)
ANNUAL SEVEN-DAY MINIMUM	1.6 Jul 30	1.9 Oct 3	.40 Sep 30 1963
INSTANTANEOUS PEAK FLOW		810 Mar 29	1900 Sep 13 1960
INSTANTANEOUS PEAK STAGE		6.86 Mar 29	(b)9.45 Sep 13 1960
INSTANTANEOUS LOW FLOW		.27 Nov 27	.00 (c)
ANNUAL RUNOFF (CFSM)	1.12	1.57	1.14
ANNUAL RUNOFF (INCHES)	15.27	21.29	15.52
10 PERCENT EXCEEDS	85	118	85
50 PERCENT EXCEEDS	18	25	20
90 PERCENT EXCEEDS	2.6	6.5	3.8

a July 9, 1959, May 9, 10, 1961.

b From floodmarks.

c No flow at times in 1959, 1961, 1962.



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MEAN	1.78	2.02	3.09	4.40	5.26	6.43	5.62	4.41	3.05	2.74	2.37	2.05
MAX	4.69	6.55	11.5	10.7	14.6	18.0	11.0	10.5	6.17	16.8	9.38	10.1
(WY)	1959	1973	1973	1978	1961	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

MISPILLION RIVER BASIN

01484100 BEAVERDAM BRANCH AT HOUSTON, DE--Continued

SUMMARY STATISTICS	FOR 1993 CALENDAR YEAR	FOR 1994 WATER YEAR	WATER YEARS 1958 - 1994
ANNUAL TOTAL	1099.80	1852.96	
ANNUAL MEAN	3.01	5.08	3.56
HIGHEST ANNUAL MEAN			5.86
LOWEST ANNUAL MEAN			1.20
HIGHEST DAILY MEAN	35 Mar 14	93 Mar 3	98 May 30 1984
LOWEST DAILY MEAN	.31 Sep 3	.37 (a)	(b).00 Jul 28 1977
ANNUAL SEVEN-DAY MINIMUM	.35 Aug 28	.38 Oct 5	.06 Jul 19 1977
INSTANTANEOUS PEAK FLOW		119 Mar 3	(c)176 Sep 12 1960
INSTANTANEOUS PEAK STAGE		4.80 Mar 3	5.55 Sep 12 1960
INSTANTANEOUS LOW FLOW		.37 (d)	.00 (f)
ANNUAL RUNOFF (CFSM)	1.06	1.79	1.26
ANNUAL RUNOFF (INCHES)	14.46	24.36	17.08
10 PERCENT EXCEEDS	6.4	9.7	6.5
50 PERCENT EXCEEDS	2.0	2.9	2.7
90 PERCENT EXCEEDS	.40	.44	.80

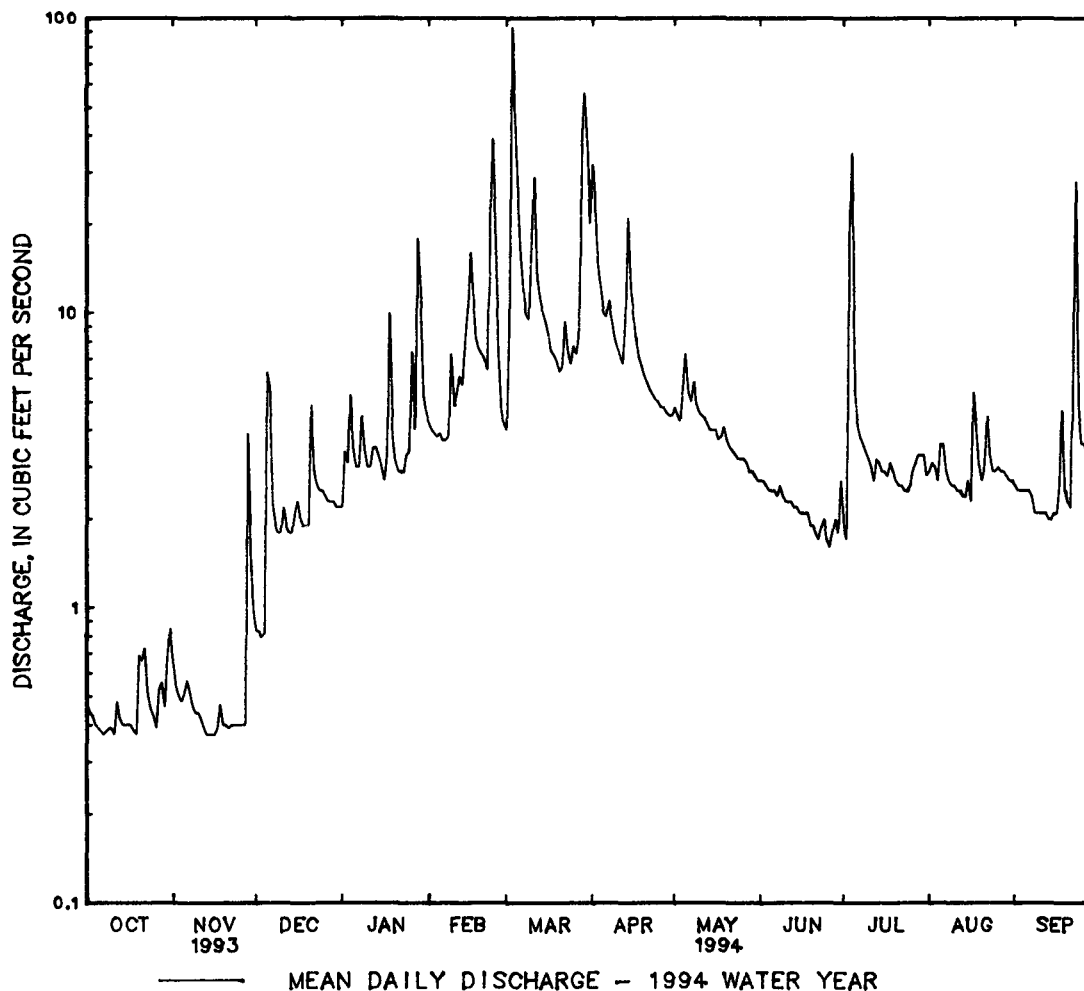
a Oct. 7,11,19, Nov. 13-16.

b Result of pumpage for irrigation.

c From rating curve extended above 75 ft³/s.

d Oct. 4-12, 15, 16, 18-20, 26, Nov. 12-17, 21.

f July 18-30, 1977.



DELAWARE BAY

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01484450 DELAWARE BAY NEAR LEWES, DE

LOCATION.--Lat 38°47'30", long 75°06'17", Sussex County, Hydrologic Unit 02040204, at east end of fishing pier at Cape Henlopen State Park, in Breakwater Harbor, 2.4 mi southeast of Lewes, and 1.1 mi southwest from mouth of the Delaware Bay.

PERIOD OF DAILY RECORD.--January 1993 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: January 1993 to current year.

WATER TEMPERATURE: January 1993 to current year.

INSTRUMENTATION.--Water-quality monitor.

REMARKS.--Records good. Interruption of the daily specific conductance and temperature record was caused by equipment malfunction.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 53,300 microsiemens, Aug. 16, 1993; minimum, 23,700 microsiemens, Apr. 18, 1994.

WATER TEMPERATURE: Maximum, 26.8°C, July 12, Sept. 1, 1993; minimum, 0.0°C, on many days during winter periods.

EXTREMES FOR CURRENT PERIOD.--

SPECIFIC CONDUCTANCE: Maximum, 49,700 microsiemens, Sept. 26; minimum, 23,700 microsiemens, Apr. 18.

WATER TEMPERATURE: Maximum, 26.4°C, Aug. 4; minimum, 0.0°C, Dec. 26-31, Jan. 1, 5, 6, 8-11, 15-24.

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CENTIGRADE, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	43000	37000	40700	41100	36400	37700	43200	42400	42900	43300	42000	42800
2	43200	37600	41800	41900	39400	40700	43100	42400	42700	43000	41600	42300
3	43400	37100	41800	42300	35800	39700	43400	42600	42800	43200	41700	42200
4	43800	37100	40800	42600	36100	40200	44200	42500	43000	43700	41700	42800
5	43800	36400	43000	42900	37700	42400	45000	40700	43200	42600	39600	41400
6	44000	38200	43100	42800	41900	42400	41900	40200	40800	42200	39000	40400
7	44100	37200	42900	42400	41400	42000	41500	40200	41000	42500	40600	41700
8	44300	39500	43700	42700	41700	42200	41400	39900	40800	42200	38400	41000
9	44500	38700	42500	42900	42200	42500	41100	39900	40500	40800	25600	39100
10	44600	38400	43900	42900	39900	42400	43000	40200	42100	40700	25600	38900
11	44200	37900	42900	43000	39500	42600	43000	39300	41500	42600	38900	41000
12	44800	38200	41600	43400	37300	41600	39500	35700	37700	42700	41000	42000
13	44700	39100	42200	43300	39000	42200	38800	36300	37300	42700	40500	41600
14	44700	38900	41100	43600	38100	43000	41500	38400	39800	43100	41300	42300
15	41300	35900	40200	43800	38900	42200	41800	40200	40900	42300	38900	40500
16	41700	37800	41100	43300	42700	42900	40700	37600	38800	41700	36300	38700
17	42000	37400	40700	44100	43100	43600	40500	35700	38100	44600	40400	42200
18	42000	35100	39400	43900	42700	43500	42500	37600	40400	43400	39600	42000
19	42600	35100	42100	44000	43100	43600	42000	40200	41200	41600	35700	38300
20	42600	41200	41800	44000	42800	43500	41600	38800	40600	---	---	---
21	42300	41600	41900	43500	42600	43000	42300	37600	40900	---	---	---
22	42000	41100	41600	44200	43200	43600	41200	37100	39300	---	---	---
23	41300	40300	40800	43900	43400	43600	42700	38700	40800	---	---	---
24	41700	39400	41100	43600	42500	43300	41200	39800	40600	---	---	---
25	41900	41100	41500	43700	42600	43100	41500	40600	41100	---	---	---
26	42300	40600	41600	43200	42600	42800	41300	38400	39900	---	---	---
27	41900	36800	39900	44400	42700	43400	40600	39100	39900	---	---	---
28	41700	35800	39700	45300	43300	44500	40400	38800	39400	---	---	---
29	42100	37300	40200	44700	42700	43500	40700	37900	39600	44100	42400	43300
30	42300	37300	40100	43200	42800	43000	41100	38900	39600	42800	41500	42200
31	42000	37200	39600	---	---	---	43300	38300	41400	42400	41000	41800
MONTH	44800	35100	41500	45300	35800	42500	45000	35700	40600	---	---	---

DELAWARE BAY

01484450 DELAWARE BAY NEAR LEWES, DE--Continued

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CENTIGRADE, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY			MARCH			APRIL			MAY			
1	---	---	---	42600	39700	41400	38100	32300	36100	39800	37900	38800
2	---	---	---	43200	41500	42600	38700	35200	36600	39100	35500	36700
3	---	---	---	43100	40800	41800	42400	37900	40000	39400	35900	37100
4	---	---	---	40800	36200	39100	40500	35100	38100	38900	36500	38000
5	---	---	---	39400	34900	38000	39200	33700	36600	37600	34200	35500
6	---	---	---	41300	37000	38700	40600	35400	38700	36300	34100	35400
7	---	---	---	42600	39400	40900	38400	32300	36500	39000	35300	36500
8	---	---	---	43700	38600	41100	36800	33300	34500	38800	36600	37600
9	---	---	---	41100	38600	39700	42000	33800	38300	37900	36000	36600
10	---	---	---	42400	38000	39700	42500	38600	40400	38300	36600	37400
11	---	---	---	38500	31200	34300	40400	37600	38700	39400	36900	37400
12	---	---	---	39500	32000	34600	39000	35200	37000	39800	37900	39200
13	---	---	---	40800	34900	39200	38400	35000	36700	38200	36000	36800
14	---	---	---	40600	38700	39200	39500	34200	35900	39100	37700	38100
15	---	---	---	39700	37000	38500	37200	34300	35700	39400	37600	38600
16	---	---	---	38900	33600	37500	40400	31700	36400	39400	38400	38900
17	---	---	---	35300	31500	33800	33700	27900	31300	38400	36400	37100
18	42700	39900	41400	39100	33800	37000	33700	23700	28000	38600	36400	37000
19	42000	39900	41200	38100	34600	36300	39600	27200	34600	40000	36700	38300
20	43200	39600	41600	36400	34000	35300	38300	27400	32700	39700	37300	38700
21	43100	39600	40900	40100	35500	37400	38000	27500	31400	40200	36800	38300
22	40200	39200	39700	40200	33700	37400	33800	28200	29600	40700	36500	38800
23	42300	39100	40800	35900	33700	34900	38900	28000	32000	40500	38100	39300
24	43400	39000	41000	38100	34300	36500	38900	32300	36500	41000	38300	39500
25	42300	38600	40200	38100	35300	37000	39400	36400	37700	41600	39300	40500
26	42600	33600	39500	38800	34200	35800	40200	36600	37900	41800	40000	41100
27	37200	33300	35400	41400	36500	39700	39600	36700	37600	42100	37600	40000
28	42200	33800	37900	40700	37100	38600	39600	36700	37700	42000	37000	40400
29	---	---	---	38600	36300	37100	39300	36900	38100	42400	37900	41400
30	---	---	---	39000	35300	37400	38900	36500	37500	42400	41200	42000
31	---	---	---	39100	36300	37500	---	---	---	42400	41700	42100
MONTH	---	---	---	43700	31200	38000	42500	23700	36000	42400	34100	38500
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
JUNE			JULY			AUGUST			SEPTEMBER			
1	42400	41400	42000	43800	43000	43600	44500	43100	44000	44700	39100	42800
2	41500	40700	41200	43800	43000	43400	44000	41500	43600	44000	39200	42900
3	41000	39900	40600	43900	42600	43200	43700	39200	42100	44800	36200	41600
4	41200	39900	40700	43600	41900	42600	43700	42500	43100	44700	36900	42400
5	43000	40000	41300	43500	42000	42700	44500	43300	43800	44700	38000	42500
6	43400	41400	42500	44300	42000	42900	43700	42100	43000	45800	43300	44600
7	43400	41900	42700	44500	42400	43500	44000	43100	43400	46200	41900	45300
8	42700	41600	42000	45000	39200	43800	43800	41800	43200	46500	40900	45600
9	42100	41200	41700	44900	40600	44500	44600	38700	43500	47100	45100	46300
10	42700	41600	42100	45600	40300	44800	44500	36700	43600	46800	42100	46000
11	43400	38900	42500	46200	45400	45800	44300	38700	43700	46800	42400	46000
12	44500	42800	43600	47000	41500	46000	44200	37800	43400	46500	42000	45500
13	45100	42500	43600	47000	45900	46300	44800	42300	44000	47300	43000	46400
14	44700	43500	43900	46600	41900	46100	45800	44500	45000	47500	43200	46200
15	44300	43100	43600	46600	41000	45900	45000	43900	44600	47700	45900	46800
16	43700	38900	42800	46200	45300	45800	45000	43900	44500	48200	46600	47600
17	43500	38600	42600	46000	44700	45500	45400	44300	44700	48400	45800	47800
18	44300	35700	42300	45900	44600	45500	45700	44900	45300	47600	46300	46800
19	43800	42000	43100	45800	44600	45300	45300	44800	45100	47900	46300	46900
20	44700	43000	43400	46100	45100	45500	46100	45000	45500	48200	40100	47000
21	45100	42900	43800	46300	45300	45800	46300	45300	45900	48300	39900	46500
22	45100	43400	43800	46600	45600	46200	46200	44800	45700	49200	42300	47800
23	45100	41900	44200	46500	45200	45800	45600	44500	44900	49200	40700	46300
24	45100	43800	44400	45900	45000	45300	45700	44900	45400	48600	39000	47000
25	45200	43800	44600	45600	44900	45200	46400	45400	45700	49600	39500	45900
26	45400	44200	44800	45400	44100	44800	45900	42600	45500	49700	41300	48700
27	45400	44500	44900	45400	44300	44800	45800	45400	45600	49500	40600	47000
28	45000	44100	44600	45300	44200	44900	45600	41700	44400	49200	39200	46100
29	44600	44200	44400	44700	44100	44500	45600	41300	43500	48700	40500	42100
30	44300	43300	43800	44800	43400	44300	45000	40600	43200	43200	42000	42400
31	---	---	---	44600	43900	44300	45500	39600	42900	---	---	---
MONTH	45400	35700	43000	47000	39200	44800	46400	36700	44300	49700	36200	45600

DELAWARE BAY

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01484450 DELAWARE BAY NEAR LEWES, DE--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			DECEMBER			JANUARY			
1	17.9	16.9	17.4	---	---	---	9.5	8.7	9.1	4.5	.0	2.3
2	18.1	17.2	17.6	---	---	---	9.2	8.4	8.9	4.5	2.6	3.9
3	17.7	17.3	17.6	---	---	---	9.5	8.7	9.2	4.9	1.9	3.6
4	17.7	16.9	17.3	---	---	---	10.1	9.1	9.5	4.6	1.0	3.5
5	17.4	16.6	17.1	---	---	---	10.5	9.1	10.2	3.6	.0	1.3
6	17.0	16.2	16.7	---	---	---	9.4	8.5	9.1	6.4	.0	2.4
7	17.5	16.5	17.0	---	---	---	9.1	8.6	8.9	6.6	3.0	4.3
8	17.4	17.1	17.2	---	---	---	9.3	8.5	9.0	4.2	.0	2.3
9	17.8	17.1	17.4	---	---	---	9.2	8.5	8.9	1.3	.0	.2
10	17.4	15.6	16.7	---	---	---	9.6	8.5	9.3	1.0	.0	.1
11	15.9	14.6	15.1	---	---	---	9.6	6.6	8.8	2.3	.0	1.0
12	15.5	14.8	15.3	---	---	---	6.6	3.7	5.1	3.8	1.9	2.7
13	15.4	14.6	15.1	---	---	---	5.6	3.6	4.6	2.7	1.3	2.3
14	15.5	14.8	15.2	---	---	---	6.3	5.3	5.9	2.8	.5	2.4
15	15.9	15.0	15.5	---	---	---	7.2	5.1	6.5	2.4	.0	.3
16	16.1	15.4	15.7	---	---	---	6.7	5.7	6.3	.0	.0	.0
17	16.2	15.8	16.0	---	---	---	6.0	1.8	4.6	.0	.0	.0
18	16.6	15.9	16.3	13.4	12.7	13.1	6.4	1.9	4.6	1.1	.0	.2
19	16.4	16.0	16.2	13.0	12.6	12.8	6.8	5.4	6.2	.0	.0	.0
20	16.3	16.1	16.2	12.9	11.1	12.4	6.9	2.2	5.6	.0	.0	.0
21	---	---	---	11.6	10.5	11.0	9.0	1.6	5.6	.0	.0	.0
22	---	---	---	11.9	10.8	11.3	3.7	.7	2.4	.0	.0	.0
23	---	---	---	11.8	11.0	11.4	5.5	2.0	3.0	.0	.0	.0
24	---	---	---	11.6	11.1	11.4	5.4	2.0	3.8	.0	.0	.0
25	---	---	---	11.5	9.8	10.7	5.6	1.1	3.5	---	---	---
26	---	---	---	10.2	8.9	9.4	4.5	.0	.9	---	---	---
27	---	---	---	11.2	9.1	10.4	2.4	.0	.2	---	---	---
28	---	---	---	11.9	11.0	11.6	3.5	.0	.4	---	---	---
29	---	---	---	11.5	10.4	10.9	2.9	.0	1.3	---	---	---
30	---	---	---	10.5	9.5	9.9	2.6	.0	.5	---	---	---
31	---	---	---	---	---	---	.3	.0	.0	---	---	---
MONTH	---	---	---	---	---	---	10.5	.0	5.5	---	---	---
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY			MARCH			APRIL			MAY			
1	---	---	---	2.2	1.7	2.1	7.9	5.4	6.5	13.5	11.5	12.4
2	---	---	---	2.3	1.9	2.1	7.2	5.9	6.6	15.1	12.2	13.9
3	---	---	---	2.8	2.3	2.6	7.4	5.4	6.4	14.5	11.0	12.9
4	---	---	---	2.9	2.4	2.7	8.3	6.6	7.4	12.8	11.2	11.8
5	---	---	---	3.4	2.5	2.9	8.1	6.3	7.3	14.0	11.7	13.0
6	---	---	---	2.9	2.6	2.8	8.5	6.2	7.1	13.6	12.7	13.1
7	---	---	---	5.3	2.7	3.4	9.7	7.0	8.2	13.1	11.5	12.5
8	---	---	---	5.2	3.5	4.4	10.5	7.6	8.8	13.1	11.9	12.5
9	---	---	---	5.2	3.6	4.3	8.6	6.6	7.5	14.5	12.3	13.1
10	---	---	---	4.8	3.4	4.3	8.3	6.5	7.6	13.3	12.2	12.9
11	---	---	---	5.0	4.3	4.7	9.0	7.4	8.4	13.7	12.0	13.0
12	---	---	---	4.9	3.4	4.0	9.5	8.1	8.5	13.6	12.2	12.9
13	---	---	---	4.3	3.2	3.7	9.2	7.9	8.3	14.7	13.1	14.0
14	---	---	---	4.6	3.6	4.1	10.8	7.7	9.5	14.9	12.8	13.8
15	---	---	---	4.9	3.8	4.5	10.5	9.1	9.8	14.9	12.7	14.1
16	---	---	---	5.1	4.3	4.7	11.4	7.6	10.0	16.3	14.1	15.3
17	---	---	---	4.9	3.5	4.0	11.3	10.1	10.6	16.8	15.8	16.3
18	2.2	1.1	1.6	3.6	3.0	3.5	12.3	8.3	10.9	16.3	13.8	15.3
19	2.4	1.7	2.0	4.2	3.2	3.7	12.2	7.7	10.0	14.9	13.4	14.3
20	3.4	1.9	2.6	4.8	3.5	4.1	13.2	9.2	11.5	14.1	13.3	13.6
21	4.2	2.5	3.5	4.4	3.7	4.1	12.9	8.5	11.2	14.7	13.3	13.9
22	4.2	2.9	3.8	6.1	3.7	4.9	12.6	10.3	11.9	15.8	13.6	14.5
23	4.1	2.7	3.2	7.2	5.0	6.0	13.8	8.7	11.0	16.7	14.1	15.1
24	4.0	2.9	3.4	7.0	5.2	6.2	11.3	8.7	10.0	18.1	14.7	16.0
25	4.6	3.2	3.7	7.2	5.3	6.1	12.4	9.4	10.5	17.3	15.2	16.0
26	4.0	3.2	3.6	7.3	5.1	6.2	12.9	9.1	10.8	17.5	15.4	16.3
27	3.5	1.5	2.3	5.7	4.8	5.1	13.4	9.7	11.7	18.7	15.8	16.9
28	2.2	.7	1.5	6.2	4.9	5.6	14.6	10.4	12.3	17.6	15.9	16.6
29	---	---	---	6.1	5.3	5.8	13.9	10.8	12.0	17.5	15.9	16.5
30	---	---	---	6.6	5.1	5.8	14.8	11.1	12.7	17.8	16.0	16.8
31	---	---	---	6.2	5.3	5.7	---	---	---	18.4	16.3	17.5
MONTH	---	---	---	7.3	1.7	4.3	14.8	5.4	9.5	18.7	11.0	14.4

DELAWARE BAY

01484450 DELAWARE BAY NEAR LEWES, DE--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	19.5	16.9	18.4	22.2	20.5	21.3	23.5	20.4	22.0	21.7	19.1	20.9
2	20.3	18.7	19.5	22.4	19.6	21.3	23.6	20.9	22.4	21.9	19.0	20.9
3	21.1	18.1	19.4	22.9	19.6	21.9	24.4	21.8	23.0	20.9	18.4	20.1
4	19.7	16.8	18.5	22.9	18.6	21.6	26.4	21.7	23.4	20.6	18.5	19.4
5	19.2	15.4	17.8	23.4	19.1	21.3	22.9	18.5	21.7	19.9	18.5	19.2
6	18.5	15.7	17.5	23.2	19.0	21.6	23.8	18.9	22.1	20.0	18.1	18.9
7	19.5	16.6	18.4	23.8	18.6	22.1	22.7	18.9	21.1	19.8	18.4	19.1
8	19.8	16.6	19.2	24.6	19.3	22.7	22.4	18.6	20.5	20.2	18.7	19.3
9	22.0	17.7	19.8	24.0	18.8	22.3	21.6	19.0	20.2	19.6	18.6	19.2
10	21.2	16.6	19.3	23.9	20.5	22.6	21.8	19.0	20.3	20.1	19.0	19.5
11	19.7	17.1	18.5	25.2	18.9	22.5	21.2	19.5	20.5	19.9	19.1	19.5
12	19.3	16.6	18.0	23.0	18.2	21.1	22.1	19.6	20.8	19.7	18.8	19.2
13	19.9	16.2	18.4	22.1	18.7	20.7	22.3	19.8	21.3	19.5	18.8	19.1
14	19.9	16.8	18.9	22.1	19.8	21.1	22.3	19.7	21.3	20.1	18.8	19.4
15	21.3	17.9	19.9	22.7	20.0	21.4	22.2	20.7	21.6	20.5	19.3	19.9
16	20.8	17.3	19.7	24.0	20.0	22.7	21.9	20.2	21.2	20.1	19.0	19.7
17	21.0	19.1	20.1	24.1	20.4	22.7	21.4	19.8	20.9	20.7	19.2	20.0
18	22.8	18.3	20.6	24.1	20.6	22.3	21.5	19.2	20.6	21.5	20.1	20.6
19	22.1	19.1	20.5	24.1	20.3	22.4	22.2	20.4	21.3	21.4	19.9	20.4
20	21.8	18.2	20.3	24.2	21.4	22.9	21.7	19.7	21.0	21.2	19.3	20.0
21	22.0	17.8	20.1	24.0	21.9	23.1	21.5	19.7	20.9	20.5	19.3	19.9
22	23.0	17.9	20.9	24.0	22.5	23.3	22.0	20.6	21.5	19.8	19.1	19.3
23	22.1	18.4	20.1	23.6	22.7	23.1	23.0	19.6	22.1	19.2	18.9	19.1
24	22.2	18.4	20.3	24.4	21.5	23.0	21.7	19.8	20.6	19.7	18.9	19.2
25	21.8	18.8	20.6	24.1	20.7	22.7	20.9	18.4	20.2	19.9	19.2	19.5
26	21.5	18.6	20.4	23.2	20.2	22.0	20.9	19.3	20.3	19.5	19.2	19.4
27	21.2	18.9	20.2	22.4	18.1	21.4	21.9	19.3	21.0	19.8	19.2	19.5
28	22.3	19.1	20.9	22.3	20.0	21.5	22.6	21.2	21.8	19.9	19.3	19.6
29	22.1	20.2	21.2	22.6	21.2	21.9	21.9	20.7	21.5	19.7	18.8	19.4
30	22.4	20.4	21.4	23.0	20.7	21.9	22.5	20.8	21.7	19.0	18.4	18.7
31	---	---	---	22.8	21.3	22.1	22.0	17.8	20.7	---	---	---
MONTH	23.0	15.4	19.6	25.2	18.1	22.1	26.4	17.8	21.3	21.9	18.1	19.6

INDIAN RIVER BASIN

61

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 mi².

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. Several measurements of water temperature were made during the year. Water-quality records for some prior periods have been collected at this location.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 45 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 5	2045	48	3.08	Mar. 29	1430	89	3.78
Jan. 28	1930	47	3.06	Apr. 1	1245	60	3.42
Feb. 11	1900	47	3.25	June 15	1415	47	3.24
Feb. 24	0300	83	3.71	June 16	1215	50	3.29
Mar. 3	0515	*303	*5.52	Sep. 22	2230	50	3.12
Mar. 11	0115	67	3.53				

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.3	1.9	3.1	5.7	11	15	45	8.9	8.9	5.9	5.5	3.0
2	1.3	2.0	4.0	10	10	28	29	9.4	5.4	4.2	4.9	2.8
3	1.3	3.1	3.7	9.7	9.7	195	23	11	4.8	3.8	4.5	2.8
4	1.2	2.6	2.8	18	9.3	79	20	13	3.9	3.8	4.2	2.8
5	1.2	2.0	16	13	9.5	34	19	16	3.5	6.8	5.9	2.8
6	1.2	2.0	14	11	9.7	26	18	13	4.0	8.0	7.1	2.7
7	1.2	1.8	6.0	11	9.2	22	18	11	4.6	7.5	5.0	2.6
8	1.2	1.6	5.2	13	9.6	21	17	10	4.6	6.0	4.5	2.6
9	1.2	1.6	6.1	10	20	20	15	11	4.4	3.1	4.3	2.5
10	1.3	1.7	6.2	9.1	16	31	15	12	4.1	3.0	4.0	2.3
11	1.2	1.6	8.2	9.1	30	49	14	11	3.1	2.7	4.0	2.1
12	1.5	1.6	5.4	12	32	26	13	9.3	2.9	2.8	3.8	2.2
13	1.4	1.6	4.5	13	20	21	15	8.3	3.5	2.8	3.6	2.2
14	1.3	1.5	6.0	11	21	20	26	6.9	3.8	3.1	4.4	2.2
15	1.3	1.6	6.0	9.3	23	18	18	6.6	17	2.6	8.9	2.2
16	1.3	1.5	12	8.0	21	17	16	6.8	36	2.4	4.6	2.1
17	1.4	1.7	7.6	8.6	16	16	14	6.0	14	2.3	6.2	2.1
18	1.4	4.0	7.4	19	14	16	13	6.2	8.5	2.5	6.1	2.8
19	1.3	2.9	6.8	11	13	15	13	7.4	6.1	2.5	4.9	2.3
20	1.4	3.2	5.5	11	13	14	15	6.5	7.5	2.4	4.6	2.2
21	1.4	2.0	17	11	12	16	14	6.1	7.7	2.3	4.7	2.2
22	1.6	1.9	9.4	11	12	19	14	5.8	7.1	2.3	6.2	16
23	1.3	2.3	8.5	9.6	30	17	11	5.5	7.5	6.1	4.7	22
24	1.3	4.0	7.9	8.5	74	16	10	7.2	9.1	5.0	4.3	6.2
25	1.3	3.1	7.8	8.2	35	17	12	8.9	5.0	3.1	4.0	4.6
26	1.4	2.7	7.2	13	23	15	12	9.1	4.3	3.5	3.8	13
27	3.9	3.1	6.3	9.6	18	15	12	11	6.2	5.3	3.7	11
28	3.8	6.2	6.1	23	16	32	12	5.8	5.6	5.8	3.5	7.4
29	3.4	3.7	6.6	22	---	70	9.7	4.6	8.5	19	3.3	6.4
30	4.1	3.3	6.3	13	---	39	9.0	4.3	9.7	6.3	3.4	5.8
31	3.6	---	5.7	12	---	27	---	7.5	---	4.9	3.1	---
TOTAL	53.0	73.8	225.3	363.4	537.0	966	491.7	266.1	221.3	141.8	145.7	143.9
MEAN	1.71	2.46	7.27	11.7	19.2	31.2	16.4	8.58	7.38	4.57	4.70	4.80
MAX	4.1	6.2	17	23	74	195	45	16	36	19	8.9	22
MIN	1.2	1.5	2.8	5.7	9.2	14	9.0	4.3	2.9	2.3	3.1	2.1
CFSM	.33	.47	1.39	2.24	3.66	5.95	3.13	1.64	1.41	.87	.90	.92
IN.	.38	.52	1.60	2.58	3.81	6.86	3.49	1.89	1.57	1.01	1.03	1.02

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1943 - 1994, BY WATER YEAR (WY)

	3.29	4.59	6.70	9.47	10.3	12.7	10.3	7.56	5.60	4.15	4.90	3.30
MEAN	3.29	4.59	6.70	9.47	10.3	12.7	10.3	7.56	5.60	4.15	4.90	3.30
MAX	10.5	14.3	22.8	24.8	25.8	31.2	24.4	19.7	25.3	17.4	24.8	12.2
(WY)	1972	1957	1946	1978	1979	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

INDIAN RIVER BASIN

01484500 STOCKLEY BRANCH AT STOCKLEY, DE--Continued

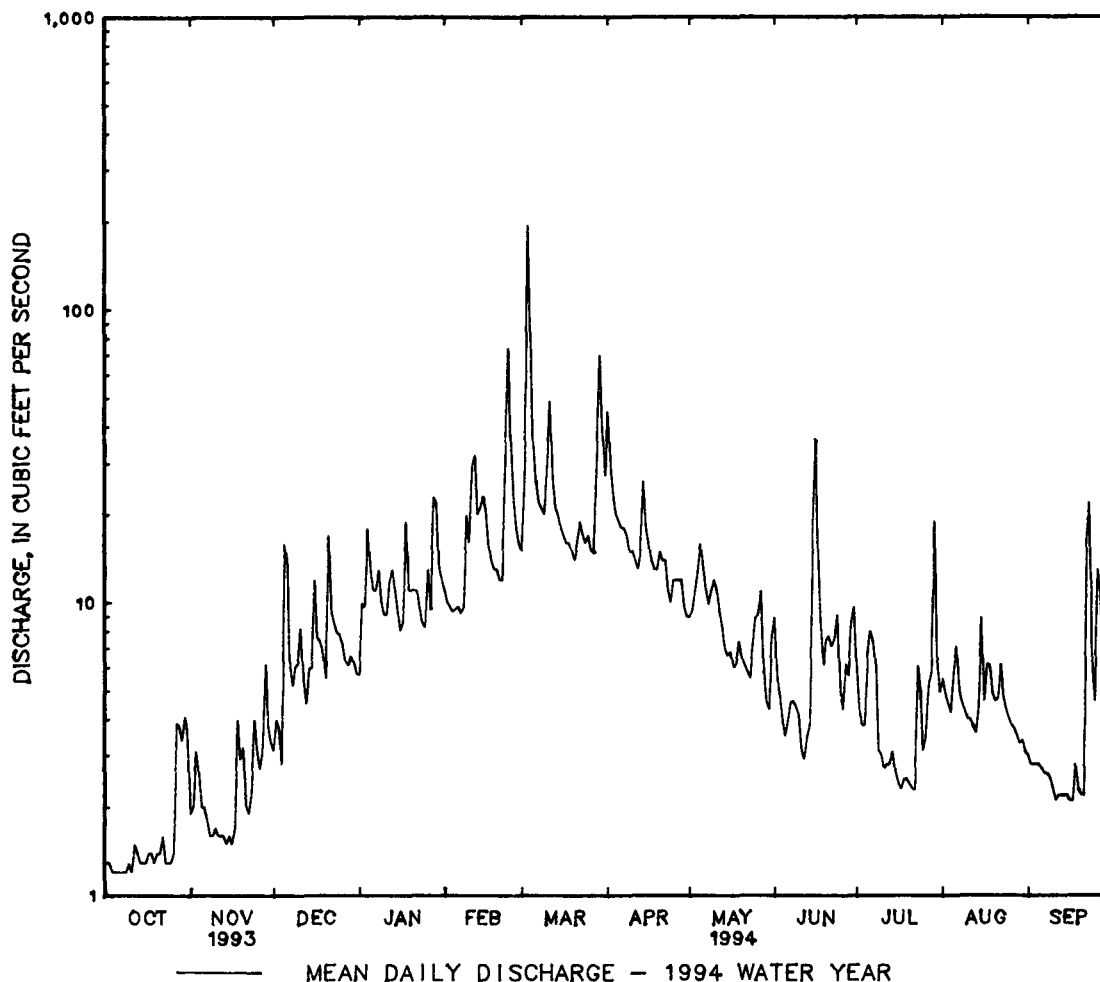
SUMMARY STATISTICS	FOR 1993 CALENDAR YEAR		FOR 1994 WATER YEAR		WATER YEARS 1943 - 1994	
ANNUAL TOTAL	2779.0		3629.0		6.92	
ANNUAL MEAN	7.61		9.94		12.0	
HIGHEST ANNUAL MEAN					3.24	
LOWEST ANNUAL MEAN					195	
HIGHEST DAILY MEAN	92	Mar 14	195	Mar 3	195	Mar 3 1994
LOWEST DAILY MEAN	1.2	(a)	1.2	(a)	.13	(b)
ANNUAL SEVEN-DAY MINIMUM	1.2	Oct 3	1.2	Oct 3	.13	Sep 2 1944
INSTANTANEOUS PEAK FLOW			303	Mar 3	(c) 303	Mar 3 1994
INSTANTANEOUS PEAK STAGE			5.52	Mar 3	5.52	Mar 3 1994
INSTANTANEOUS LOW FLOW			1.0	Oct 9	.13	(d)
ANNUAL RUNOFF (CFSM)	1.45		1.90		1.32	
ANNUAL RUNOFF (INCHES)	19.73		25.76		17.93	
10 PERCENT EXCEEDS	15		20		14	
50 PERCENT EXCEEDS	6.1		6.3		4.9	
90 PERCENT EXCEEDS	1.5		1.8		1.5	

a Oct. 4-9, 11.

b Sept. 2-11, 1944.

c From rating curve extended above 150 ft³/s.

d Sept. 1-11, 1944.



INDIAN RIVER BASIN

63

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 mi².

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.--No estimated daily discharges. Records good. Outflow from lake controlled by sluice gates at outlet. Gates partly open during period Mar. 4-7. Several measurements of water temperature were made during the period.

PEAK DISCHARGE FOR CURRENT YEAR.--Peak discharge, 1,770 ft³/s, Mar. 3, gage height, 4.94 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	24	47	46	88	155	226	359	126	90	68	83	47
2	23	35	44	104	146	284	431	122	89	59	78	47
3	23	34	44	127	133	1150	336	118	82	56	70	45
4	22	33	44	158	127	1260	269	132	74	54	65	42
5	22	33	72	181	123	663	235	173	70	54	67	40
6	20	37	154	163	123	463	219	164	71	56	72	40
7	21	38	145	145	123	360	217	148	70	55	68	39
8	23	35	86	147	123	309	206	140	70	51	59	37
9	26	34	72	146	158	300	192	133	69	47	55	36
10	26	33	70	141	208	306	178	129	65	44	53	34
11	23	31	82	132	267	447	173	126	63	42	51	34
12	32	31	78	130	363	434	168	120	64	40	49	33
13	29	31	69	137	346	323	153	115	62	39	49	31
14	26	31	67	141	279	278	195	108	60	43	57	32
15	25	31	74	136	267	267	238	105	67	46	139	34
16	25	31	122	189	265	254	210	108	188	42	99	34
17	25	33	131	121	250	233	169	101	180	40	77	33
18	26	53	102	169	218	221	154	99	114	43	80	54
19	25	48	92	168	193	216	144	114	84	48	73	48
20	27	41	86	144	194	207	138	112	75	43	65	42
21	29	37	130	132	190	201	132	105	74	39	61	41
22	33	34	160	113	184	227	124	102	72	37	75	102
23	28	34	138	107	238	209	121	99	68	39	69	223
24	25	34	118	107	514	223	110	95	76	58	60	179
25	24	36	109	107	567	222	104	97	68	53	56	101
26	25	35	101	122	380	222	100	105	56	63	54	163
27	58	34	95	134	282	224	98	174	61	78	54	233
28	58	61	93	145	241	297	104	154	66	89	52	191
29	41	72	93	196	---	503	124	117	60	168	51	119
30	45	53	98	205	---	621	123	98	69	141	49	93
31	59	---	93	168	---	409	---	90	---	85	47	---
TOTAL	918	1150	2908	4403	6657	11559	5524	3729	2377	1820	2037	2227
MEAN	29.6	38.3	93.8	142	238	373	184	120	79.2	58.7	65.7	74.2
MAX	59	72	160	205	567	1260	431	174	188	168	139	233
MIN	20	31	44	88	123	201	98	90	56	37	47	31
CFSM	.45	.58	1.42	2.15	3.60	5.65	2.79	1.82	1.20	.89	1.00	1.12
IN.	.52	.65	1.64	2.48	3.75	6.52	3.11	2.10	1.34	1.03	1.15	1.26

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1986 - 1994, BY WATER YEAR (WY)

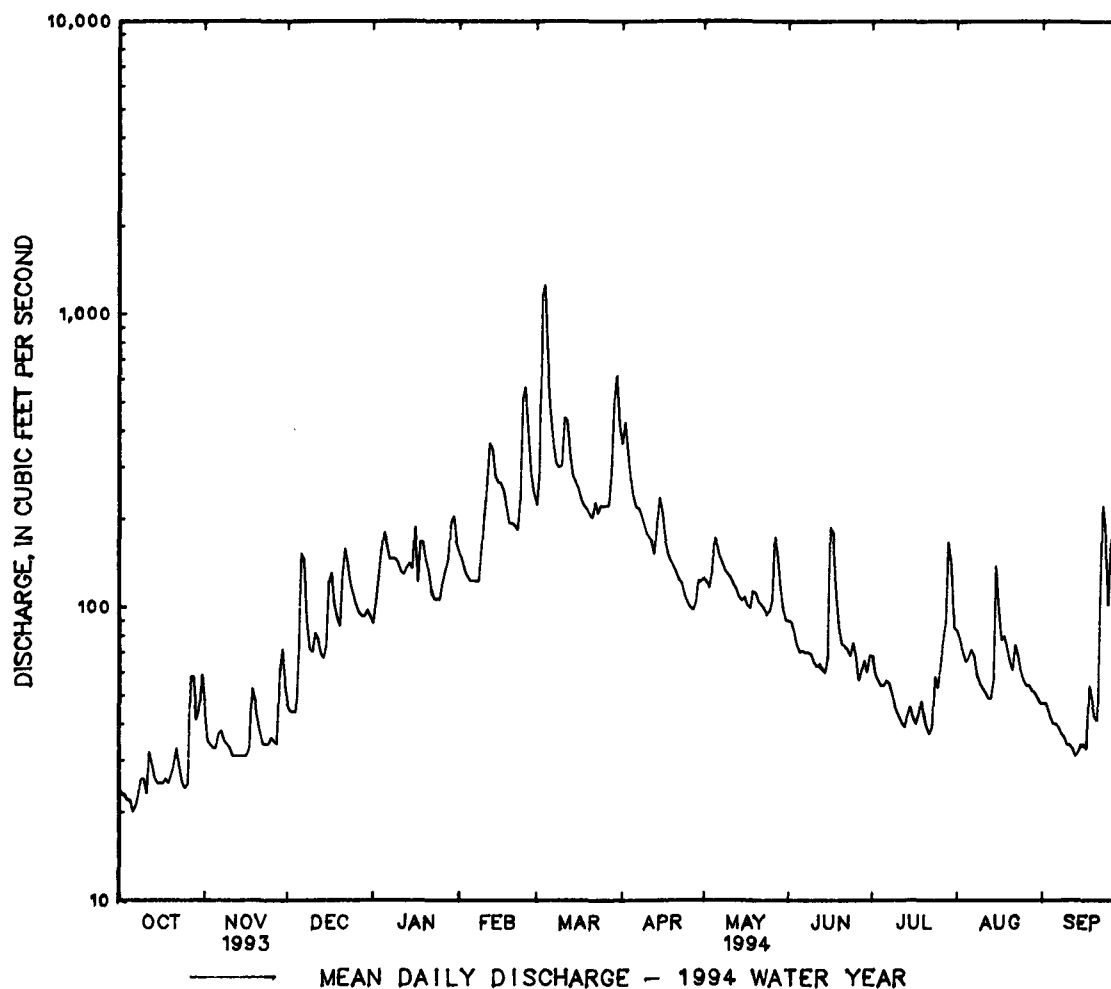
	41.7	44.1	72.1	103	130	195	138	93.6	62.7	44.5	48.4	46.7
MEAN	41.7	44.1	72.1	103	130	195	138	93.6	62.7	44.5	48.4	46.7
MAX	77.1	79.3	101	144	238	373	184	136	85.6	58.7	85.6	106
(WY)	1993	1993	1993	1993	1994	1994	1994	1993	1993	1994	1992	1992
MIN	20.8	24.3	33.2	53.7	77.4	94.1	77.3	47.3	34.0	23.2	25.5	20.1
(WY)	1987	1988	1988	1988	1992	1992	1992	1986	1986	1986	1988	1986

INDIAN RIVER BASIN

01484525 MILLSBORO POND OUTLET AT MILLSBORO, DE--Continued

SUMMARY STATISTICS	FOR 1993 CALENDAR YEAR		FOR 1994 WATER YEAR		WATER YEARS 1986 - 1994	
ANNUAL TOTAL	36597		45309			
ANNUAL MEAN	100		124		87.2	
HIGHEST ANNUAL MEAN					124	
LOWEST ANNUAL MEAN					55.0	
HIGHEST DAILY MEAN	908	Mar 14	1260	Mar 4	1260	Mar 4 1994
LOWEST DAILY MEAN	20	Oct 6	20	Oct 6	13	Oct 7 1986
ANNUAL SEVEN-DAY MINIMUM	22	Oct 2	22	Oct 2	15	Oct 5 1986
INSTANTANEOUS PEAK FLOW			1770	Mar 3	1770	Mar 3 1994
INSTANTANEOUS PEAK STAGE			4.94	Mar 3	4.94	Mar 3 1994
INSTANTANEOUS LOW FLOW			17	Oct 4	11	(a)
ANNUAL RUNOFF (CFSM)	1.52		1.88		1.32	
ANNUAL RUNOFF (INCHES)	20.63		25.54		17.95	
10 PERCENT EXCEEDS	195		238		153	
50 PERCENT EXCEEDS	84		90		67	
90 PERCENT EXCEEDS	31		33		24	

a Sept. 12, Oct. 6, 1986, Nov. 6, 1987.



POCOMOKE RIVER BASIN

65

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 Whaleyville, and 50.3 mi upstream from mouth.

DRAINAGE AREA.--60.5 mi².

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

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

REMARKS.--No estimated daily discharges. 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.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 500 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Feb. 12	0600	710	10.45	Mar. 30	0300	857	10.75
Feb. 24	2000	817	10.85	Apr. 1	1200	592	9.57
Mar. 3	2300	*1470	*12.87	Sep. 27	0600	551	9.39
Mar. 11	0600	776	10.42				

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.4	21	36	63	123	164	545	36	33	14	57	17
2	5.4	19	32	152	103	314	437	34	31	13	96	17
3	5.2	17	31	228	88	1210	301	31	28	17	102	16
4	5.1	16	29	313	77	1340	212	31	27	20	64	15
5	5.0	16	46	266	77	1010	166	41	25	15	50	14
6	4.9	17	158	184	107	693	145	38	24	13	48	14
7	4.9	18	95	151	98	421	162	35	23	13	41	14
8	5.1	17	71	149	87	284	149	35	22	12	35	13
9	5.5	17	59	141	155	207	124	33	21	11	31	13
10	5.4	17	54	109	243	342	111	30	20	11	28	12
11	5.2	17	64	93	408	757	100	28	19	11	25	11
12	5.4	16	68	101	690	574	90	27	19	10	23	11
13	5.5	16	57	143	549	376	108	26	18	10	23	11
14	5.3	16	51	134	441	262	240	24	17	9.7	22	11
15	5.2	16	51	115	378	194	179	23	17	9.5	42	10
16	5.0	16	188	81	300	159	137	23	19	9.3	51	10
17	5.1	15	171	71	230	129	113	21	18	9.1	45	9.9
18	5.4	28	123	210	188	113	94	21	18	53	57	22
19	5.1	30	116	148	158	103	83	24	17	272	52	24
20	5.3	29	99	97	138	90	74	23	16	151	42	18
21	5.9	26	221	78	124	84	67	22	15	71	36	16
22	6.5	22	208	68	114	127	63	21	15	47	34	47
23	5.8	21	152	62	293	120	59	20	14	34	33	310
24	5.6	20	135	62	767	101	56	19	14	29	30	220
25	5.6	20	122	61	734	115	53	18	13	24	27	136
26	5.7	19	104	65	475	154	48	19	13	23	25	228
27	12	18	86	67	315	167	45	73	12	36	23	529
28	13	42	78	148	211	435	42	68	17	33	22	398
29	12	63	75	284	---	753	38	49	15	108	21	249
30	13	44	74	195	---	817	36	41	13	82	20	166
31	20	---	65	150	---	572	---	36	---	57	18	---
TOTAL	209.5	669	2919	4189	7671	12187	4077	970	573	1227.6	1223	2581.9
MEAN	6.76	22.3	94.2	135	274	393	136	31.3	19.1	39.6	39.5	86.1
MAX	20	63	221	313	767	1340	545	73	33	272	102	529
MIN	4.9	15	29	61	77	84	36	18	12	9.1	18	9.9
CFSM	.11	.37	1.56	2.23	4.53	6.50	2.25	.52	.32	.65	.65	1.42
IN.	.13	.41	1.79	2.58	4.72	7.49	2.51	.60	.35	.75	.75	1.59

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1950 - 1994, BY WATER YEAR (WY)

	MEAN	35.1	48.0	79.1	112	123	147	102	59.6	44.8	34.6	52.4	26.4
MAX	164	221	231	322	339	393	277	236	216	217	507	128	
(WY)	1977	1980	1978	1978	1979	1994	1983	1978	1972	1975	1989	1979	
MIN	4.18	7.27	9.41	15.5	50.0	49.7	33.0	16.1	9.31	6.29	3.51	4.34	
(WY)	1969	1969	1966	1981	1981	1981	1985	1985	1986	1986	1957	1957	

POCOMOKE RIVER BASIN

01485000 POCOMOKE RIVER NEAR WILLARDS, MD--Continued

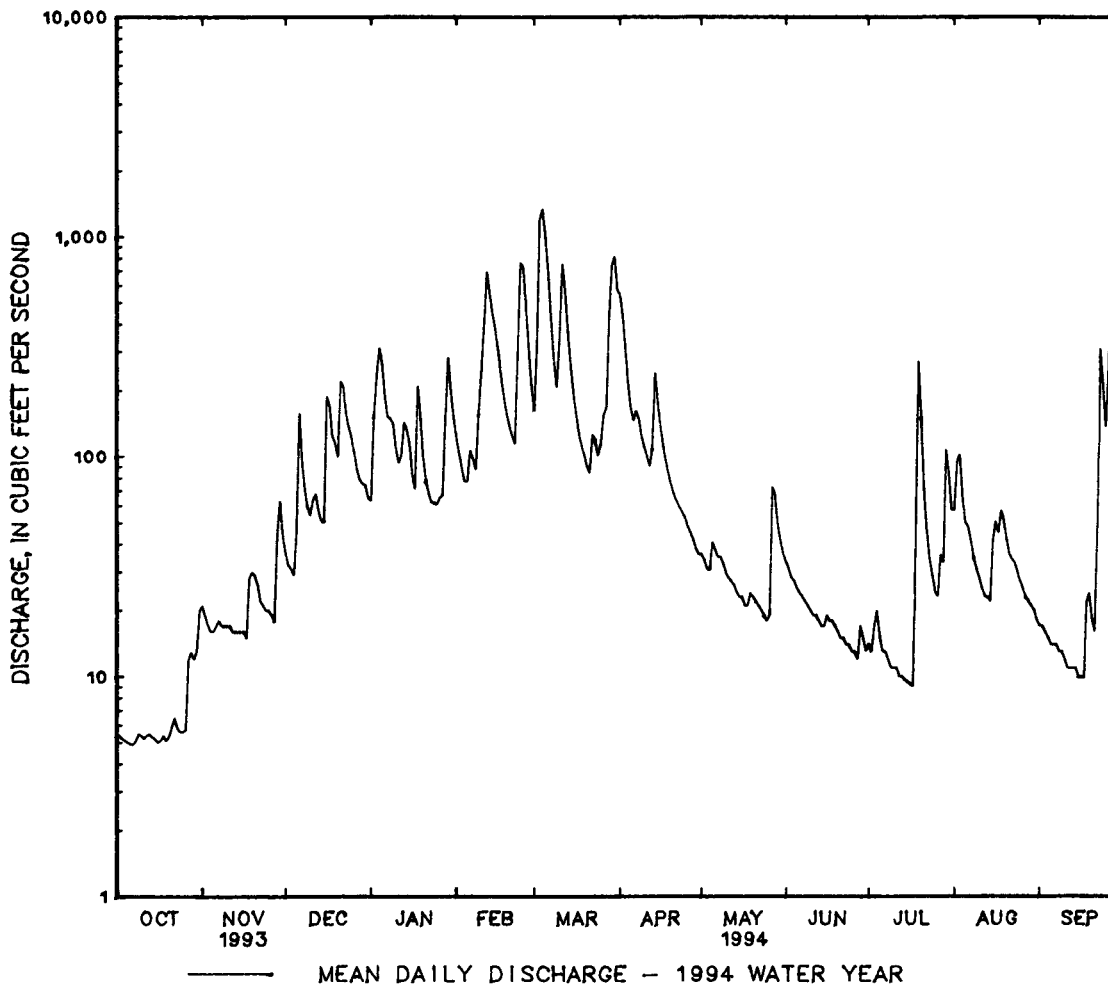
SUMMARY STATISTICS	FOR 1993 CALENDAR YEAR		FOR 1994 WATER YEAR		WATER YEARS 1950 - 1994	
ANNUAL TOTAL	29827.6		38497.0		72.4	
ANNUAL MEAN	81.7		105		130	
HIGHEST ANNUAL MEAN					24.8	
LOWEST ANNUAL MEAN					2580	
HIGHEST DAILY MEAN	1230	Mar 14	1340	Mar 4	Aug 20 1989	
LOWEST DAILY MEAN	4.9	Oct 6	4.9	(a)	(b)	
ANNUAL SEVEN-DAY MINIMUM	5.1	Oct 2	5.1	Oct 2	Aug 12 1957	
INSTANTANEOUS PEAK FLOW			1470	Mar 3	Aug 20 1989	
INSTANTANEOUS PEAK STAGE			12.87	Mar 3	Aug 20 1989	
INSTANTANEOUS LOW FLOW			4.8	(a)	(d)	
ANNUAL RUNOFF (CFSM)	1.35		1.74		1.20	
ANNUAL RUNOFF (INCHES)	18.34		23.67		16.26	
10 PERCENT EXCEEDS	182		264		159	
50 PERCENT EXCEEDS	48		41		40	
90 PERCENT EXCEEDS	5.8		11		9.0	

a Oct. 6, 7.

b Aug. 14, 18, 1957.

c From rating curve extended above 1,600 ft³/s.

d Aug. 18, 19, 1957.



POCOMOKE RIVER BASIN

67

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 mi².

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. Records good. Several measurements of water temperature were made during the year. Water-quality data for some prior years have been collected at this location.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 280 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Feb. 2	2300	682	6.44	Mar. 11	2000	728	6.52
Feb. 25	0200	918	6.82	Mar. 30	0300	739	6.54
Mar. 3	2000	*1,760	*7.72	Apr. 2	0300	340	5.57

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.4	26	60	39	99	107	325	23	6.2	4.2	18	3.8
2	3.7	24	41	69	75	190	329	30	5.6	3.9	41	3.8
3	3.4	21	32	126	60	1420	239	28	5.2	3.3	46	3.5
4	2.9	19	29	227	59	1310	161	25	4.8	3.0	33	3.4
5	2.7	17	37	247	58	642	111	26	4.7	3.6	22	3.4
6	2.4	20	60	193	72	309	85	25	4.5	3.3	24	3.1
7	2.5	20	80	126	79	196	91	23	4.5	2.6	19	3.1
8	2.7	18	80	93	78	143	101	22	4.5	2.2	14	3.1
9	3.6	17	57	84	88	119	95	20	4.4	2.0	11	2.7
10	3.6	16	43	69	140	170	76	18	4.1	1.8	8.6	2.7
11	3.8	16	48	66	200	615	65	16	3.8	1.8	6.8	2.7
12	4.2	15	49	65	512	584	56	16	3.8	1.8	5.8	2.7
13	4.5	14	49	82	586	312	67	15	3.8	1.7	5.5	2.6
14	4.1	13	45	101	354	197	144	14	3.7	1.6	4.9	2.6
15	4.0	12	42	93	252	142	202	13	3.6	1.6	25	2.7
16	3.5	12	72	73	210	106	158	12	4.8	2.4	19	3.0
17	3.5	12	98	51	168	82	99	12	4.2	2.3	17	3.2
18	3.5	26	106	84	128	71	72	11	4.0	13	19	4.7
19	3.5	26	84	124	98	65	58	13	3.5	18	15	4.9
20	3.6	27	72	124	81	58	48	14	3.1	27	13	5.0
21	4.3	24	91	72	73	54	41	13	3.1	38	11	4.5
22	6.8	22	128	52	68	78	37	12	3.1	28	11	30
23	6.6	19	137	48	124	90	34	11	2.7	13	10	53
24	5.7	18	104	49	640	88	31	9.7	3.7	7.0	7.7	39
25	5.3	16	81	52	810	88	28	8.4	3.5	4.9	6.2	55
26	5.1	15	71	55	451	116	26	9.1	2.6	12	5.3	62
27	18	15	60	56	242	140	24	12	2.6	40	4.8	61
28	23	33	48	80	155	221	21	12	2.6	21	4.5	53
29	18	48	39	168	---	533	20	10	3.1	20	4.2	55
30	21	65	40	217	---	691	19	8.2	3.2	19	4.1	37
31	30	---	41	153	---	419	---	7.1	---	17	3.8	---
TOTAL	213.9	646	2024	3138	5960	9356	2863	488.5	117.0	321.0	440.2	516.2
MEAN	6.90	21.5	65.3	101	213	302	95.4	15.8	3.90	10.4	14.2	17.2
MAX	30	65	137	247	810	1420	329	30	6.2	40	46	62
MIN	2.4	12	29	39	58	54	19	7.1	2.6	1.6	3.8	2.6
CFSM	.15	.48	1.45	2.25	4.74	6.72	2.13	.35	.09	.23	.32	.38
IN.	.18	.54	1.68	2.60	4.94	7.75	2.37	.40	.10	.27	.36	.43

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1950 - 1994, BY WATER YEAR (WY)

	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961
MEAN	25.1	35.7	56.3	85.6	95.4	118	78.0	44.5	28.6	20.8	40.4	18.7
MAX	150	175	155	261	269	302	202	183	160	120	346	177
(WY)	1977	1980	1978	1978	1979	1994	1983	1978	1972	1975	1989	1979
MIN	2.81	3.80	6.33	10.8	32.1	29.5	17.6	7.10	2.52	2.02	1.59	1.64
(WY)	1991	1967	1966	1966	1991	1986	1985	1986	1986	1986	1966	1980

POCOMOKE RIVER BASIN

01485500 NASSAWANGO CREEK NEAR SNOW HILL, MD--Continued

SUMMARY STATISTICS	FOR 1993 CALENDAR YEAR		FOR 1994 WATER YEAR		WATER YEARS 1950 - 1994	
ANNUAL TOTAL	23396.7		26083.8		54.3	
ANNUAL MEAN	64.1		71.5		116	
HIGHEST ANNUAL MEAN					20.8	
LOWEST ANNUAL MEAN					1979	
HIGHEST DAILY MEAN	1050	Mar 14	1420	Mar 3	2590	Aug 19 1989
LOWEST DAILY MEAN	(e)1.7	(a)	1.6	(b)	.80	(c)
ANNUAL SEVEN-DAY MINIMUM	1.8	Jul 29	1.8	Jul 9	.86	Sep 7 1966
INSTANTANEOUS PEAK FLOW			1760	Mar 3	(d)3930	Aug 19 1989
INSTANTANEOUS PEAK STAGE			7.72	Mar 3	9.07	Aug 19 1989
INSTANTANEOUS LOW FLOW			1.5	Jul 15	.80	(c)
ANNUAL RUNOFF (CFSM)	1.43		1.59		1.21	
ANNUAL RUNOFF (INCHES)	19.38		21.61		16.44	
10 PERCENT EXCEEDS	108		159		126	
50 PERCENT EXCEEDS	29		23		26	
90 PERCENT EXCEEDS	2.9		3.2		3.4	

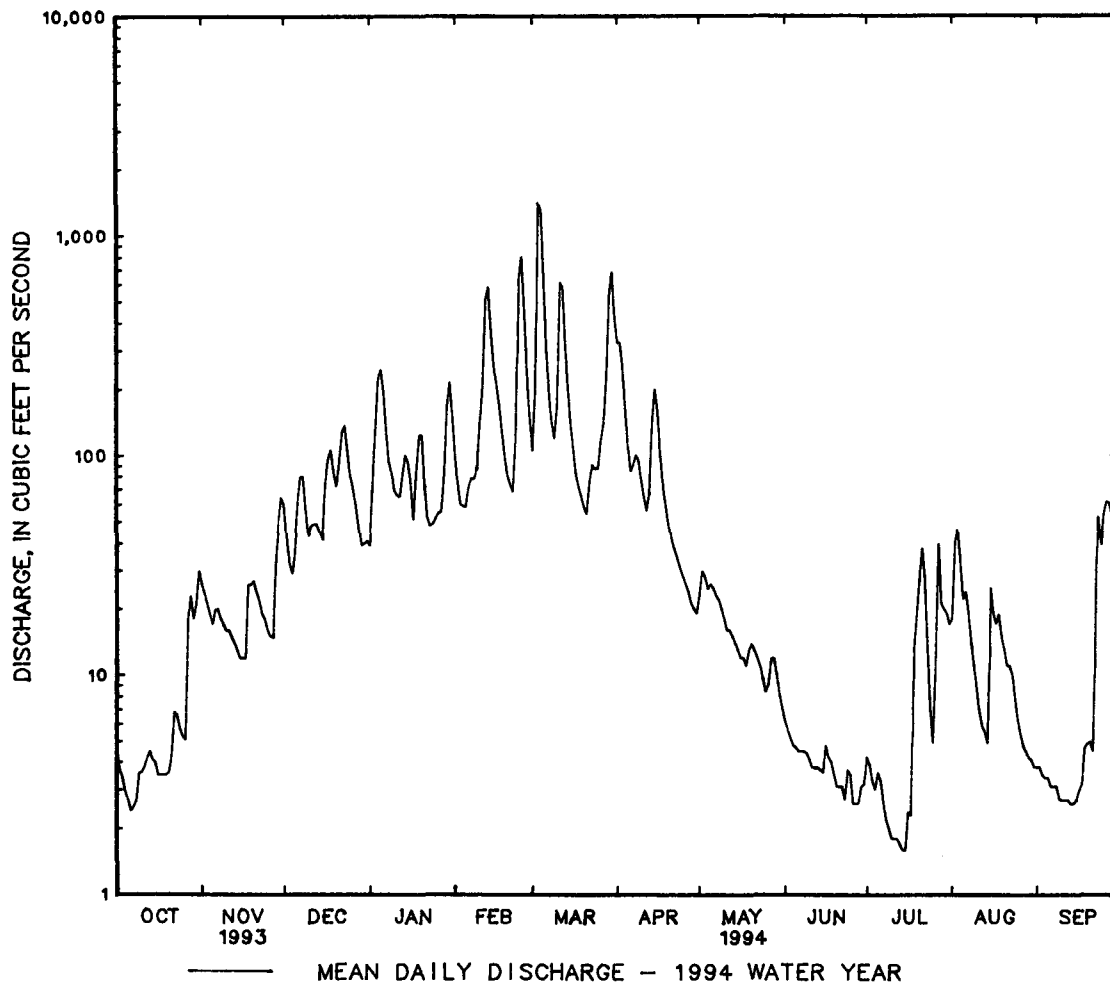
a Aug. 2-4.

b July 14, 15.

c Sept. 8-10, 1966.

d From rating curve extended above 1,300 ft³/s on basis of contracted-opening measurement at gage height 9.07 ft.

e Estimated.



69

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.

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 datum 1.0 ft higher.

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

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 50 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Feb. 11	2115	108	3.44	Mar. 28	0315	57	3.08
Feb. 23	1700	147	3.85	Mar. 29	0730	148	3.86
Mar. 2	2300	*303	*6.34	Apr. 1	0515	104	3.41
Mar. 10	1800	141	3.77	Apr. 13	1815	71	3.17

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.42	2.1	3.7	4.5	9.4	10	72	3.4	1.2	.69	.75	.62
2	.42	1.5	3.4	20	8.1	93	29	3.4	1.1	.61	2.3	.61
3	.41	1.4	3.2	18	7.1	144	18	2.8	1.1	.58	1.6	.57
4	.40	1.3	3.1	28	6.4	59	14	2.9	1.1	.63	1.0	.54
5	.39	1.4	5.0	16	8.6	32	11	3.6	1.1	.58	1.4	.53
6	.36	1.6	7.3	11	13	20	11	3.4	1.1	.56	2.8	.52
7	.36	e1.4	5.1	9.8	10	15	19	3.0	1.1	.53	1.9	.52
8	.39	e1.3	4.3	11	9.0	12	13	3.1	1.0	.50	1.3	.50
9	.44	e1.2	3.9	9.5	22	12	11	2.8	.98	.51	1.0	.49
10	.43	e1.2	3.7	7.4	22	59	9.6	2.5	.93	.55	.91	.48
11	.38	e1.1	6.2	6.7	54	62	8.4	2.4	.93	.48	.85	.45
12	.43	e1.1	5.4	9.0	58	26	7.8	2.3	.94	.45	.81	.44
13	.60	e1.0	4.4	12	35	18	25	2.1	.92	.44	.78	.43
14	.61	e.99	4.1	10	28	14	26	2.0	.88	.41	.75	.42
15	.62	e.99	4.2	8.7	23	12	15	2.0	.85	.40	1.1	.42
16	.56	e.98	12	6.1	18	9.9	11	2.0	.93	.42	1.0	.42
17	.45	e.98	8.2	6.2	14	8.1	8.7	1.8	.89	.42	1.2	.43
18	.37	4.3	6.5	26	12	7.6	7.0	1.7	.86	1.2	1.6	.49
19	.32	3.1	8.1	11	10	7.0	6.2	1.7	.80	.89	1.3	.43
20	.33	2.5	7.2	7.5	9.3	6.4	5.4	1.7	.78	1.1	1.0	.39
21	.35	1.9	17	6.2	8.9	7.0	5.0	1.6	.79	.69	.97	.38
22	.39	1.7	11	5.7	8.1	13	4.8	1.6	.75	.53	1.0	.95
23	.34	1.5	8.9	5.3	62	9.5	4.4	1.5	.72	.50	.93	1.7
24	.34	1.4	8.7	5.5	89	8.1	4.1	1.4	.74	.49	.83	1.4
25	.33	1.3	7.9	5.7	41	13	3.7	1.5	.67	.45	.78	.97
26	.35	1.3	6.6	6.0	23	13	3.5	1.6	.61	.48	.76	.78
27	1.1	1.3	5.6	5.7	15	20	3.3	1.6	.84	.66	.74	.70
28	1.3	11	5.3	24	12	52	3.1	1.4	.93	.67	.72	.64
29	1.0	7.2	5.3	23	---	106	2.9	1.3	.71	.90	.69	.61
30	1.1	4.5	5.0	14	---	46	2.9	1.2	.70	1.1	.65	.58
31	2.2	---	4.5	11	---	26	---	1.3	---	.70	.62	---
TOTAL	17.49	64.54	194.8	350.5	635.9	940.6	365.8	66.6	26.95	19.12	34.04	18.41
MEAN	.56	2.15	6.28	11.3	22.7	30.3	12.2	2.15	.90	.62	1.10	.61
MAX	2.2	11	17	28	89	144	72	3.6	1.2	1.2	2.8	1.7
MIN	.32	.98	3.1	4.5	6.4	6.4	2.9	1.2	.61	.40	.62	.38
CFSM	.12	.45	1.31	2.36	4.73	6.32	2.54	.45	.19	.13	.23	.13
IN.	.14	.50	1.51	2.72	4.93	7.29	2.83	.52	.21	.15	.26	.14

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1951 - 1994, BY WATER YEAR (WY)

MEAN	1.74	2.48	4.86	8.29	8.94	11.1	7.29	3.91	2.39	1.58	3.85	1.82
MAX	10.5	17.5	13.5	23.8	22.8	30.3	17.3	12.2	12.7	9.20	27.8	18.7
(WY)	1980	1980	1978	1978	1979	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

MANOKIN RIVER BASIN

01486000 MANOKIN BRANCH NEAR PRINCESS ANNE, MD--Continued

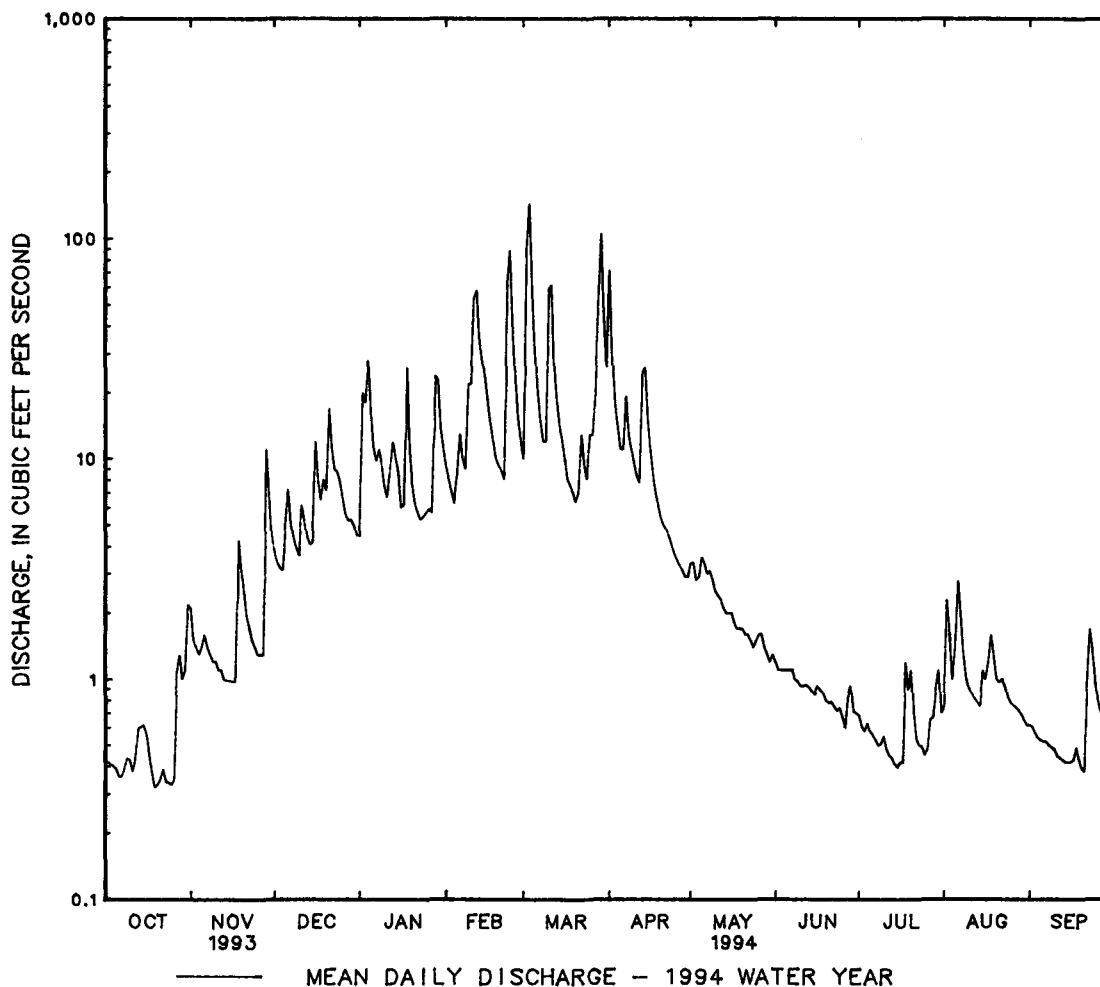
SUMMARY STATISTICS	FOR 1993 CALENDAR YEAR		FOR 1994 WATER YEAR		WATER YEARS 1951 - 1994	
ANNUAL TOTAL	2361.09		2734.75		4.84	
ANNUAL MEAN	6.47		7.49		10.3	
HIGHEST ANNUAL MEAN					1.41	
LOWEST ANNUAL MEAN					251	
HIGHEST DAILY MEAN	83	Mar 13	144	Mar 3	Aug 20 1969	
LOWEST DAILY MEAN	.32	Oct 19	.32	Oct 19	(a)	
ANNUAL SEVEN-DAY MINIMUM	.34	Oct 19	.34	Oct 19	Aug 23 1963	
INSTANTANEOUS PEAK FLOW			303	Mar 2	(b) 547	
INSTANTANEOUS PEAK STAGE			6.34	Mar 2	(c) 7.08	
INSTANTANEOUS LOW FLOW			.31	(d)	Aug 19 1985	
ANNUAL RUNOFF (CFSM)	1.35		1.56		.00	
ANNUAL RUNOFF (INCHES)	18.30		21.19		1.01	
10 PERCENT EXCEEDS	13		18		13.69	
50 PERCENT EXCEEDS	3.7		1.7		11	
90 PERCENT EXCEEDS	.45		.45		2.0	
					.32	

a No flow during 1954, 1963, 1964, 1966.

b From rating curve extended above 27 ft³/s on basis of channel-conveyance study.

c Gage height of 5.44 ft occurred on Aug. 20, 1969 following ditching of stream channel.

d Oct. 19, 20, 23, 25, 26.



NANTICOKE RIVER BASIN

71

01487000 NANTICOKE RIVER NEAR BRIDGEVILLE, DE

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

DRAINAGE AREA.--75.4 mi².

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.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 360 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jan. 28	2200	541	6.72	Mar. 29	1900	1,370	8.66
Feb. 24	0400	911	7.86	Apr. 1	1400	834	7.69
Mar. 3	1600	*1,970	*9.45	Apr. 14	0800	646	7.25
Mar. 11	0100	757	7.52				

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	21	27	29	68	170	239	695	157	82	109	64	48
2	21	25	27	90	159	286	559	155	78	84	66	43
3	20	24	27	92	155	1550	410	147	77	74	64	38
4	20	24	26	115	148	987	346	149	69	86	58	42
5	20	24	94	114	146	514	306	182	68	82	65	40
6	19	26	203	100	144	380	293	170	68	69	81	37
7	20	25	83	99	137	324	308	158	69	60	67	36
8	20	24	60	116	136	300	292	158	63	51	60	34
9	20	24	54	113	198	282	266	151	58	44	56	35
10	21	24	52	103	204	390	256	143	59	51	51	32
11	20	24	61	101	212	614	245	137	53	47	46	32
12	22	24	54	108	270	387	233	134	51	42	44	32
13	21	23	51	111	244	317	255	130	49	39	44	30
14	20	24	50	108	236	296	546	122	44	42	43	29
15	20	24	53	103	247	277	378	116	47	43	63	31
16	20	24	60	95	287	263	309	122	104	40	54	31
17	20	24	54	98	258	244	284	118	98	36	65	32
18	20	27	52	228	225	233	259	114	81	48	97	54
19	20	24	53	152	212	228	243	116	71	62	82	42
20	22	24	51	117	205	214	233	114	68	49	68	36
21	24	23	96	111	201	208	219	111	63	43	64	33
22	26	23	89	108	194	250	208	109	59	39	94	61
23	23	23	76	108	342	237	199	105	53	32	84	251
24	22	23	72	112	790	221	191	99	61	33	71	170
25	21	23	72	116	471	221	184	101	58	34	64	111
26	22	22	71	166	335	222	179	108	43	60	62	93
27	27	22	68	144	282	226	173	104	46	58	60	86
28	25	58	68	257	253	683	168	98	81	66	56	80
29	23	48	71	336	---	1140	160	91	68	75	55	75
30	25	31	71	211	---	837	157	86	140	84	56	71
31	30	---	68	183	---	496	---	83	---	76	52	---
TOTAL	675	785	2016	4083	6861	13066	8554	3888	2029	1758	1956	1765
MEAN	21.8	26.2	65.0	132	245	421	285	125	67.6	56.7	63.1	58.8
MAX	30	58	203	336	790	1550	695	182	140	109	97	251
MIN	19	22	26	68	136	208	157	83	43	32	43	29
CFSM	.29	.35	.86	1.75	3.25	5.59	3.78	1.66	.90	.75	.84	.78
IN.	.33	.39	.99	2.01	3.39	6.45	4.22	1.92	1.00	.87	.97	.87

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1943 - 1994, BY WATER YEAR (WY)

	45.0	58.8	87.0	118	133	161	138	101	74.6	58.3	63.6	46.7
MEAN	45.0	58.8	87.0	118	133	161	138	101	74.6	58.3	63.6	46.7
MAX	137	192	294	311	376	421	300	219	298	210	412	234
(WY)	1980	1957	1949	1978	1961	1994	1958	1990	1948	1959	1967	1960
MIN	17.9	21.2	23.9	23.8	50.9	61.5	47.8	45.8	29.3	17.5	13.6	10.1
(WY)	1944	1988	1944	1966	1950	1977	1985	1951	1986	1944	1943	1943

NANTICOKE RIVER BASIN

01487000 NANTICOKE RIVER NEAR BRIDGEVILLE, DE--Continued

SUMMARY STATISTICS

FOR 1993 CALENDAR YEAR

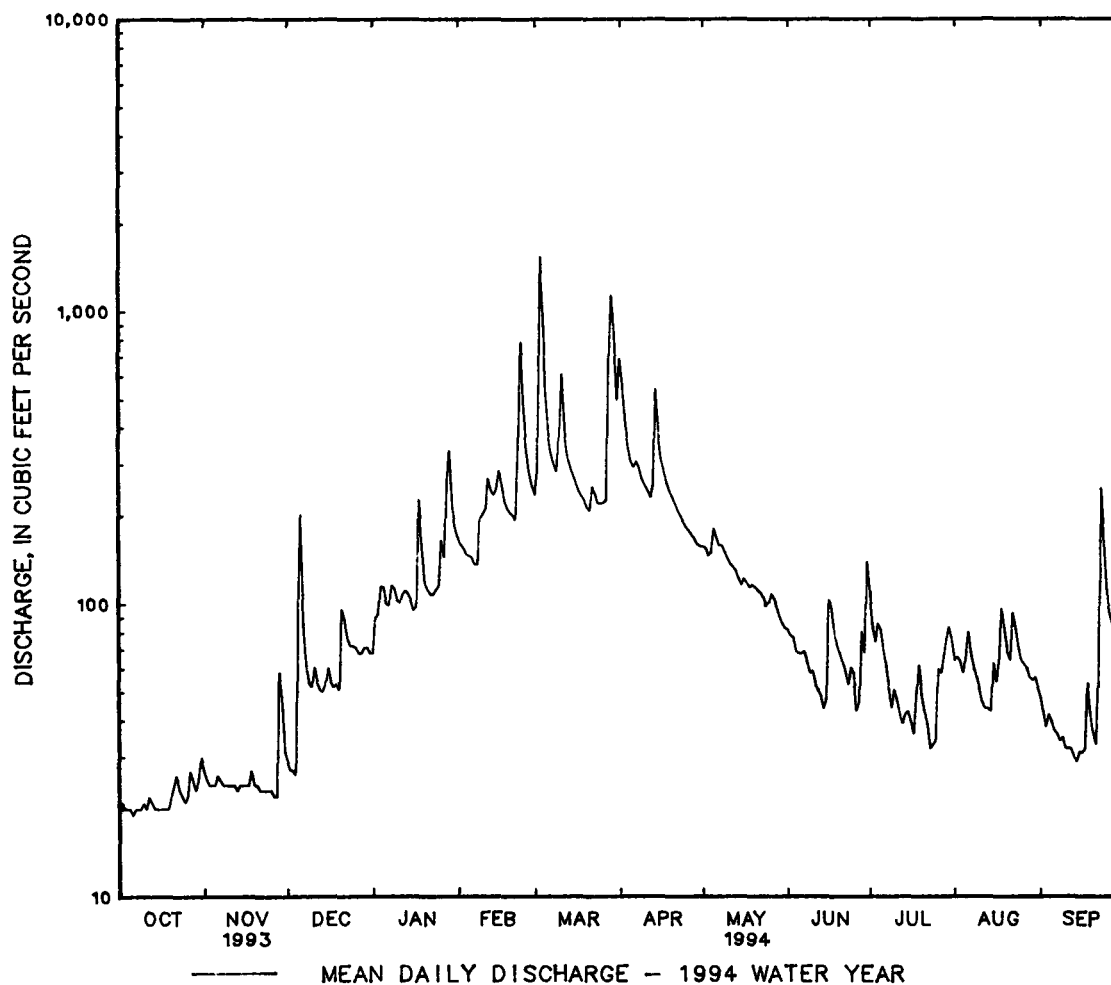
FOR 1994 WATER YEAR

WATER YEARS 1943 - 1994

ANNUAL TOTAL	32348		47436		90.6	
ANNUAL MEAN	88.6		130		170	1958
HIGHEST ANNUAL MEAN					43.8	1985
LOWEST ANNUAL MEAN					2880	Feb 26 1979
HIGHEST DAILY MEAN	798	Mar 14	1550	Mar 3	6.6	Sep 29 1943
LOWEST DAILY MEAN	19	Oct 6	19	Oct 6	7.8	Sep 23 1943
ANNUAL SEVEN-DAY MINIMUM	20	Oct 3	20	Oct 3	3020	Feb 26 1979
INSTANTANEOUS PEAK FLOW			1970	Mar 3	10.31	Feb 26 1979
INSTANTANEOUS PEAK STAGE			9.45	Mar 3	(b)6.3	Sep 29 1943
INSTANTANEOUS LOW FLOW			19	(a)	1.20	
ANNUAL RUNOFF (CFSM)	1.18		1.72		16.32	
ANNUAL RUNOFF (INCHES)	15.96		23.40		173	
10 PERCENT EXCEEDS	206		279		65	
50 PERCENT EXCEEDS	61		75		26	
90 PERCENT EXCEEDS	22		24			

a Oct. 6, 7.

b Minimum discharge observed.



NANTICOKE RIVER BASIN

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01487000 NANTICOKE RIVER NEAR BRIDGEVILLE, DE--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1961-72, 1974-80, 1991, October 1993 to September 1994.

REMARKS.--Trace metals and organics collected and analyzed using ultraclean methodologies for the 1994 water year were not available at time of publication. Data are available upon request.

WATER QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH WATER WHOLE FIELD (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	TEMPER- ATURE AIR (DEG C)	BARO- METRIC PRES- SURE (MM OF HG)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	OXYGEN, DIS- SOLVED (MG/L)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	CARBON, ORGANIC SUS- PENDED TOTAL (MG/L AS C)
MAY 1994 05...	1615	191	114	6.4	15.5	18.5	759	10.6	107	3.8	0.7

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.

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 (backwater), which are fair. 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.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 450 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jan. 18	0345	523	5.16	Mar. 29	1045	1,730	8.95
Jan. 28	1715	966	6.72	Apr. 1	0930	501	5.07
Feb. 23	1845	1,800	9.11	July 3	2330	1,030	6.94
Mar. 3	0830	*2,610	*11.19	Sep. 23	0230	894	6.48
Mar. 10	1915	933	6.61				

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.5	e12	14	30	87	111	342	55	33	23	28	26
2	8.1	e11	12	44	77	277	210	52	32	22	28	25
3	7.8	e10	12	59	71	2100	166	48	30	153	29	23
4	7.4	e9.6	12	111	66	508	140	55	29	369	28	22
5	7.0	e9.4	104	85	64	260	121	108	29	78	31	22
6	6.8	e11	134	59	62	189	117	84	28	52	68	22
7	7.4	e10	47	56	58	157	196	73	27	43	44	22
8	7.9	e10	34	111	60	138	143	79	66	38	34	21
9	8.7	e9.6	29	83	169	123	119	76	47	33	29	20
10	9.2	e9.4	27	63	119	391	111	67	35	31	27	19
11	8.6	e9.0	31	58	105	321	101	60	31	29	26	19
12	8.8	e8.9	30	61	106	184	95	57	30	27	25	18
13	8.4	e8.7	28	67	99	152	149	53	29	26	24	18
14	7.6	e8.5	27	65	131	133	268	50	27	27	23	18
15	6.9	8.3	28	55	196	117	152	48	25	26	24	17
16	6.8	8.4	31	50	246	107	132	48	24	24	22	17
17	7.1	8.2	29	57	223	95	119	46	24	23	36	17
18	7.3	9.0	28	270	202	91	102	44	24	22	82	22
19	7.6	8.3	29	94	183	86	93	45	23	21	50	27
20	9.2	8.7	27	60	167	80	85	44	23	20	37	20
21	9.4	8.3	73	55	148	78	78	43	21	19	33	18
22	9.8	8.6	58	55	137	114	73	42	22	19	46	76
23	9.9	8.8	44	53	702	95	69	41	20	18	53	520
24	9.1	8.4	40	68	719	87	66	39	31	18	44	114
25	8.3	7.9	39	73	286	90	64	39	36	18	37	71
26	7.7	7.7	37	188	195	89	62	38	25	19	34	56
27	7.6	7.8	34	86	147	105	60	39	25	21	32	49
28	7.7	56	33	422	122	733	59	38	31	33	31	48
29	7.6	43	34	218	---	1190	55	35	29	33	29	42
30	9.0	18	33	122	---	389	54	34	27	44	28	36
31	13	---	30	100	---	227	---	33	---	35	27	---
TOTAL	256.2	362.5	1168	2978	4947	8817	3601	1613	883	1364	1089	1445
MEAN	8.26	12.1	37.7	96.1	177	284	120	52.0	29.4	44.0	35.1	48.2
MAX	13	56	134	422	719	2100	342	108	66	369	82	520
MIN	6.8	7.7	12	30	58	78	54	33	20	18	22	17
CFSM	.19	.28	.86	2.19	4.02	6.48	2.73	1.19	.67	1.00	.80	1.10
IN.	.22	.31	.99	2.52	4.19	7.47	3.05	1.37	.75	1.16	.92	1.22

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1943 - 1994. BY WATER YEAR (WY)

MEAN	18.9	34.2	58.7	82.8	87.2	110	76.5	52.0	35.4	35.5	35.9	19.6
MAX	101	190	196	258	267	284	226	178	156	297	340	126
(WY)	1972	1957	1949	1978	1979	1994	1983	1989	1948	1975	1967	1960
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

NANTICOKE RIVER BASIN

01488500 MARSHYHOPE CREEK NEAR ADAMSVILLE, DE--Continued

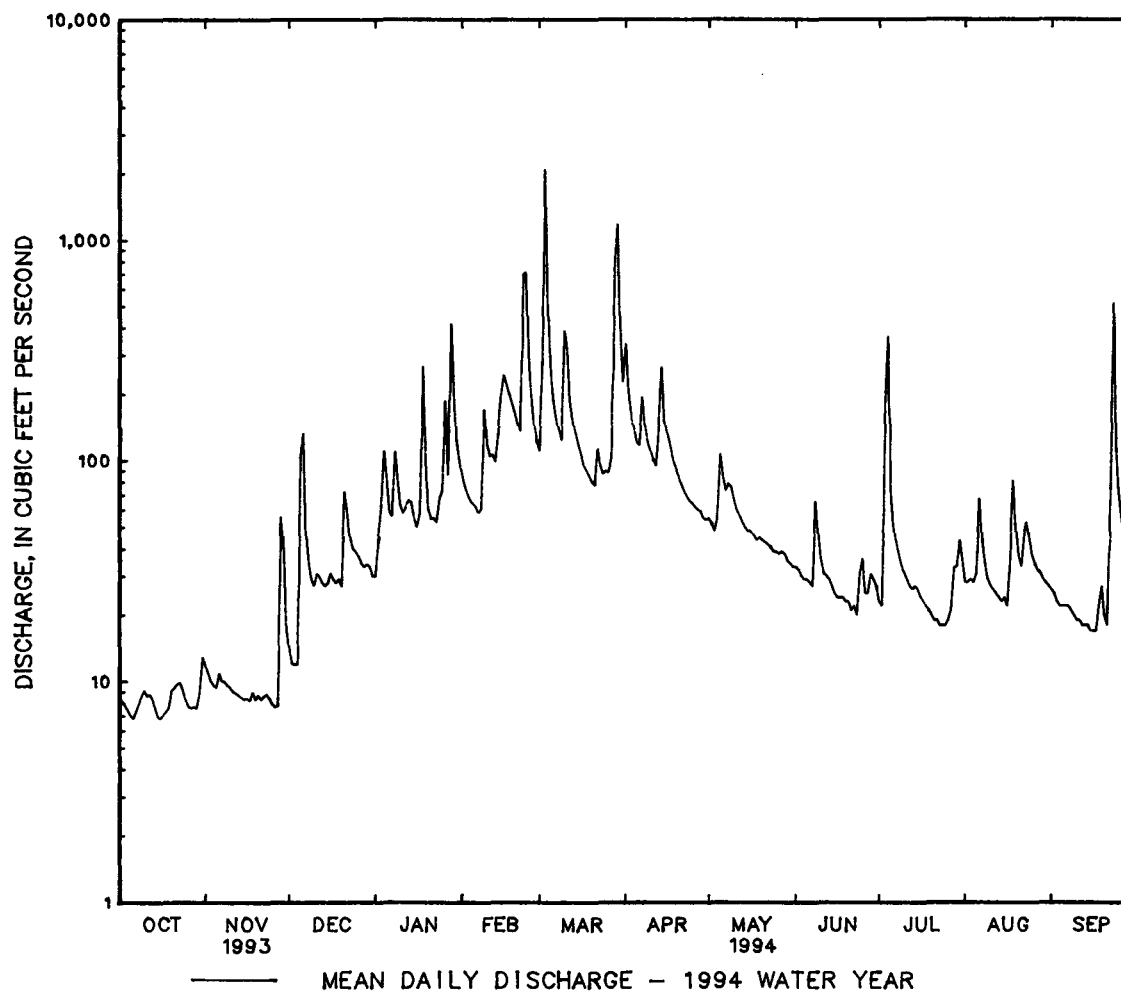
SUMMARY STATISTICS	FOR 1993 CALENDAR YEAR		FOR 1994 WATER YEAR		WATER YEARS 1943 - 1994	
ANNUAL TOTAL	19655.3		28523.7		54.4	
ANNUAL MEAN	53.9		78.1		111	
HIGHEST ANNUAL MEAN					16.2	
LOWEST ANNUAL MEAN					1.2	
HIGHEST DAILY MEAN	795	Mar 14	2100	Mar 3	2710	Aug 5 1967
LOWEST DAILY MEAN	6.8	(a)	6.8	(a)	1.2	(b)
ANNUAL SEVEN-DAY MINIMUM	7.4	Oct 13	7.4	Oct 13	1.3	Sep 5 1964
INSTANTANEOUS PEAK FLOW			2610	Mar 3	(c)3700	Jul 13 1975
INSTANTANEOUS PEAK STAGE			11.19	Mar 3	13.98	Aug 5 1967
INSTANTANEOUS LOW FLOW			5.6	Oct 6	1.0	(d)
ANNUAL RUNOFF (CFSM)	1.23		1.78		1.24	
ANNUAL RUNOFF (INCHES)	16.66		24.17		16.85	
10 PERCENT EXCEEDS	121		152		114	
50 PERCENT EXCEEDS	27		37		28	
90 PERCENT EXCEEDS	8.2		8.8		7.2	

a Oct. 6, 16.

b Sept. 9, 10, 1964.

c From rating curve extended above 3,300 ft³/s.

d Sept. 9, 10, 1964; Aug. 20, 1965.



CHOPTANK RIVER BASIN

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 mi².

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.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jan. 29	1045	1,370	7.42	Mar. 11	1230	1,180	7.22
Feb. 24	1615	1,800	8.60	Mar. 29	0500	4,370	11.77
Mar. 3	2230	*4,800	*12.20				

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	27	40	43	205	260	734	120	63	76	72	94
2	11	21	29	58	174	267	708	115	64	60	65	86
3	11	18	25	68	155	2830	562	106	56	44	73	76
4	10	15	26	91	145	3260	452	108	54	45	67	67
5	10	15	54	123	140	1130	369	164	52	42	64	65
6	9.8	18	107	123	135	705	302	184	49	38	123	62
7	7.8	17	118	100	127	538	340	169	51	35	204	58
8	9.4	16	82	140	125	447	422	179	64	29	148	55
9	9.7	15	54	183	138	398	352	204	104	26	96	52
10	10	15	46	153	150	507	269	194	107	22	72	48
11	11	14	50	132	126	1050	255	163	73	21	60	46
12	16	14	47	119	136	772	242	145	61	19	72	43
13	17	15	41	139	140	537	245	140	55	20	76	43
14	14	14	39	138	138	433	560	128	48	28	66	40
15	13	14	41	120	134	366	623	117	45	80	96	38
16	12	14	51	96	141	308	476	110	44	92	112	40
17	11	14	47	105	173	257	535	106	39	74	106	40
18	11	18	42	167	268	223	436	99	41	105	157	57
19	11	19	40	338	521	208	291	101	38	319	251	56
20	12	17	40	298	850	196	232	110	41	181	193	47
21	14	17	61	171	774	183	202	111	38	93	135	41
22	18	15	82	135	593	240	183	103	37	61	193	52
23	16	14	77	124	591	321	169	95	36	69	606	275
24	14	14	65	123	1520	262	159	85	91	69	574	472
25	13	14	56	146	1270	233	153	90	82	59	324	272
26	12	14	53	281	718	234	145	98	54	100	208	163
27	13	13	48	405	496	244	139	96	42	96	166	136
28	16	46	44	469	349	1770	134	88	50	95	143	132
29	15	78	46	1150	---	4120	128	83	47	122	128	126
30	17	64	44	511	---	2340	123	72	49	118	121	107
31	30	---	45	269	---	976	---	67	---	88	108	---
TOTAL	406.7	619	1640	6518	10432	25615	9940	3750	1675	2326	4879	2889
MEAN	13.1	20.6	52.9	210	373	826	331	121	55.8	75.0	157	96.3
MAX	30	78	118	1150	1520	4120	734	204	107	319	606	472
MIN	7.8	13	25	43	125	183	123	67	36	19	60	38
CFSM	.12	.18	.47	1.86	3.30	7.31	2.93	1.07	.49	.66	1.39	.85
IN.	.13	.20	.54	2.15	3.43	8.43	3.27	1.23	.55	.77	1.61	.95

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1948 - 1994, BY WATER YEAR (WY)

	51.8	88.1	145	197	218	265	199	131	90.8	58.6	84.2	46.7
MEAN	51.8	88.1	145	197	218	265	199	131	90.8	58.6	84.2	46.7
MAX	402	476	475	559	646	826	649	457	329	421	829	323
(WY)	1972	1957	1973	1978	1979	1994	1983	1989	1972	1975	1967	1960
MIN	9.85	10.9	13.3	17.9	42.7	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

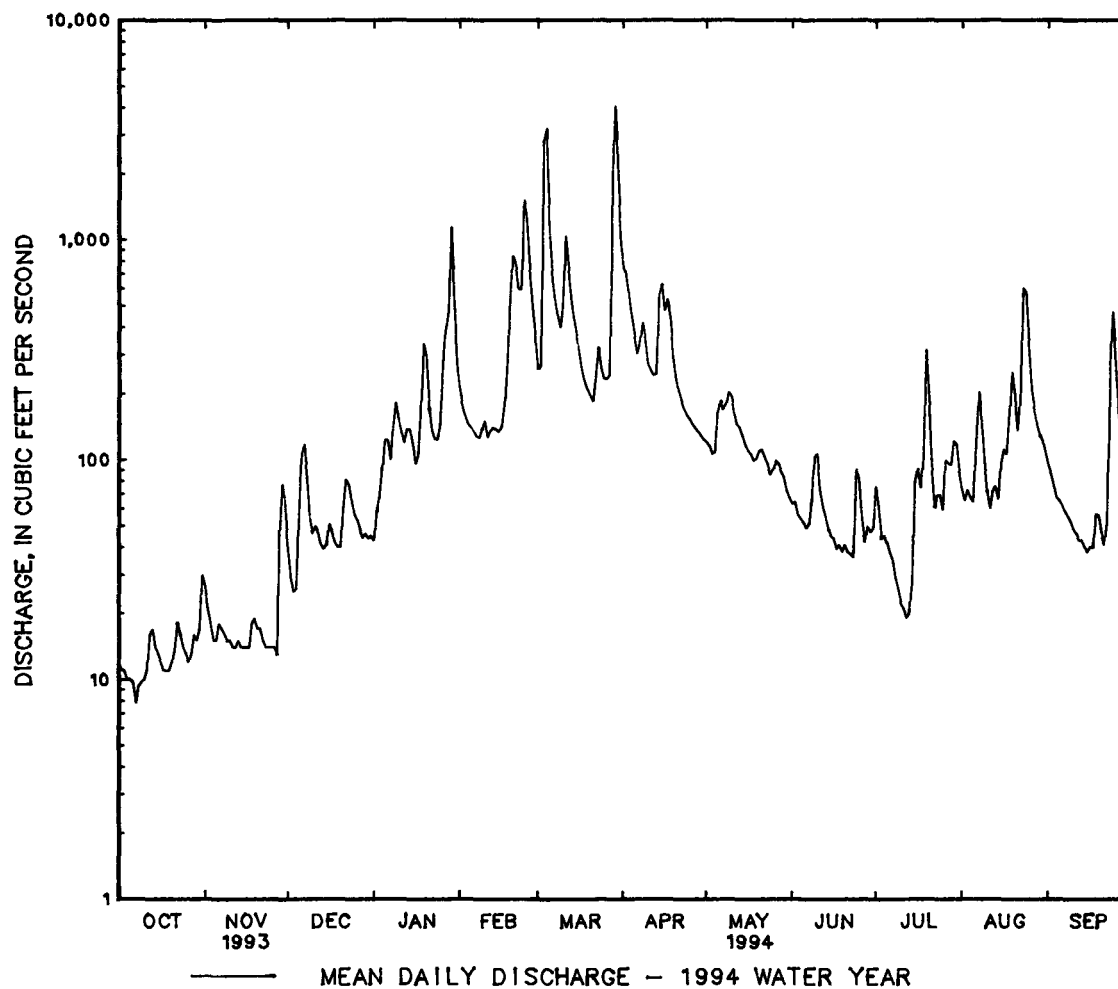
CHOPTANK RIVER BASIN

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01491000 CHOPTANK RIVER NEAR GREENSBORO, MD--Continued

SUMMARY STATISTICS	FOR 1993 CALENDAR YEAR	FOR 1994 WATER YEAR	WATER YEARS 1948 - 1994
ANNUAL TOTAL	43674.9	70689.7	
ANNUAL MEAN	120	194	130
HIGHEST ANNUAL MEAN			237
LOWEST ANNUAL MEAN			26.6
HIGHEST DAILY MEAN	1950 Mar 18	4120 Mar 29	6160 Aug 4 1967
LOWEST DAILY MEAN	4.1 Sep 3	7.8 Oct 7	1.5 Aug 29 1966
ANNUAL SEVEN-DAY MINIMUM	6.2 Aug 29	9.5 Oct 4	2.2 Aug 26 1966
INSTANTANEOUS PEAK FLOW		4800 Mar 3	(a)6970 Aug 4 1967
INSTANTANEOUS PEAK STAGE		12.20 Mar 3	14.47 Aug 4 1967
INSTANTANEOUS LOW FLOW		7.0 Oct 7	1.2 (b)
ANNUAL RUNOFF (CFSM)	1.06	1.71	1.15
ANNUAL RUNOFF (INCHES)	14.38	23.27	15.64
10 PERCENT EXCEEDS	278	449	283
50 PERCENT EXCEEDS	46	94	70
90 PERCENT EXCEEDS	9.2	15	15

a From rating curve extended above 3,600 ft³/s.
b Aug. 29, 1966, Sept. 3, 1987.



CHOPTANK RIVER BASIN

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

WATER-QUALITY RECORDS

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

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1974 to September 1981, October 1984 to September 1991.

WATER TEMPERATURE: October 1974 to September 1991.

SUSPENDED-SEDIMENT DISCHARGE: October 1980 to September 1991.

REMARKS.--Trace metals and organics collected and analyzed using ultraclean methodologies on May 5, 1994 were not available at time of publication. Data are available upon request.

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°C, Aug. 14, 1988; minimum daily, 0.0°C, on many days during winter periods.

SEDIMENT CONCENTRATION: Maximum 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 1993 TO SEPTEMBER 1994

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH WATER WHOLE FIELD (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	TEMPER- ATURE AIR (DEG C)	BARO- METRIC PRES- SURE (MM OF HG)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)
OCT 1993												
18...	1215	11	205	7.3	15.0	20.5	762	--	8.8	87	--	--
NOV												
02...	1330	20	241	7.1	9.0	13.0	766	--	10.5	90	--	--
18...	1100	17	210	7.3	13.0	10.0	768	0.50	7.6	72	25	28
DEC												
14...	1255	39	226	7.5	3.0	8.0	758	--	12.4	93	--	--
FEB 1994												
25...	1300	1250	75	7.4	5.0	6.0	765	--	10.3	80	--	--
MAR												
03...	1430	3630	77	6.6	3.0	1.0	744	--	11.4	87	--	--
04...	1300	3060	51	6.2	3.0	11.0	747	--	10.9	83	--	--
08...	1330	440	104	6.3	9.5	11.0	762	3.1	9.1	80	--	--
24...	1315	253	125	6.6	14.0	22.0	759	--	8.8	86	--	--
31...	1300	928	72	6.3	9.0	12.0	768	--	9.0	77	--	--
APR												
14...	1115	547	115	6.6	15.0	21.5	776	--	7.3	71	--	--
21...	1015	203	116	6.8	15.5	19.5	765	--	6.9	69	--	--
MAY												
05...	1230	167	132	6.6	15.0	18.0	760	5.1	8.4	84	6000	3300
19...	0830	99	138	7.0	14.0	13.0	762	--	7.9	76	--	--
JUN												
28...	1015	53	143	6.9	23.5	24.5	761	--	--	--	--	--
JUL												
12...	1030	19	153	7.1	23.0	29.0	764	--	6.5	76	--	--
AUG												
09...	0945	96	111	6.9	20.0	25.0	776	--	6.6	72	--	--
18...	0815	139	123	6.9	22.0	22.5	760	--	5.9	68	--	--
SEP												
15...	1145	38	140	6.9	21.5	25.5	765	1.6	7.1	80	32	96
27...	0930	139	119	6.9	20.5	23.0	758	--	5.6	62	--	--

CHOPTANK RIVER BASIN

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01491000 CHOPTANK RIVER NEAR GREENSBORO, MD--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	HARD- NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LITY WAT DIS TOT IT FIELD (MG/L AS CACO3)	BICAR- BONATE WATER DIS IT FIELD (MG/L AS HCO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)
OCT 1993												
18...	--	--	--	--	--	30	37	--	--	--	11	--
NOV												
02...	--	--	--	--	--	20	25	--	--	--	16	--
18...	65	18	4.9	10	4.0	34	41	28	19	0.10	15	131
DEC												
14...	--	--	--	--	--	12	15	--	--	--	19	--
FEB 1994												
25...	--	--	--	--	--	7	9	--	--	--	8.4	--
MAR												
03...	--	--	--	--	--	6	8	--	--	--	6.8	--
04...	--	--	--	--	--	6	7	--	--	--	4.5	--
08...	27	7.0	2.4	5.4	2.0	5	6	17	8.9	<0.10	13	77
24...	--	--	--	--	--	10	12	--	--	--	15	--
31...	--	--	--	--	--	7	8	--	--	--	9.1	--
APR												
14...	--	--	--	--	--	11	13	--	--	--	12	--
21...	--	--	--	--	--	14	18	--	--	--	14	--
MAY												
05...	38	9.9	3.1	6.2	5.5	19	23	16	12	<0.10	13	97
19...	--	--	--	--	--	19	23	--	--	--	14	--
JUN												
28...	--	--	--	--	--	22	27	--	--	--	16	--
JUL												
12...	--	--	--	--	--	27	33	--	--	--	16	--
AUG												
09...	--	--	--	--	--	16	20	--	--	--	16	--
18...	--	--	--	--	--	22	27	--	--	--	14	--
SEP												
15...	45	12	3.6	8.4	2.2	18	22	15	15	<0.10	17	115
27...	--	--	--	--	--	12	14	--	--	--	16	--

DATE	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS NO3)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN, AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, AM- MONIA + ORGANIC DIS. (MG/L AS N)	PHOS- PHORUS TOTAL (MG/L AS P)	PHOS- PHORUS DIS- SOLVED (MG/L AS P)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P)	ALUM- INUM, DIS- SOLVED (UG/L AS AL)
OCT 1993											
18...	5.7	0.002	1.30	1.30	0.020	0.20	<0.20	0.030	0.011	0.007	--
NOV											
02...	3.7	0.025	0.850	0.850	0.130	0.50	0.40	0.110	0.093	0.072	--
18...	3.7	0.004	0.840	0.840	0.010	0.20	0.20	0.010	0.012	0.009	8
DEC											
14...	7.1	0.006	1.60	1.60	0.080	0.30	0.20	0.020	0.016	0.009	--
FEB 1994											
25...	3.5	0.009	0.790	0.790	0.090	0.70	0.50	0.080	0.054	0.029	1000
MAR											
03...	3.2	0.009	0.740	0.740	0.220	1.0	0.70	0.130	0.065	0.045	250
04...	2.8	0.008	0.640	0.640	0.110	0.70	0.50	0.120	0.060	0.045	490
08...	6.2	0.006	1.40	1.40	0.060	0.40	0.30	0.030	0.031	0.018	190
24...	5.3	0.006	1.20	1.20	0.010	0.30	0.30	0.030	0.026	0.013	170
31...	3.5	0.006	0.800	0.800	0.050	0.50	0.50	0.050	0.045	0.025	650
APR											
14...	5.7	0.014	1.30	1.30	0.110	0.60	0.50	0.050	0.051	0.035	230
21...	4.4	0.013	1.00	1.00	0.070	0.60	0.50	0.080	0.065	0.043	190
MAY											
05...	--	--	--	--	--	0.70	0.60	0.100	--	--	70
19...	4.4	0.016	1.00	1.00	0.060	0.50	0.40	0.100	0.058	0.018	50
JUN											
28...	4.4	0.011	1.00	1.00	0.060	0.40	0.40	0.080	0.078	0.070	30
JUL											
12...	4.9	0.003	1.10	1.10	<0.010	0.30	0.30	0.060	0.060	0.044	20
AUG											
09...	3.1	0.005	0.700	0.700	0.080	0.40	0.40	0.090	0.089	0.065	70
18...	2.8	0.008	0.640	0.640	0.060	0.50	0.40	0.060	0.085	0.067	70
SEP											
15...	4.4	0.004	1.00	1.00	0.020	0.20	0.20	0.030	0.035	0.030	20
27...	2.5	0.004	0.580	0.580	0.040	0.40	0.40	0.060	0.061	0.044	80

WATER QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

[illegible]

CHOPTANK RIVER BASIN

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01491000 CHOPTANK RIVER NEAR GREENSBORO, MD--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

RADIOCHEMICAL ANALYSES

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	URANIUM NATURAL DIS- SOLVED (UG/L AS U)
MAY 1994			
05...	1230	167	<1.0
SEP			
15...	1145	38	<1.0

SUSPENDED SEDIMENT DISCHARGE

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SEDI- MENT, DIS- CHARGE, SUS- PENDED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT 1993					
18...	1215	11	4	0.12	--
NOV					
02...	1330	20	2	0.11	--
18...	1100	17	4	0.18	78
DEC					
14...	1255	39	6	0.63	--
FEB 1994					
25...	1300	1250	27	91	--
MAR					
03...	1430	3630	87	853	--
04...	1300	3060	46	380	--
08...	1330	440	10	12	--
24...	1315	253	6	4.1	--
31...	1300	928	21	53	--
APR					
14...	1115	547	16	24	--
21...	1015	203	8	4.4	--
MAY					
05...	1230	167	8	3.6	89
19...	0830	99	4	1.1	--
JUN					
28...	1015	53	10	1.4	--
JUL					
12...	1030	19	3	0.15	--
AUG					
09...	0945	96	6	1.6	--
18...	0815	139	8	3.0	--
SEP					
15...	1145	38	5	0.52	76
27...	0930	139	4	1.5	--

CHESTER RIVER BASIN

01493000 UNICORN BRANCH NEAR MILLINGTON, MD

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

DRAINAGE AREA.--22.3 mi².

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

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

GAGE.--Water-stage recorder and concrete control. Datum of gage is 3.57 ft 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.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 180 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jan. 29	0030	464	4.61	Mar. 28	1745	*649	*5.14
Feb. 21	0245	312	4.17	Aug. 22	0900	297	4.30
Feb. 24	0045	329	4.23	Aug. 23	0415	367	4.54
Mar. 3	1300	615	5.06				

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.7	10	9.5	12	40	34	97	30	18	17	15	22
2	7.5	8.8	8.7	12	36	38	88	28	17	14	22	21
3	7.4	8.2	8.5	12	27	424	73	27	17	13	32	21
4	7.4	7.7	10	13	22	240	63	34	16	17	17	20
5	7.0	9.0	26	18	20	113	56	39	16	13	18	19
6	7.0	9.1	26	25	20	82	53	32	17	12	35	19
7	7.2	7.6	36	24	20	66	67	32	17	12	21	18
8	7.4	7.1	37	25	20	54	65	45	76	11	16	17
9	7.6	6.8	14	25	20	54	53	40	32	10	14	17
10	7.8	6.7	6.3	25	21	94	52	32	21	8.8	14	17
11	7.3	7.1	11	24	21	133	58	29	19	9.8	15	16
12	9.4	6.5	11	24	21	82	51	28	18	9.5	25	16
13	8.5	6.4	12	24	20	63	59	26	16	8.2	18	16
14	7.9	6.6	13	24	21	54	119	24	15	12	21	15
15	10	6.3	13	23	20	48	85	24	14	38	51	15
16	7.7	6.2	12	22	20	44	82	26	15	16	28	15
17	7.7	6.9	12	18	21	39	100	24	14	13	24	15
18	6.8	8.2	12	18	25	37	71	23	15	21	30	16
19	7.3	7.8	12	22	32	35	56	23	13	38	22	14
20	8.9	7.1	12	25	147	33	49	25	12	16	19	14
21	10	6.9	12	23	198	34	43	23	11	13	43	13
22	10	6.9	12	20	106	54	39	22	12	13	222	25
23	7.6	6.9	12	19	128	50	37	21	12	13	258	57
24	7.3	6.9	13	14	244	40	37	19	13	13	112	27
25	7.5	6.9	13	22	131	46	35	25	12	12	52	20
26	8.2	7.1	13	76	78	44	35	26	11	13	41	21
27	8.1	8.7	13	86	52	51	35	21	12	17	36	45
28	7.9	29	12	180	37	380	34	19	16	34	31	26
29	7.1	19	12	231	---	460	31	19	12	21	29	20
30	9.2	11	12	75	---	225	31	18	18	16	27	17
31	12	---	12	46	---	116	---	18	---	15	24	---
TOTAL	250.4	259.4	438.0	1207	1568	3267	1754	822	527	489.3	1332	614
MEAN	8.08	8.65	14.1	38.9	56.0	105	58.5	26.5	17.6	15.8	43.0	20.5
MAX	12	29	37	231	244	460	119	45	76	38	258	57
MIN	6.8	6.2	6.3	12	20	33	31	18	11	8.2	14	13
CFSM	.36	.39	.63	1.75	2.51	4.73	2.62	1.19	.79	.71	1.93	.92
IN.	.42	.43	.73	2.01	2.62	5.45	2.93	1.37	.88	.82	2.22	1.02

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1948 - 1994, BY WATER YEAR (WY)

	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959
MEAN	14.2	16.8	24.0	32.1	36.5	42.8	36.4	26.3	20.2	16.4	17.2	14.5
MAX	91.5	65.4	67.2	83.7	83.7	105	109	66.8	80.7	52.5	62.5	92.1
(WY)	1972	1972	1973	1978	1961	1994	1983	1989	1972	1972	1967	1960
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

CHESTER RIVER BASIN

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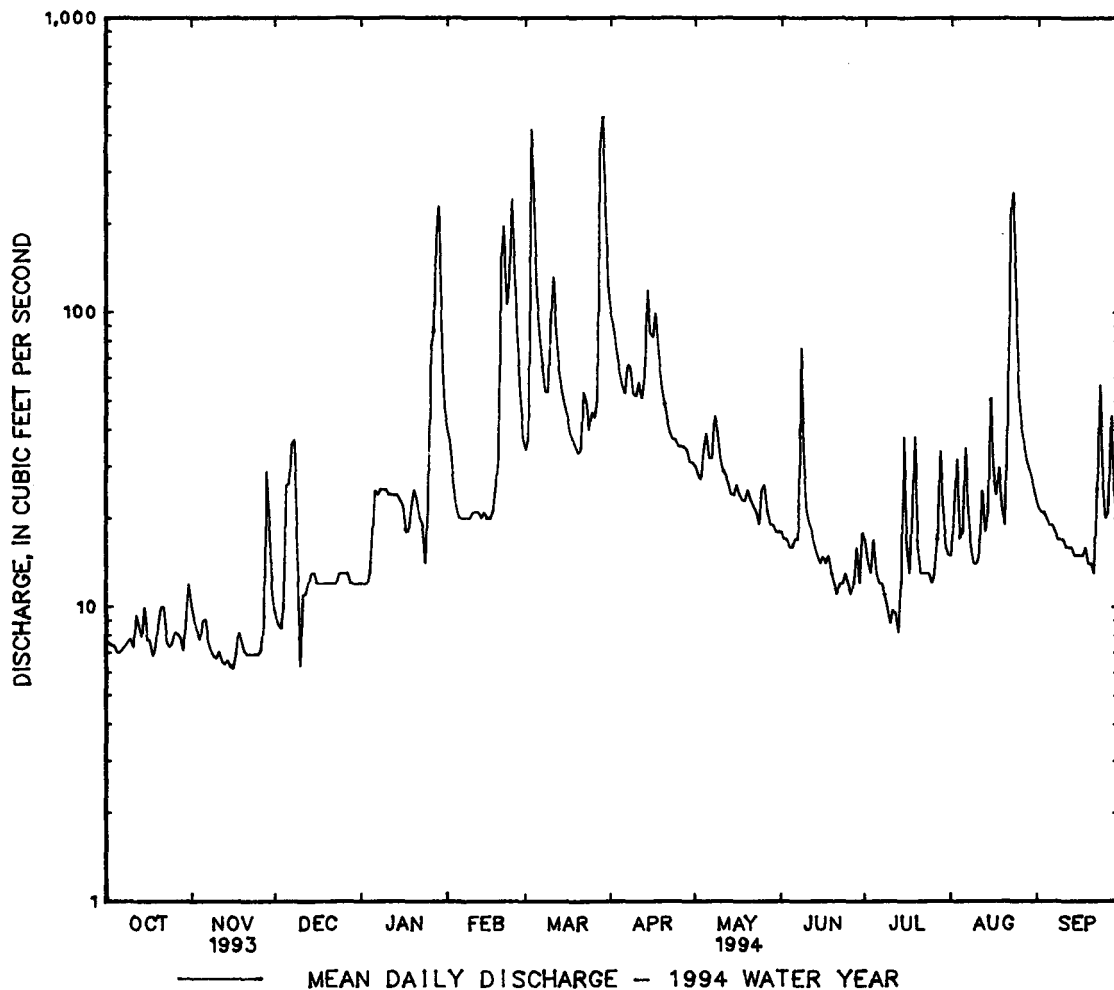
01493000 UNICORN BRANCH NEAR MILLINGTON, MD--Continued

SUMMARY STATISTICS	FOR 1993 CALENDAR YEAR	FOR 1994 WATER YEAR	WATER YEARS 1948 - 1994
ANNUAL TOTAL	8568.38	12528.1	
ANNUAL MEAN	23.5	34.3	24.6
HIGHEST ANNUAL MEAN			51.8
LOWEST ANNUAL MEAN			7.08
HIGHEST DAILY MEAN	333 Mar 18	460 Mar 29	685 Sep 13 1960
LOWEST DAILY MEAN	.88 Mar 3	6.2 Nov 16	.10 Jun 9 1965
ANNUAL SEVEN-DAY MINIMUM	6.0 Jul 29	6.5 Nov 10	.14 Jun 8 1965
INSTANTANEOUS PEAK FLOW		649 Mar 28	(a)1060 Sep 12 1960
INSTANTANEOUS PEAK STAGE		5.14 Mar 28	7.17 Sep 12 1960
INSTANTANEOUS LOW FLOW		.58 (b)	.00 (c)
ANNUAL RUNOFF (CFSM)	1.05	1.54	1.10
ANNUAL RUNOFF (INCHES)	14.29	20.90	15.00
10 PERCENT EXCEEDS	52	66	47
50 PERCENT EXCEEDS	12	20	16
90 PERCENT EXCEEDS	6.9	7.7	7.2

a From rating curve extended above 600 ft³/s.

b Dec. 9, 10.

c No flow for part of each day June 13, 14, 1965, caused by regulation at Unicorn Lake Dam.



CHESTER RIVER BASIN

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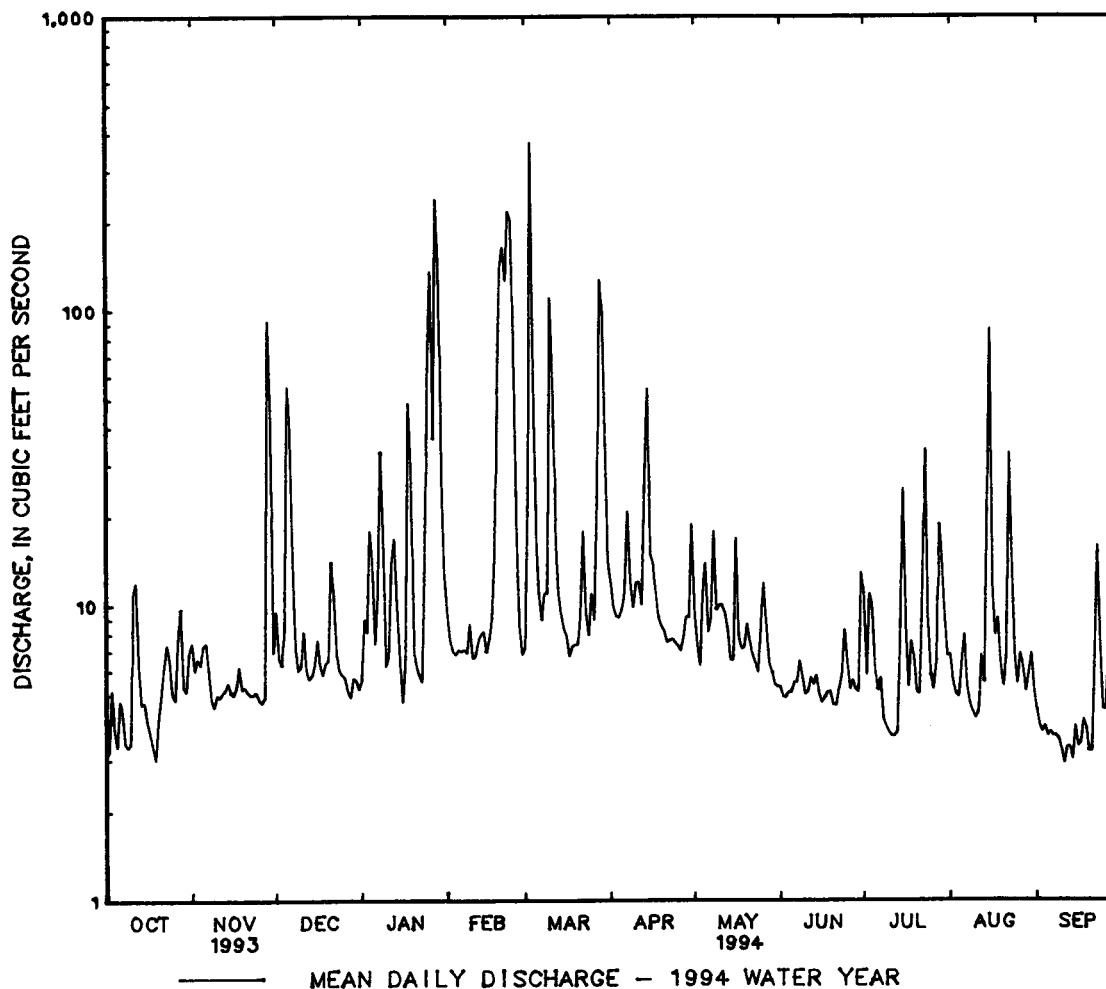
01493500 MORGAN CREEK NEAR KENNEDYVILLE, MD--Continued

SUMMARY STATISTICS	FOR 1993 CALENDAR YEAR	FOR 1994 WATER YEAR	WATER YEARS 1951 - 1994
ANNUAL TOTAL	3512.9	5553.4	
ANNUAL MEAN	9.62	15.2	10.7
HIGHEST ANNUAL MEAN			24.2
LOWEST ANNUAL MEAN			3.67
HIGHEST DAILY MEAN	148 Mar 18	377 Mar 3	2810 Jun 22 1972
LOWEST DAILY MEAN	1.9 Sep 6	2.9 Sep 11	.70 (a)
ANNUAL SEVEN-DAY MINIMUM	3.0 Aug 25	3.3 Sep 8	.71 Sep 7 1966
INSTANTANEOUS PEAK FLOW		743 Mar 3	(b)7500 Jun 22 1972
INSTANTANEOUS PEAK STAGE		7.08 Mar 3	13.07 Jun 22 1972
INSTANTANEOUS LOW FLOW		2.3 Oct 5	.60 (c)
ANNUAL RUNOFF (CFSM)	.76	1.20	.84
ANNUAL RUNOFF (INCHES)	10.29	16.27	11.40
10 PERCENT EXCEEDS	15	20	16
50 PERCENT EXCEEDS	6.2	6.8	6.2
90 PERCENT EXCEEDS	3.5	4.0	3.2

a July 21, Aug. 28-31, Sept. 4, 8-13, 1966.

b From rating curve extended above 640 ft³/s on basis of culvert and flow-over-road measurement of peak flow.

c Aug. 28, 29, 1966.



ELK RIVER BASIN

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, 3.5 mi north of Elkton, and 7 mi upstream from confluence with Little Elk Creek.

DRAINAGE AREA.--52.6 mi².

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 ft³/s.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,700 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 28	1130	2,000	6.00	Jan. 28	1400	*5,220	*9.25
Dec. 5	0915	2,930	6.86	Mar. 10	1115	4,150	8.06

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	34	78	49	e44	83	70	112	69	45	35	84	25
2	32	45	45	51	e76	69	101	64	43	29	35	23
3	32	40	43	48	69	101	94	58	42	66	31	22
4	30	39	53	71	64	88	90	64	41	31	28	21
5	28	42	1360	59	61	161	84	76	41	28	30	21
6	27	43	200	e50	84	169	87	62	41	28	34	21
7	27	39	93	52	130	307	112	71	42	27	27	21
8	28	37	71	94	107	444	86	191	39	26	25	21
9	28	36	61	e76	60	248	79	84	38	25	24	20
10	27	36	58	e62	59	1770	106	68	37	23	23	20
11	26	35	65	e52	55	338	139	62	36	21	23	19
12	64	35	53	111	e57	227	91	63	40	21	25	18
13	47	35	49	140	e61	240	204	63	38	21	25	18
14	33	40	49	e72	62	270	234	55	36	35	25	18
15	31	38	49	e59	62	224	109	55	35	67	29	18
16	30	35	48	e48	58	171	119	154	34	30	24	19
17	30	35	45	e97	60	113	100	69	35	26	51	20
18	31	43	44	246	69	98	86	61	33	35	68	23
19	30	38	48	77	140	90	82	58	32	35	34	23
20	36	38	46	59	523	97	78	68	32	26	29	18
21	111	36	175	e55	613	179	74	62	30	24	29	18
22	107	36	91	e48	469	422	72	55	31	35	90	26
23	43	35	61	e45	562	149	70	54	30	41	49	67
24	38	35	54	71	756	125	69	54	34	44	32	32
25	36	35	51	88	230	114	67	64	32	27	29	26
26	35	34	48	191	130	97	65	89	29	28	31	26
27	35	35	e46	95	90	213	66	98	30	46	30	51
28	37	654	45	2150	e81	372	71	57	34	167	28	36
29	36	121	e45	403	---	392	68	53	30	41	27	27
30	48	62	e45	152	---	174	72	50	40	32	27	25
31	78	---	e44	97	---	127	---	47	---	47	25	---
TOTAL	1255	1890	3234	4963	4871	7659	2887	2198	1080	1167	1071	743
MEAN	40.5	63.0	104	160	174	247	96.2	70.9	36.0	37.6	34.5	24.8
MAX	111	654	1360	2150	756	1770	234	191	45	167	90	67
MIN	26	34	43	44	55	69	65	47	29	21	23	18
CFSM	.77	1.20	1.98	3.04	3.31	4.70	1.83	1.35	.68	.72	.66	.47
IN.	.89	1.34	2.29	3.51	3.44	5.42	2.04	1.55	.76	.83	.76	.53

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1932 - 1994, BY WATER YEAR (WY)

	40.8	54.6	67.9	84.7	99.4	101	90.6	77.5	59.8	57.9	52.7	43.9
MEAN	40.8	54.6	67.9	84.7	99.4	101	90.6	77.5	59.8	57.9	52.7	43.9
MAX	133	115	152	283	236	247	191	160	216	248	241	134
(WY)	1972	1973	1984	1979	1936	1994	1993	1958	1972	1975	1933	1960
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

ELK RIVER BASIN

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

SUMMARY STATISTICS	FOR 1993 CALENDAR YEAR		FOR 1994 WATER YEAR		WATER YEARS 1932 - 1994	
ANNUAL TOTAL	31095		33018		69.3	
ANNUAL MEAN	85.2		90.5		109	
HIGHEST ANNUAL MEAN					35.4	
LOWEST ANNUAL MEAN					109	
HIGHEST DAILY MEAN	1360	Dec 5	2150	Jan 28	3070	Jun 22 1972
LOWEST DAILY MEAN	19	(a)	18	(b)	4.8	(c)
ANNUAL SEVEN-DAY MINIMUM	20	Sep 2	19	Sep 10	4.9	Sep 7 1966
INSTANTANEOUS PEAK FLOW			5220	Jan 28	(d)10600	Jul 5 1937
INSTANTANEOUS PEAK STAGE			9.25	Jan 28	(f)14.50	Jul 5 1937
INSTANTANEOUS LOW FLOW			17	(g)	(h)4.5	Jan 21 1955
ANNUAL RUNOFF (CFSM)	1.62		1.72		1.32	
ANNUAL RUNOFF (INCHES)	21.99		23.35		17.90	
10 PERCENT EXCEEDS	159		157		114	
50 PERCENT EXCEEDS	49		48		47	
90 PERCENT EXCEEDS	27		25		21	

a Sept. 6, 7.

b Sept. 12-15, and 20-21.

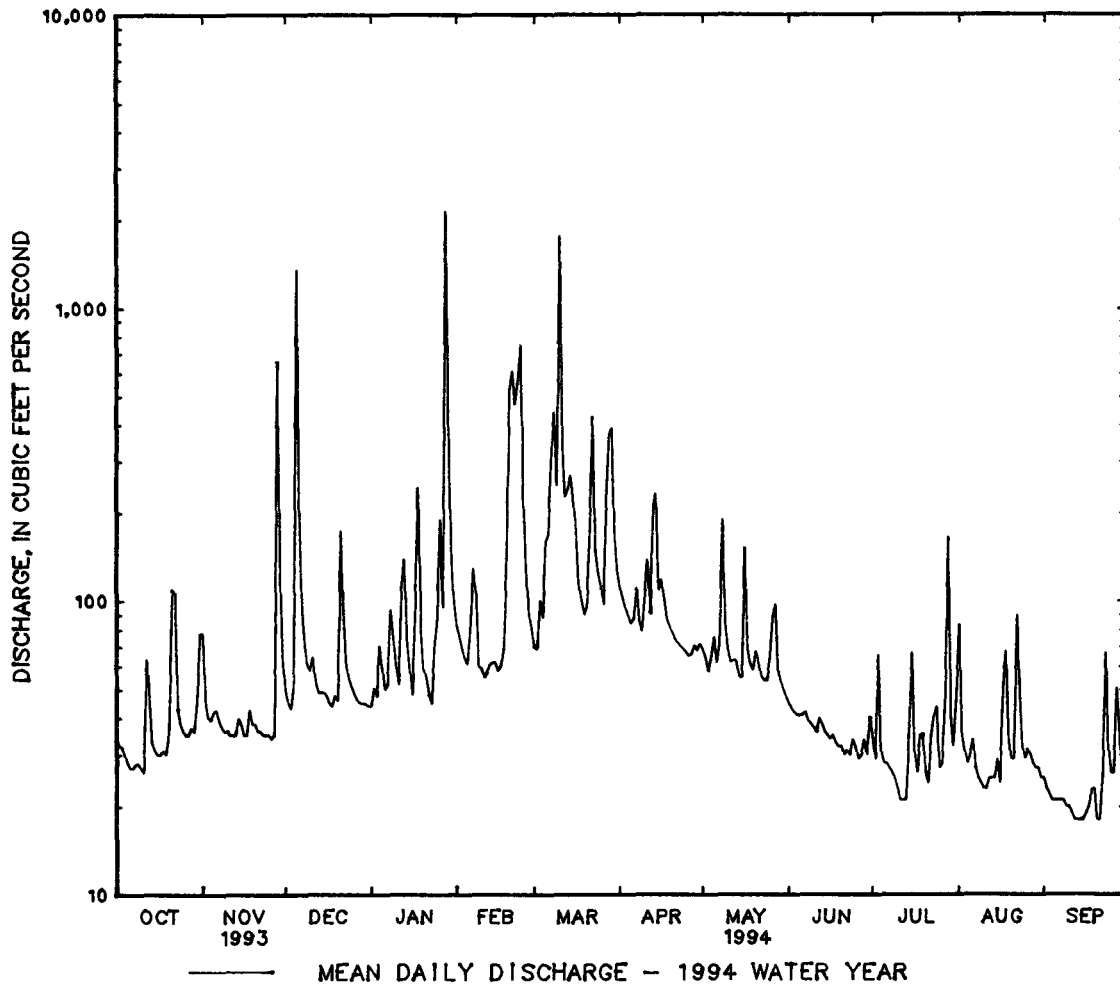
c Sept. 8-10, 1966.

d From rating curve extended above 1,700 ft³/s on basis of velocity-area and conveyance studies.

f From floodmarks.

g Sept. 15 and 21.

h Result of freezeup.



ELK RIVER BASIN

01495900 ELK RIVER NEAR TOWN POINT, MD

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

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

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1981 to November 1985, October 1986 to current year.

WATER TEMPERATURE: October 1981 to November 1985, October 1986 to current year.

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

REMARKS.--Records good except those below 500 microsiemens, which are fair. Interruption of the daily specific conductance and temperature record was caused by equipment malfunction. Probes are attached to southeast side of bulkhead of wharf; prior to Oct. 1986, probes were attached to bulkhead on the north side of the wharf.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE (water years 1982-85, 1987-89, 1991-94): Maximum, 19,900 microsiemens, Oct. 26, 1982; minimum, 117 microsiemens, July 21-23, 28, 1984.

WATER TEMPERATURE (water years 1982-85, 1987-94): Maximum, 33.0°C, Aug. 6, 1988; minimum, 0.0°C on many days during winter periods.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum, 12,600 microsiemens, Jan. 27; minimum, 140 microsiemens, Apr. 3, 6, 10, 13-20, 24-27.

WATER TEMPERATURE: Maximum, 31.2°C, June 19; minimum, 0.0°C, Jan. 3-31, Feb. 1-18, 26-28, Mar. 1-3.

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CENTIGRADE, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	5570	4180	4650	8690	5500	7020	3840	3060	3290	568	460	525
2	5250	3980	4530	5570	4450	4930	3870	3230	3530	460	438	449
3	4140	3280	3580	4990	4350	4670	3600	2440	3000	525	460	479
4	3520	2540	3100	4410	3710	4120	2610	2150	2440	4280	504	2490
5	2880	2180	2340	4250	3150	3570	2580	1840	2240	3600	2020	2760
6	2520	2220	2420	3250	2820	3010	2970	1700	2270	2270	1810	2070
7	2620	2220	2520	3110	2540	2910	2760	1100	1920	1830	1660	1740
8	2530	2280	2410	2710	2180	2430	3610	1730	2630	2350	1730	2000
9	2430	2210	2300	2650	2160	2310	2440	1740	1920	2310	1930	2040
10	2230	1970	2060	2310	2180	2240	1800	1340	1630	1930	1330	1510
11	6020	2110	3080	2410	2230	2290	1430	1080	1250	1600	1290	1420
12	7890	5640	6450	2270	1620	1980	1560	1030	1130	1910	1560	1650
13	6040	4590	5260	1930	1170	1690	1290	1120	1170	3450	1690	2190
14	5800	4770	5210	1890	1700	1790	1290	1020	1200	2790	2310	2640
15	5920	4960	5350	2010	1620	1820	1060	998	1030	2580	2060	2400
16	6090	4960	5380	1850	1710	1790	2830	1020	1450	2220	1750	1980
17	6990	5240	5710	1770	1690	1730	3490	2680	2910	1890	1730	1820
18	6290	5040	5660	2770	1650	1780	3220	2450	2920	1730	1460	1590
19	7380	5240	5860	3250	1750	1940	2520	1830	2100	1580	934	1270
20	6690	5570	5970	2310	1290	1830	1850	1710	1800	1020	955	985
21	7320	6070	6430	1900	919	1320	1710	1310	1570	1040	956	994
22	6250	5030	5510	1430	755	955	1370	633	993	1080	891	1010
23	5150	3880	4400	1190	715	853	891	590	696	2160	719	1310
24	4830	4070	4310	1000	655	768	633	481	551	1950	1770	1900
25	4230	3220	3660	6140	655	1170	547	460	500	2220	1890	2030
26	3690	3450	3520	6140	2810	4060	633	331	446	5550	1750	2860
27	9850	3690	7050	6220	3300	4390	590	504	554	12600	3760	8510
28	7880	6140	6720	6400	5100	5940	525	460	489	11700	8100	9890
29	6420	5060	5730	5290	3990	4650	1080	395	615	8660	5170	6570
30	5220	4580	4770	4120	2540	3080	848	697	777	6420	5190	5700
31	9110	5220	6800	---	---	---	719	568	665	7660	5400	5990
MONTH	9850	1970	4600	8690	655	2770	3870	331	1600	12600	438	2610

ELK RIVER BASIN

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01495900 ELK RIVER NEAR TOWN POINT, MD--Continued

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CENTIGRADE, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	7540	4550	6100	700	526	626	280	180	237	180	160	166
2	5340	4240	4780	721	505	598	260	160	210	200	160	171
3	4610	1580	3510	1410	678	1180	220	140	169	180	160	169
4	2780	1600	1990	3050	1330	1980	260	160	209	180	160	164
5	2200	1810	1870	1950	1310	1580	240	160	209	511	180	289
6	1870	1790	1820	1620	1140	1380	180	140	173	533	180	308
7	1850	1790	1820	1540	1410	1480	240	160	186	220	180	190
8	2100	1750	1860	1470	1270	1390	321	220	263	200	180	190
9	2950	2080	2540	1310	996	1260	301	180	217	200	180	190
10	3160	2720	2890	1310	1140	1230	180	140	164	220	180	199
11	3820	2950	3270	1270	1160	1220	220	160	188	530	180	223
12	4880	3510	4130	1180	996	1070	240	160	189	484	180	288
13	5190	4530	4790	1120	996	1080	180	140	158	551	180	249
14	4780	3050	4090	1100	933	1040	180	140	146	573	160	253
15	3700	3240	3580	996	871	933	180	140	154	220	200	216
16	3530	3410	3480	871	631	762	160	140	146	681	200	350
17	3430	1540	2200	734	362	542	160	140	154	240	200	219
18	3110	1450	2320	445	301	365	200	140	163	810	200	257
19	2800	2600	2720	383	280	322	180	140	154	4590	611	1470
20	2910	2660	2730	424	220	308	180	140	163	4370	2760	3350
21	3070	2840	2950	260	220	233	180	160	170	4430	2730	3310
22	3280	2840	3010	280	200	237	180	160	171	3510	2490	3010
23	2910	2240	2630	362	240	306	180	160	171	2970	2320	2740
24	4190	2700	3710	301	240	276	160	140	154	2880	2290	2690
25	3690	1640	2540	280	220	243	331	140	173	3440	2330	2700
26	1910	613	1200	342	240	282	180	140	160	2630	2030	2440
27	1180	851	1000	280	220	243	160	140	159	2340	1920	2250
28	914	700	793	220	200	212	444	160	180	2330	1920	2120
29	---	---	---	260	200	224	180	160	169	2320	1950	2190
30	---	---	---	301	180	246	180	160	173	2150	1630	2000
31	---	---	---	260	180	230	---	---	---	1710	1220	1540
MONTH	7540	613	2870	3050	180	744	444	140	178	4590	160	1160
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	1360	1010	1200	458	279	340	280	240	249	220	160	189
2	1330	966	1140	398	279	321	280	220	250	260	200	228
3	1190	839	1020	299	260	277	280	240	253	569	220	326
4	962	672	804	339	260	299	280	220	244	1840	240	629
5	795	629	711	320	260	285	240	220	227	5750	1840	3260
6	791	505	632	321	240	271	1520	220	435	3560	2300	2750
7	587	361	450	321	240	276	3480	1260	2140	2640	1800	2250
8	605	402	509	321	240	262	2120	1460	1810	2060	1500	1830
9	643	421	472	260	240	244	2080	1700	1830	1980	1620	1860
10	964	502	675	280	220	247	1900	1540	1770	1800	1540	1670
11	761	621	696	301	240	269	1680	1420	1550	1740	1540	1650
12	777	640	708	301	240	266	1600	1520	1560	1700	1480	1600
13	737	637	680	260	240	252	1560	1160	1410	---	---	---
14	696	557	635	280	220	259	1220	816	1030	---	---	---
15	636	458	556	280	240	251	816	631	717	---	---	---
16	597	478	557	280	240	262	713	672	692	---	---	---
17	597	517	551	301	260	270	692	610	638	---	---	---
18	597	537	565	321	240	270	651	528	588	---	---	---
19	557	457	506	1620	321	892	569	445	512	---	---	---
20	518	438	470	2060	713	1070	528	383	448	---	---	---
21	636	478	553	939	590	770	403	321	373	---	---	---
22	557	478	512	672	301	436	507	321	354	---	---	---
23	695	517	604	424	240	328	1840	342	659	---	---	---
24	696	596	634	362	240	315	1400	939	1210	---	---	---
25	696	596	647	342	260	296	1020	775	901	---	---	---
26	656	537	583	280	240	269	775	487	648	---	---	---
27	577	457	527	280	240	267	507	383	455	---	---	---
28	457	358	425	260	240	257	487	280	369	---	---	---
29	457	358	400	280	240	261	321	260	278	6530	4260	5550
30	358	299	320	280	240	261	362	260	305	4720	3240	3790
31	---	---	---	260	240	250	301	180	233	---	---	---
MONTH	1360	299	625	2060	220	342	3480	180	779	---	---	---

ELK RIVER BASIN

01495900 ELK RIVER NEAR TOWN POINT, MD--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			DECEMBER			JANUARY			
1	19.0	15.4	17.3	12.6	9.0	11.3	7.2	5.3	6.2	.5	.1	.2
2	19.0	17.5	18.3	11.2	8.4	9.6	7.9	6.4	7.1	.8	.1	.3
3	18.5	17.4	18.0	10.4	9.6	10.0	8.1	7.3	7.6	.3	.0	.1
4	18.4	16.6	17.5	10.9	9.3	10.1	7.8	7.4	7.6	1.1	.0	.5
5	17.9	16.0	17.0	11.0	10.2	10.6	8.5	7.1	8.1	.9	.0	.2
6	17.8	15.4	16.7	11.0	9.0	10.2	8.1	6.3	7.2	.4	.0	.0
7	18.2	16.5	17.4	9.5	8.2	8.8	7.9	7.3	7.6	.5	.0	.1
8	18.8	17.2	17.9	10.0	8.0	8.9	7.9	7.0	7.4	.7	.0	.2
9	19.0	17.3	18.2	9.8	8.3	8.9	7.5	6.5	7.0	.5	.0	.1
10	18.6	13.1	16.2	10.0	8.2	9.0	7.2	6.5	6.9	.6	.0	.2
11	16.5	12.2	14.3	9.8	8.3	9.0	7.3	3.7	6.1	.6	.0	.1
12	16.4	15.1	15.6	10.3	8.8	9.5	3.8	1.8	2.5	.4	.0	.1
13	15.9	14.0	15.0	9.7	8.4	9.2	4.3	1.3	2.4	.3	.0	.1
14	15.1	13.5	14.4	11.4	9.6	10.4	5.8	4.0	4.8	.6	.0	.1
15	16.0	14.5	15.1	13.0	10.8	11.8	5.8	5.4	5.6	.3	.0	.1
16	16.1	14.6	15.2	12.5	11.0	11.8	6.6	5.4	6.1	.6	.0	.3
17	16.1	15.2	15.6	12.0	11.1	11.4	5.8	4.5	5.3	.4	.0	.1
18	16.8	15.2	16.0	11.9	10.4	11.1	5.5	5.2	5.3	.5	.0	.2
19	16.0	14.9	15.4	11.1	10.0	10.6	5.5	4.7	5.2	.0	.0	.0
20	15.8	15.5	15.6	10.9	8.5	10.1	5.0	4.5	4.7	.3	.0	.0
21	16.9	15.7	16.2	9.3	7.9	8.7	5.1	3.5	4.7	.3	.0	.1
22	16.3	14.7	15.5	9.3	8.0	8.6	3.8	2.8	3.3	.3	.0	.0
23	16.2	14.0	15.0	9.7	7.7	8.6	3.9	2.9	3.4	.6	.0	.2
24	15.9	14.1	14.8	9.4	8.3	8.8	3.1	2.0	2.6	.4	.0	.1
25	16.4	13.9	15.0	9.5	6.8	7.9	3.2	2.5	2.8	.6	.0	.2
26	15.0	14.2	14.6	9.5	7.2	7.9	2.7	.1	1.0	.6	.0	.1
27	15.8	14.0	14.9	9.3	7.2	8.2	.5	.1	.2	.2	.0	.0
28	15.3	14.0	14.7	10.1	9.1	9.6	.6	.1	.3	.0	.0	.0
29	14.9	13.5	14.2	9.1	7.9	8.5	1.4	.1	.3	.2	.0	.0
30	14.3	12.0	13.2	8.1	6.6	7.2	.1	.1	.1	.3	.0	.1
31	13.1	12.0	12.5	---	---	---	.5	.1	.2	.4	.0	.1
MONTH	19.0	12.0	15.7	13.0	6.6	9.5	8.5	.1	4.5	1.1	.0	.1
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY			MARCH			APRIL			MAY			
1	.3	.0	.0	.7	.0	.3	10.1	7.0	8.4	19.5	16.3	18.4
2	.2	.0	.0	.4	.0	.0	9.6	7.8	8.5	19.7	14.6	17.3
3	.3	.0	.0	1.3	.0	.6	8.7	7.9	8.3	18.7	16.2	17.4
4	.4	.0	.2	1.9	.6	1.2	12.3	7.9	10.0	17.2	14.4	15.8
5	.6	.0	.3	2.7	1.1	1.9	11.2	9.2	10.0	18.4	14.4	16.3
6	.6	.0	.3	2.9	1.1	2.1	10.9	9.4	10.0	17.7	15.9	16.6
7	.5	.0	.2	4.8	1.8	3.1	10.8	9.9	10.3	16.5	15.0	15.8
8	.2	.0	.0	4.1	3.3	3.7	13.0	8.4	10.7	16.3	15.1	15.6
9	.3	.0	.1	3.7	2.2	2.6	11.7	9.5	10.6	17.9	14.3	15.9
10	.2	.0	.0	3.3	2.2	2.7	10.7	9.7	10.2	16.9	16.0	16.4
11	.2	.0	.0	4.7	2.3	3.3	12.7	9.5	11.1	18.0	15.1	16.8
12	.3	.0	.0	5.3	2.1	3.8	12.0	9.8	10.7	17.5	15.7	16.8
13	.2	.0	.0	5.3	3.7	4.6	11.2	9.8	10.2	18.0	13.8	16.1
14	.3	.0	.0	6.9	4.4	5.5	12.6	10.4	11.2	18.2	15.5	17.0
15	.3	.0	.0	6.3	5.4	5.8	13.0	11.4	11.9	19.3	16.9	18.0
16	.4	.0	.1	5.6	3.1	4.9	13.6	11.6	12.5	20.2	17.1	18.9
17	.3	.0	.1	4.8	1.7	3.1	12.5	11.1	11.8	17.3	15.1	16.3
18	1.0	.0	.4	3.3	2.5	2.9	14.1	10.7	12.3	17.6	14.7	16.2
19	2.3	.2	1.2	5.2	2.2	3.6	13.6	12.3	13.0	16.3	15.6	15.9
20	3.0	1.4	2.1	5.6	2.9	4.2	16.8	12.7	14.7	16.1	15.4	15.7
21	2.2	1.6	2.0	4.7	3.8	4.3	16.5	13.8	14.8	18.3	14.9	16.4
22	3.0	.6	1.9	7.1	4.2	5.6	16.8	12.7	14.8	19.7	16.0	17.7
23	2.4	1.0	1.4	8.3	5.5	6.8	16.5	13.3	14.7	20.9	17.4	18.9
24	2.4	1.3	1.7	9.3	6.4	7.7	16.1	13.5	14.7	21.2	18.6	20.0
25	3.0	.8	1.8	8.4	7.0	7.9	17.8	14.3	16.0	21.9	19.6	20.7
26	1.9	.0	1.3	8.6	5.5	7.2	18.2	14.8	16.6	21.7	20.2	20.9
27	.5	.0	.2	7.9	6.7	7.0	18.0	16.4	17.3	21.0	18.9	19.8
28	.4	.0	.1	7.5	6.8	7.1	20.4	17.1	18.4	21.1	17.7	19.8
29	---	---	---	7.9	6.8	7.3	18.5	17.2	17.8	21.8	19.4	20.7
30	---	---	---	8.5	6.5	7.5	19.8	17.5	18.5	23.3	20.4	21.6
31	---	---	---	8.1	6.9	7.5	---	---	---	23.8	20.8	22.0
MONTH	3.0	.0	.5	9.3	.0	4.4	20.4	7.0	12.7	23.8	13.8	17.8

ELK RIVER BASIN

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01495900 ELK RIVER NEAR TOWN POINT, MD--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	24.6	21.4	22.8	28.8	25.9	27.3	29.4	27.2	28.3	25.8	23.6	24.6
2	23.4	20.7	22.2	29.7	26.6	27.9	29.4	27.7	28.4	25.0	22.1	23.6
3	23.9	20.2	22.0	29.3	27.1	28.0	29.8	27.4	28.4	23.6	22.1	22.9
4	25.0	21.3	23.1	30.0	26.8	28.1	30.1	27.6	28.7	23.2	20.9	22.2
5	23.7	22.5	23.0	29.9	27.2	28.1	28.6	24.5	27.2	23.9	22.3	23.0
6	24.1	22.3	23.1	30.6	27.6	28.8	26.9	21.8	25.2	24.1	22.0	22.9
7	25.0	22.9	24.0	30.5	27.5	29.1	28.1	25.5	26.8	23.5	21.9	22.8
8	26.0	22.7	24.4	30.7	28.7	29.8	28.3	25.4	26.6	23.4	21.0	22.3
9	25.2	21.2	23.4	31.1	28.8	30.0	27.9	25.2	26.6	23.8	21.8	22.8
10	26.1	22.9	24.3	30.3	28.5	29.4	27.6	26.0	26.7	23.6	21.8	22.6
11	24.3	23.1	23.6	29.6	27.0	28.5	27.7	25.2	26.4	22.7	20.7	21.7
12	25.1	23.1	24.0	29.9	27.2	28.7	27.9	26.0	26.9	23.0	20.3	21.6
13	26.7	24.0	25.0	30.3	28.2	29.3	28.5	26.7	27.4	---	---	---
14	27.0	25.1	25.8	30.2	28.4	29.3	27.8	26.2	27.1	---	---	---
15	28.5	25.8	26.9	30.3	28.2	29.3	27.3	25.2	26.0	---	---	---
16	29.7	26.8	28.0	30.1	28.4	29.1	27.2	25.0	25.9	---	---	---
17	29.2	26.9	27.8	31.1	28.1	29.3	25.7	24.9	25.2	---	---	---
18	30.1	27.0	28.3	30.4	27.7	29.0	25.7	24.4	25.2	---	---	---
19	31.2	27.9	29.1	30.4	28.2	29.3	26.9	24.1	25.3	---	---	---
20	30.6	27.4	28.8	31.1	28.8	29.7	27.0	25.0	26.0	---	---	---
21	29.2	27.4	28.1	30.4	28.8	29.6	26.2	25.5	25.9	---	---	---
22	29.6	27.1	28.4	29.8	28.3	28.9	25.7	23.8	24.7	---	---	---
23	29.9	26.9	28.4	29.3	27.7	28.4	26.1	21.2	24.3	---	---	---
24	30.0	27.6	28.8	30.0	27.5	28.8	26.4	24.3	25.2	---	---	---
25	29.0	27.1	28.3	30.4	28.3	29.2	25.5	24.1	24.8	---	---	---
26	28.6	26.3	27.6	29.7	28.0	28.7	26.0	24.1	24.8	---	---	---
27	27.9	27.1	27.4	28.9	27.7	28.3	26.0	24.2	25.0	---	---	---
28	28.1	26.4	27.2	27.8	27.0	27.5	26.0	24.4	25.1	---	---	---
29	27.9	26.7	27.3	29.0	26.3	27.6	24.9	23.7	24.5	21.1	18.6	20.3
30	27.9	26.3	26.9	29.3	27.3	28.2	26.1	23.2	24.5	20.8	17.8	19.3
31	---	---	---	29.5	27.7	28.3	24.9	23.5	24.2	---	---	---
MONTH	31.2	20.2	25.9	31.1	25.9	28.8	30.1	21.2	26.0	---	---	---

SUSQUEHANNA RIVER BASIN

01578310 SUSQUEHANNA RIVER AT CONOWINGO, MD

LOCATION.--Lat 39°39'31", long 76°10'28", Harford County, Hydrologic Unit 02050306, at downstream side of Conowingo Dam, 1.0 mi southwest of Conowingo, and 9.9 mi upstream from mouth.

DRAINAGE AREA.--27,100 mi².

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 discharge. 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.

PEAK DISCHARGE FOR CURRENT YEAR.--Peak discharge, 403,000 ft³/s, Mar. 23, gage height, 26.16 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	23800	24300	180000	11800	68200	65100	200000	33200	23700	41400	27600	38000
2	17400	22400	139000	9270	58300	64300	170000	54600	17600	44200	13400	34400
3	4460	25300	110000	23100	56100	54800	170000	63500	18700	34800	19900	30200
4	19200	23800	80000	27100	52100	52800	209000	57000	11100	25500	27200	19300
5	20200	21600	108000	30200	34300	44700	249000	64000	6410	30200	15100	20000
6	14400	19200	139000	19000	29500	44000	234000	49600	27300	25000	13900	23400
7	22300	12300	120000	20300	42000	50500	212000	54700	24500	25300	6290	23400
8	10500	32400	111000	8120	37600	60300	229000	50300	18300	27000	19900	13600
9	4460	30800	99700	9120	36800	64400	212000	51100	19900	22600	18500	18000
10	4420	37400	78100	28100	29800	78800	178000	50300	17800	15300	17300	16200
11	10900	34000	68700	8700	33600	124000	164000	41000	11200	29700	12800	6530
12	21800	35200	68700	14600	16900	123000	164000	50900	10400	32100	15100	12100
13	13100	17800	77700	12700	20100	111000	171000	41400	19600	22400	10500	15600
14	12000	13600	74700	21900	26100	118000	213000	35400	28900	24400	5900	13900
15	13300	25200	66700	13100	23200	132000	233000	28700	30500	25400	10600	12900
16	4700	19100	61500	12000	28900	132000	199000	47000	48100	13900	18100	17100
17	4510	21000	55000	13900	28800	137000	157000	28400	64100	11000	42300	10200
18	7440	28300	37500	18300	19900	130000	157000	28800	59900	20100	60500	5550
19	9800	43000	39200	12300	22400	115000	143000	40300	33900	17800	92000	14500
20	12000	47900	41800	14300	19100	88600	123000	27200	39300	18600	202000	18000
21	14200	47600	46400	14900	41700	97300	109000	21100	28600	19400	141000	13800
22	13300	57900	46500	9130	62800	112000	93900	20800	23700	17000	127000	17200
23	14100	55500	52000	2560	104000	151000	75800	31900	21300	19100	103000	16100
24	4470	45100	39100	22200	176000	229000	62500	29800	17500	19100	97600	14700
25	16300	30400	39900	22300	151000	304000	68400	22800	16100	25400	87400	5100
26	19900	29100	32000	19000	119000	358000	58700	25600	6410	25600	67800	20700
27	19000	23600	31200	20800	89700	353000	49400	25200	20500	29200	54500	21700
28	19500	61400	29200	36200	80700	343000	48400	15700	36800	24000	45100	23800
29	18500	189000	22400	36000	---	315000	45800	17300	37000	28900	42900	46700
30	7250	236000	26700	36200	---	284000	36500	23200	37900	21800	45300	53500
31	6430	---	13600	48500	---	246000	---	25800	---	16000	45600	---
TOTAL	403640	1310200	2135300	595700	1508600	4582600	4435400	1156600	777020	752200	1506090	596180
MEAN	13020	43670	68880	19220	53880	147800	147800	37310	25900	24260	48580	19870
MAX	23800	236000	180000	48500	176000	358000	249000	64000	64100	44200	202000	53500
MIN	4420	12300	13600	2560	16900	44000	36500	15700	6410	11000	5900	5100
CFSM	.48	1.61	2.54	.71	1.99	5.45	5.46	1.38	.96	.90	1.79	.73
IN.	.55	1.80	2.93	.82	2.07	6.29	6.09	1.59	1.07	1.03	2.07	.82

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1968 - 1994, BY WATER YEAR (WY)

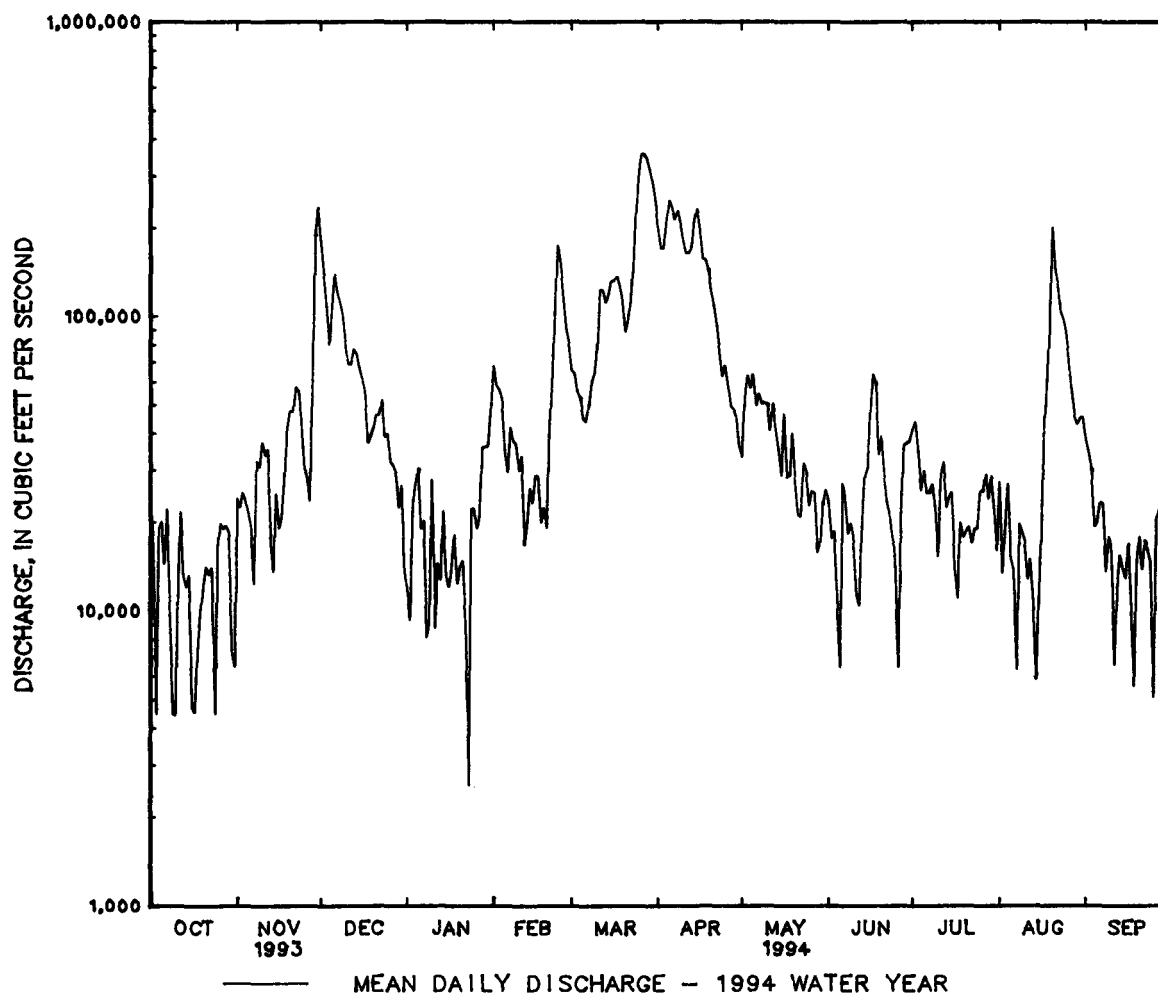
	MEAN	23630	35920	49470	38570	53210	75060	83690	48930	37020	20480	14570	16480
MAX	81800	73170	104700	101200	115800	147800	250100	108200	208000	59050	48580	88450	
(WY)	1977	1978	1973	1979	1984	1994	1993	1989	1972	1972	1994	1975	
MIN	5557	9803	14630	7164	13050	28320	36670	23900	8656	6107	5927	4737	
(WY)	1970	1981	1990	1981	1980	1969	1988	1982	1991	1991	1991	1980	

SUSQUEHANNA RIVER BASIN

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01578310 SUSQUEHANNA RIVER AT CONOWINGO, MD--Continued

SUMMARY STATISTICS	FOR 1993 CALENDAR YEAR		FOR 1994 WATER YEAR		WATER YEARS 1968 - 1994	
ANNUAL TOTAL	19153600		19759530		41310	
ANNUAL MEAN	52480		<u>54140</u>		61090	1978
HIGHEST ANNUAL MEAN					26570	1981
LOWEST ANNUAL MEAN					1120000	Jun 24 1972
HIGHEST DAILY MEAN	467000	Apr 2	358000	Mar 26	269	Jul 13 1969
LOWEST DAILY MEAN	4120	Feb 21	2560	Jan 23	1810	Sep 24 1980
ANNUAL SEVEN-DAY MINIMUM	5700	Aug 27	9110	Oct 14	1130000	Jun 24 1972
INSTANTANEOUS PEAK FLOW			403000	Mar 26	36.83	Jun 24 1972
INSTANTANEOUS PEAK STAGE			26.16	Mar 26	144	Mar 2 1969
INSTANTANEOUS LOW FLOW			917	Jan 2	1.52	
ANNUAL RUNOFF (CFSM)	1.94		2.00		20.71	
ANNUAL RUNOFF (INCHES)	26.29		27.12			
10 PERCENT EXCEEDS	157000		139000		86000	
50 PERCENT EXCEEDS	21000		29100		27700	
90 PERCENT EXCEEDS	6150		12100		6000	



SUSQUEHANNA RIVER BASIN

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

WATER-QUALITY RECORDS

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

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.--Trace metals and organics collected and analyzed using ultraclean methodologies for the 1994 water year were not available at time of publication. Data are available upon request.

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: Maximum 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 1993 TO SEPTEMBER 1994

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH WATER WHOLE FIELD (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	TEMPER- ATURE AIR (DEG C)	BARO- METRIC PRES- SURE (MM OF HG)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)
OCT 1993												
19...	1315	12600	345	7.8	16.0	15.0	768	--	8.1	81	--	--
NOV												
03...	1200	31700	350	7.9	12.0	8.0	766	--	9.0	83	--	--
17...	1215	16000	264	7.6	9.0	12.0	762	1.8	11.6	100	17	10
30...	1415	225000	134	7.0	8.0	6.0	776	--	12.0	100	--	--
DEC												
01...	1400	177000	128	6.5	7.0	8.0	780	--	12.8	103	--	--
02...	1315	139000	123	7.5	6.5	15.0	773	--	13.1	105	--	--
07...	1245	142000	158	7.4	6.5	11.0	764	--	12.5	101	--	--
FEB 1994												
07...	1245	38500	222	7.1	2.0	11.0	765	--	--	--	--	--
24...	1515	133000	225	7.8	1.0	6.5	751	24	14.6	104	820	980
MAR												
11...	1400	120000	195	7.1	2.0	6.0	768	--	8.8	63	--	--
23...	1345	164000	215	7.6	6.0	21.0	756	--	13.0	105	--	--
25...	1630	295000	167	6.6	6.5	9.5	758	--	13.9	114	--	--
26...	1930	389000	143	6.7	5.5	8.0	764	--	13.6	108	--	--
27...	1115	369000	134	7.5	5.5	6.0	755	--	13.3	106	--	--
27...	2130	372000	128	7.3	5.0	6.0	754	--	13.4	106	--	--
28...	1130	364000	134	7.3	5.5	6.0	756	--	13.6	108	--	--
28...	1830	331000	135	7.4	5.0	6.0	759	--	--	--	--	--
29...	0830	348000	132	7.4	5.5	--	762	--	13.9	111	--	--
29...	1730	310000	134	7.3	5.5	--	763	--	13.9	110	--	--
30...	1000	290000	141	7.4	5.5	--	771	--	13.9	109	--	--
APR												
01...	1145	218000	164	7.6	9.0	11.5	763	--	13.3	115	--	--
06...	1030	259000	138	7.1	9.0	13.5	756	--	12.6	110	--	--
12...	1130	179000	146	7.3	8.5	9.0	773	--	12.9	109	--	--
20...	1130	132000	150	7.5	12.5	19.5	763	--	10.8	101	--	--
MAY												
04...	1115	61000	234	7.9	17.0	--	767	6.2	10.6	109	48	830
26...	1045	28700	234	7.9	19.5	24.5	750	--	9.0	99	--	--
JUN												
10...	1020	6700	284	7.4	25.5	--	754	--	5.5	68	--	--
29...	1130	59400	200	7.5	27.5	27.5	756	--	5.0	64	--	--
JUL												
13...	0815	6200	205	7.5	28.5	28.0	762	--	5.9	76	--	--
27...	1215	53800	252	7.4	28.5	28.5	759	--	4.3	55	--	--
AUG												
18...	1000	77700	265	7.4	25.5	25.5	752	--	5.7	71	--	--
20...	1300	243000	191	7.3	22.0	26.5	755	--	8.8	101	--	--
22...	1345	154000	118	7.3	20.0	22.0	757	--	8.5	94	--	--
29...	1330	67700	172	7.3	22.5	24.0	759	--	7.5	87	--	--
SEP												
01...	1430	68400	183	7.8	23.0	26.0	762	--	7.6	88	--	--
14...	1245	26000	225	8.0	24.0	31.0	760	2.6	7.7	92	2500	180
28...	1100	45700	300	7.6	22.5	19.0	757	--	6.1	71	--	--

SUSQUEHANNA RIVER BASIN

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01578310 SUSQUEHANNA RIVER AT CONOWINGO, MD--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	HARD- NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY WAT DIS TOT IT FIELD (MG/L AS CACO3)	BICAR- BONATE WATER DIS IT FIELD (MG/L AS HCO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)
OCT 1993												
19...	--	--	--	--	--	59	72	--	--	--	2.1	--
NOV												
03...	--	--	--	--	--	63	77	--	--	--	1.7	--
17...	98	27	7.4	11	1.9	49	60	45	16	0.10	2.9	149
30...	49	14	3.5	3.7	2.5	29	35	22	6.3	0.20	4.5	--
DEC												
01...	46	13	3.2	3.4	1.9	20	25	22	5.5	0.10	4.9	--
02...	46	13	3.4	3.7	1.7	23	28	23	6.1	0.10	5.0	--
07...	--	--	--	--	--	32	39	--	--	--	5.5	--
FEB 1994												
07...	81	22	6.3	10	1.6	35	43	38	17	<0.10	--	--
24...	76	21	5.6	11	1.8	35	43	28	16	<0.10	5.9	117
MAR												
11...	--	--	--	--	1.7	35	42	--	--	--	5.3	--
23...	--	--	--	--	--	36	44	--	--	--	5.4	--
25...	58	16	4.5	5.9	1.5	27	33	22	10	<0.10	5.3	--
26...	53	15	3.7	4.9	1.4	23	28	19	8.8	<0.10	5.3	--
27...	44	12	3.4	4.3	1.3	21	--	19	7.8	<0.10	5.0	--
27...	50	14	3.6	3.5	1.4	--	--	19	8.0	<0.10	5.0	--
28...	47	13	3.5	4.7	1.4	22	27	19	8.3	<0.10	5.2	--
28...	47	13	3.5	4.1	1.4	25	30	19	8.0	<0.10	5.1	--
29...	50	14	3.7	4.2	1.4	24	29	20	8.1	<0.10	5.2	--
29...	51	14	3.8	4.3	1.5	27	33	20	7.9	<0.10	5.3	--
30...	51	14	3.9	4.5	1.4	27	33	21	8.1	<0.10	5.4	--
APR												
01...	--	--	--	--	--	28	34	--	--	--	5.6	--
06...	--	--	--	--	--	22	26	--	--	--	4.8	--
12...	--	--	--	--	--	25	30	--	--	--	4.4	--
20...	--	--	--	--	--	27	33	--	--	--	4.5	--
MAY												
04...	94	26	7.1	7.4	1.5	48	59	39	12	<0.10	1.7	133
26...	--	--	--	--	--	45	55	--	--	--	1.0	--
JUN												
10...	--	--	--	--	--	--	--	--	--	--	--	--
29...	--	--	--	--	--	37	45	--	--	--	3.8	--
JUL												
13...	--	--	--	--	--	44	53	--	--	--	3.7	--
27...	--	--	--	--	--	54	65	--	--	--	--	--
AUG												
18...	--	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	40	49	--	--	--	4.0	--
22...	--	--	--	--	--	22	26	--	--	--	4.6	--
29...	--	--	--	--	--	33	40	--	--	--	5.8	--
SEP												
01...	--	--	--	--	--	36	43	--	--	--	5.7	--
14...	83	23	6.2	8.3	1.9	--	--	35	12	<0.10	3.6	138
28...	--	--	--	--	--	47	57	--	--	--	1.1	--

SUSQUEHANNA RIVER BASIN

01578310 SUSQUEHANNA RIVER AT CONOWINGO, MD--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS NO3)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N)	PHOS- PHORUS TOTAL (MG/L AS P)	PHOS- PHORUS DIS- SOLVED (MG/L AS P)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P)	ALUM- INUM, DIS- SOLVED (UG/L AS AL)
OCT 1993											
19...	4.8	0.015	1.10	1.10	0.080	0.30	0.20	0.020	0.005	0.001	--
NOV											
03...	--	<0.001	0.850	0.850	0.010	0.30	<0.20	0.030	0.021	0.011	--
17...	5.7	0.012	1.30	1.30	0.050	0.20	<0.20	0.010	0.010	0.004	20
30...	--	--	--	--	--	--	--	0.220	0.028	0.014	10
DEC											
01...	4.8	0.005	1.10	1.10	0.040	0.50	<0.20	0.130	0.023	0.010	20
02...	4.9	0.004	1.10	1.10	0.040	0.40	<0.20	0.080	0.016	0.007	20
07...	6.6	0.007	1.50	1.50	0.060	0.40	<0.20	0.140	0.070	0.055	--
FEB 1994											
07...	--	--	--	--	--	--	--	--	--	--	20
24...	7.5	0.012	1.70	1.70	0.170	0.40	0.30	0.080	0.026	0.029	110
MAR											
11...	7.5	0.013	1.70	1.70	0.190	0.50	0.40	0.050	0.041	0.197	30
23...	7.9	0.011	1.80	1.80	0.130	0.40	0.30	0.110	0.044	0.034	70
25...	7.1	0.006	1.60	1.60	0.070	0.40	0.20	0.130	0.017	0.009	70
26...	5.7	0.006	1.30	1.30	0.080	0.70	0.20	0.170	0.015	0.009	70
27...	5.3	0.006	1.20	1.20	0.080	0.40	<0.20	0.120	0.014	0.012	60
27...	5.3	0.004	1.20	1.20	0.060	0.40	<0.20	0.110	0.014	0.005	60
28...	5.7	0.007	1.30	1.30	0.080	0.50	0.20	0.160	0.022	0.012	50
28...	5.7	0.010	1.30	1.30	0.070	0.20	0.30	0.030	0.021	0.012	80
29...	6.2	0.006	1.40	1.40	0.070	0.30	0.20	0.050	0.019	0.011	80
29...	6.2	0.007	1.40	1.40	0.070	0.40	<0.20	0.110	0.021	0.012	80
30...	6.2	0.006	1.40	1.40	0.060	0.40	<0.20	0.090	0.020	0.013	50
APR											
01...	6.2	0.004	1.40	1.40	0.050	<0.20	<0.20	0.010	0.012	0.007	60
06...	4.4	0.004	1.00	1.00	0.060	0.30	<0.20	0.040	0.008	0.003	60
12...	4.3	0.006	0.980	0.980	0.040	<0.20	<0.20	0.020	0.008	0.005	50
20...	4.1	0.006	0.940	0.940	0.040	0.20	<0.20	0.030	0.011	0.005	50
MAY											
04...	4.8	0.010	1.10	1.10	0.030	0.40	<0.20	<0.010	0.004	0.002	60
26...	4.2	0.010	0.960	0.960	0.050	0.30	0.20	0.010	0.004	<0.001	30
JUN											
10...	--	--	--	--	--	--	--	--	--	--	--
29...	2.9	0.025	0.680	0.680	0.140	0.50	0.30	0.040	0.005	0.007	20
JUL											
13...	3.5	0.025	0.820	0.820	0.080	0.60	0.30	0.060	0.010	0.002	30
27...	--	--	--	--	--	--	--	--	--	--	--
AUG											
18...	--	--	--	--	--	--	--	--	--	--	--
20...	3.8	0.016	0.870	0.870	0.080	0.50	0.30	0.090	0.024	0.015	40
22...	2.7	0.009	0.630	0.630	0.050	0.40	0.20	0.050	0.036	0.019	150
29...	4.4	0.013	1.00	1.00	0.040	0.30	<0.20	0.060	0.023	0.016	50
SEP											
01...	4.4	0.015	1.00	1.00	0.030	0.20	<0.20	0.030	0.020	0.015	30
14...	3.8	0.028	0.890	0.890	0.060	0.30	0.20	0.020	0.006	0.001	20
28...	4.1	0.066	1.00	1.00	0.090	0.30	0.30	0.020	0.008	0.004	20

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WATER QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

[illegible]

01578310 SUSQUEHANNA RIVER AT CONOWINGO, MD--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

[illegible]

SUSQUEHANNA RIVER BASIN

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01578310 SUSQUEHANNA RIVER AT CONOWINGO, MD--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	NICKEL, DIS- SOLVED (UG/L AS NI)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, DIS- SOLVED (UG/L AS AG)	STRON- TIUM, TOTAL RECOV- ERABLE (UG/L AS SR)	STRON- TIUM, DIS- SOLVED (UG/L AS SR)	VANA- DIUM, DIS- SOLVED (UG/L AS V)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	CARBON, ORGANIC SUS- PENDED TOTAL (MG/L AS C)
OCT 1993											
19...	--	--	--	--	--	--	--	--	3.1	--	--
NOV											
03...	--	--	--	--	--	--	--	--	4.9	--	--
17...	3	<1	<1.0	--	130	<6	--	<4	2.7	--	--
30...	3	--	--	70	--	--	40	1	9.8	--	--
DEC											
01...	3	--	--	40	--	--	30	2	7.8	--	--
02...	3	--	--	60	--	--	20	1	6.3	--	--
07...	--	--	--	--	--	--	--	--	5.8	--	--
FEB 1994											
07...	7	--	--	100	--	--	<10	10	--	--	--
24...	2	<1	<1.0	--	110	<6	--	7	8.6	--	--
MAR											
11...	--	--	--	--	--	--	--	--	3.2	1.9	0.6
23...	--	--	--	--	--	--	--	--	3.4	1.9	--
25...	3	--	--	60	--	--	40	--	4.8	--	--
26...	3	--	--	60	--	--	50	--	7.6	--	--
27...	2	--	--	50	--	--	40	--	5.2	--	--
27...	2	--	--	40	--	--	40	--	7.5	--	--
28...	2	--	--	50	--	--	40	--	7.4	--	--
28...	3	--	--	60	--	--	30	--	5.1	2.2	1.6
29...	3	--	--	60	--	--	30	--	4.8	--	--
29...	3	--	--	60	--	--	30	--	4.5	2.2	1.3
30...	3	--	--	60	--	--	30	--	4.2	--	--
APR											
01...	--	--	--	--	--	--	--	--	2.7	--	--
06...	--	--	--	--	--	--	--	--	3.1	1.6	0.9
12...	--	--	--	--	--	--	--	--	2.9	--	--
20...	--	--	--	--	--	--	--	--	2.7	--	0.8
MAY											
04...	2	<1	<1.0	--	120	<6	--	3	4.1	--	--
26...	--	--	--	--	--	--	--	--	2.4	--	0.5
JUN											
10...	--	--	--	--	--	--	--	--	--	2.0	0.6
29...	--	--	--	--	--	--	--	--	4.2	2.4	0.7
JUL											
13...	--	--	--	--	--	--	--	--	4.3	--	--
27...	--	--	--	--	--	--	--	--	--	2.5	0.6
AUG											
18...	--	--	--	--	--	--	--	--	--	2.1	0.7
20...	--	--	--	--	--	--	--	--	5.2	3.0	1.4
22...	--	--	--	--	--	--	--	--	6.9	--	--
29...	--	--	--	--	--	--	--	--	4.8	4.0	0.8
SEP											
01...	--	--	--	--	--	--	--	--	6.2	--	--
14...	1	<1	<1.0	--	110	6	--	1	3.6	--	--
28...	--	--	--	--	--	--	--	--	3.9	--	--

SUSQUEHANNA RIVER BASIN

01578310 SUSQUEHANNA RIVER AT CONOWINGO, MD--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

RADIOCHEMICAL ANALYSES

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	RADIUM 226, DIS- SOLVED, RADON METHOD (PCI/L)	RA-226 2 SIGMA WATER, DISS, (PCI/L)	URANIUM NATURAL DIS- SOLVED (UG/L AS U)	URANIUM NATURAL 2 SIGMA WATER, DISS, (UG/L)
MAY 1994						
04...	1115	61000	0.03	0.010	0.16	<1.0
SEP						
14...	1245	26000	0.04	0.010	0.15	<1.0

SUSPENDED SEDIMENT DISCHARGE

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT 1993					
19...	1315	12600	7	238	88
NOV					
03...	1200	31700	9	770	93
17...	1215	16000	7	302	89
30...	1415	225000	127	77200	99
DEC					
01...	1400	177000	78	37300	98
02...	1315	139000	48	18000	98
07...	1245	142000	65	24900	--
FEB 1994					
07...	1245	38500	5	520	86
24...	1515	133000	47	16900	100
MAR					
11...	1400	120000	31	10000	98
23...	1345	164000	36	15900	--
25...	1630	295000	101	80400	93
26...	1930	389000	125	131000	97
27...	1115	369000	98	97600	97
27...	2130	372000	115	116000	97
28...	1130	364000	148	145000	96
28...	1830	331000	115	103000	94
29...	0830	348000	85	79900	95
29...	1730	310000	78	65300	94
30...	1000	290000	60	47000	94
APR					
01...	1145	218000	35	20600	95
06...	1030	259000	38	26600	95
12...	1130	179000	31	15000	97
20...	1130	132000	22	7840	96
MAY					
04...	1115	61000	17	2800	97
26...	1045	28700	9	697	90
JUN					
29...	1130	59400	20	3210	100
JUL					
13...	0815	6200	14	234	98
27...	1215	53800	10	1450	100
AUG					
20...	1300	243000	47	30800	98
22...	1345	154000	106	44100	100
29...	1330	67700	20	3660	99
SEP					
01...	1430	68400	20	3690	99
14...	1245	26000	7	491	94
28...	1100	45700	10	1230	98

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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.

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.--Water-discharge records good except those for estimated daily discharges (ice effect), which are fair. Prior to 1965, some regulation at low flow by mills upstream from station.

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

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,900 ft³/s and maximum (*):

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
MEAN DAILY VALUES

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1927 - 1994, BY WATER YEAR (WY)

MEAN	82.5	101	115	138	163	170	169	150	125	105	95.8	87.8
MAX	317	266	286	398	415	486	379	421	576	279	362	345
(WY)	1980	1927	1984	1979	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

SUSQUEHANNA RIVER BASIN

01580000 DEER CREEK AT ROCKS, MD--Continued

SUMMARY STATISTICS	FOR 1993 CALENDAR YEAR		FOR 1994 WATER YEAR		WATER YEARS 1927 - 1994	
ANNUAL TOTAL	63151		72004		125	
ANNUAL MEAN	173		197		224	1972
HIGHEST ANNUAL MEAN					58.2	1966
LOWEST ANNUAL MEAN					6610	Jun 22 1972
HIGHEST DAILY MEAN	3210	Nov 28	3210	Nov 28	8.6	(b)
LOWEST DAILY MEAN	49	(a)	54	Sep 21	9.0	Sep 7 1966
ANNUAL SEVEN-DAY MINIMUM	56	Aug 28	58	Sep 10	(c)13600	Aug 23 1933
INSTANTANEOUS PEAK FLOW			8450	Nov 28	(d)17.70	Aug 23 1933
INSTANTANEOUS PEAK STAGE			14.08	Nov 28	8.0	(f)
INSTANTANEOUS LOW FLOW			40	Sep 1	1.32	
ANNUAL RUNOFF (CFSM)	1.83		2.09		17.98	
ANNUAL RUNOFF (INCHES)	24.89		28.37		210	
10 PERCENT EXCEEDS	307		383		93	
50 PERCENT EXCEEDS	120		135		45	
90 PERCENT EXCEEDS	64		68			

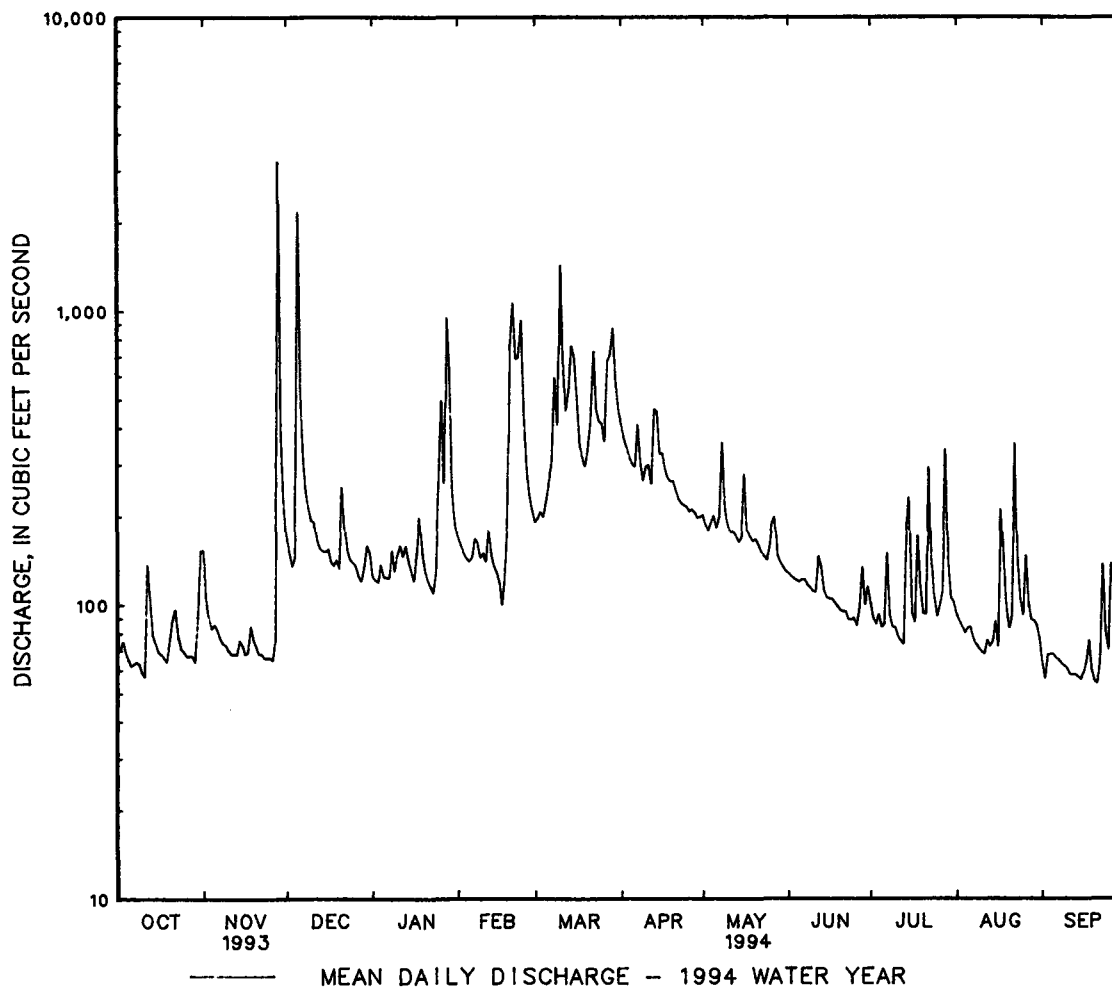
a Sept. 14, 15.

b Sept. 11, 12 1966.

c From rating curve extended above 3,000 ft³/s, on basis of slope-area measurements at gage heights 13.3 ft and 17.7 ft.

d From floodmarks.

f Dec. 16, 1930, Jan. 26, 1939, result of regulation.



SUSQUEHANNA RIVER BASIN

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01580000 DEER CREEK AT ROCKS, MD--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1972-73, 1976-80, October 1993 to September 1994.

WATER QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH WATER WHOLE FIELD (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	TEMPER- ATURE AIR (DEG C)	HARD- NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LITY WAT DIS TOT IT FIELD MG/L AS CACO3
OCT 1993 07...	0800	57	155	6.5	10.0	10.0	46	11	4.5	8.1	2.6	21
AUG 1994 25...	0900	107	158	7.0	18.0	20.0	45	11	4.3	8.3	2.7	25

DATE	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS NO3)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	IRON, DIS- SOLVED (UG/L AS FE)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)
OCT 1993 07...	5.2	19	--	8.1	--	--	<0.010	3.60	3.60	68	23
AUG 1994 25...	5.2	18	<0.10	6.4	97	15	0.010	3.30	3.30	86	33

BUSH RIVER BASIN

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 mi².

WATER-DISCHARGE RECORDS

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.--Water-discharge records good below 200 ft³/s and fair above.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 28	0600	*4,910	*9.30	Feb. 20	1545	1,360	5.04
Dec. 5	0500	2,760	7.01	July 14	1915	1,070	4.53
Jan. 28	1330	1,790	5.72	Aug. 17	1245	1,450	5.19

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	39	62	53	53	95	75	121	67	39	26	47	25
2	38	39	49	53	86	80	103	61	37	24	32	23
3	36	35	45	49	90	134	97	58	35	23	30	22
4	35	32	86	77	88	108	93	64	34	23	27	22
5	34	36	1140	56	80	181	88	68	35	23	32	22
6	30	36	135	49	102	e105	94	59	35	24	28	21
7	24	33	90	57	123	e205	130	87	35	34	24	21
8	23	31	76	87	101	e210	92	155	34	23	23	20
9	22	30	69	54	94	e135	85	71	34	21	22	20
10	22	29	66	54	85	e570	105	62	31	20	22	19
11	19	27	66	57	88	e165	101	58	32	19	21	19
12	105	27	58	91	107	148	88	65	35	18	24	19
13	39	28	55	74	97	151	224	58	34	18	22	18
14	30	33	55	68	87	171	e140	53	31	153	31	18
15	28	31	57	54	75	150	e87	53	30	70	28	18
16	25	28	60	61	75	121	e90	79	30	30	21	21
17	26	29	52	75	80	97	e76	56	29	25	312	20
18	24	41	51	201	88	92	e75	52	29	55	66	23
19	26	32	55	e100	207	89	e75	52	28	32	39	19
20	35	30	51	e90	494	90	e73	55	26	26	32	19
21	59	28	129	e85	373	146	71	52	27	25	78	17
22	42	26	69	82	217	198	70	49	25	44	98	35
23	31	28	59	76	311	130	68	46	28	42	51	70
24	29	27	54	120	497	106	66	43	31	29	36	30
25	28	26	53	e125	156	102	65	61	27	25	32	25
26	28	26	51	e250	103	89	63	91	25	24	54	114
27	28	46	49	83	86	274	66	68	36	86	35	54
28	29	1310	48	711	74	306	64	48	39	128	31	32
29	28	101	50	263	---	329	60	43	30	44	30	27
30	48	65	48	129	---	161	61	42	30	33	29	25
31	68	---	53	109	---	136	---	40	---	156	26	---
TOTAL	1078	2352	3032	3493	4159	5054	2691	1916	951	1323	1383	838
MEAN	34.8	78.4	97.8	113	149	163	89.7	61.8	31.7	42.7	44.6	27.9
MAX	105	1310	1140	711	497	570	224	155	39	156	312	114
MIN	19	26	45	49	74	75	60	40	25	18	21	17
CFSM	1.00	2.25	2.81	3.24	4.27	4.68	2.58	1.78	.91	1.23	1.28	.80
IN.	1.15	2.51	3.24	3.73	4.45	5.40	2.88	2.05	1.02	1.41	1.48	.90

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1967 - 1994, BY WATER YEAR (WY)

	34.8	44.6	54.5	61.2	69.7	68.7	64.5	60.6	53.0	45.9	39.5	41.6
MEAN	34.8	44.6	54.5	61.2	69.7	68.7	64.5	60.6	53.0	45.9	39.5	41.6
MAX	94.0	86.2	118	150	151	163	134	162	204	133	137	140
(WY)	1980	1972	1984	1979	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	11.3	11.6	10.4
(WY)	1970	1982	1981	1981	1992	1981	1969	1969	1969	1986	1981	1986

BUSH RIVER BASIN

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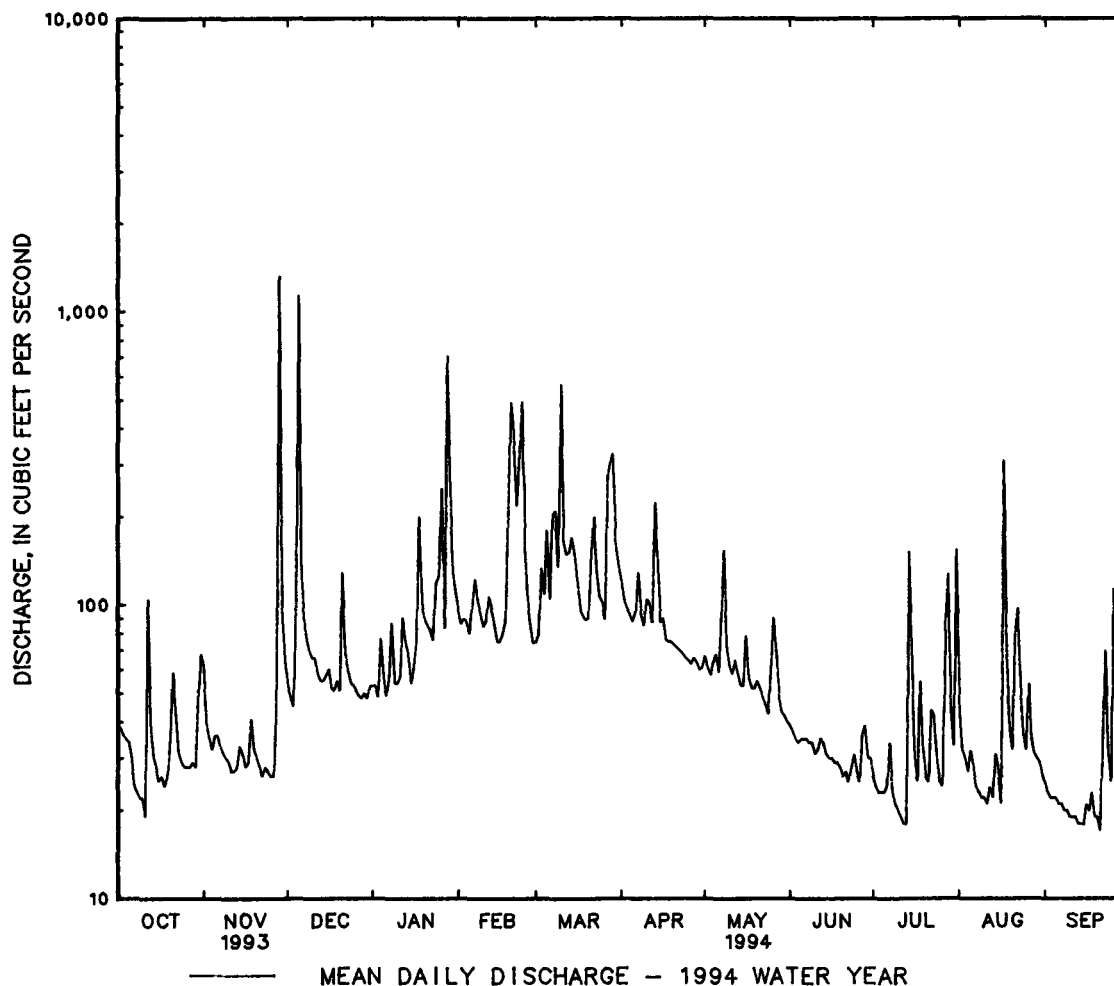
01581700 WINTERS RUN NEAR BENSON, MD--Continued

SUMMARY STATISTICS	FOR 1993 CALENDAR YEAR		FOR 1994 WATER YEAR		WATER YEARS 1967 - 1994	
ANNUAL TOTAL	24840		28270			
ANNUAL MEAN	68.1		77.5		52.9	
HIGHEST ANNUAL MEAN					86.0	
LOWEST ANNUAL MEAN					22.9	
HIGHEST DAILY MEAN	1310	Nov 28	1310	Nov 28	3000	Jun 22 1972
LOWEST DAILY MEAN	17	Sep 6	17	Sep 21	6.7	(a)
ANNUAL SEVEN-DAY MINIMUM	18	Sep 2	19	Sep 9	7.9	Jun 30 1969
INSTANTANEOUS PEAK FLOW			4910	Nov 28	7600	Jun 22 1972
INSTANTANEOUS PEAK STAGE			9.30	Nov 28	11.60	Jun 22 1972
INSTANTANEOUS LOW FLOW			16	(b)	(c) 3.0	Jan 10 1982
ANNUAL RUNOFF (CFSM)	1.96		2.23		1.52	
ANNUAL RUNOFF (INCHES)	26.55		30.22		20.64	
10 PERCENT EXCEEDS	110		135		88	
50 PERCENT EXCEEDS	45		52		38	
90 PERCENT EXCEEDS	25		23		16	

a Aug. 28, 29, 1981.

b July 13, 14.

c Result of freezeup.



BUSH RIVER BASIN

01581700 WINTERS RUN NEAR BENSON, MD

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1993 to September 1994.

WATER QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH WATER WHOLE FIELD (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	TEMPER- ATURE AIR (DEG C)	HARD- NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
OCT 1993 07...	0920	22	144	6.5	11.0	16.0	44	9.1	5.2	7.0	2.2
AUG 1994 25...	1015	33	142	7.1	18.0	22.0	44	9.6	4.8	7.2	2.1

DATE	ALKA- LINITY WAT DIS TOT IT FIELD MG/L AS CACO3	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	IRON, DIS- SOLVED (UG/L AS FE)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)
OCT 1993 07...	23	6.8	15	--	13	--	<0.010	3.30	3.30	60	17
AUG 1994 25...	25	7.3	14	<0.10	12	94	<0.010	2.70	2.70	83	23

GUNPOWDER RIVER BASIN

107

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 mi².

WATER-DISCHARGE RECORDS

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.--Water-discharge records good except those for estimated daily discharges (ice effect), which are fair. Slight diurnal fluctuation at low flow caused by mill upstream from station.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 28	0730	*4,360	*10.32	Feb. 20	1900	1,060	4.19
Dec. 5	0845	2,380	6.85	Mar. 10	0915	1,190	4.48

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	37	63	89	e68	93	135	221	118	74	52	51	43
2	36	47	80	68	91	134	201	112	71	48	48	41
3	39	43	73	66	100	147	190	109	70	46	47	40
4	35	40	91	77	94	136	181	118	68	48	45	39
5	33	42	1060	67	81	156	171	115	68	45	47	38
6	32	40	231	68	81	163	169	108	69	49	45	38
7	32	37	162	71	92	206	248	129	67	81	41	38
8	32	36	135	91	86	e263	168	188	65	48	40	36
9	33	36	117	72	81	e170	157	119	63	43	39	35
10	31	36	111	e74	85	661	184	110	61	46	39	35
11	31	35	107	e80	77	323	169	104	62	41	39	34
12	75	35	92	94	95	258	156	107	64	39	50	33
13	45	35	88	88	78	305	285	100	60	38	44	33
14	37	39	86	80	69	409	223	96	57	103	52	33
15	36	36	86	65	70	356	181	103	55	102	53	33
16	35	34	87	e69	67	253	191	137	56	51	44	37
17	35	36	78	e80	69	201	166	100	55	66	77	36
18	34	41	75	e100	79	182	156	97	54	78	71	41
19	34	36	78	e80	140	179	150	94	54	53	54	34
20	46	35	73	e70	431	213	144	95	53	48	49	33
21	50	34	143	e66	490	275	139	91	52	158	89	32
22	48	34	97	e63	327	348	135	88	51	117	158	41
23	40	33	85	e62	368	254	131	85	49	80	75	109
24	38	33	79	e75	479	231	129	82	49	59	58	45
25	37	33	77	e110	257	221	127	104	49	53	51	40
26	36	32	73	e210	203	193	124	139	45	52	82	93
27	36	47	74	e80	165	370	130	112	64	57	54	69
28	36	1330	68	e300	147	375	123	89	83	178	48	46
29	35	171	e72	220	---	428	119	83	53	72	50	43
30	58	111	e74	124	---	291	118	79	58	57	47	40
31	74	---	e69	104	---	247	---	76	---	54	44	---
TOTAL	1236	2640	3910	2942	4495	8083	4986	3287	1799	2062	1731	1288
MEAN	39.9	88.0	126	94.9	161	261	166	106	60.0	66.5	55.8	42.9
MAX	75	1330	1060	300	490	661	285	188	83	178	158	109
MIN	31	32	68	62	67	134	118	76	45	38	39	32
CFSM	.75	1.66	2.38	1.79	3.03	4.93	3.14	2.00	1.13	1.26	1.06	.81
IN.	.87	1.86	2.75	2.07	3.16	5.68	3.51	2.31	1.27	1.45	1.22	.91

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1944 - 1994, BY WATER YEAR (WY)

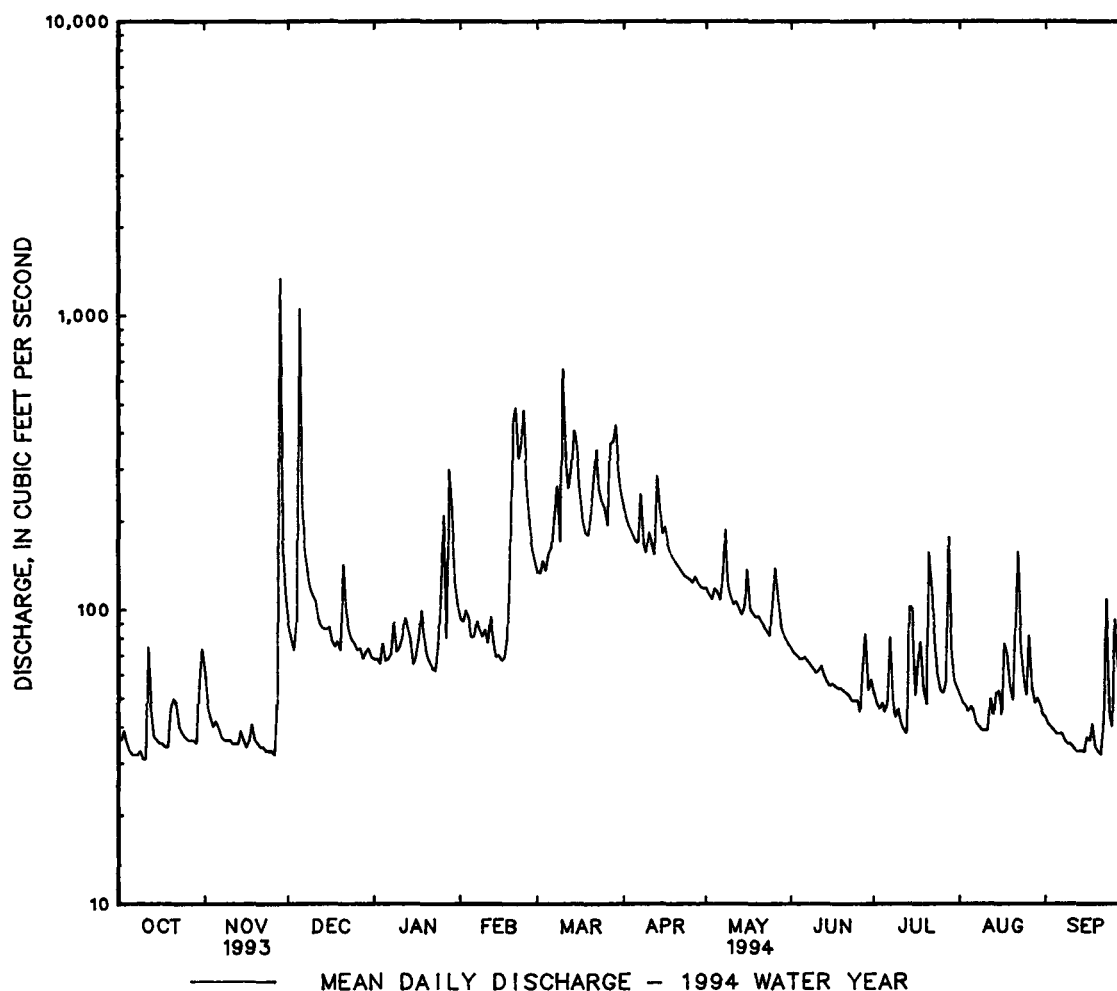
	45.1	55.0	64.5	74.0	88.3	93.2	92.2	84.4	70.8	57.6	47.5	48.1
MEAN	45.1	55.0	64.5	74.0	88.3	93.2	92.2	84.4	70.8	57.6	47.5	48.1
MAX	203	129	145	180	187	261	194	202	353	158	159	227
(WY)	1980	1972	1973	1979	1979	1994	1952	1952	1972	1972	1971	1975
MIN	16.7	22.8	20.9	22.1	37.9	40.3	38.4	29.4	24.3	12.2	9.44	17.2
(WY)	1964	1982	1966	1981	1967	1981	1963	1969	1966	1966	1966	1986

GUNPOWDER RIVER BASIN

01582000 LITTLE FALLS AT BLUE MOUNT, MD--Continued

SUMMARY STATISTICS	FOR 1993 CALENDAR YEAR		FOR 1994 WATER YEAR		WATER YEARS 1944 - 1994	
ANNUAL TOTAL	34667		38459			
ANNUAL MEAN	95.0		105		68.4	
HIGHEST ANNUAL MEAN					132	
LOWEST ANNUAL MEAN					31.8	
HIGHEST DAILY MEAN	1330	Nov 28	1330	Nov 28	4730	Jun 22 1972
LOWEST DAILY MEAN	30	Sep 3	31	(a)	4.5	Sep 11 1966
ANNUAL SEVEN-DAY MINIMUM	32	Oct 5	32	Oct 5	4.8	Sep 6 1966
INSTANTANEOUS PEAK FLOW			4360	Nov 28	(b)8280	Jun 22 1972
INSTANTANEOUS PEAK STAGE			10.32	Nov 28	18.54	Jun 22 1972
INSTANTANEOUS LOW FLOW			30	(a)	1.9	Aug 26 1966
ANNUAL RUNOFF (CFSM)	1.80		1.99		1.29	
ANNUAL RUNOFF (INCHES)	24.38		27.04		17.56	
10 PERCENT EXCEEDS	177		204		117	
50 PERCENT EXCEEDS	64		73		51	
90 PERCENT EXCEEDS	35		36		25	

a Oct. 10, 11.

b From rating curve extended above 1,300 ft³/s on basis of contracted-opening measurement of peak flow.

GUNPOWDER RIVER BASIN

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01582000 LITTLE FALLS AT BLUE MOUNT, MD--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1993 to September 1994.

WATER QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH WATER WHOLE FIELD (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	TEMPER- ATURE AIR (DEG C)	HARD- NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
OCT 1993 07...	1200	38	165	6.6	14.0	20.0	49	11	5.2	8.9	1.8
AUG 1994 25...	1145	52	169	7.1	18.0	23.0	48	11	4.9	9.6	1.8

DATE	ALKA- LITY WAT DIS TOT IT FIELD MG/L AS CACO3	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, DIS- SOLVED (MG/L AS N)	IRON, DIS- SOLVED (UG/L AS FE)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)
OCT 1993 07...	22	5.9	22	--	9.2	--	<0.010	3.40	3.40	65	25
AUG 1994 25...	24	6.1	22	<0.10	8.7	95	<0.010	3.20	3.20	52	25

GUNPOWDER RIVER BASIN

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 mi².

PERIOD OF RECORD.--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 discharge (ice effect, missing record), 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 gal; dead storage, 1,080,000,000 gal). Several measurements of water temperature were made during the year.

PEAK DISCHARGE FOR CURRENT YEAR.--Peak discharge, 5,180 ft³/s, Mar. 4, gage height, 13.72 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	128	172	352	194	e270	361	717	346	212	167	143	e135
2	123	146	283	198	e270	366	645	326	204	150	137	e130
3	123	139	248	199	e275	460	600	303	188	142	135	e127
4	118	135	255	228	e250	405	574	320	182	139	129	e122
5	115	136	2470	227	e230	416	535	339	179	131	132	e118
6	113	135	1210	204	e240	437	522	316	181	137	131	e116
7	112	131	648	212	e260	483	691	324	185	185	125	e113
8	112	129	473	279	249	739	551	533	180	139	123	e110
9	112	127	390	244	257	659	496	399	176	130	121	e108
10	112	127	346	236	226	1460	522	344	169	131	121	e106
11	111	127	350	247	423	1130	537	311	166	124	119	e105
12	176	126	301	244	497	819	488	317	169	123	128	e105
13	136	125	265	271	223	792	660	303	167	121	123	e105
14	124	131	253	e225	213	986	713	279	162	166	129	e105
15	121	127	252	e215	194	1000	578	275	158	222	136	e106
16	119	127	267	e225	194	895	572	390	160	139	120	e110
17	118	127	243	e250	193	686	518	311	205	183	163	e116
18	117	138	234	e300	205	593	473	281	184	233	160	e110
19	117	129	242	e260	298	555	449	269	169	168	133	e104
20	135	127	230	e230	764	570	439	264	162	145	126	e102
21	142	125	364	e215	1130	656	415	257	150	271	169	e100
22	146	125	334	e205	1010	972	400	246	148	257	294	e120
23	129	124	282	e200	980	787	386	238	139	202	183	e220
24	126	123	256	e300	e1100	727	377	233	137	169	148	e130
25	124	123	244	e400	e750	699	371	253	137	e140	135	e125
26	122	122	242	e650	616	629	363	335	134	e140	246	e200
27	122	136	212	e250	473	930	372	393	144	e170	209	e150
28	121	e3000	208	e900	400	1110	370	287	279	e340	168	e135
29	121	953	203	e500	---	1280	346	251	200	e190	154	e130
30	146	507	214	e350	---	989	343	231	184	165	144	e125
31	185	---	196	e300	---	804	---	218	---	151	e140	---
TOTAL	3926	7999	12067	8958	12190	23395	15023	9492	5210	5270	4624	3688
MEAN	127	267	389	289	435	755	501	306	174	170	149	123
MAX	185	3000	2470	900	1130	1460	717	533	279	340	294	220
MIN	111	122	196	194	193	361	343	218	134	121	119	100
(†)	19808	20348	20471	20153	20286	20327	20178	20061	19938	19922	19963	19518

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1983 - 1994, BY WATER YEAR (WY)

	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994
MEAN	131	164	187	185	214	256	271	264	181	171	140	137
MAX	198	267	389	339	435	755	586	476	284	280	184	227
(WY)	1990	1994	1994	1991	1994	1994	1993	1989	1989	1986	1990	1987
MIN	52.4	81.6	101	63.3	85.8	127	114	85.5	82.4	94.8	70.8	69.6
(WY)	1987	1993	1993	1983	1983	1992	1992	1992	1992	1985	1985	1983

† Monthend contents, in millions of gallons, in Prettyboy Reservoir (contents on Sept. 30, 1993, 19,828,000,000 gal). Records furnished by Baltimore Department of Public Works.

01582500 GUNPOWDER FALLS AT GLENCOE, MD--Continued

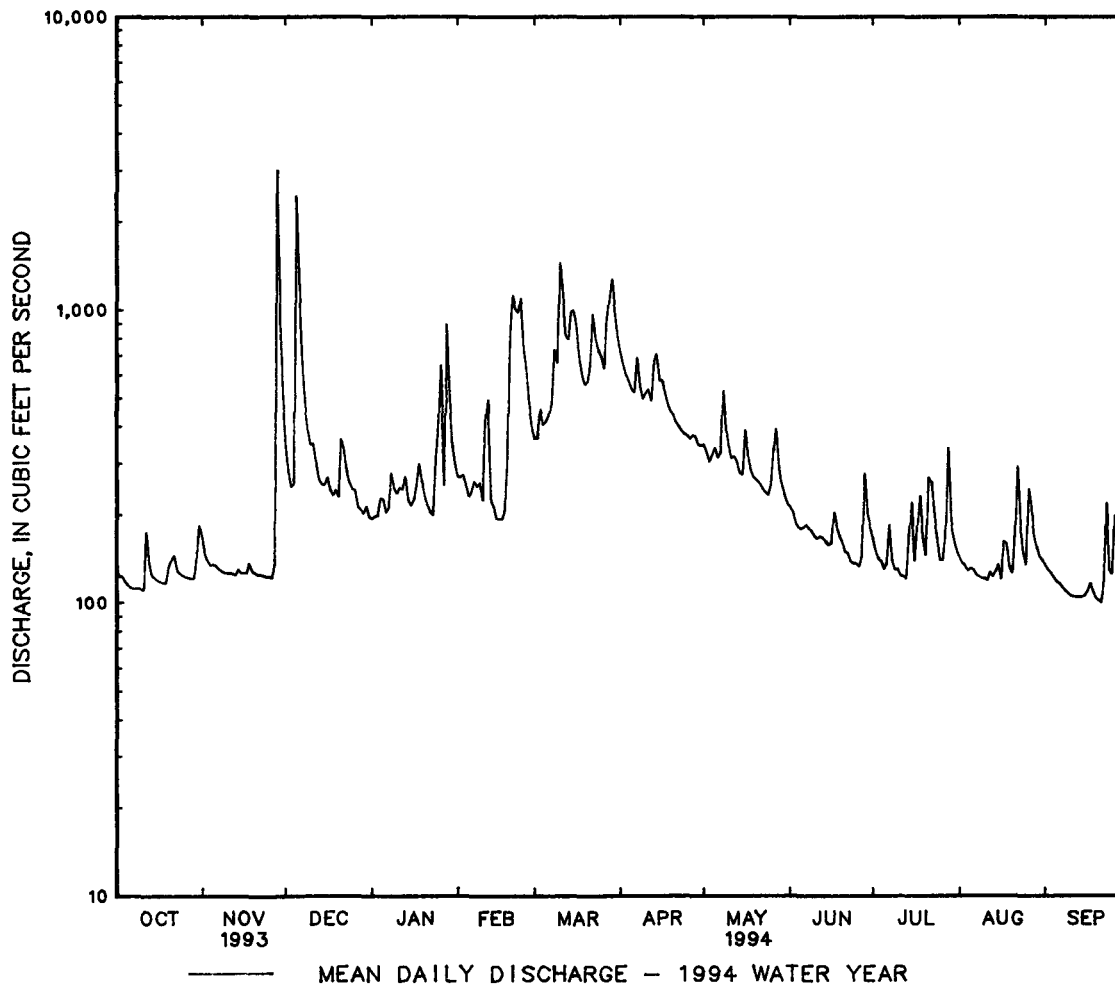
SUMMARY STATISTICS	FOR 1993 CALENDAR YEAR		FOR 1994 WATER YEAR		WATER YEARS 1983 - 1994	
ANNUAL TOTAL	92451		111842		192	
ANNUAL MEAN	253		306		306	
HIGHEST ANNUAL MEAN					118	
LOWEST ANNUAL MEAN					118	
HIGHEST DAILY MEAN	(e)3000	Nov 28	(e)3000	Nov 28	(e)3000	Nov 28 1993
LOWEST DAILY MEAN	78	(a)	(e)100	Sep 21	42	(b)
ANNUAL SEVEN-DAY MINIMUM	79	Feb 5	106	Sep 9	43	Sep 14 1986
INSTANTANEOUS PEAK FLOW			5180	Nov 28	5180	Nov 28 1993
INSTANTANEOUS PEAK STAGE			13.72	Nov 28	13.72	Nov 28 1993
INSTANTANEOUS LOW FLOW			UNKNOWN		(c)35	Jan 4 1983
ANNUAL RUNOFF (CFSM)	1.58		1.92		1.20	
ANNUAL RUNOFF (INCHES)	21.49		26.00		16.32	
10 PERCENT EXCEEDS	529		649		340	
50 PERCENT EXCEEDS	146		209		146	
90 PERCENT EXCEEDS	93		121		78	

e Estimated.

a Feb. 10, 11.

b Sept. 17, 18, 1986.

c Result of freezeup.



GUNPOWDER RIVER BASIN

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 mi².

WATER-DISCHARGE RECORDS

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.--Water-discharge records good except those for estimated daily discharges (ice effect, doubtful gage-height record), which are fair.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 28	0815	*5,700	*10.05	Feb. 20	1815	1,160	4.60
Dec. 5	0700	2,160	6.22	Mar. 10	1015	1,620	5.40
Jan. 28	1545	1,100	4.48				

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	47	69	93	71	e96	e135	e170	121	69	56	51	43
2	45	56	83	72	e90	130	e165	114	67	53	48	41
3	45	53	77	71	e87	148	e162	111	67	53	47	39
4	42	51	110	82	85	131	e158	121	67	58	45	39
5	40	53	1080	73	85	184	153	125	67	52	46	37
6	39	51	195	70	e100	183	153	115	69	51	45	38
7	39	48	142	76	e95	266	e250	126	69	55	42	37
8	38	47	120	110	e85	336	e160	203	67	48	41	35
9	38	46	107	e80	94	205	150	117	66	46	40	35
10	36	46	102	e75	82	783	161	104	64	45	40	35
11	35	45	101	e75	75	268	163	98	65	43	39	33
12	70	45	89	96	92	212	145	101	68	42	41	33
13	53	45	85	101	83	e250	e350	96	66	42	40	33
14	46	49	84	93	80	e400	210	91	63	45	44	32
15	44	46	83	80	76	e200	e160	91	61	48	49	34
16	43	44	88	e80	76	e180	e180	e140	112	43	40	35
17	43	46	79	e95	79	e160	160	91	86	73	54	36
18	42	58	77	e110	93	e155	148	89	65	81	56	40
19	42	49	81	e90	250	e150	144	87	60	51	46	33
20	57	47	76	e78	661	e170	138	89	57	46	43	32
21	62	44	160	e72	411	e210	134	85	64	74	66	32
22	69	44	107	e68	234	e280	130	82	76	65	101	41
23	51	44	93	e62	295	e165	128	79	56	55	60	87
24	48	44	88	e80	544	e160	127	76	57	50	48	44
25	47	43	83	e130	e200	e155	125	77	55	47	46	40
26	46	42	79	e300	e170	e150	121	e110	52	46	147	86
27	46	60	74	110	e155	e370	127	e130	77	68	58	59
28	45	1920	74	468	e145	e350	126	77	110	160	49	46
29	44	166	74	e220	---	e450	117	73	61	65	53	43
30	60	112	75	e130	---	215	118	71	59	54	48	40
31	84	---	e76	e110	---	182	---	70	---	54	44	---
TOTAL	1486	3513	3935	3428	4618	7333	4733	3160	2042	1769	1617	1238
MEAN	47.9	117	127	111	165	237	158	102	68.1	57.1	52.2	41.3
MAX	84	1920	1080	468	661	783	350	203	112	160	147	87
MIN	35	42	74	62	75	130	117	70	52	42	39	32
CFSM	.80	1.96	2.12	1.85	2.76	3.96	2.64	1.70	1.14	.95	.87	.69
IN.	.92	2.19	2.45	2.13	2.87	4.56	2.94	1.97	1.27	1.10	1.01	.77

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1944 - 1994, BY WATER YEAR (WY)

	45.4	55.7	67.0	78.8	92.6	95.8	90.6	82.9	71.5	55.4	48.8	47.7
MEAN	45.4	55.7	67.0	78.8	92.6	95.8	90.6	82.9	71.5	55.4	48.8	47.7
MAX	209	131	185	222	240	237	209	227	395	164	183	261
(WY)	1980	1953	1973	1979	1994	1952	1952	1972	1972	1971	1975	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

GUNPOWDER RIVER BASIN

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01583500 WESTERN RUN AT WESTERN RUN, MD--Continued

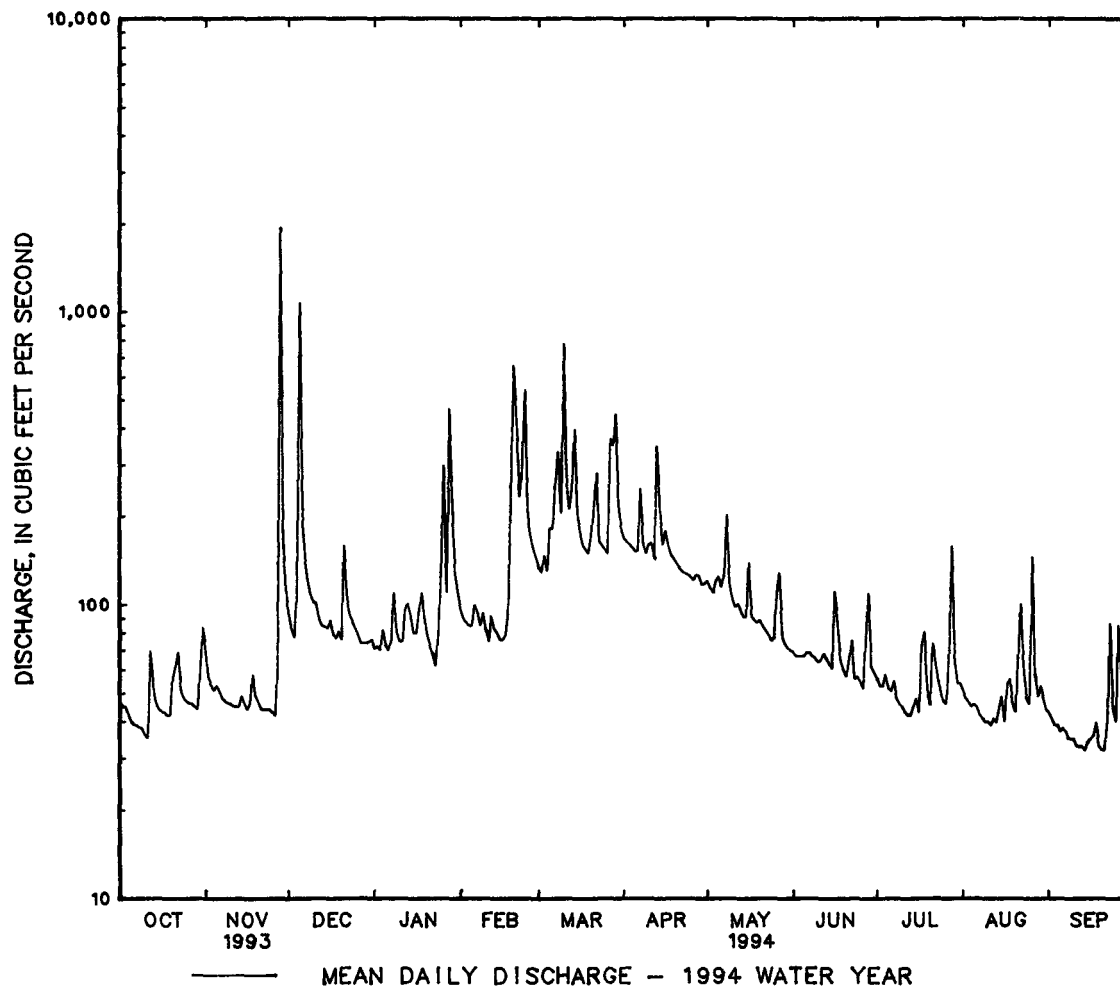
SUMMARY STATISTICS	FOR 1993 CALENDAR YEAR		FOR 1994 WATER YEAR		WATER YEARS 1944 - 1994	
ANNUAL TOTAL	36353		38872		69.2	
ANNUAL MEAN	99.6		106		138	
HIGHEST ANNUAL MEAN					28.9	
LOWEST ANNUAL MEAN					7000	
HIGHEST DAILY MEAN	1920	Nov 28	1920	Nov 28	2.5	Jun 22 1972
LOWEST DAILY MEAN	31	Sep 7	32	(a)	3.8	Sep 12 1966
ANNUAL SEVEN-DAY MINIMUM	34	Sep 1	34	Sep 9	38000	Sep 6 1966
INSTANTANEOUS PEAK FLOW			5700	Nov 28	(c)26.00	Jun 22 1972
INSTANTANEOUS PEAK STAGE			10.05	Nov 28	(d)	Jun 22 1972
INSTANTANEOUS LOW FLOW			30	(d)	2.4	Sep 12 1966
ANNUAL RUNOFF (CFSM)	1.67		1.78		1.16	
ANNUAL RUNOFF (INCHES)	22.61		24.18		15.73	
10 PERCENT EXCEEDS	170		180		117	
50 PERCENT EXCEEDS	66		75		51	
90 PERCENT EXCEEDS	39		41		23	

a Sept. 14, 20, 21.

b From rating curve extended above 3,200 ft³/s, on basis of slope-area measurement and contracted-opening measurement of peak flow.

c From floodmarks.

d Sept. 14, 15, 20, 21.



GUNPOWDER RIVER BASIN

01583500 WESTERN RUN AT WESTERN RUN, MD--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1993 to September 1994.

WATER QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH WATER WHOLE FIELD (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	TEMPER- ATURE AIR (DEG C)	HARD- NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LITY WAT DIS TOT IT FIELD MG/L AS CACO3
OCT 1993 07...	1350	38	241	7.1	13.0	21.0	94	24	8.3	8.2	2.1	66
AUG 1994 25...	1315	45	237	7.6	19.0	25.5	90	23	7.9	8.5	1.8	64

DATE	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS NO3)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	IRON, DIS- SOLVED (UG/L AS FE)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)
OCT 1993 07...	8.5	19	--	11	--	15	0.010	3.40	3.40	29	20
AUG 1994 25...	8.0	18	<0.10	11	137	--	<0.010	3.00	3.00	38	26

01583600 BEAVERDAM RUN AT COCKEYSVILLE, MD

LOCATION.--Lat 39°29'08", long 76°38'46", 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 mi².

WATER-DISCHARGE RECORDS

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.--Water-discharge records good except those for estimated daily discharges (missing record), which are fair.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 650 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 28	0530	*1,820	*10.22	July 27	2115	939	6.47
Dec. 5	0730	849	6.05	Aug. 26	0015	671	5.19

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16	25	28	21	e28	38	63	44	30	20	26	19
2	15	20	25	21	e25	41	58	37	26	19	23	18
3	14	19	23	21	e24	107	56	35	26	32	22	18
4	13	18	82	38	24	70	54	54	25	41	20	18
5	12	28	560	22	23	91	52	43	23	22	30	18
6	12	20	96	19	30	69	56	37	25	29	21	19
7	13	18	45	39	33	105	78	105	25	28	19	18
8	13	17	38	e50	27	114	51	93	24	20	18	16
9	13	18	34	e26	30	85	49	46	23	18	18	16
10	13	17	35	e23	e24	336	70	40	22	18	18	15
11	12	18	32	23	e23	99	54	37	24	17	18	15
12	79	18	28	54	e22	69	49	45	23	18	27	15
13	17	21	28	31	25	68	156	36	22	17	19	15
14	15	20	27	30	25	72	75	34	23	29	49	16
15	15	18	32	e23	23	69	56	50	20	20	24	17
16	14	18	30	e23	29	61	63	56	56	18	19	16
17	15	33	25	e37	31	53	53	35	30	50	54	17
18	14	26	24	e52	42	51	50	34	24	48	31	18
19	15	19	29	e26	111	49	49	33	22	28	22	15
20	33	18	23	e22	224	49	46	36	21	20	20	15
21	37	17	93	e22	140	102	44	31	57	65	78	15
22	21	17	31	e20	69	73	43	28	33	30	73	68
23	17	17	27	e20	150	55	42	30	24	23	28	46
24	15	17	25	43	223	52	42	30	35	21	23	19
25	16	17	24	39	69	56	41	44	23	19	36	18
26	17	16	22	e110	51	48	40	92	24	22	117	57
27	16	109	22	e32	e44	178	47	45	42	172	25	33
28	16	886	21	249	e40	190	41	34	30	129	23	21
29	15	70	22	73	---	194	39	31	23	36	40	19
30	45	35	22	38	---	83	40	28	21	29	23	17
31	39	---	22	33	---	69	---	28	---	29	20	---
TOTAL	617	1610	1575	1280	1609	2796	1657	1351	826	1087	984	647
MEAN	19.9	53.7	50.8	41.3	57.5	90.2	55.2	43.6	27.5	35.1	31.7	21.6
MAX	79	886	560	249	224	336	156	105	57	172	117	68
MIN	12	16	21	19	22	38	39	28	20	17	18	15
CFSM	.95	2.57	2.43	1.98	2.75	4.32	2.64	2.09	1.32	1.68	1.52	1.03
IN.	1.10	2.87	2.80	2.28	2.86	4.98	2.95	2.40	1.47	1.93	1.75	1.15

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1983 - 1994, BY WATER YEAR (WY)

	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994
MEAN	18.8	28.3	29.7	28.0	33.0	42.7	39.6	39.8	25.4	25.0	19.8	19.9
MAX	33.0	53.7	59.0	41.9	57.5	90.2	81.6	80.5	43.7	49.8	39.7	36.7
(WY)	1990	1994	1984	1991	1994	1994	1983	1989	1983	1984	1990	1987
MIN	10.4	14.8	15.0	16.9	18.5	21.4	18.5	14.5	9.23	8.94	10.0	7.29
(WY)	1983	1983	1983	1992	1992	1985	1985	1986	1986	1986	1985	1986

GUNPOWDER RIVER BASIN

01583600 BEAVERDAM RUN AT COCKEYSVILLE, MD--Continued

SUMMARY STATISTICS	FOR 1993 CALENDAR YEAR		FOR 1994 WATER YEAR		WATER YEARS 1983 - 1994	
ANNUAL TOTAL	13954		16039			
ANNUAL MEAN	38.2		43.9		29.1	
HIGHEST ANNUAL MEAN					43.9	
LOWEST ANNUAL MEAN					17.2	
HIGHEST DAILY MEAN	886	Nov 28	886	Nov 28	886	Nov 28 1993
LOWEST DAILY MEAN	11	(a)	12	(b)	5.5	(c)
ANNUAL SEVEN-DAY MINIMUM	11	Aug 27	13	Oct 5	5.8	Aug 10 1986
INSTANTANEOUS PEAK FLOW			1820	Nov 28	(d)3360	Jul 1 1984
INSTANTANEOUS PEAK STAGE			10.22	Nov 28	(f)12.10	Jul 1 1984
INSTANTANEOUS LOW FLOW			11	Oct 11	4.1	Oct 1 1986
ANNUAL RUNOFF (CFSM)	1.83		2.10		1.39	
ANNUAL RUNOFF (INCHES)	24.84		28.55		18.94	
10 PERCENT EXCEEDS	64		74		50	
50 PERCENT EXCEEDS	23		28		21	
90 PERCENT EXCEEDS	14		17		11	

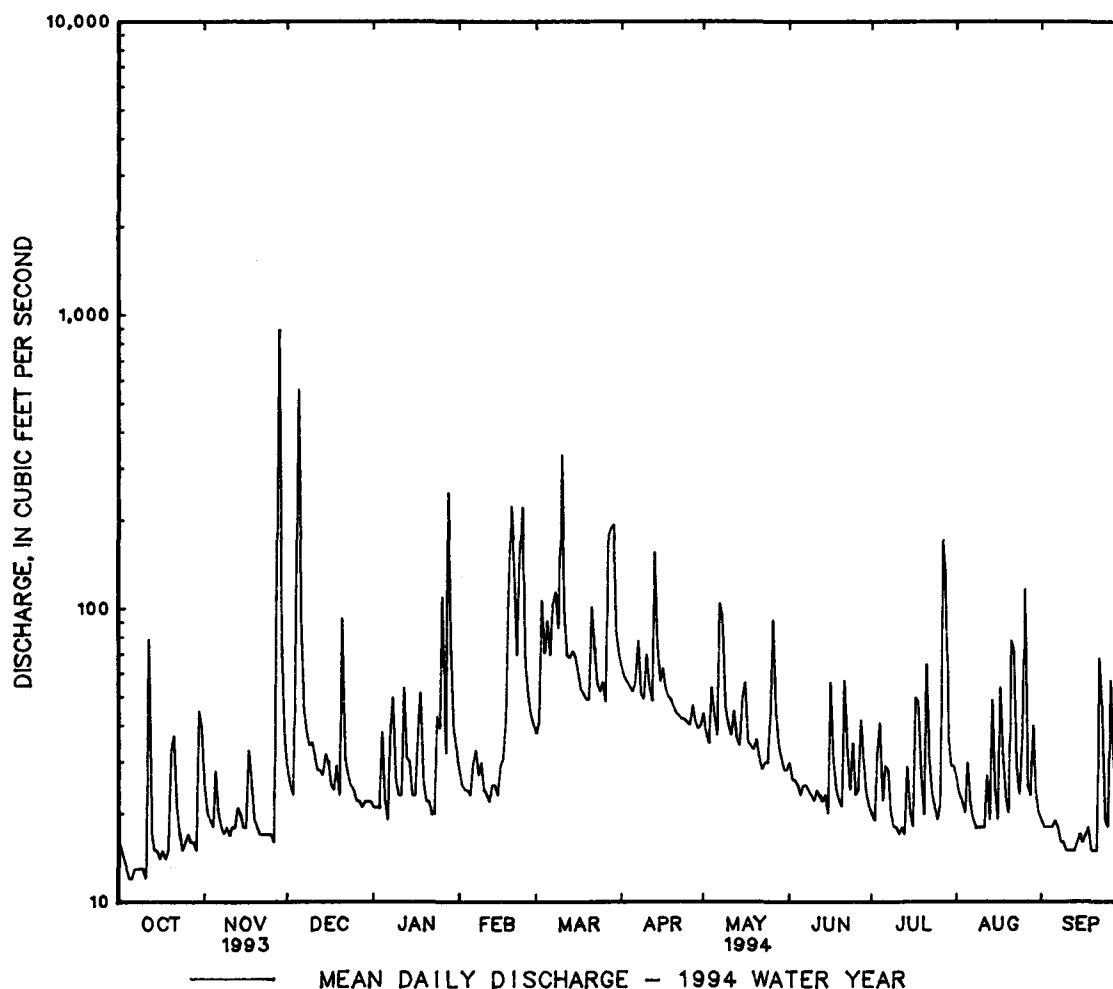
a Aug. 29, 30, Sept. 1, 2, 6, 7, 12, 13.

b Oct. 5, 6, 11.

c Aug. 16, 1986, Sept. 1, 1992.

d From rating curve extended above 1,000 ft³/s.

f From floodmarks.



GUNPOWDER RIVER BASIN

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01583600 BEAVERDAM RUN AT COCKEYSVILLE, MD--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1993 to September 1994.

WATER QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH WATER WHOLE FIELD (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	TEMPER- ATURE AIR (DEG C)	HARD- NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LITY WAT DIS TOT IT FIELD MG/L AS CACO3
OCT 1993 07...	1430	13	439	7.2	14.0	19.0	180	43	18	17	3.9	117
AUG 1994 25...	1400	8.0	474	7.7	20.0	26.0	180	43	18	18	4.2	118

DATE	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS NO3)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	IRON, DIS- SOLVED (UG/L AS FE)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)
OCT 1993 07...	29	44	--	11	--	7.9	0.010	1.80	1.80	19	16
AUG 1994 25...	29	47	0.10	10	278	11	0.010	2.60	2.60	17	18

GUNPOWDER RIVER BASIN

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 mi².

WATER-DISCHARGE RECORDS

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.--Water-discharge records good except those for estimated daily discharges (instrument malfunction), which are fair.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 300 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 28	0530	*1,200	*5.11	Feb. 20	1530	365	3.70
Dec. 5	0515	1,070	4.96	Feb. 24	1345	331	3.60
Jan. 28	1145	538	4.13	Mar. 10	0930	362	3.69

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.3	10	12	11	14	15	24	15	10	6.3	5.2	6.1
2	6.1	7.7	11	11	12	17	22	14	9.7	5.9	5.0	5.7
3	5.8	7.2	10	11	12	61	21	13	9.6	6.5	4.9	5.6
4	5.5	6.8	26	18	12	41	20	15	9.4	5.8	4.5	5.3
5	5.2	7.0	271	13	12	82	19	15	9.4	5.5	5.6	5.1
6	5.0	6.9	27	11	19	45	20	14	9.4	5.6	4.9	5.0
7	5.0	6.3	20	14	18	65	25	22	9.2	6.1	4.2	5.0
8	4.7	6.1	17	25	13	44	19	24	8.9	5.0	4.2	4.7
9	4.7	5.9	16	e13	13	35	17	16	8.5	4.8	4.0	4.5
10	4.6	5.9	15	e12	11	150	22	15	8.2	4.7	4.0	4.6
11	4.5	5.9	15	e12	e14	34	19	15	8.8	4.5	4.3	4.4
12	18	5.9	13	22	e13	27	18	13	9.1	4.5	5.5	4.2
13	6.7	5.8	12	18	12	26	60	12	8.5	4.4	4.4	4.2
14	5.9	6.3	12	18	11	26	30	11	7.8	10	5.5	4.0
15	5.7	6.0	13	e11	11	24	21	12	7.4	6.9	5.8	3.8
16	5.6	5.6	13	e11	11	22	22	15	7.5	5.4	4.5	3.8
17	5.3	6.4	12	e20	12	19	19	11	7.4	5.0	41	3.8
18	5.2	7.6	11	e26	15	19	17	11	6.9	6.7	11	3.9
19	5.0	6.1	12	e13	53	18	17	11	6.7	5.4	7.5	3.8
20	7.2	5.9	11	11	113	18	16	12	6.6	4.9	6.5	3.8
21	14	5.6	33	11	76	33	16	11	6.7	8.3	21	3.8
22	8.7	5.6	15	10	48	29	15	11	6.6	7.5	25	6.6
23	6.8	5.6	13	10	69	20	15	10	7.9	6.1	12	8.6
24	6.2	5.6	12	21	123	19	15	10	9.3	5.1	9.0	5.3
25	6.1	5.5	12	21	26	19	15	17	7.6	4.6	7.9	4.8
26	5.9	5.3	11	74	20	17	14	35	6.5	4.9	39	8.4
27	5.9	17	11	13	17	63	14	15	10	21	10	7.7
28	5.6	219	11	165	16	82	14	12	7.8	16	8.2	5.2
29	5.3	18	11	45	---	87	13	11	6.7	7.0	7.9	4.9
30	9.2	13	11	19	---	32	15	11	6.6	5.7	7.1	4.5
31	12	---	11	20	---	26	---	10	---	5.8	6.4	---
TOTAL	207.7	431.5	700	710	796	1215	594	439	244.7	205.9	296.0	151.1
MEAN	6.70	14.4	22.6	22.9	28.4	39.2	19.8	14.2	8.16	6.64	9.55	5.04
MAX	18	219	271	165	123	150	60	35	10	21	41	8.6
MIN	4.5	5.3	10	10	11	15	13	10	6.5	4.4	4.0	3.8
CFSM	.71	1.53	2.40	2.44	3.02	4.17	2.11	1.51	.87	.71	1.02	.54
IN.	.82	1.71	2.77	2.81	3.15	4.81	2.35	1.74	.97	.81	1.17	.60

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1976 - 1994, BY WATER YEAR (WY)

	7.73	8.95	11.6	14.2	14.7	17.1	14.6	13.4	10.2	9.58	8.11	8.00
MEAN	7.73	8.95	11.6	14.2	14.7	17.1	14.6	13.4	10.2	9.58	8.11	8.00
MAX	25.1	18.0	26.9	38.4	39.3	39.2	35.3	28.1	17.0	28.0	26.9	32.2
(WY)	1980	1980	1984	1979	1979	1994	1983	1989	1990	1989	1978	1979
MIN	2.97	3.05	4.04	3.67	6.16	6.02	7.37	5.94	3.85	2.49	2.97	2.41
(WY)	1987	1982	1981	1981	1992	1981	1981	1986	1986	1986	1981	1986

GUNPOWDER RIVER BASIN

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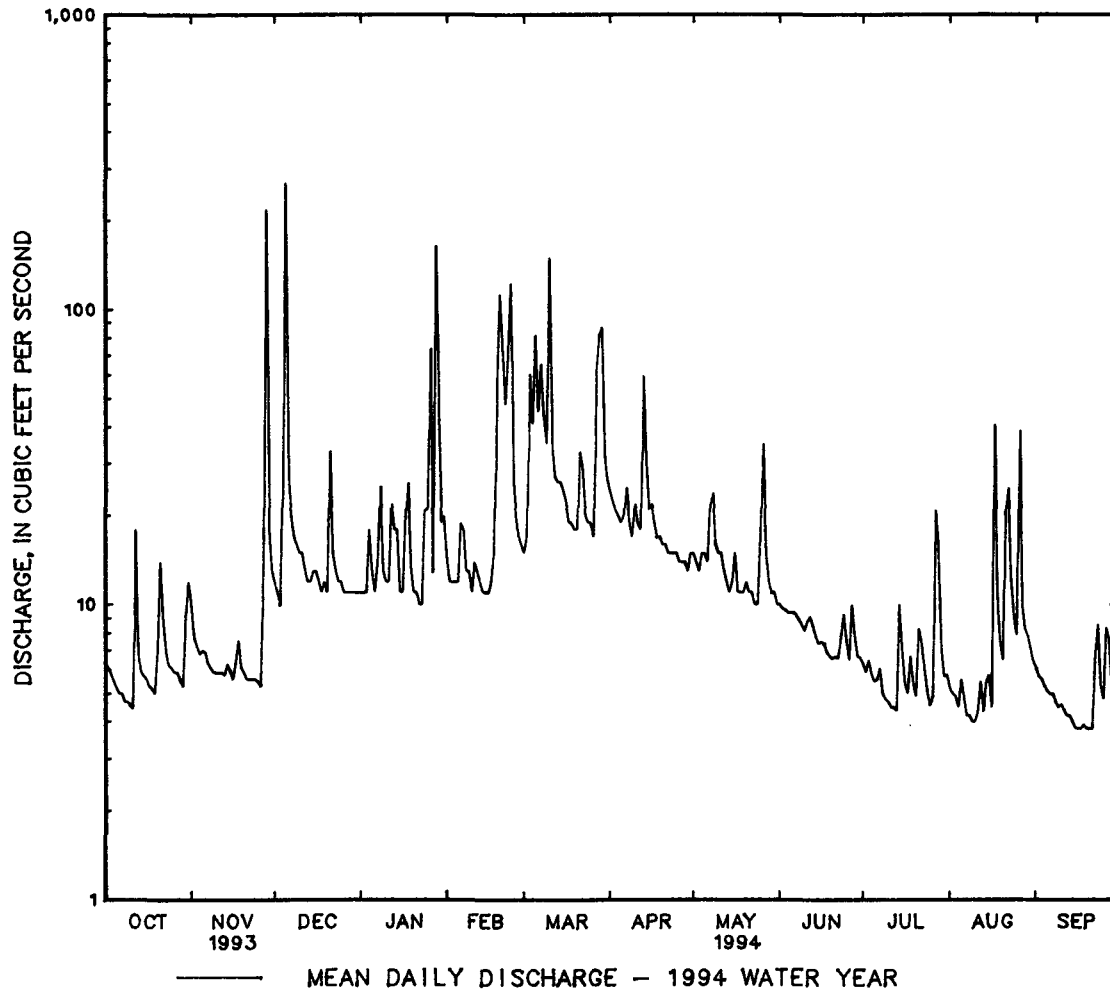
01584050 LONG GREEN CREEK AT GLEN ARM, MD--Continued

SUMMARY STATISTICS	FOR 1993 CALENDAR YEAR	FOR 1994 WATER YEAR	WATER YEARS 1976 - 1994
ANNUAL TOTAL	5602.9	5990.9	
ANNUAL MEAN	15.4	16.4	11.5
HIGHEST ANNUAL MEAN			18.1
LOWEST ANNUAL MEAN			5.33
HIGHEST DAILY MEAN	271 Dec 5	271 Dec 5	408 Jan 26 1978
LOWEST DAILY MEAN	3.8 Sep 14	3.8 (a)	1.5 Aug 15 1986
ANNUAL SEVEN-DAY MINIMUM	4.1 Sep 1	3.8 Sep 15	1.6 Aug 10 1986
INSTANTANEOUS PEAK FLOW		1200 Nov 28	(b)3250 Jul 1 1984
INSTANTANEOUS PEAK STAGE		5.11 Nov 28	6.70 Jul 1 1984
INSTANTANEOUS LOW FLOW		3.5 Sep 18	(c)1.0 Jan 29 1977
ANNUAL RUNOFF (CFSM)	1.63	1.75	1.22
ANNUAL RUNOFF (INCHES)	22.17	23.71	16.64
10 PERCENT EXCEEDS	25	26	18
50 PERCENT EXCEEDS	9.8	11	8.3
90 PERCENT EXCEEDS	5.3	4.9	3.6

a Sept. 15-17, 19-21.

b From rating curve extended above 1,300 ft³/s.

c Result of freezeup.



GUNPOWDER RIVER BASIN

01584050 LONG GREEN CREEK AT GLEN ARM, MD--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1993 to September 1994.

WATER QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT- ANCE (US/CM)	PH WATER WHOLE FIELD (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	TEMPER- ATURE AIR (DEG C)	HARD- NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LITY WAT DIS TOT IT FIELD MG/L AS CACO3
OCT 1993 08...	0730	4.7	295	7.3	12.0	10.0	130	34	12	6.7	2.7	96
AUG 1994 25...	0700	7.3	303	7.5	17.0	15.0	120	31	11	7.4	4.4	100

DATE	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS NO3)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, DIS- SOLVED (MG/L AS N)	IRON, DIS- SOLVED (UG/L AS FE)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)
OCT 1993 08...	8.6	18	--	11	--	19	0.010	4.40	4.40	19	7
AUG 1994 25...	8.3	18	<0.10	12	169	13	0.170	3.00	3.00	42	73

GUNPOWDER RIVER BASIN

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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 from 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 mi².

PERIOD OF RECORD.--April 1992 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 75 ft above sea level, from topographic maps.

REMARKS.--Records good except those for estimated daily discharges (ice effect, missing record), which are fair and those of 0.5 ft³/s or less, which are fair to poor. Several measurements of water temperature were made during the year.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 250 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Oct. 9, 1992	2230	260	3.30	July 3, 1994	1600	402	4.35
Nov. 13, 1992	0030	257	3.28	July 27, 1994	2045	373	4.11
Nov. 23, 1992	0330	*279	*3.43	Aug. 17, 1994	1130	*404	*4.36
				Aug. 21, 1994	1645	308	3.62
Nov. 28, 1993	0400	296	3.54	Sep. 27, 1994	0045	266	3.34
Dec. 5, 1993	0245	333	3.81				

REVISIONS.--The maximum discharge for the period April-September 1992 has been revised to 262 ft³/s, July 31, 1992, gage height, 3.31 ft. Revised figures of discharge for the water year 1993, superseding those published in the report for 1993 are given below.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.17	.13	1.0	1.3	.85	1.2	19	.95	1.2	.38	.25	.23
2	.15	3.9	1.0	1.1	.95	3.7	4.4	.95	.48	15	.27	.24
3	.14	19	.97	.95	.85	2.3	2.0	.94	.58	2.8	.28	.25
4	.15	.29	1.0	1.2	.85	48	1.4	.85	.77	.58	.39	.28
5	.16	1.8	1.5	16	.85	7.8	1.2	14	1.1	.43	1.4	.21
6	.11	.54	.95	1.7	.85	2.5	1.2	1.7	.56	.38	9.7	.18
7	.11	.24	.95	1.2	.85	1.4	1.1	.77	.48	3.1	.42	.22
8	.11	.20	1.0	3.0	.85	1.2	1.0	.69	4.1	.41	.32	.24
9	17	.19	1.0	3.4	.85	.95	1.2	.65	.73	.34	.25	.23
10	3.7	.19	18	1.5	.85	1.1	9.4	.65	.42	.27	.25	2.0
11	1.6	.22	31	1.6	.85	1.0	1.9	.59	.52	.26	1.6	.35
12	.26	3.6	6.3	4.2	8.4	.95	1.9	5.3	.38	.32	2.0	.17
13	.17	15	1.9	5.8	5.3	e.95	1.2	1.8	.38	.34	.27	.18
14	.15	.40	1.5	1.7	1.6	e.95	1.2	.65	.37	4.6	.25	.19
15	.15	.33	1.3	1.3	1.1	e.95	1.2	.58	.37	.49	.25	.22
16	.15	.30	1.2	1.2	13	3.9	18	1.5	.37	.31	.31	2.8
17	.20	.28	9.9	1.2	3.5	45	2.1	.60	.35	.23	8.9	2.2
18	.28	.28	2.2	.98	1.4	4.8	1.2	2.2	.36	.22	.47	1.6
19	.36	.63	1.5	.95	1.0	2.7	1.2	1.1	.36	12	.29	.30
20	.35	.31	3.1	.95	.95	3.2	1.0	.70	.42	1.1	2.4	.22
21	.35	.34	1.3	1.5	1.0	13	11	.61	6.7	.37	.35	.46
22	.38	3.6	1.2	7.0	7.3	5.4	6.8	.54	.53	.34	.24	.31
23	.42	26	1.7	1.3	2.4	16	1.4	.53	.39	.34	.22	.22
24	.77	1.9	1.1	1.7	1.2	22	1.2	.49	.35	.30	.21	.22
25	.19	2.0	e.95	1.3	.98	2.3	1.1	.49	.46	.30	.20	.97
26	.15	2.6	.95	1.1	1.0	1.5	4.4	.49	.41	.30	.23	1.2
27	.15	1.7	.95	.95	1.3	2.2	1.3	.54	.41	.32	.26	20
28	.15	1.3	7.8	.95	1.0	6.3	1.0	.49	.41	.33	.24	.49
29	.17	1.2	2.3	.95	---	3.5	.95	.49	.38	1.5	.18	.35
30	.25	1.1	2.7	.87	---	1.8	.95	.49	.38	.28	.21	.25
31	.58	---	1.6	.85	---	1.9	---	2.6	---	.24	.21	---
TOTAL	29.03	89.57	109.82	69.70	61.88	210.45	102.90	44.93	24.72	48.18	32.82	36.78
MEAN	.94	2.99	3.54	2.25	2.21	6.79	3.43	1.45	.82	1.55	1.06	1.23
MAX	.17	26	31	16	13	48	19	14	6.7	15	9.7	20
MIN	.11	.13	.95	.85	.85	.95	.95	.49	.35	.22	.18	.17
CFSM	.70	2.23	2.64	1.68	1.65	5.07	2.56	1.08	.61	1.16	.79	.91
IN.	.81	2.49	3.05	1.93	1.72	5.84	2.86	1.25	.69	1.34	.91	1.02

• Estimated

GUNPOWDER RIVER BASIN

01585095 NORTH FORK WHITEMARSH RUN NEAR WHITE MARSH, MD--Continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.22	.56	.59	.55	1.7	1.2	1.3	1.2	.41	.38	.38	e.27
2	.22	.29	.48	.98	1.3	13	.96	.60	.38	.23	.89	e.24
3	.22	.28	.42	.62	1.2	32	.95	.48	.38	22	.39	e.22
4	.21	.27	22	11	1.0	7.6	.91	4.7	.38	1.2	.28	e.20
5	.19	.89	65	1.4	1.0	5.1	.80	.98	.35	.33	3.0	e.22
6	.19	.34	2.4	.73	1.2	2.4	1.6	.61	.37	.98	.31	e.23
7	.19	.28	1.1	7.2	1.2	1.9	4.2	4.7	.38	.43	.22	e.21
8	.19	.28	.85	10	1.1	4.0	.90	2.6	.40	.28	.19	e.20
9	.21	.29	.73	.92	2.4	7.4	.78	.64	.34	.30	.19	e.18
10	.25	.30	1.2	.88	1.1	31	3.0	.58	.28	.42	.21	.19
11	.25	.28	.83	1.1	1.6	3.3	1.0	.52	.53	.35	1.8	.16
12	10	.28	.67	9.7	1.3	1.9	.80	1.3	.39	.31	.96	.17
13	.27	.37	.65	1.6	2.7	1.6	12	.49	.31	.35	.38	.18
14	.22	.38	.65	1.2	3.3	1.4	2.9	.45	.31	7.5	9.3	.21
15	.22	.28	1.7	.70	2.0	1.6	1.2	2.0	.31	.62	1.2	.17
16	.22	.28	.91	.59	4.1	1.2	2.0	1.9	.31	.41	.95	.19
17	.25	1.6	.64	6.5	4.3	1.0	.91	.48	.31	.40	48	.25
18	.29	.69	.59	8.5	5.7	.95	.80	.44	.36	9.1	1.2	.94
19	.30	.28	1.0	.90	9.3	.95	.78	.61	1.8	.48	.94	.21
20	.81	.26	.61	.92	12	.95	.71	.63	.48	.35	.85	.24
21	9.7	.25	10	.67	11	11	.65	.46	1.1	.65	18	.22
22	.59	.25	.95	e.65	6.0	3.9	.65	.40	.45	1.5	8.0	6.7
23	.85	.25	.72	e.65	22	1.4	.63	.38	.48	.49	e.68	3.7
24	.25	.25	.65	e.80	20	1.1	.59	.48	.46	.34	e.64	.54
25	.25	.25	.65	4.7	3.9	2.1	.59	5.4	.33	.85	2.8	.56
26	.30	.25	.61	12	2.3	.98	.59	7.7	.37	1.6	9.4	8.8
27	.34	11	.59	.70	1.3	25	1.2	.93	1.1	28	e.60	17
28	.41	49	.59	29	1.0	24	.53	.53	.36	4.1	e.55	3.1
29	.35	1.2	.59	6.6	---	14	.45	.49	.33	.65	e.90	1.2
30	2.8	.65	.59	3.2	---	2.7	.45	.45	4.0	.43	e.36	.51
31	1.9	---	.54	2.4	---	1.4	---	.44	---	.83	e.30	---
TOTAL	32.66	71.83	119.50	127.36	127.0	208.03	44.83	43.57	17.76	85.86	113.87	47.21
MEAN	1.05	2.39	3.85	4.11	4.54	6.71	1.49	1.41	.59	2.77	3.67	1.57
MAX	10	49	65	29	22	32	12	7.7	4.0	28	48	17
MIN	.19	.25	.42	.55	1.0	.95	.45	.38	.28	.23	.19	.16
CFM	.79	1.79	2.88	3.07	3.38	5.01	1.12	1.05	.44	2.07	2.74	1.17
IN.	.91	1.99	3.32	3.54	3.53	5.78	1.24	1.21	.49	2.38	3.16	1.31

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1992 - 1994, BY WATER YEAR (WY)

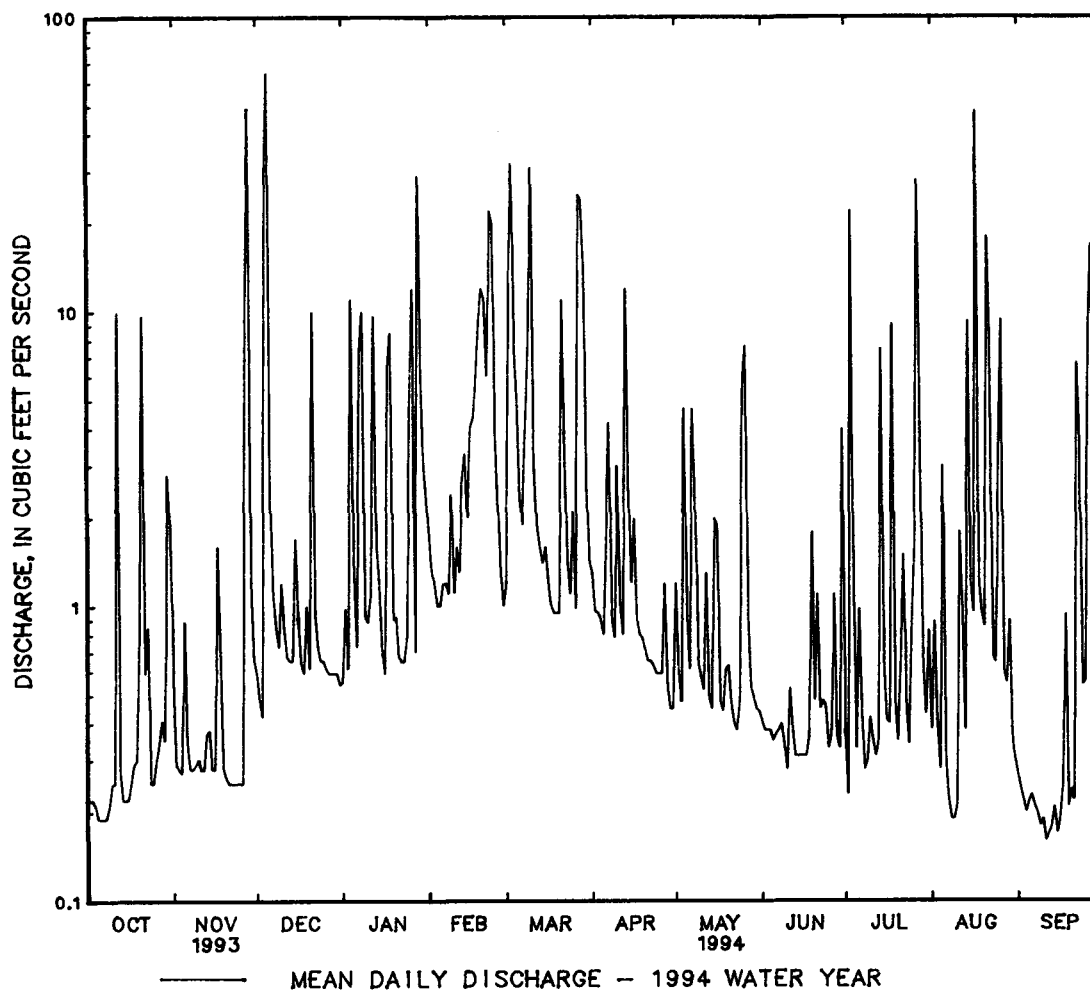
MEAN	.99	2.69	3.70	3.18	3.37	6.75	2.46	1.39	.85	1.93	1.72	1.56
MAX	1.05	2.99	3.85	4.11	4.54	6.79	3.43	1.45	1.14	2.77	3.67	1.89
(WY)	1994	1993	1994	1994	1994	1993	1993	1993	1992	1994	1994	1992
MIN	.94	2.39	3.54	2.25	2.21	6.71	1.49	1.32	.59	1.47	.43	1.23
(WY)	1993	1994	1993	1993	1993	1994	1994	1992	1994	1992	1992	1993

GUNPOWDER RIVER BASIN

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01585095 NORTH FORK WHITEMARSH RUN NEAR WHITE MARSH, MD--Continued

SUMMARY STATISTICS	FOR 1993 CALENDAR YEAR	FOR 1994 WATER YEAR	WATER YEARS 1992 - 1994
ANNUAL TOTAL	856.35	1039.48	
ANNUAL MEAN	2.35	2.85	2.60
HIGHEST ANNUAL MEAN			2.85 1994
LOWEST ANNUAL MEAN			2.36 1993
HIGHEST DAILY MEAN	65 Dec 5	65 Dec 5	65 Dec 5 1993
LOWEST DAILY MEAN	.17 Sep 12	.16 Sep 11	.05 Sep 1 1992
ANNUAL SEVEN-DAY MINIMUM	.20 Oct 3	.18 Sep 9	.08 Aug 4 1992
INSTANTANEOUS PEAK FLOW		404 Aug 17	404 Aug 17 1994
INSTANTANEOUS PEAK STAGE		4.36 Aug 17	4.36 Aug 17 1994
INSTANTANEOUS LOW FLOW		.13 Aug 10	.04 Jul 29 1992
ANNUAL RUNOFF (CFSM)	1.75	2.13	1.94
ANNUAL RUNOFF (INCHES)	23.77	28.86	26.39
10 PERCENT EXCEEDS	4.7	7.8	5.4
50 PERCENT EXCEEDS	.73	.67	.64
90 PERCENT EXCEEDS	.24	.25	.19



GUNPOWDER RIVER BASIN

01585100 WHITEMARSH RUN AT WHITE MARSH, MD

LOCATION.--Lat 39°22'15", long 76°26'46", Baltimore County, Hydrologic Unit 02060003, on left bank at upstream side of bridge on State Highway 7, 1.0 mi southwest of White Marsh, and 3.0 mi upstream from mouth.

DRAINAGE AREA.--7.61 mi².

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 (Oct. 6-11, Nov. 8-17, backwater from leaves; ice effect), 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.

PEAK DISCHARGES FOR CURRENT PERIOD.--Peak discharges greater than base discharge of 750 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 28	0515	1,300	6.83	Mar. 10	0900	803	4.54
Dec. 5	0415	*1,430	*7.43	July 27	2200	1,330	6.95
Jan. 26	0500	840	4.68	Aug. 17	1230	1,350	7.06
Jan. 28	1045	1,110	5.88	Aug. 21	1800	1,050	5.60

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.1	8.7	4.6	2.8	5.7	6.2	11	7.4	2.5	4.0	3.2	2.5
2	1.1	3.8	3.7	5.0	4.8	56	8.7	3.9	2.4	1.5	5.5	2.2
3	1.2	3.2	3.3	3.5	4.5	238	7.7	3.5	2.4	39	3.5	2.0
4	1.3	3.3	84	48	4.1	50	7.7	26	2.2	8.8	4.0	1.9
5	1.1	10	354	9.6	3.5	33	6.6	10	2.3	2.5	13	2.0
6	e1.1	4.4	15	5.1	3.8	19	11	4.0	2.4	3.2	3.1	2.2
7	e1.1	3.6	7.9	29	3.9	13	32	30	2.4	3.0	1.7	2.0
8	e1.1	e3.2	5.8	59	3.8	21	7.9	24	2.3	1.6	1.6	1.9
9	e1.1	e3.2	4.7	8.7	9.1	40	6.5	5.5	2.1	1.5	1.6	1.9
10	e1.1	e3.2	5.5	5.2	4.4	187	17	4.1	2.0	1.9	1.5	2.0
11	e1.1	e3.2	5.4	5.0	4.6	21	8.9	3.8	3.2	1.6	5.9	1.7
12	53	e3.2	3.9	45	5.3	12	6.8	10	2.6	1.6	7.6	1.9
13	3.8	e3.6	3.8	12	8.9	10	73	3.9	2.1	1.5	2.5	2.1
14	2.1	e3.6	3.9	9.1	10	9.6	24	3.5	2.0	25	34	2.3
15	1.9	e3.2	6.3	e6.9	6.7	8.9	9.8	7.7	1.7	6.5	7.0	2.2
16	2.0	e3.5	6.0	e6.0	16	6.7	14	17	4.6	2.2	2.5	2.4
17	2.7	e12	3.0	e6.2	21	5.5	7.0	4.1	1.9	1.7	199	2.7
18	4.0	8.9	2.9	50	29	5.6	5.7	3.9	1.6	35	15	3.2
19	4.5	3.1	5.1	e5.0	55	5.2	5.5	4.2	5.6	3.4	5.0	2.0
20	8.0	3.0	3.0	e5.4	66	5.0	5.3	4.7	2.4	2.0	3.3	2.1
21	50	3.3	51	e5.4	64	63	4.7	3.4	3.3	9.7	95	2.3
22	7.8	3.2	7.4	e5.4	26	30	4.2	3.0	3.2	8.6	79	29
23	4.8	3.3	4.7	e5.4	126	9.4	4.2	3.0	1.8	4.1	11	16
24	3.0	3.5	3.7	e6.0	124	7.3	4.2	2.8	3.2	2.0	4.9	2.8
25	3.5	3.5	3.6	e15	20	12	4.1	26	2.2	9.7	4.6	2.0
26	6.1	4.8	3.4	203	12	6.2	3.8	30	1.5	6.5	76	29
27	9.1	34	3.0	50	7.1	142	9.5	8.0	8.2	114	6.2	71
28	9.9	262	2.8	244	6.1	158	4.7	3.2	2.7	34	3.8	8.9
29	8.4	11	2.9	42	---	117	3.8	2.7	2.1	6.1	7.9	7.1
30	26	6.2	2.7	15	---	21	3.8	2.5	27	3.3	3.2	2.4
31	19	---	2.7	7.9	---	13	---	2.5	---	5.8	2.6	---
TOTAL	242.0	428.7	619.7	926.6	655.3	1331.6	323.1	268.3	105.9	351.3	614.7	213.7
MEAN	7.81	14.3	20.0	29.9	23.4	43.0	10.8	8.65	3.53	11.3	19.8	7.12
MAX	53	262	354	244	126	238	73	30	27	114	199	71
MIN	1.1	3.0	2.7	2.8	3.5	5.0	3.8	2.5	1.5	1.5	1.5	1.7
CFSM	1.03	1.88	2.63	3.93	3.08	5.64	1.42	1.14	.46	1.49	2.61	.94
IN.	1.18	2.10	3.03	4.53	3.20	6.51	1.58	1.31	.52	1.72	3.00	1.04

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1959 - 1994, BY WATER YEAR (WY)

	6.73	10.4	13.4	13.5	16.0	16.6	13.2	11.3	8.73	9.06	10.5	9.90
MEAN	6.73	10.4	13.4	13.5	16.0	16.6	13.2	11.3	8.73	9.06	10.5	9.90
MAX	27.2	31.8	41.5	45.2	42.7	43.2	43.5	43.7	44.5	45.4	90.1	36.3
(WY)	1972	1973	1984	1978	1979	1993	1983	1989	1972	1989	1971	1971
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 1993 CALENDAR YEAR	FOR 1994 WATER YEAR	WATER YEARS 1959 - 1994
ANNUAL TOTAL	4896.7	6080.9	
ANNUAL MEAN	13.4	16.7	11.9
HIGHEST ANNUAL MEAN			21.0
LOWEST ANNUAL MEAN			4.27
HIGHEST DAILY MEAN	354 Dec 5	354 Dec 5	820 Jun 22 1972
LOWEST DAILY MEAN	1.0 (a)	1.1 (b)	.10 Sep 11 1966
ANNUAL SEVEN-DAY MINIMUM	1.1 Oct 5	1.1 Oct 5	.39 Sep 1 1966
INSTANTANEOUS PEAK FLOW		1430 Dec 5	(c)8000 Aug 1 1971
INSTANTANEOUS PEAK STAGE		7.43 Dec 5	14.05 Aug 1 1971
INSTANTANEOUS LOW FLOW		.91 (d)	(f).00 Mar 20 1965
ANNUAL RUNOFF (CFSM)	1.76	2.19	1.56
ANNUAL RUNOFF (INCHES)	23.94	29.73	21.24
10 PERCENT EXCEEDS	27	37	21
50 PERCENT EXCEEDS	4.5	4.8	4.1
90 PERCENT EXCEEDS	1.5	2.0	1.5

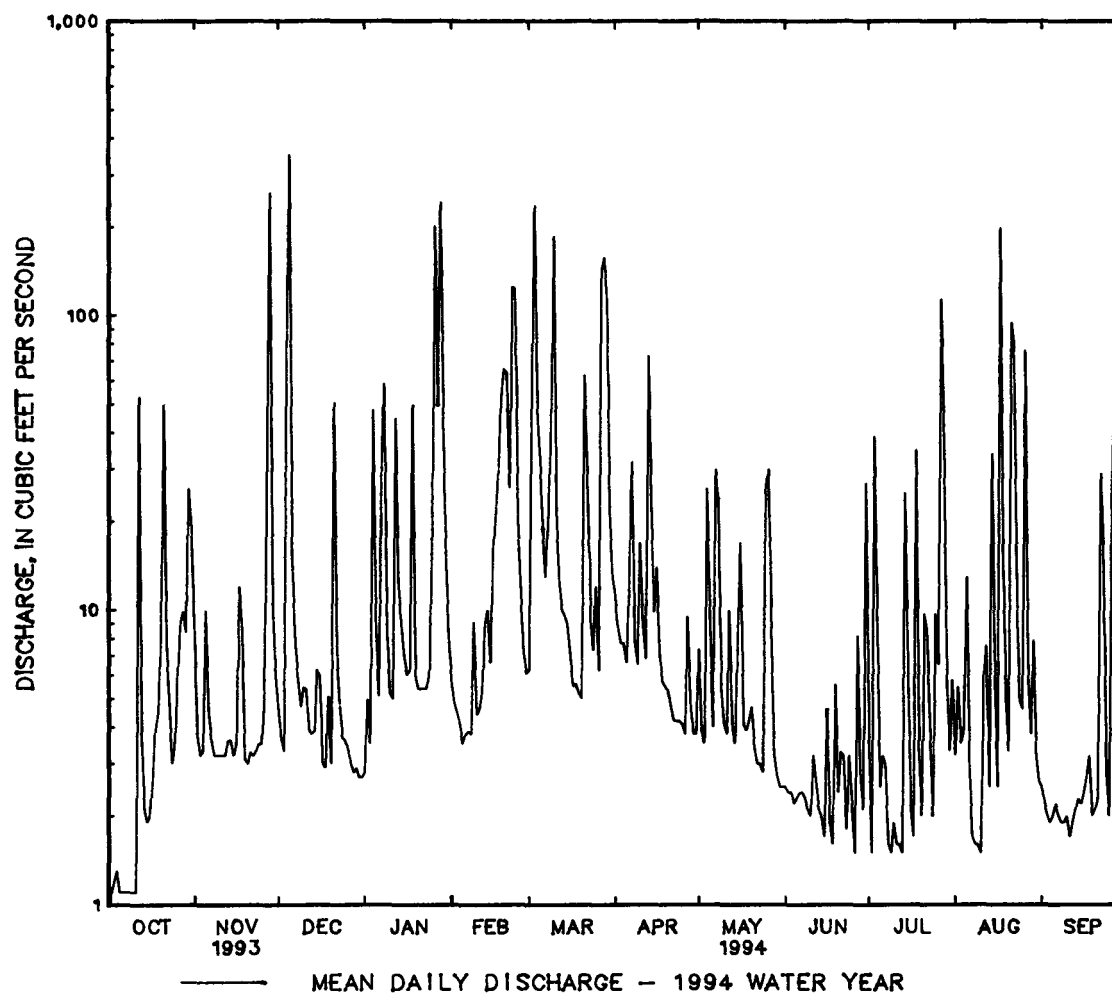
a July 31, Aug. 1, and Sept. 6.

b Oct. 1, 2, and 5-11.

c 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.

d Oct. 4 and 5.

f Result of construction work upstream from station.



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 mi².

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 fair. 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 1972 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.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 80 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 28	0315	*646	*4.64	Feb. 21	1330	91	2.83
Dec. 5	0730	184	3.29	Mar. 10	0700	97	2.87
Feb. 20	1615	124	3.02	Aug. 26	0045	581	4.48

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.63	3.2	2.7	3.2	1.7	1.6	5.6	5.0	2.6	2.5	1.3	2.0
2	.93	1.5	2.0	3.5	.90	4.0	4.6	4.8	2.0	2.4	1.3	1.8
3	2.0	1.8	1.5	3.5	.54	7.2	4.3	4.8	1.6	2.3	1.6	1.4
4	.99	1.2	6.0	4.0	.48	6.7	4.0	5.7	1.6	2.3	1.0	1.4
5	.99	.74	71	3.5	.91	9.7	3.4	5.1	1.8	1.9	1.5	1.5
6	.98	1.8	10	3.3	1.5	9.2	5.8	4.8	1.9	.87	1.1	1.5
7	.93	2.2	5.1	3.8	2.5	16	9.4	8.2	2.0	2.6	1.2	1.2
8	1.5	2.1	4.0	4.8	3.0	21	2.7	10	2.4	2.1	1.6	1.8
9	1.3	2.1	3.5	3.6	1.7	11	2.4	4.0	2.7	1.0	1.7	1.8
10	1.3	2.0	4.0	3.3	1.5	49	4.7	3.7	1.4	2.1	1.7	1.7
11	1.2	2.1	5.2	3.2	2.0	17	7.3	3.6	1.5	1.8	1.4	1.8
12	4.8	.70	4.6	4.7	2.2	15	6.8	4.9	2.4	.69	1.5	1.6
13	1.9	1.6	4.5	2.6	1.7	18	14	4.5	2.9	1.4	1.4	1.8
14	1.7	2.3	4.5	2.1	1.2	21	9.1	4.2	2.1	1.8	1.6	1.7
15	.79	2.1	4.6	e2.0	2.5	15	7.6	6.4	2.0	1.8	.91	1.9
16	1.4	2.0	4.3	1.3	3.1	11	7.5	4.9	2.3	1.2	1.2	1.8
17	.98	2.4	3.8	e1.2	3.9	7.9	6.9	1.9	.81	5.1	3.6	1.7
18	.53	2.2	3.7	e1.2	4.8	7.0	6.8	3.8	2.1	1.6	1.6	1.6
19	.71	1.3	4.0	e1.2	12	7.3	6.5	3.2	2.1	2.1	1.0	1.4
20	2.7	.80	3.7	e1.6	46	5.8	6.1	3.5	2.0	2.0	1.3	1.4
21	3.8	.57	11	e2.0	37	10	5.8	4.0	2.1	2.4	7.8	1.6
22	2.8	.46	4.7	e2.4	18	11	5.8	3.8	1.3	1.8	11	1.8
23	2.4	.78	2.6	e2.8	22	8.0	5.8	3.7	2.1	.90	1.9	2.8
24	2.3	.84	2.9	e3.3	30	7.6	5.7	3.5	2.2	2.0	2.0	2.5
25	1.2	1.0	2.9	1.4	12	7.2	5.5	4.7	2.1	1.8	5.7	2.3
26	1.4	.89	1.0	9.4	9.0	5.4	5.4	10	1.8	2.0	43	2.1
27	2.2	10	2.4	2.0	4.5	23	5.4	3.6	2.7	3.5	1.4	1.7
28	1.6	123	3.3	13	2.0	23	2.9	4.3	3.0	2.1	2.3	1.9
29	1.3	5.0	3.3	5.9	---	25	3.4	3.7	3.2	1.9	2.0	1.5
30	3.8	1.7	3.3	2.5	---	12	4.7	3.9	2.7	1.8	1.6	1.5
31	4.3	---	3.0	2.0	---	8.4	---	3.0	---	1.4	1.3	---
TOTAL	55.36	180.38	193.1	104.3	228.63	401.0	175.9	145.2	63.41	61.16	109.51	52.5
MEAN	1.79	6.01	6.23	3.36	8.17	12.9	5.86	4.68	2.11	1.97	3.53	1.75
MAX	4.8	123	71	13	46	49	14	10	3.2	5.1	43	2.8
MIN	.53	.46	1.0	1.2	.48	1.6	2.4	1.9	.81	.69	.91	1.2
CFSM	.54	1.83	1.89	1.02	2.48	3.93	1.78	1.42	.64	.60	1.07	.53
IN.	.63	2.04	2.18	1.18	2.59	4.53	1.99	1.64	.72	.69	1.24	.59

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1950 - 1994, BY WATER YEAR (WY)

MEAN	2.16	2.50	3.12	3.39	4.52	4.73	4.75	4.18	3.67	2.71	2.17	2.40
MAX	9.96	6.66	7.16	10.8	10.7	12.9	12.3	11.3	29.5	11.1	6.91	21.7
(WY)	1980	1953	1973	1978	1974	1994	1993	1952	1972	1972	1955	1975
MIN	.40	.53	1.02	.56	.70	.77	.89	.88	.64	.67	.36	.30
(WY)	1987	1974	1989	1992	1992	1981	1992	1986	1986	1991	1986	1977

01585500 CRANBERRY BRANCH NEAR WESTMINSTER, MD--Continued

SUMMARY STATISTICS	FOR 1993 CALENDAR YEAR		FOR 1994 WATER YEAR		WATER YEARS 1950 - 1994	
ANNUAL TOTAL	1904.77		1770.45			
ANNUAL MEAN	(a)5.22		(a)4.85		(a)3.35	
HIGHEST ANNUAL MEAN					7.82	
LOWEST ANNUAL MEAN					.86	
HIGHEST DAILY MEAN	123	Nov 28	123	Nov 28	440	Jun 22 1972
LOWEST DAILY MEAN	.46	Nov 22	.46	Nov 22	.16	(b)
ANNUAL SEVEN-DAY MINIMUM	.63	Aug 19	.76	Nov 20	.22	Sep 8 1977
INSTANTANEOUS PEAK FLOW			646	Nov 28	(c)2220	Sep 26 1975
INSTANTANEOUS PEAK STAGE			4.64	Nov 28	7.47	Sep 26 1975
INSTANTANEOUS LOW FLOW			.01	(d)	(f).01	(d)
ANNUAL RUNOFF (CFSM)	1.59		1.47		1.02	
ANNUAL RUNOFF (INCHES)	21.54		20.02		13.84	
10 PERCENT EXCEEDS	9.9		9.4		5.9	
50 PERCENT EXCEEDS	2.9		2.4		2.3	
90 PERCENT EXCEEDS	.81		1.2		.80	

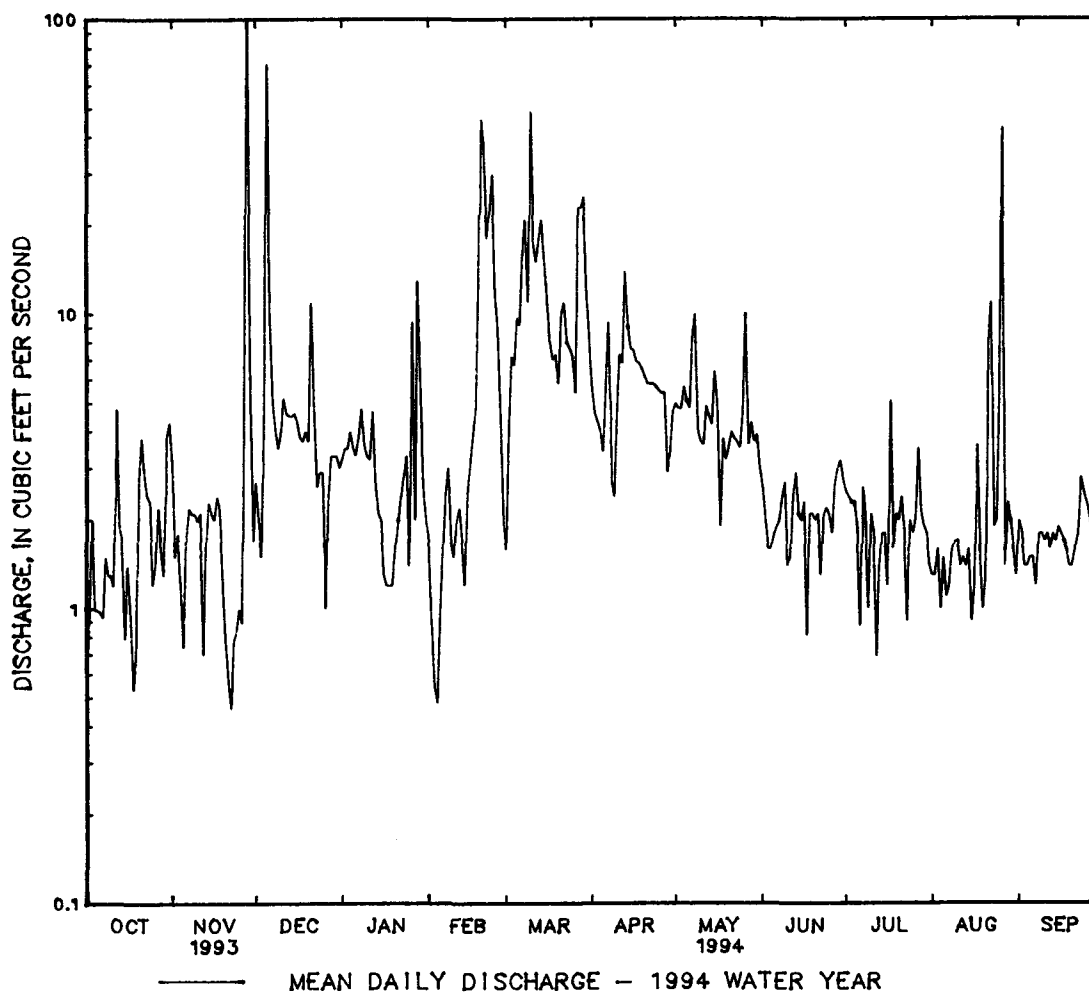
a Unadjusted for storage and diversions.

b Oct. 29, 30, 1986.

c From rating curve extended above 200 ft³/s on the basis of culvert measurements at gage heights 5.54 ft and 7.47 ft.

d Feb. 5, 6, 1994.

f Result of regulation.



PATAPSCO RIVER BASIN

01586000 NORTH BRANCH PATAPSCO RIVER AT CEDARHURST, MD

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

DRAINAGE AREA.--56.6 mi².

WATER-DISCHARGE RECORDS

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.--Water-discharge records good except those for Dec. 24-25, Jan. 1, Jan. 7-11, Jan. 18-20 and Feb. 2-14 (ice effect) and Jan. 6-11 (missing record), which are fair. 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 3.15 ft³/s diverted upstream from station for municipal supply of Westminster; sewage effluent discharged into Little Pipe Creek in Monocacy River basin.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 28	0600	*5,440	*10.07	Mar. 10	0915	1,560	5.26
Dec. 5	0745	2,670	7.01	Mar. 27	1300	1,260	4.64
Feb. 20	1730	1,670	5.47	July 17	1715	1,200	4.53
Feb. 21	1545	1,330	4.80	Aug. 26	0400	1,730	5.59
Feb. 24	1600	1,120	4.35				

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	39	63	83	58	82	103	172	87	52	42	33	34
2	37	42	74	58	e75	103	155	77	49	35	31	32
3	44	40	67	55	e70	142	145	75	49	33	29	30
4	35	38	95	65	e65	126	138	90	48	33	28	28
5	33	39	1450	56	e64	174	127	84	48	31	30	27
6	32	37	219	e55	e68	167	127	76	49	31	29	26
7	34	36	148	e60	e72	278	209	97	47	43	26	25
8	33	33	118	e68	e81	369	123	188	44	33	24	24
9	33	33	102	e70	77	190	114	90	43	28	23	27
10	33	33	95	e60	e60	888	130	79	41	27	22	26
11	31	33	98	e70	e42	313	126	71	43	25	22	25
12	73	33	81	78	e52	236	114	80	45	25	28	29
13	45	33	75	79	e57	269	262	71	41	24	24	25
14	35	39	74	70	e55	337	171	69	38	26	32	23
15	34	35	75	e50	56	258	136	70	36	32	32	34
16	33	33	79	e44	58	195	149	119	45	28	24	26
17	33	34	68	e42	63	159	135	72	48	225	68	27
18	32	47	65	e40	77	147	128	69	39	76	65	39
19	30	35	70	e40	195	140	123	68	40	42	36	26
20	57	33	64	e52	599	140	120	68	41	34	30	23
21	60	31	165	e55	e555	188	115	66	35	34	84	23
22	60	30	93	58	e290	239	113	62	34	52	136	41
23	41	30	79	57	e410	164	111	60	33	50	60	76
24	37	30	e70	72	e630	157	110	58	34	36	38	33
25	35	30	e68	102	222	153	107	71	33	32	34	28
26	33	29	66	e270	163	131	94	141	30	31	386	51
27	34	69	63	95	129	427	99	100	109	52	59	44
28	34	1900	57	373	110	394	91	64	80	104	47	31
29	32	155	57	211	---	497	83	60	45	45	47	29
30	72	102	58	109	---	240	85	58	46	37	40	26
31	93	---	62	90	---	195	---	54	---	34	35	---
TOTAL	1287	3155	4038	2662	4477	7519	3912	2494	1365	1380	1602	938
MEAN	41.5	105	130	85.9	160	243	130	80.5	45.5	44.5	51.7	31.3
MAX	93	1900	1450	373	630	888	262	188	109	225	386	76
MIN	30	29	57	40	42	103	83	54	30	24	22	23
CFSM	.73	1.86	2.30	1.52	2.82	4.29	2.30	1.42	.80	.79	.91	.55
IN.	.85	2.07	2.65	1.75	2.94	4.94	2.57	1.64	.90	.91	1.05	.62

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1945 - 1994, BY WATER YEAR (WY)

	1945	1946	1947	1948	1949	1950	1951	1952	1953	1954	1955	1956
MEAN	41.2	50.3	62.6	71.6	86.9	95.4	87.9	76.9	64.8	48.5	42.2	42.2
MAX	214	114	164	212	212	243	213	201	389	149	165	356
(WY)	1980	1953	1973	1979	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 1993 CALENDAR YEAR		FOR 1994 WATER YEAR		WATER YEARS 1945 - 1994	
ANNUAL TOTAL	36236		34829			
ANNUAL MEAN	99.3		95.4		64.1	
HIGHEST ANNUAL MEAN					121	
LOWEST ANNUAL MEAN					30.1	
HIGHEST DAILY MEAN	1900	Nov 28	1900	Nov 28	6000	Jun 22 1972
LOWEST DAILY MEAN	24	Sep 7	22	(a)	3.1	(b)
ANNUAL SEVEN-DAY MINIMUM	27	Aug 28	24	Aug 7	3.5	Sep 7 1966
INSTANTANEOUS PEAK FLOW			5440	Nov 28	(c)27800	Jun 22 1972
INSTANTANEOUS PEAK STAGE			10.07	Nov 28	(d)20.75	Jun 22 1972
INSTANTANEOUS LOW FLOW			5.9	Jul 23	1.3	(f)
ANNUAL RUNOFF (CFSM)	1.75		1.69		1.13	
ANNUAL RUNOFF (INCHES)	23.82		22.89		15.38	
10 PERCENT EXCEEDS	171		173		113	
50 PERCENT EXCEEDS	60		58		44	
90 PERCENT EXCEEDS	33		29		19	

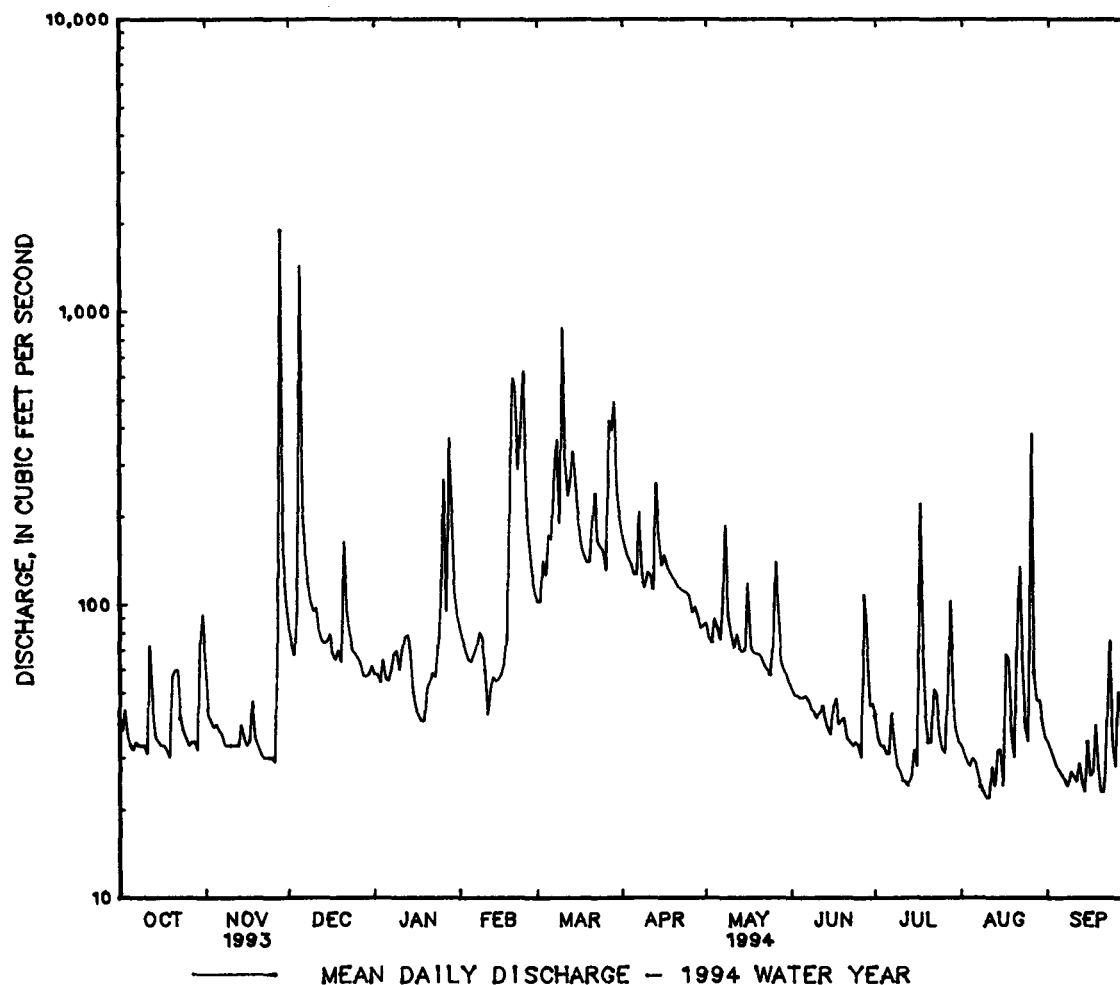
a Aug. 10, 11.

b Sept. 10, 12, 1966.

c From rating curve extended above 4,100 ft³/s on basis of contracted-opening measurement of peak flow.

d From high-water mark in well.

f Sept. 17, 1983 and Aug. 10, 1985, result of regulation.



PATAPSCO RIVER BASIN

01586000 NORTH BRANCH PATAPSCO RIVER AT CEDARHURST, MD--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1993 to September 1994.

WATER QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH WATER WHOLE FIELD (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	TEMPER- ATURE AIR (DEG C)	HARD- NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
OCT 1993 08...	0915	32	220	6.7	12.0	16.0	76	21	5.7	10	1.8
AUG 1994 31...	0700	35	216	6.9	17.0	18.0	70	19	5.4	11	2.2

DATE	ALKA- LINITY WAT DIS TOT IT FIELD MG/L AS CACO3	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	IRON, DIS- SOLVED (UG/L AS FE)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)
OCT 1993 08...	41	6.9	25	--	5.8	--	<0.010	4.40	4.40	56	48
AUG 1994 31...	39	8.5	24	0.10	6.2	123	<0.010	3.70	3.70	39	52

PATAPSCO RIVER BASIN

131

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 mi².

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder. Datum of gage is 428.70 ft above sea level.

REMARKS.--Water-discharge records good except those for estimated daily discharges (ice effect), which are poor.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 500 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 28	0315	*1,620	*5.30	Dec. 5	0600	681	3.73

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.2	12	24	20	25	32	48	24	13	8.5	9.0	8.5
2	9.0	10	22	19	e23	33	44	23	12	7.9	8.7	8.2
3	9.3	9.6	21	18	e23	39	41	22	12	7.6	8.3	7.7
4	8.5	9.2	33	21	23	35	39	25	12	7.4	7.9	7.5
5	8.2	9.3	327	18	21	52	37	23	12	7.3	7.9	7.3
6	7.8	9.3	58	17	24	44	36	22	12	7.2	8.1	7.2
7	7.8	8.7	41	19	30	73	55	30	11	8.9	7.4	7.0
8	7.8	8.5	35	27	e23	80	35	41	11	7.0	7.2	6.9
9	8.1	8.3	31	e20	e22	48	33	24	11	6.2	6.9	6.5
10	8.3	8.3	30	19	e20	179	37	22	10	6.1	6.6	6.2
11	8.1	8.0	28	20	e17	68	34	21	10	5.9	6.5	5.9
12	16	7.9	24	e22	e18	58	31	22	11	5.8	7.7	5.9
13	9.0	8.1	23	23	21	61	77	20	10	5.7	6.7	5.8
14	7.7	9.0	23	22	19	71	48	19	9.4	6.2	9.5	5.7
15	7.6	8.4	23	e20	e18	61	39	19	8.7	7.0	8.8	8.9
16	7.6	8.0	23	e19	19	51	44	24	9.3	6.5	7.1	7.1
17	7.6	8.6	21	e18	20	44	36	19	9.7	59	19	7.1
18	7.7	11	20	e17	25	42	34	18	8.9	16	15	10
19	7.4	8.7	21	e17	62	39	32	18	8.3	10	9.7	6.9
20	13	8.4	19	e18	126	39	31	18	8.3	9.2	8.8	6.5
21	14	7.9	45	e19	108	49	29	17	8.0	8.5	16	6.2
22	12	7.9	26	e19	60	52	28	16	9.1	10	17	11
23	9.3	7.6	23	e20	93	43	28	16	7.3	10	12	15
24	8.7	7.6	22	e28	141	41	27	15	7.4	9.1	9.4	8.9
25	8.7	7.6	21	e32	58	40	26	17	7.3	8.4	11	8.3
26	8.3	7.6	20	e80	45	35	25	25	6.6	8.3	43	13
27	8.7	39	19	29	39	92	27	19	24	14	12	11
28	8.5	417	18	93	35	84	25	16	15	19	10	9.1
29	8.3	40	18	46	---	102	24	15	9.3	11	10	8.7
30	16	29	18	31	---	63	24	14	9.6	9.3	9.5	7.9
31	16	---	20	27	---	54	---	13	---	9.3	8.7	---
TOTAL	294.2	750.5	1097	818	1158	1804	1074	637	313.2	322.3	335.4	241.9
MEAN	9.49	25.0	35.4	26.4	41.4	58.2	35.8	20.5	10.4	10.4	10.8	8.06
MAX	16	417	327	93	141	179	77	41	24	59	43	15
MIN	7.4	7.6	18	17	17	32	24	13	6.6	5.7	6.5	5.7
CFSM	.68	1.79	2.53	1.88	2.95	4.16	2.56	1.47	.75	.74	.77	.58
IN.	.78	1.99	2.91	2.17	3.08	4.79	2.85	1.69	.83	.86	.89	.64

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1983 - 1994, BY WATER YEAR (WY)

	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994
MEAN	9.34	14.1	18.0	17.4	22.2	27.1	26.6	23.7	13.1	10.0	9.72	7.78
MAX	17.2	25.0	35.5	32.5	41.4	62.0	54.7	51.9	25.3	17.1	29.9	13.9
(WY)	1991	1994	1984	1991	1994	1993	1993	1989	1989	1984	1984	1987
MIN	3.73	7.75	8.20	8.41	10.7	13.8	11.9	10.1	5.50	4.30	4.01	2.78
(WY)	1987	1983	1983	1983	1992	1990	1985	1986	1986	1991	1986	1986

PATAPSCO RIVER BASIN

01586210 BEAVER RUN NEAR FINKSBURG, MD--Continued

SUMMARY STATISTICS	FOR 1993 CALENDAR YEAR		FOR 1994 WATER YEAR		WATER YEARS 1983 - 1994	
ANNUAL TOTAL	9054.7		8845.5		16.6	
ANNUAL MEAN	24.8		24.2		24.7	
HIGHEST ANNUAL MEAN					9.92	
LOWEST ANNUAL MEAN					504	
HIGHEST DAILY MEAN	417	Nov 28	417	Nov 28	504	Feb 12 1985
LOWEST DAILY MEAN	6.4	Sep 15	5.7	(a)	2.1	(b)
ANNUAL SEVEN-DAY MINIMUM	7.6	Sep 1	6.1	Jul 8	2.2	Sep 15 1986
INSTANTANEOUS PEAK FLOW			1620	Nov 28	(c)2150	May 6 1989
INSTANTANEOUS PEAK STAGE			5.30	Nov 28	(d)5.70	May 6 1989
INSTANTANEOUS LOW FLOW			5.6	(f)	2.0	(g)
ANNUAL RUNOFF (CFSM)	1.77		1.73		1.18	
ANNUAL RUNOFF (INCHES)	24.06		23.50		16.07	
10 PERCENT EXCEEDS	45		45		30	
50 PERCENT EXCEEDS	15		17		12	
90 PERCENT EXCEEDS	8.0		7.4		5.3	

a July 13, Sept. 14.

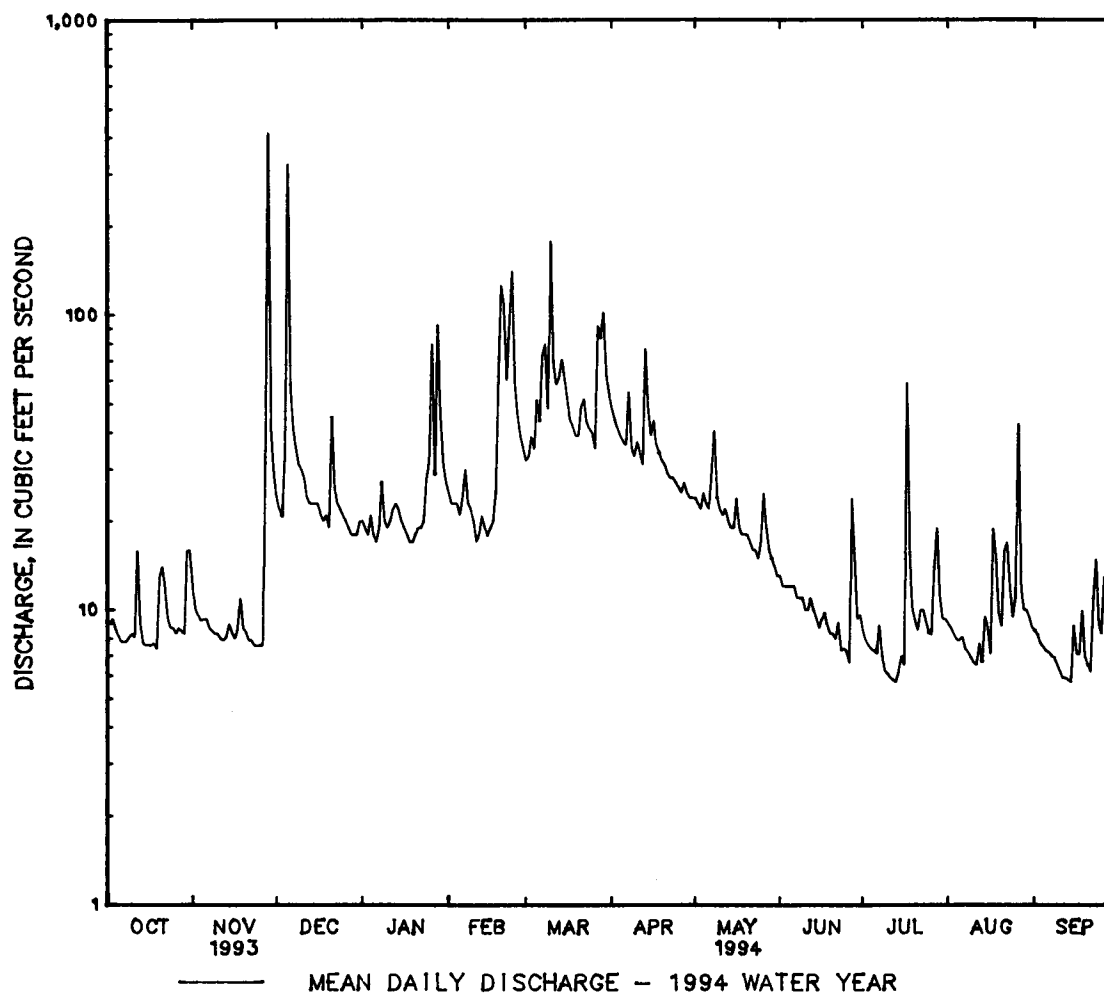
b Sept. 17, 18, 1986.

c From rating curve extended above 600 ft³/s.

d From floodmarks.

f July 11-14, Sept. 13-15.

g Sept. 12, 1983, Sept. 17, 18, 1986.



PATAPSCO RIVER BASIN

133

01586210 BEAVER RUN NEAR FINKSBURG, MD--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1993 to September 1994.

WATER QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH WATER WHOLE FIELD (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	TEMPER- ATURE AIR (DEG C)	HARD- NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
OCT 1993 08...	1000	13	178	6.6	12.0	15.0	51	13	4.6	10	1.7
AUG 1994 31...	0745	8.7	189	6.9	17.0	18.0	58	15	5.1	11	2.0

DATE	ALKA- LINITY WAT DIS TOT IT FIELD MG/L AS CACO3	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	IRON, DIS- SOLVED (UG/L AS FE)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)
OCT 1993 08...	28	4.3	22	--	7.0	--	<0.010	4.30	4.30	18	6
AUG 1994 31...	30	4.5	23	<0.10	6.6	107	<0.010	3.80	3.80	31	11

PATAPSCO RIVER BASIN

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 mi².

WATER-DISCHARGE RECORDS

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.--Water-discharge records good except those for estimated daily discharges (ice effect), which are fair.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 750 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 28	0415	*3,060	*7.89	Feb. 20	1630	981	4.73
Dec. 5	0615	1,480	5.68	July 17	1745	836	4.41

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	19	26	35	32	39	56	110	49	26	20	18	16
2	18	20	31	29	36	60	97	43	24	18	17	15
3	17	18	28	28	e34	76	89	42	24	17	16	14
4	16	18	49	34	31	62	87	51	24	17	15	14
5	16	17	814	29	31	115	81	46	24	16	16	14
6	15	17	146	27	39	101	81	41	24	16	16	15
7	15	17	91	30	50	177	124	59	23	19	14	15
8	15	16	71	45	39	172	78	90	22	15	14	14
9	15	16	60	38	36	101	72	50	22	15	14	16
10	14	15	57	e31	30	397	83	44	21	14	13	16
11	13	15	52	e32	e26	166	76	40	22	14	13	14
12	25	15	42	e35	e23	136	70	43	22	13	16	14
13	17	15	39	36	e30	135	172	39	21	13	14	14
14	15	17	38	e34	28	149	126	37	19	14	15	13
15	15	16	39	29	26	137	97	38	20	15	15	23
16	15	16	39	e40	27	115	107	43	39	14	13	17
17	15	16	33	e32	29	96	86	36	25	154	42	16
18	15	20	33	e25	40	90	79	35	22	32	30	24
19	15	16	35	e26	147	83	75	34	24	20	18	16
20	22	16	32	e28	308	79	71	34	24	17	15	14
21	24	15	79	e31	234	95	67	33	24	17	39	14
22	24	15	45	e32	123	109	63	31	27	22	48	24
23	18	15	39	32	197	90	61	30	20	21	24	30
24	17	15	36	73	336	87	59	29	20	17	18	19
25	16	15	35	86	139	85	57	32	19	17	19	17
26	15	14	32	197	91	72	54	51	17	17	142	26
27	15	43	30	48	71	192	59	38	54	40	25	22
28	15	950	29	165	61	199	53	30	37	46	20	19
29	15	78	e28	88	---	252	49	29	23	22	21	18
30	26	46	e32	53	---	158	48	27	22	19	18	16
31	34	---	42	44	---	132	---	26	---	22	16	---
TOTAL	546	1548	2191	1489	2301	3974	2431	1250	735	733	734	519
MEAN	17.6	51.6	70.7	48.0	82.2	128	81.0	40.3	24.5	23.6	23.7	17.3
MAX	34	950	814	197	336	397	172	90	54	154	142	30
MIN	13	14	28	25	23	56	48	26	17	13	13	13
CFSM	.63	1.84	2.52	1.72	2.93	4.58	2.89	1.44	.87	.84	.85	.62
IN.	.73	2.06	2.91	1.98	3.06	5.28	3.23	1.66	.98	.97	.98	.69

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1983 - 1994, BY WATER YEAR (WY)

	18.0	26.1	36.9	35.3	44.7	61.2	60.2	49.3	27.5	19.7	18.0	14.6
MAX	44.3	51.6	85.9	65.8	91.2	154	141	111	52.0	30.8	46.2	23.7
(WY)	1991	1994	1984	1991	1984	1993	1993	1989	1989	1984	1984	1987
MIN	5.69	13.7	15.5	17.0	20.6	29.1	27.0	20.5	11.5	7.47	6.48	5.15
(WY)	1987	1992	1983	1992	1992	1985	1985	1986	1986	1986	1986	1986

PATAPSCO RIVER BASIN

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01586610 MORGAN RUN NEAR LOUISVILLE, MD--Continued

SUMMARY STATISTICS	FOR 1993 CALENDAR YEAR		FOR 1994 WATER YEAR		WATER YEARS 1983 - 1994	
ANNUAL TOTAL	20216		18451			
ANNUAL MEAN	55.4		50.6		34.2	
HIGHEST ANNUAL MEAN					53.6	
LOWEST ANNUAL MEAN					19.5	
HIGHEST DAILY MEAN	950	Nov 28	950	Nov 28	1000	May 6 1989
LOWEST DAILY MEAN	12	(a)	13	(b)	4.0	(c)
ANNUAL SEVEN-DAY MINIMUM	12	Sep 1	14	Jul 10	4.2	Sep 17 1986
INSTANTANEOUS PEAK FLOW			3060	Nov 28	(d)3400	May 6 1989
INSTANTANEOUS PEAK STAGE			7.89	Nov 28	(f)8.31	May 6 1989
INSTANTANEOUS LOW FLOW			13	(g)	UNKNOWN	
ANNUAL RUNOFF (CFSM)	1.98		1.81		1.22	
ANNUAL RUNOFF (INCHES)	26.86		24.51		16.61	
10 PERCENT EXCEEDS	118		101		64	
50 PERCENT EXCEEDS	31		29		24	
90 PERCENT EXCEEDS	15		15		9.9	

a Sept. 1-3, 6, 7.

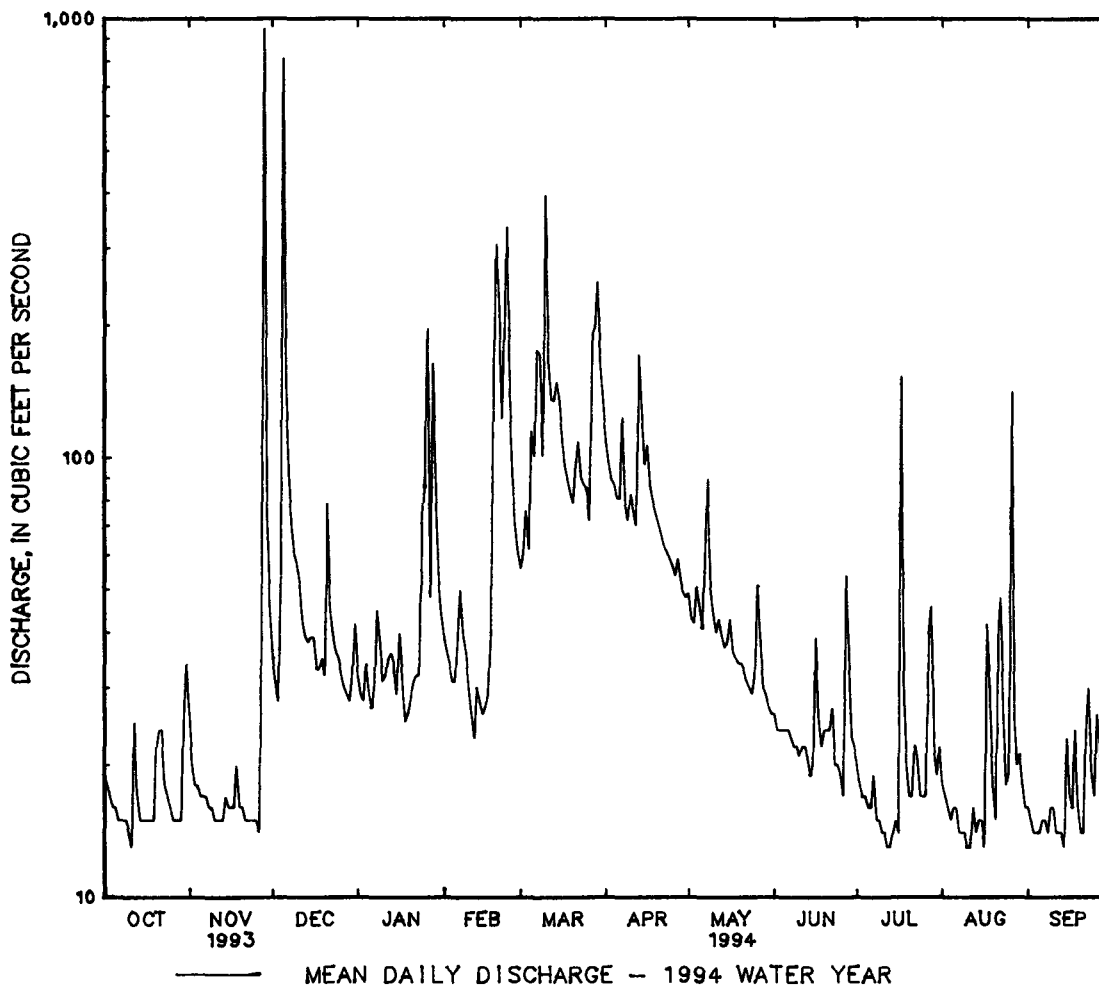
b Oct. 10, July 12, 13, Aug. 10, 11, 16, Sept. 14.

c Sept. 18-20, 1986.

d From rating curve extended above 1,900 ft³/s.

f from floodmarks.

g July 13, 14, Aug. 10, 11.



PATAPSCO RIVER BASIN

01586610 MORGAN RUN NEAR LOUISVILLE, MD--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1993 to September 1994.

WATER QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH WATER WHOLE FIELD (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	TEMPER- ATURE AIR (DEG C)	HARD- NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
OCT 1993 08...	1100	26	152	6.6	13.0	18.0	50	13	4.3	7.2	1.5
AUG 1994 31...	0845	17	163	7.0	17.0	19.0	53	14	4.4	7.7	1.7

DATE	ALKA- LITY WAT DIS TOT IT FIELD MG/L AS CACO3	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	IRON, DIS- SOLVED (UG/L AS FE)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)
OCT 1993 08...	28	4.0	16	--	6.9	--	<0.010	3.80	3.80	24	10
AUG 1994 31...	30	4.5	17	0.10	6.9	90	<0.010	3.70	3.70	33	10

PATAPSCO RIVER BASIN

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01589000 PATAPSCO RIVER AT HOLLOFIELD, MD

LOCATION.--Lat 39°18'36", long 76°47'34", Baltimore County, Hydrologic Unit 02060003, on left bank at downstream side of highway bridge at Hollofield, 0.3 mi downstream from Dogwood Run, 3.0 mi north of Ellicott City, and 28 mi upstream from mouth.

DRAINAGE AREA.--285 mi².

PERIOD OF RECORD.--May 1944 to January 1992, March 1994 to present.

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

REMARKS.--Records good except those for estimated daily discharges (missing record), which are poor. Flow regulated by Liberty Reservoir, 11 mi upstream, beginning July 22, 1954, usable capacity, 42,070,000,000 gal; dead storage, 1,260,000,000 gal. Diversions upstream from station for municipal supply of Westminster (sewage effluent discharged into Little Pipe Creek), and from Liberty Reservoir beginning Feb. 26, 1953, for municipal supply of Baltimore, and beginning February 1970 for a small municipal supply for part of Carroll County.

PEAK DISCHARGE FOR CURRENT PERIOD.--Peak discharge, 1,570 ft³/s, Apr. 14, gage height, 3.99 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, MARCH 1994 TO SEPTEMBER 1994
MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	855	261	125	e115	e72	78
2	---	---	---	---	---	---	716	236	119	e100	e68	71
3	---	---	---	---	---	---	638	197	113	e90	e66	67
4	---	---	---	---	---	---	e580	235	110	e80	e64	65
5	---	---	---	---	---	---	e540	257	108	e78	e71	64
6	---	---	---	---	---	---	509	215	110	e86	e68	64
7	---	---	---	---	---	---	801	250	108	e105	e58	62
8	---	---	---	---	---	---	618	766	102	e88	e52	60
9	---	---	---	---	---	---	517	444	99	e76	47	60
10	---	---	---	---	---	---	518	332	96	e72	46	61
11	---	---	---	---	---	---	587	258	99	e68	47	56
12	---	---	---	---	---	---	503	240	104	e66	90	55
13	---	---	---	---	---	---	740	219	112	e65	87	53
14	---	---	---	---	---	---	1090	182	94	e74	182	53
15	---	---	---	---	---	---	753	182	88	e80	168	91
16	---	---	---	---	---	---	730	335	115	e77	73	75
17	---	---	---	---	---	---	614	232	115	e850	163	65
18	---	---	---	---	---	---	530	193	95	e420	201	76
19	---	---	---	---	---	---	476	177	87	e140	107	66
20	---	---	---	---	---	---	448	167	99	e90	82	59
21	---	---	---	---	---	---	396	156	83	e81	331	57
22	---	---	---	---	---	---	370	147	80	e105	306	120
23	---	---	---	---	---	---	347	140	76	e130	125	341
24	---	---	---	---	---	---	330	139	e78	e115	92	97
25	---	---	---	---	---	---	323	152	e74	e96	80	77
26	---	---	---	---	---	---	300	200	e70	e80	214	172
27	---	---	---	---	---	---	297	307	e260	e100	109	162
28	---	---	---	---	---	---	316	191	e230	e250	89	97
29	---	---	---	---	---	---	282	163	e200	e120	88	82
30	---	---	---	---	---	---	265	148	e140	e90	92	71
31	---	---	---	---	---	1010	---	134	---	e76	78	---
TOTAL	---	---	---	---	---	---	15989	7255	3389	4063	3416	2577
MEAN	---	---	---	---	---	---	533	234	113	131	110	85.9
MAX	---	---	---	---	---	---	1090	766	260	850	331	341
MIN	---	---	---	---	---	---	265	134	70	65	46	53
(†)	---	---	---	---	---	44204	43795	43552	43263	42050	41070	38618
(*)	---	---	---	---	---	190	194	235	221	203	200	258

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1944 - 1994, BY WATER YEAR (WY)

	120	143	187	218	266	284	287	256	223	152	118	138
MEAN	120	143	187	218	266	284	287	256	223	152	118	138
MAX	857	590	675	770	724	804	1071	1102	2024	601	516	1493
(WY)	1980	1953	1973	1949	1951	1953	1952	1952	1972	1956	1971	1975
MIN	14.7	35.2	32.7	33.3	92.0	74.3	85.3	58.3	33.5	22.4	20.1	19.4
(WY)	1987	1966	1966	1966	1969	1981	1963	1963	1986	1966	1966	1986

† Month-end contents, in millions of gallons in Liberty Reservoir. Records provided by Baltimore Department of Public Works.

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

PATAPSCO RIVER BASIN

01589000 PATAPSCO RIVER AT HOLLOFIELD, MD--Continued

SUMMARY STATISTICS

WATER YEARS 1944 - 1994

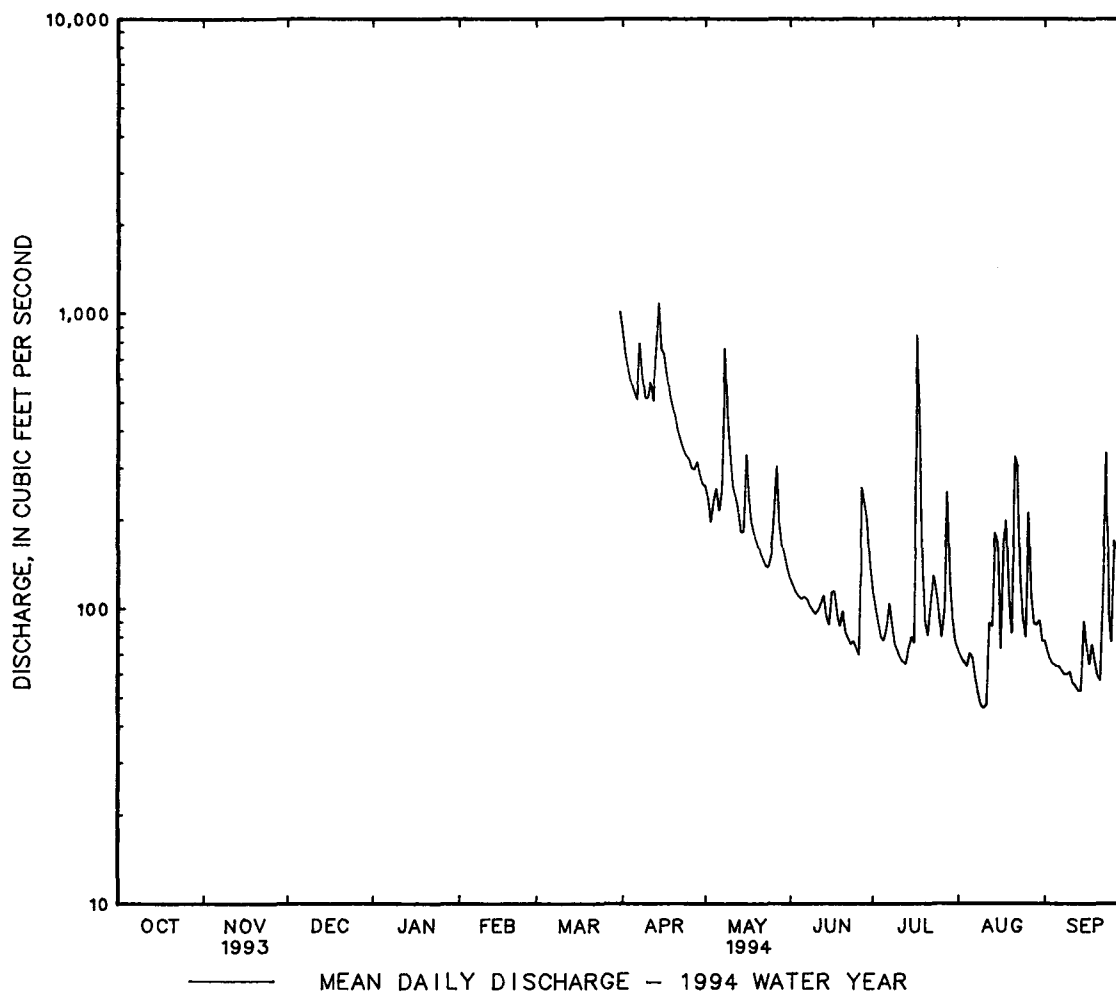
ANNUAL MEAN	*199	
ANNUAL MEAN DIVERSIONS*	165	
HIGHEST ANNUAL MEAN	*524	1972
LOWEST ANNUAL MEAN	*64.3	1966
HIGHEST DAILY MEAN	30000	Jun 22 1972
LOWEST DAILY MEAN	7.9	Oct 12 1986
ANNUAL SEVEN-DAY MINIMUM	9.7	Oct 6 1986
INSTANTANEOUS PEAK FLOW	a80600	Jun 22 1972
INSTANTANEOUS PEAK STAGE	b31.30	Jun 22 1972
INSTANTANEOUS LOW FLOW	6.0	Sep 6 1944
ANNUAL RUNOFF (CFSM)	.70	
ANNUAL RUNOFF (INCHES)	9.50	
10 PERCENT EXCEEDS	416	
50 PERCENT EXCEEDS	113	
90 PERCENT EXCEEDS	39	

* Unadjusted for diversions.

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

a From rating curve extended above 27,000 ft³/s on basis of slope-area measurement of peak flow.

b From floodmarks.



PATAPSCO RIVER BASIN

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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 mi².

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.--Records good except those for estimated daily values, Jan. 19-24, (frozen float), and Feb. 3 to March 8, (ADR malfunction), which are fair. 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.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 30 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 28	0630	44	2.79	July 27	2330	*143	*4.55
Jan. 28	1300	33	2.57	Sep. 23	0045	48	2.86
Mar. 28	0815	42	2.75				

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.4	2.5	2.0	1.8	2.8	e4.0	8.1	5.1	3.1	4.3	4.0	2.8
2	1.5	1.6	2.0	2.5	2.7	e6.0	6.8	4.9	3.0	2.9	3.0	2.4
3	1.5	1.5	1.9	2.4	e2.6	e25	6.7	4.4	3.0	7.6	2.8	2.3
4	1.3	1.5	3.4	4.4	e2.6	e35	6.2	6.7	3.0	6.4	3.1	2.1
5	1.3	2.2	19	2.8	e2.6	e16	5.8	7.0	2.9	3.3	13	2.1
6	1.2	1.8	7.5	2.2	e2.6	e11	6.1	4.9	3.0	2.9	7.6	2.2
7	1.2	1.6	3.5	3.4	e2.6	e8.0	8.8	6.2	3.4	2.6	3.2	2.5
8	1.4	1.6	2.7	7.2	e2.7	e6.4	6.2	8.8	4.3	2.5	2.9	2.2
9	1.3	1.5	2.4	3.1	e3.2	6.4	5.4	5.4	3.1	2.4	2.7	1.9
10	1.2	1.4	2.4	2.2	e3.0	17	7.2	4.7	3.0	2.4	2.7	1.9
11	1.2	1.4	2.4	2.2	e2.8	11	6.3	4.4	3.1	2.4	3.8	1.8
12	5.1	1.4	2.2	4.6	e2.8	6.3	5.6	4.7	3.1	2.5	6.1	2.0
13	2.0	1.7	2.1	3.4	e3.0	5.6	10	4.2	2.9	2.4	3.2	1.8
14	1.5	1.9	2.1	2.8	e3.0	5.4	13	3.9	2.8	3.4	4.2	2.0
15	1.5	1.7	3.2	2.1	e2.9	5.3	7.1	6.2	2.7	3.5	4.2	2.8
16	1.4	1.7	3.9	1.4	e3.2	5.1	6.7	8.4	2.6	2.5	3.1	2.2
17	1.4	1.9	2.4	1.7	e4.0	4.6	5.9	4.5	2.6	2.4	8.7	2.2
18	1.5	2.6	2.2	4.0	e5.4	4.9	5.4	4.1	2.7	3.4	5.7	2.4
19	1.4	2.1	2.2	e2.5	e7.2	5.0	5.3	4.1	3.2	4.1	3.4	1.9
20	1.6	2.2	2.1	e2.3	e6.4	4.6	5.2	4.6	3.2	2.5	2.9	1.9
21	2.4	1.6	5.5	e2.2	e5.0	6.6	5.1	4.0	2.8	3.3	4.0	2.3
22	2.3	1.3	2.9	e2.4	e4.4	8.9	5.0	3.7	2.7	6.5	4.3	9.2
23	1.5	1.3	2.4	e2.8	e12	5.4	5.1	3.6	4.8	4.9	3.4	17
24	1.4	1.4	2.5	e5.0	e11	5.2	5.2	3.6	5.9	2.7	2.8	3.5
25	1.4	1.4	2.3	4.1	e5.6	6.6	5.0	5.4	3.7	2.8	2.6	2.7
26	1.5	1.3	2.1	7.3	e4.0	5.1	4.9	4.5	3.0	2.9	5.2	2.8
27	1.8	3.1	1.9	3.3	e3.8	14	5.9	3.6	3.7	26	2.9	7.1
28	1.8	20	1.9	14	e3.7	25	5.6	3.3	3.0	41	2.6	2.8
29	1.6	4.7	2.0	9.3	---	21	4.9	3.3	3.6	7.3	3.0	2.5
30	3.5	2.6	1.9	4.4	---	12	5.0	3.2	6.1	4.0	2.7	2.3
31	3.5	---	1.8	3.4	---	8.2	---	3.1	---	4.5	2.6	---
TOTAL	54.6	74.5	98.8	117.2	117.6	310.6	189.5	148.5	100.0	172.3	126.4	95.6
MEAN	1.76	2.48	3.19	3.78	4.20	10.0	6.32	4.79	3.33	5.56	4.08	3.19
MAX	5.1	20	19	14	12	35	13	8.8	6.1	41	13	17
MIN	1.2	1.3	1.8	1.4	2.6	4.0	4.9	3.1	2.6	2.4	2.6	1.8
CF5M	.35	.50	.64	.76	.85	2.02	1.27	.96	.67	1.12	.82	.64
IN.	.41	.56	.74	.88	.88	2.32	1.42	1.11	.75	1.29	.95	.72

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1944 - 1994, BY WATER YEAR (WY)

	1944	1945	1946	1947	1948	1949	1950	1951	1952	1953	1954	1955
MEAN	3.57	4.21	4.61	4.83	5.05	5.89	5.66	5.74	5.02	4.63	4.56	4.44
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

PATAPSCO RIVER BASIN

01589500 SAWMILL CREEK AT GLEN BURNIE, MD--Continued

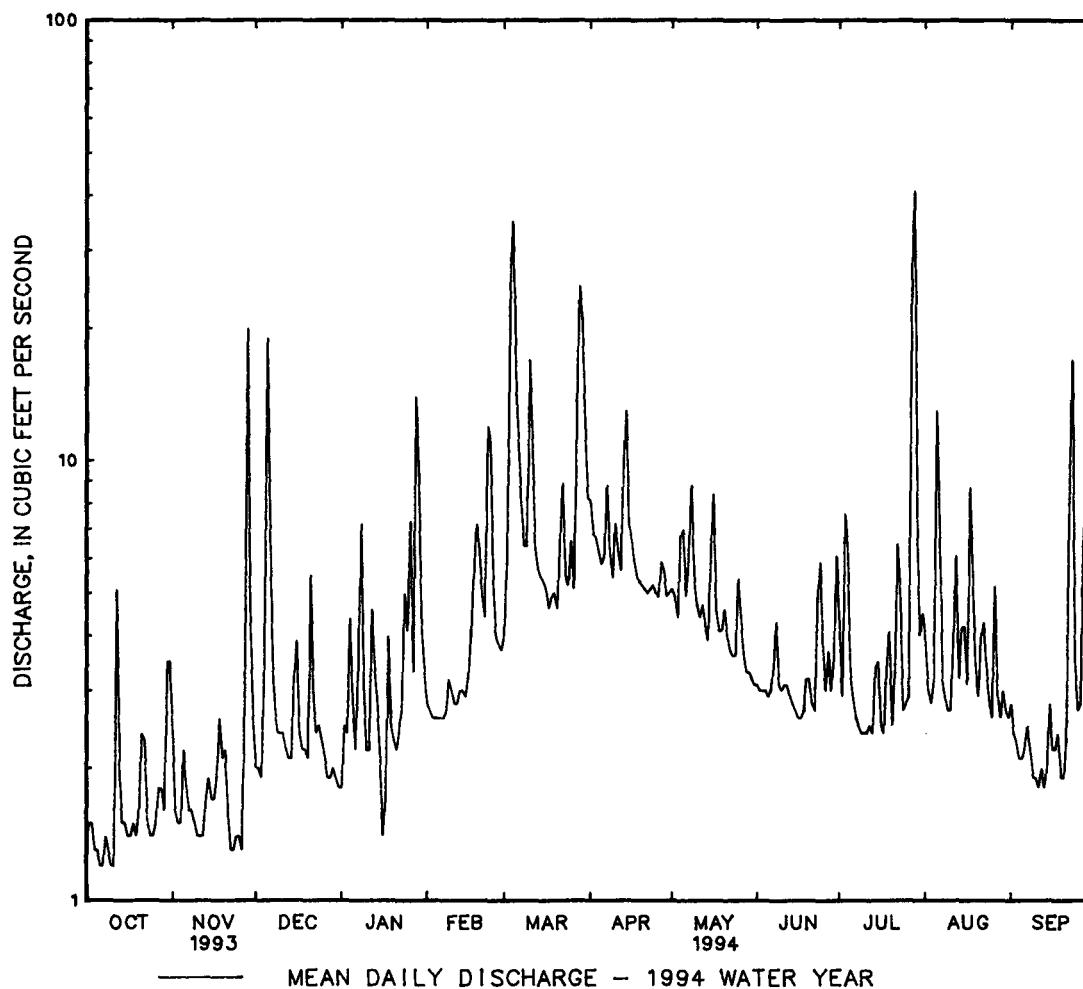
SUMMARY STATISTICS	FOR 1993 CALENDAR YEAR		FOR 1994 WATER YEAR		WATER YEARS 1944 - 1994	
ANNUAL TOTAL	1224.0		1605.6			
ANNUAL MEAN	3.35		4.40		4.85	
HIGHEST ANNUAL MEAN					11.0	
LOWEST ANNUAL MEAN					.43	
HIGHEST DAILY MEAN	24	Mar 4	41	Jul 28	84	Sep 1 1952
LOWEST DAILY MEAN	1.1	Sep 13	1.2	(a)	.01	(b)
ANNUAL SEVEN-DAY MINIMUM	1.3	Aug 28	1.3	Oct 5	.01	Jul 25 1986
INSTANTANEOUS PEAK FLOW			143	Jul 27	(c)178	Aug 29 1989
INSTANTANEOUS PEAK STAGE			4.55	Jul 27	5.12	Aug 29 1989
INSTANTANEOUS LOW FLOW			1.1	Nov 12	.00	(d)
ANNUAL RUNOFF (CFSM)	.67		.89		.98	
ANNUAL RUNOFF (INCHES)	9.16		12.02		13.25	
10 PERCENT EXCEEDS	6.4		7.2		9.4	
50 PERCENT EXCEEDS	2.3		3.1		4.4	
90 PERCENT EXCEEDS	1.4		1.6		.30	

a October 6, 7, 10, 11.

b Many days in 1985, 1986, 1987.

c From rating curve extended above 157 ft³/s, on basis of contracted-opening measurement at gage height 4.77 ft.

d Part of each day Sept. 6, 7, 1985, July 29, Aug. 2, 1986.



PATAPSCO RIVER BASIN

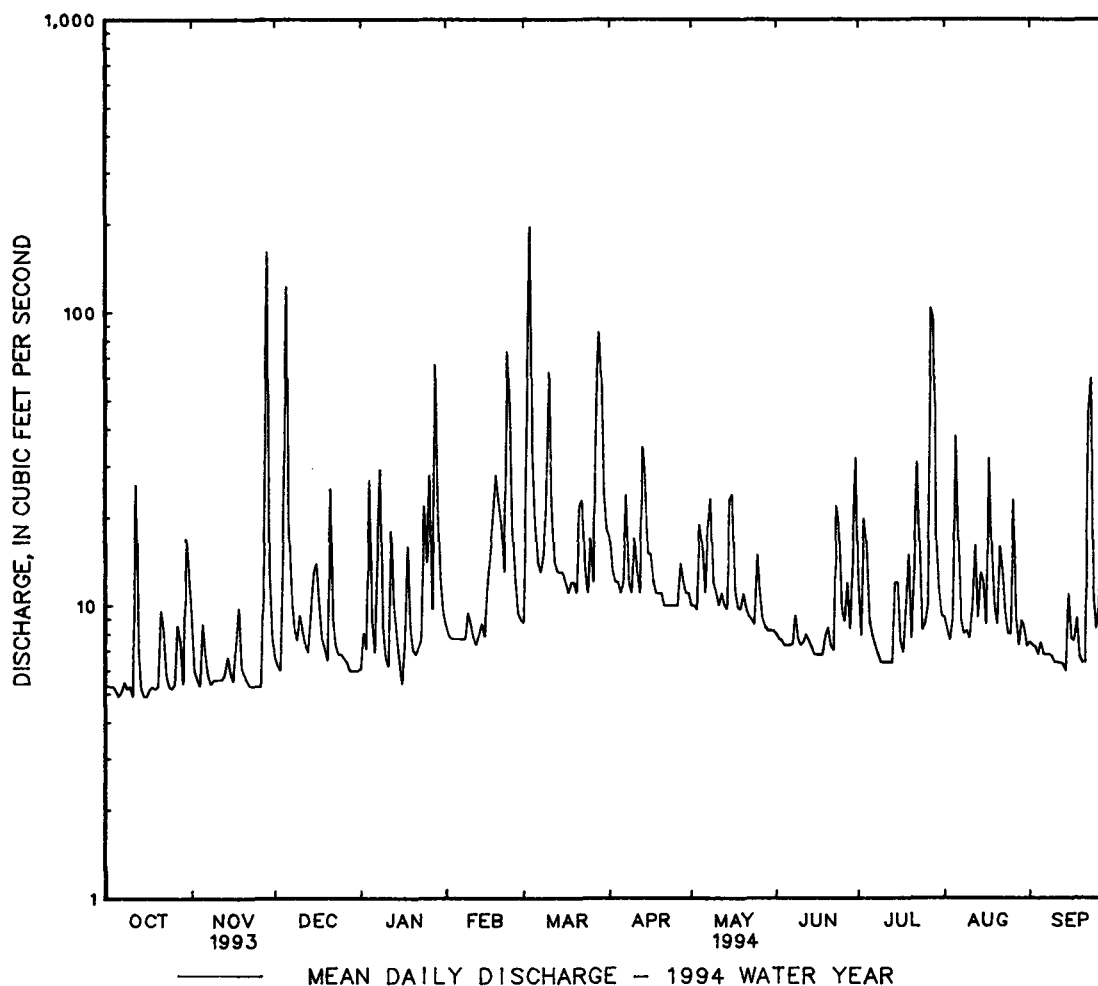
01589512 SAWMILL CREEK AT CRAIN HIGHWAY AT GLEN BURNIE, MD--Continued

SUMMARY STATISTICS	FOR 1993 CALENDAR YEAR		FOR 1994 WATER YEAR		WATER YEARS 1984 - 1994	
ANNUAL TOTAL	4184.5		5008.5			
ANNUAL MEAN	11.5		13.7		9.51	
HIGHEST ANNUAL MEAN					13.7	
LOWEST ANNUAL MEAN					4.65	
HIGHEST DAILY MEAN	162	Nov 28	197	Mar 3	197	Mar 3 1994
LOWEST DAILY MEAN	4.6	(a)	4.9	(b)	1.3	Oct 8 1983
ANNUAL SEVEN-DAY MINIMUM	4.9	Jul 28	5.1	Oct 5	1.5	Aug 11 1985
INSTANTANEOUS PEAK FLOW			644	Jul 27	644	Jul 27 1994
INSTANTANEOUS PEAK STAGE			8.75	Jul 27	8.75	Jul 27 1994
INSTANTANEOUS LOW FLOW			4.9	(c)	UNKNOWN	
ANNUAL RUNOFF (CFSM)	1.39		1.67		1.15	
ANNUAL RUNOFF (INCHES)	18.89		22.61		15.68	
10 PERCENT EXCEEDS	19		23		17	
50 PERCENT EXCEEDS	7.1		8.8		6.6	
90 PERCENT EXCEEDS	5.3		5.6		3.0	

a Sept. 13, 14.

b Oct. 6, 11, 15, 16.

a Oct. 5-7, 9-12, 14-20, 25, 26, Nov. 26, 27.



PATUXENT RIVER BASIN

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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 mi².

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), which are fair.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 770 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 28	0915	*2,980	*8.97	Feb. 20	1715	1,090	6.20
Dec. 5	0745	1,410	6.83	Feb. 24	1515	818	5.55
Feb. 19	1915	1,120	6.25				

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14	24	38	30	54	66	118	53	29	19	16	20
2	14	19	33	32	46	70	105	48	27	16	16	18
3	14	18	30	32	e44	101	97	46	27	15	16	17
4	13	18	48	45	42	120	93	59	27	18	14	17
5	12	19	778	37	41	254	85	55	27	15	14	17
6	12	19	121	32	50	168	86	48	27	15	14	16
7	12	17	75	40	53	170	153	67	26	14	12	16
8	12	16	60	77	47	161	93	146	25	13	12	15
9	13	16	51	50	56	124	84	67	24	12	11	15
10	12	16	47	e45	41	373	87	57	23	13	11	15
11	12	16	46	37	33	163	85	51	25	11	11	14
12	19	16	38	63	42	125	78	52	26	11	45	14
13	15	16	36	59	41	115	126	47	24	11	39	14
14	13	18	36	54	39	116	111	44	22	15	60	13
15	13	17	40	46	35	107	89	59	21	14	43	14
16	13	15	49	e42	36	96	112	99	21	12	19	14
17	13	17	37	38	42	84	87	54	22	14	77	14
18	13	28	35	82	88	83	79	50	21	19	65	15
19	13	20	38	41	353	82	76	47	19	14	32	13
20	15	18	34	38	407	75	73	46	19	12	24	12
21	24	16	72	36	229	82	68	43	18	12	98	12
22	31	16	51	36	125	107	65	40	17	13	70	19
23	18	16	42	36	256	81	62	38	18	14	36	33
24	16	15	38	e90	425	76	61	37	19	13	27	18
25	15	15	37	85	147	80	59	40	19	15	23	16
26	15	15	35	198	106	71	57	47	16	19	58	32
27	15	66	32	57	81	255	58	50	22	31	29	34
28	16	1200	31	224	71	249	56	36	26	59	24	20
29	16	82	e31	131	---	325	53	34	19	22	24	18
30	20	50	e31	73	---	168	52	32	21	18	23	16
31	30	---	e30	62	---	135	---	31	---	16	21	---
TOTAL	483	1854	2100	1948	3030	4282	2508	1623	677	515	984	521
MEAN	15.6	61.8	67.7	62.8	108	138	83.6	52.4	22.6	16.6	31.7	17.4
MAX	31	1200	778	224	425	373	153	146	29	59	98	34
MIN	12	15	30	30	33	66	52	31	16	11	11	12
CFSM	.45	1.78	1.95	1.81	3.11	3.97	2.40	1.50	.65	.48	.91	.50
IN.	.52	1.98	2.24	2.08	3.24	4.58	2.68	1.73	.72	.55	1.05	.56

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1944 - 1994, BY WATER YEAR (WY)

	1944	1945	1946	1947	1948	1949	1950	1951	1952	1953	1954	1955
MEAN	21.6	28.4	39.6	45.5	55.0	62.0	58.8	49.8	36.3	26.2	22.1	26.2
MAX	150	82.8	106	135	152	173	158	141	206	102	120	214
(WY)	1980	1953	1949	1979	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	8.75	4.15	2.79	4.51
(WY)	1987	1966	1966	1966	1947	1981	1963	1963	1986	1966	1966	1986

PATUXENT RIVER BASIN

01591000 PATUXENT RIVER NEAR UNITY, MD--Continued

SUMMARY STATISTICS	FOR 1993 CALENDAR YEAR		FOR 1994 WATER YEAR		WATER YEARS 1944 - 1994	
ANNUAL TOTAL	21466		20525			
ANNUAL MEAN	58.8		56.2		39.2	
HIGHEST ANNUAL MEAN					82.3	
LOWEST ANNUAL MEAN					19.8	
HIGHEST DAILY MEAN	1200	Nov 28	1200	Nov 28	2590	Sep 26 1975
LOWEST DAILY MEAN	11	(a)	11	(b)	.20	(c)
ANNUAL SEVEN-DAY MINIMUM	12	Aug 27	12	Oct 5	.40	Sep 6 1966
INSTANTANEOUS PEAK FLOW			2980	Nov 28	(d)21800	Sep 11 1971
INSTANTANEOUS PEAK STAGE			8.97	Nov 28	18.60	Sep 11 1971
INSTANTANEOUS LOW FLOW			10	(f)	.20	(g)
ANNUAL RUNOFF (CFSM)	1.69		1.62		1.13	
ANNUAL RUNOFF (INCHES)	22.95		21.94		15.32	
10 PERCENT EXCEEDS	115		107		71	
50 PERCENT EXCEEDS	34		34		25	
90 PERCENT EXCEEDS	13		14		9.0	

a Sept. 6, 12-15.

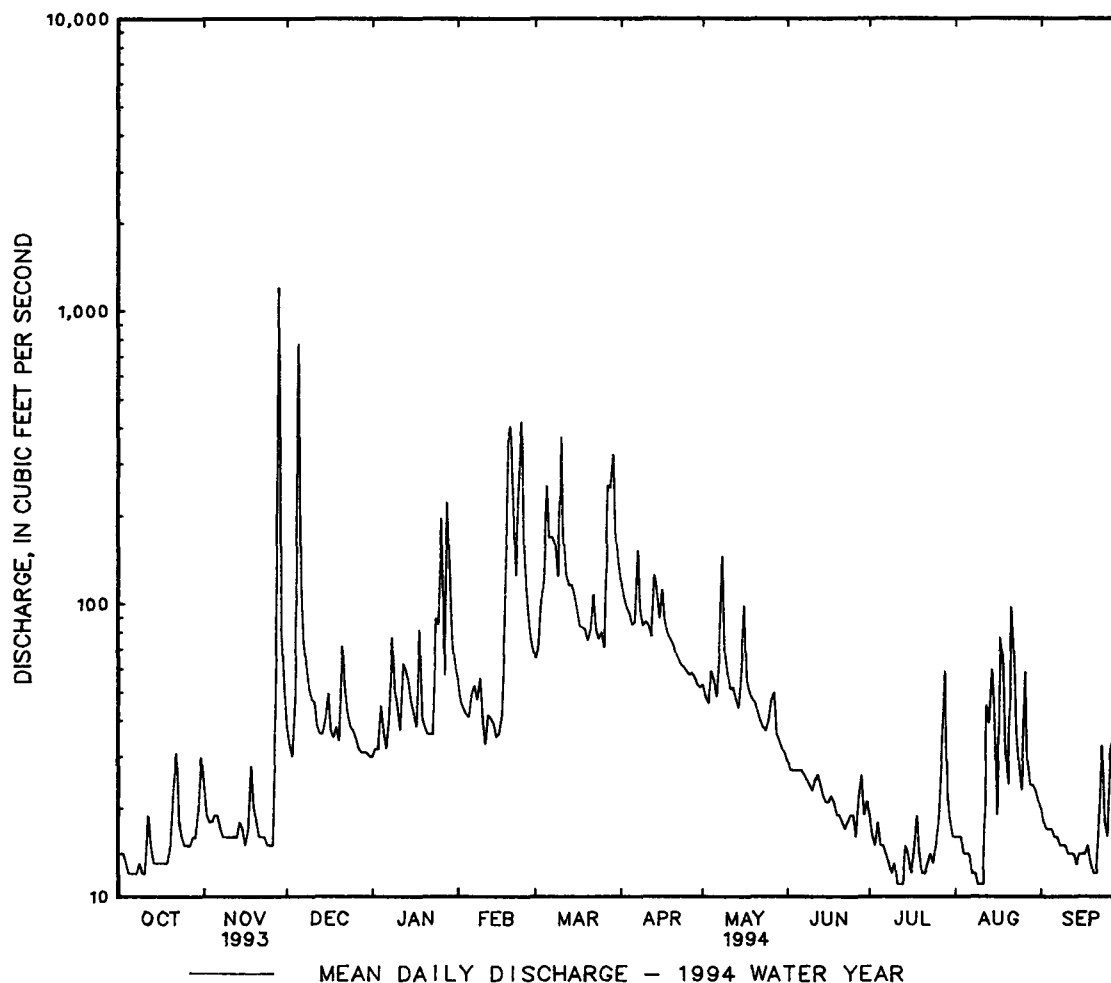
b July 11-13, Aug. 9-11.

c Sept. 10, 11, 1966.

d From rating curve extended above 1,500 ft³/s on basis of slope-area measurement at gage height 13.00 ft.

f July 13, 14.

g Sept. 10-12, 1966.



PATUXENT RIVER BASIN

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01591000 PATUXENT RIVER NEAR UNITY, MD--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water year 1985 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH WATER WHOLE FIELD (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	TEMPER- ATURE AIR (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN DEMAND, CHEM- ICAL (LOW LEVEL) (MG/L)	OXYGEN DEMAND, BIO- CHEM- ICAL, 5 DAY (MG/L)
OCT 1992										
05...	1020	14	111	7.7	12.0	11.0	3.6	10.1	--	--
06...	0730	13	113	6.7	9.0	5.5	3.1	--	<10	0.5
27...	0835	21	115	6.5	9.0	11.0	1.9	--	<10	1.7
NOV										
03...	0625	602	--	--	--	--	69	--	23	--
03...	0928	351	--	--	--	--	25	--	<10	--
04...	1134	55	175	7.3	11.0	17.0	10	10.0	--	--
19...	1115	32	112	6.7	7.0	4.0	2.5	--	<10	0.9
23...	0759	187	--	--	--	--	93	--	<10	--
DEC										
07...	1025	31	109	7.6	3.5	4.5	2.3	12.7	--	--
11...	1014	431	--	--	--	--	21	--	<10	--
11...	1312	667	--	--	--	--	40	--	<10	--
11...	1521	861	--	--	--	--	140	--	12	--
11...	1706	996	--	--	--	--	270	--	12	--
11...	2157	757	--	--	--	--	22	--	<10	--
12...	0053	425	--	--	--	--	2.4	--	<10	--
22...	1030	54	111	6.2	4.0	3.0	3.0	--	<10	3.1
JAN 1993										
04...	1135	42	108	7.8	5.5	14.0	2.4	12.3	--	--
11...	1030	51	114	6.5	3.0	1.0	2.8	--	<10	0.5
FEB										
08...	1140	35	104	7.7	1.0	7.0	2.7	14.2	--	--
24...	0945	47	130	6.1	1.0	4.0	3.0	--	<10	0.8
MAR										
04...	0948	215	--	--	--	--	--	--	--	--
04...	1747	1360	--	--	--	--	--	--	--	--
04...	1857	1410	--	--	--	--	--	--	--	--
04...	2007	1400	--	--	--	--	--	--	--	--
04...	2118	1360	--	--	--	--	--	--	--	--
04...	2223	1290	--	--	--	--	--	--	--	--
04...	2354	996	--	--	--	--	--	--	--	--
05...	0232	442	--	--	--	--	--	--	--	--
05...	1535	282	--	--	--	--	10	--	<10	--
06...	0520	163	--	--	--	--	0.60	--	<10	--
07...	0549	111	--	--	--	--	0.70	--	<10	--
09...	1025	83	107	7.1	5.5	8.5	8.4	11.9	--	--
18...	1150	176	--	--	--	--	0.50	--	<10	--
18...	2157	143	--	--	--	--	2.0	--	<10	--
24...	0039	713	--	--	--	--	4.5	--	<10	--
24...	0656	837	--	--	--	--	3.3	--	<10	--
24...	0859	754	--	--	--	--	3.4	--	<10	--
24...	1535	381	--	--	--	--	2.0	--	<10	--
25...	0054	284	--	--	--	--	1.1	--	<10	--
27...	2208	595	--	--	--	--	44	--	<10	--
28...	1002	674	--	--	--	--	51	--	<10	--
28...	1217	663	--	--	--	--	5.2	--	<10	--
APR										
01...	0508	632	--	--	--	--	35	--	<10	--
01...	0821	359	--	--	--	--	2.1	--	<10	--
01...	2034	299	--	--	--	--	28	--	<10	--
07...	1051	111	292	6.0	7.0	9.0	0.80	--	<10	--
13...	0835	113	107	7.3	8.5	9.0	7.8	10.7	--	--
30...	0915	91	--	--	--	--	4.5	--	<10	1.4
MAY										
10...	1010	67	104	7.3	16.5	24.0	6.1	9.8	--	--
26...	0740	46	102	6.7	15.0	15.0	6.7	--	<10	0.5
JUN										
14...	0925	36	109	7.2	16.0	21.0	9.7	8.8	--	--
23...	0830	33	104	6.7	17.0	19.0	5.9	--	<10	0.8
JUL										
12...	1012	19	106	7.3	23.5	27.0	12	7.9	--	--
27...	0745	18	101	6.7	20.0	24.0	15	--	<10	0.9
AUG										
09...	0910	19	113	7.4	17.5	25.0	5.7	9.7	--	--
25...	1650	15	--	--	--	--	5.6	--	--	--
SEP										
21...	1035	34	139	7.4	15.5	16.5	7.3	9.2	--	--
27...	0930	41	113	6.5	16.0	22.0	9.6	--	11	0.5
27...	2221	104	--	--	--	--	110	--	<10	--

PATUXENT RIVER BASIN

01591000 PATUXENT RIVER NEAR UNITY, MD--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	ALKA- LINITY WAT WH TOT FET FIELD MG/L AS CACO3	SILICA, DIS- SOLVED (MG/L AS SiO2)	RESIDUE TOTAL AT 105 DEG. C, SUS- PENDED (MG/L)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS NO3)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N)
OCT 1992										
05...	--	--	10	12	0.006	2.70	2.70	--	0.35	--
06...	20	8.8	16	12	0.007	2.70	2.70	0.008	0.15	0.25
27...	24	8.6	4	9.6	0.020	2.20	2.20	0.008	0.30	0.20
NOV										
03...	--	4.3	18	10	0.034	2.30	2.30	0.036	0.90	0.70
03...	--	14	120	12	0.033	2.80	2.80	0.012	0.45	0.30
04...	--	--	8	7.8	0.036	1.80	1.80	0.016	0.50	--
19...	18	8.1	<1	12	0.005	2.70	2.70	<0.008	0.15	0.20
23...	--	11	92	11	0.005	2.40	2.40	0.012	--	--
DEC										
07...	--	--	4	11	0.008	2.50	2.50	0.016	0.25	--
11...	--	10	34	12	0.003	2.70	2.70	0.008	0.55	0.10
11...	--	10	70	12	0.004	2.80	2.80	0.008	0.70	0.15
11...	--	9.4	218	11	0.005	2.40	2.40	0.016	1.5	0.15
11...	--	7.9	385	7.9	0.006	1.80	1.80	0.020	2.7	0.20
11...	--	--	3	--	--	--	--	--	0.55	--
12...	--	--	3	--	--	--	--	--	0.35	--
22...	15	8.1	5	13	0.004	3.00	3.00	0.012	0.20	0.15
JAN 1993										
04...	--	--	4	15	0.005	3.30	3.30	<0.008	0.25	--
11...	16	7.7	6	14	0.008	3.10	3.10	0.008	0.20	<0.10
FEB										
08...	--	--	3	16	0.081	3.60	3.60	0.031	0.60	--
24...	12	7.1	10	12	0.009	2.79	2.79	<0.008	0.30	0.30
MAR										
04...	--	--	--	--	--	--	--	--	0.30	--
04...	--	--	--	--	--	--	--	--	1.8	--
04...	--	--	--	--	--	--	--	--	1.3	--
04...	--	--	--	--	--	--	--	--	0.50	--
04...	--	--	--	--	--	--	--	--	0.40	--
04...	--	--	--	--	--	--	--	--	0.30	--
04...	--	--	--	--	--	--	--	--	0.40	--
05...	--	--	--	--	--	--	--	--	0.20	--
05...	--	11	2	5.3	0.008	1.20	1.20	0.011	0.20	0.15
06...	--	12	2	5.3	0.009	1.20	1.20	0.012	0.20	0.10
07...	--	14	2	5.7	0.009	1.30	1.30	0.011	0.20	0.20
09...	--	--	11	13	0.009	2.90	2.90	0.027	0.25	--
18...	--	13	18	5.3	0.005	1.20	1.20	0.029	<0.10	0.20
18...	--	14	20	5.7	0.007	1.30	1.30	0.014	0.15	0.20
24...	--	11	5	6.6	0.005	1.50	1.50	0.025	0.20	0.20
24...	--	11	5	5.7	0.006	1.30	1.30	0.017	0.20	0.20
24...	--	12	6	6.2	0.006	1.40	1.40	0.016	0.50	0.20
24...	--	11	2	3.5	0.010	0.800	0.800	0.028	0.20	0.10
25...	--	11	2	2.9	0.008	0.660	0.660	0.020	0.20	<0.10
27...	--	12	92	6.1	0.012	1.40	1.40	0.032	0.70	0.25
28...	--	12	84	5.7	0.011	1.30	1.30	0.021	0.50	0.15
28...	--	12	25	5.7	0.011	1.30	1.30	0.016	0.15	<0.10
APR										
01...	--	13	70	5.7	0.005	1.30	1.30	0.010	--	--
01...	--	13	4	5.7	0.005	1.30	1.30	0.009	0.10	<0.10
01...	--	11	15	6.2	0.006	1.40	1.40	0.025	0.25	0.25
07...	14	13	2	5.7	0.008	1.30	1.30	0.008	<0.10	<0.10
13...	--	--	10	13	0.006	3.00	3.00	0.012	0.34	--
30...	--	6.3	5	13	0.004	3.00	3.00	0.010	0.30	0.21
MAY										
10...	--	--	15	13	0.011	2.90	2.90	0.025	0.30	--
26...	15	8.2	4	14	0.009	3.20	3.20	0.028	0.57	--
JUN										
14...	--	--	8	13	0.014	3.00	3.00	0.063	0.90	--
23...	18	9.7	12	12	0.010	2.68	2.68	0.017	0.44	0.19
JUL										
12...	--	--	9	--	0.011	--	--	0.048	0.45	--
27...	8	9.2	14	12	0.004	2.74	2.74	0.024	0.41	<0.10
AUG										
09...	--	--	23	9.2	0.005	2.09	2.09	0.021	0.18	--
25...	--	9.4	<1	9.3	0.008	2.12	2.12	0.016	0.30	0.22
SEP										
21...	--	--	<1	7.1	0.005	1.61	1.61	<0.008	0.44	--
27...	21	8.8	9	9.8	0.003	2.21	2.21	0.026	0.37	0.27
27...	--	27	202	7.5	0.003	1.70	1.70	0.034	0.83	0.20

PATUXENT RIVER BASIN

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01591000 PATUXENT RIVER NEAR UNITY, MD--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	PHOS- PHORUS TOTAL (MG/L AS P)	PHOS- PHORUS DIS- SOLVED (MG/L AS P)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P)	CHLORO- PHYLL A PHYTO- PLANK- TON, UNCORR. (UG/L)	CHLORO- PHYLL B PHYTO- PLANK- TON, UNCORR. (UG/L)	CHLORO- PHYLL C PHYTO- PLANK- TON, UNCORR. (UG/L)	PHEO- PHYTIN PHYTO- PLANK- TON, ACID M. (UG/L)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)
OCT 1992									
05...	<0.010	--	--	0.600	<0.001	<0.001	0.200	1.3	--
06...	<0.010	<0.010	<0.004	0.400	<0.001	0.200	<0.001	1.3	1.6
27...	<0.010	<0.010	<0.004	<0.001	<0.001	<0.001	<0.001	2.5	2.8
NOV									
03...	0.180	0.080	0.048	--	--	--	--	10	--
03...	0.100	0.040	0.026	--	--	--	--	4.1	--
04...	0.070	--	--	0.001	<0.001	<0.001	0.200	1.8	--
19...	0.090	--	--	0.200	<0.001	<0.001	<0.001	1.4	--
23...	--	--	--	--	--	--	--	6.8	6.3
DEC									
07...	0.030	--	--	0.400	<0.001	<0.001	--	1.2	--
11...	0.070	0.010	--	--	--	--	--	6.0	6.0
11...	0.120	<0.010	--	--	--	--	--	5.8	5.7
11...	0.380	0.030	--	--	--	--	--	7.1	5.8
11...	0.600	0.040	--	--	--	--	--	10	6.7
11...	0.150	--	--	--	--	--	--	5.5	--
12...	0.060	--	--	--	--	--	--	4.2	--
22...	0.090	0.020	0.008	<0.001	<0.001	<0.001	<0.001	1.3	--
JAN 1993									
04...	0.010	--	--	--	--	--	--	1.0	--
11...	<0.010	0.020	0.006	<0.001	<0.001	<0.001	--	1.1	--
FEB									
08...	<0.010	--	--	--	--	--	<0.001	0.8	--
24...	<0.010	<0.010	0.013	0.200	<0.001	<0.001	<0.001	1.0	--
MAR									
04...	0.070	--	--	--	--	--	--	2.6	--
04...	0.600	--	--	--	--	--	--	6.5	--
04...	0.370	--	--	--	--	--	--	4.1	--
04...	0.150	--	--	--	--	--	--	2.3	--
04...	0.130	--	--	--	--	--	--	2.3	--
04...	0.090	--	--	--	--	--	--	1.9	--
04...	0.200	--	--	--	--	--	--	3.3	--
05...	0.050	--	--	--	--	--	--	2.7	--
05...	0.020	0.030	0.019	--	--	--	--	1.3	--
06...	0.030	0.030	0.020	--	--	--	--	0.9	--
07...	0.030	0.030	0.022	--	--	--	--	0.6	--
09...	0.030	--	--	--	--	--	0.400	1.4	--
18...	0.030	0.010	0.022	--	--	--	--	0.8	1.1
18...	0.030	0.030	0.026	--	--	--	--	0.7	0.8
24...	0.040	0.030	0.025	--	--	--	--	1.7	--
24...	0.040	0.040	0.023	--	--	--	--	1.9	--
24...	0.030	0.020	0.023	--	--	--	--	1.8	--
24...	0.020	0.050	0.023	--	--	--	--	1.8	--
25...	0.030	0.030	0.020	--	--	--	--	1.2	--
27...	0.200	<0.010	0.049	--	--	--	--	2.8	--
28...	0.160	<0.010	0.052	--	--	--	--	2.5	--
28...	0.040	<0.010	0.045	--	--	--	--	1.5	--
APR									
01...	--	--	--	--	--	--	--	2.0	1.9
01...	0.020	<0.010	0.035	--	--	--	--	1.9	1.5
01...	0.030	0.020	0.027	--	--	--	--	3.0	--
07...	0.030	0.020	0.016	--	--	--	--	0.5	--
13...	0.070	--	--	--	--	--	0.200	1.4	--
30...	0.070	0.060	0.006	0.200	<0.001	<0.001	--	1.3	--
MAY									
10...	0.020	--	--	--	--	--	0.600	1.7	--
26...	0.020	0.070	<0.004	0.200	<0.001	<0.001	0.200	1.3	1.5
JUN									
14...	0.080	--	--	--	--	--	0.001	2.3	--
23...	0.090	0.050	0.014	0.200	<0.001	<0.001	0.200	1.7	1.6
JUL									
12...	0.070	--	--	--	--	--	1.80	1.8	--
27...	0.100	0.040	0.012	0.200	<0.001	<0.001	0.200	1.5	1.6
AUG									
09...	0.420	--	--	--	--	--	0.600	2.2	--
25...	0.020	0.010	--	--	--	--	--	2.0	1.8
SEP									
21...	0.030	--	--	--	--	--	0.200	2.2	--
27...	0.050	<0.010	0.033	0.200	<0.001	<0.001	<0.001	2.6	--
27...	0.250	0.020	0.040	--	--	--	--	4.5	3.0

PATUXENT RIVER BASIN

01591000 PATUXENT RIVER NEAR UNITY, MD--Continued

SUSPENDED SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)
OCT 1992				
06...	0730	13	9	0.32
09...	2315	153	522	215
27...	0835	21	3	0.17
NOV				
03...	0625	602	505	821
03...	0928	351	60	57
19...	1115	32	1	0.09
23...	0759	187	99	50
DEC				
11...	1014	431	34	40
11...	1312	667	73	131
11...	1521	861	238	553
11...	1706	996	552	1480
11...	2157	757	64	131
12...	0053	425	4	4.6
22...	1030	54	2	0.29
JAN 1993				
11...	1030	51	1	0.14
22...	2009	59	4	0.63
FEB				
17...	1352	64	1	0.17
24...	0945	47	1	0.13
MAR				
04...	0948	215	15	8.7
04...	1747	1360	371	1360
04...	1857	1410	199	759
04...	2007	1400	58	220
04...	2118	1360	46	169
04...	2223	1290	7	24
04...	2354	996	74	199
05...	0232	442	10	12
05...	1535	282	1	0.76
06...	0520	163	1	0.44
07...	0549	111	1	0.30
18...	1150	176	1	0.47
18...	2157	143	1	0.38
23...	2212	589	10	16
24...	0039	713	1	1.9
24...	0253	769	1	2.1
24...	0457	818	1	2.2
24...	0656	837	1	2.3
24...	0859	754	2	4.1
24...	1145	490	173	229
24...	1535	381	1	1.0
24...	1950	365	1	0.98
25...	0054	284	1	0.77
25...	0710	237	1	0.64
27...	2208	595	105	169
28...	0102	422	4	4.6
28...	1002	674	94	171
28...	1217	663	19	34
APR				
01...	0508	632	90	154
01...	0821	359	4	3.9
01...	2034	299	20	16
02...	0910	257	103	71
02...	0915	257	6	4.2
30...	0915	91	12	3.0
MAY				
26...	0740	46	10	1.3
JUN				
23...	0830	33	21	1.8
JUL				
27...	0745	18	13	0.63
SEP				
27...	0930	41	12	1.3
27...	2221	104	202	57

PATUXENT RIVER BASIN

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01591400 CATTAIL CREEK NEAR GLENWOOD, MD

LOCATION (REVISED).--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 mi².

WATER-DISCHARGE RECORDS

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.--Water-discharge records good except those for estimated daily discharges (ice effect), which are fair.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 500 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 28	0715	*3,570	*7.78	Feb. 24	1530	1,320	5.44
Dec. 5	0800	2,100	6.42	Mar. 5	1830	959	4.85
Jan. 24	1930	507	3.87	Mar. 10	0945	623	4.16
Jan. 28	1745	644	4.21	Mar. 27	1315	589	4.08
Feb. 19	1900	1,870	6.16	May 15	2245	610	4.13
Feb. 20	1715	1,980	6.29	Aug. 21	1745	982	4.87
Feb. 21	1600	661	4.25				

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	18	26	22	36	35	55	34	22	16	12	15
2	11	15	24	23	28	40	51	31	21	14	13	14
3	11	14	23	24	27	77	48	29	21	14	14	13
4	11	14	39	35	26	91	48	38	20	15	11	13
5	10	16	910	28	27	269	45	36	20	14	11	12
6	9.9	15	62	24	39	129	47	31	21	13	11	12
7	9.8	14	41	32	40	99	78	51	20	13	10	12
8	10	13	35	60	32	80	48	100	19	12	9.8	11
9	10	13	32	32	38	61	45	42	18	11	9.5	11
10	10	13	31	e29	28	263	48	36	18	11	9.2	11
11	9.8	13	31	25	27	74	49	33	19	10	9.5	11
12	18	13	26	48	28	56	44	33	19	10	18	11
13	12	13	25	41	27	53	65	30	18	9.7	17	10
14	11	15	25	38	25	53	57	29	17	14	34	10
15	11	15	28	31	24	51	46	76	16	14	27	12
16	11	14	34	e27	26	47	65	85	17	11	15	11
17	11	15	26	28	32	42	48	36	18	12	59	11
18	11	24	25	71	69	42	43	32	16	14	44	12
19	11	16	28	29	449	43	42	31	16	12	23	11
20	14	15	25	26	521	40	40	31	15	11	18	10
21	23	13	56	25	179	46	38	29	14	10	146	10
22	22	13	34	25	68	59	37	27	14	11	46	18
23	14	13	30	25	194	43	35	28	14	11	24	30
24	13	13	27	113	414	41	35	28	16	11	18	15
25	13	12	26	68	68	44	34	31	15	12	16	13
26	13	12	25	183	49	39	33	39	13	13	34	34
27	13	59	23	37	40	168	35	36	24	24	20	35
28	12	1370	23	247	36	149	35	27	23	41	17	19
29	12	49	23	94	---	173	33	25	15	17	17	16
30	17	32	e22	48	---	72	33	24	17	14	16	14
31	23	---	e22	42	---	60	---	23	---	13	15	---
TOTAL	399.5	1884	1807	1580	2597	2539	1360	1161	536	427.7	744.0	437
MEAN	12.9	62.8	58.3	51.0	92.7	81.9	45.3	37.5	17.9	13.8	24.0	14.6
MAX	23	1370	910	247	521	269	78	100	24	41	146	35
MIN	9.8	12	22	22	24	35	33	23	13	9.7	9.2	10
CFSM	.56	2.74	2.55	2.23	4.05	3.58	1.98	1.64	.78	.60	1.05	.64
IN.	.65	3.06	2.94	2.57	4.22	4.12	2.21	1.89	.87	.69	1.21	.71

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1978 - 1994, BY WATER YEAR (WY)

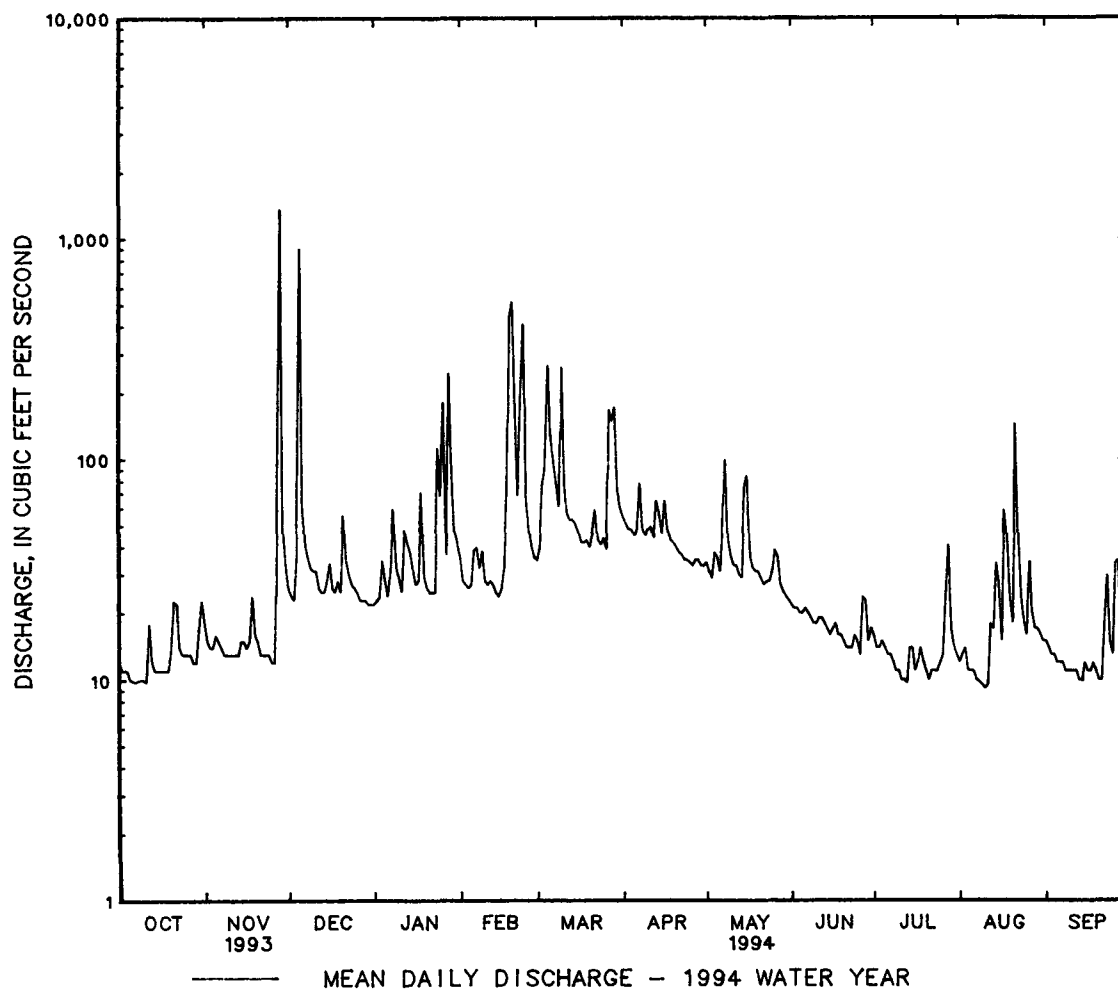
	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994
MEAN	18.2	22.3	28.1	29.0	40.4	40.2	38.6	32.9	21.7	15.9	12.9	15.0					
MAX	76.6	62.8	83.1	83.0	103	109	112	92.5	38.4	31.5	30.7	81.6					
(WY)	1980	1994	1984	1979	1993	1993	1989	1989	1988	1984	1984	1979					
MIN	3.73	5.96	9.24	8.38	14.6	14.5	14.9	14.1	6.96	4.23	4.63	4.43					
(WY)	1987	1982	1982	1981	1992	1981	1985	1986	1986	1986	1991	1991					

PATUXENT RIVER BASIN

01591400 CATTAIL CREEK NEAR GLENWOOD, MD--Continued

SUMMARY STATISTICS	FOR 1993 CALENDAR YEAR		FOR 1994 WATER YEAR		WATER YEARS 1978 - 1994	
ANNUAL TOTAL	15898.0		15472.2		26.0	
ANNUAL MEAN	43.6		42.4		13.1	
HIGHEST ANNUAL MEAN					42.4	
LOWEST ANNUAL MEAN					13.1	
HIGHEST DAILY MEAN	1370	Nov 28	1370	Nov 28	1400	Feb 12 1985
LOWEST DAILY MEAN	6.4	(a)	9.2	Aug 10	2.4	Aug 19 1991
ANNUAL SEVEN-DAY MINIMUM	6.7	Aug 29	9.9	Oct 5	2.6	Sep 16 1985
INSTANTANEOUS PEAK FLOW			3570	Nov 28	(b)4340	Oct 23 1990
INSTANTANEOUS PEAK STAGE			7.78	Nov 28	8.41	Oct 23 1990
INSTANTANEOUS LOW FLOW			8.1	Aug 10	1.7	Aug 19 1991
ANNUAL RUNOFF (CFSM)	1.90		1.85		1.14	
ANNUAL RUNOFF (INCHES)	25.83		25.13		15.44	
10 PERCENT EXCEEDS	62		61		41	
50 PERCENT EXCEEDS	24		25		17	
90 PERCENT EXCEEDS	9.6		11		6.5	

a Aug. 31, Sept. 14.

b From rating curve extended above 175 ft³/s on basis of contracted-opening and flow-over-road measurement at gage.

PATUXENT RIVER BASIN

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01591400 CATTAIL CREEK NEAR GLENWOOD, MD--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1989-90, October 1993 to September 1994.

WATER QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON- DUCT- ANCE (US/CM)	PH WATER WHOLE FIELD (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	TEMPER- ATURE AIR (DEG C)	HARD- NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY WAT DIS TOT IT FIELD MG/L AS CACO3
OCT 1993												
15...	1330	8.4	165	6.5	12.0	14.0	48	11	5.1	10	2.3	21
AUG 1994												
10...	1345	9.6	156	6.8	20.0	25.0	48	11	5.0	9.1	1.7	20
SEP												
02...	1245	14	166	6.8	18.0	19.0	48	11	5.1	9.1	2.2	22

DATE	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS NO3)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, DIS- SOLVED (MG/L AS N)	IRON, DIS- SOLVED (UG/L AS FE)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)
OCT 1993											
15...	3.7	21	--	10	--	18	0.010	4.00	4.00	59	16
AUG 1994											
10...	2.7	20	<0.10	10	116	--	<0.010	4.20	4.20	65	28
SEP											
02...	3.6	21	<0.10	10	118	18	0.010	4.10	4.10	91	32

PATUXENT RIVER BASIN

01591610 PATUXENT RIVER BELOW BRIGHTON DAM NEAR BRIGHTON, MD

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

DRAINAGE AREA.--78.6 mi².

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.--Records good except those for estimated daily discharges (manometer malfunction), which are fair. 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 ft³/s. Data provided by Washington Suburban Sanitary Commission.

PEAK DISCHARGE FOR CURRENT YEAR.--Peak discharge, 1,140 ft³/s, Dec. 5, gage height, 5.31 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	94	131	124	53	341	53	380	54	47	50	51	52
2	95	128	122	51	315	152	294	112	48	50	51	51
3	94	125	83	51	330	194	211	211	47	50	51	51
4	47	124	53	51	145	301	211	210	47	50	51	50
5	42	157	503	52	53	349	211	150	46	50	52	50
6	48	122	513	53	53	353	211	52	47	50	51	50
7	49	120	383	53	53	351	215	51	47	51	51	50
8	51	76	260	53	53	458	214	53	47	51	52	50
9	52	28	207	52	143	477	212	167	47	51	53	50
10	52	28	104	147	204	347	211	210	47	51	53	50
11	51	28	50	190	201	453	211	143	61	50	52	50
12	52	28	50	206	200	457	117	51	66	51	53	50
13	48	28	50	206	198	205	54	113	65	51	53	50
14	115	28	50	205	196	204	115	209	65	51	53	43
15	198	28	50	112	140	205	214	207	54	51	53	13
16	264	26	50	53	51	210	212	210	47	51	53	13
17	267	26	50	56	51	209	208	98	50	51	52	13
18	e123	26	50	102	51	188	206	51	47	51	54	13
19	e67	31	50	188	52	209	203	161	47	50	54	13
20	34	41	219	194	374	207	206	208	47	50	53	12
21	35	40	239	185	728	161	205	205	47	51	53	12
22	34	73	51	181	414	209	133	200	64	51	54	12
23	32	222	51	179	262	208	53	95	35	51	54	12
24	31	216	51	177	584	210	52	49	74	50	54	12
25	31	38	51	179	880	210	124	49	52	51	54	12
26	31	68	51	181	521	211	89	49	50	51	168	12
27	31	104	136	145	411	214	53	49	51	51	213	12
28	32	230	190	55	170	221	116	48	50	51	109	13
29	96	129	190	147	---	314	150	48	50	51	51	12
30	133	124	188	199	---	542	53	48	50	51	51	19
31	130	---	123	286	---	527	---	35	---	51	52	---
TOTAL	2459	2573	4342	4042	7174	8609	5144	3596	1542	1571	1959	902
MEAN	79.3	85.8	140	130	256	278	171	116	51.4	50.7	63.2	30.1
MAX	267	230	513	286	880	542	380	211	74	51	213	52
MIN	31	26	50	51	51	53	52	35	35	50	51	12
(†)	5050	5925	6025	6525	6100	6350	6250	6250	6275	6175	6375	6550

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1981 - 1994, BY WATER YEAR (WY)

	MEAN	58.8	48.7	86.1	73.3	81.0	117	131	99.1	73.7	57.3	62.0	71.5
MAX	117	85.8	373	183	256	320	304	229	170	66.9	86.4	205	
(WY)	1981	1994	1984	1991	1994	1993	1993	1989	1989	1984	1982	1989	
MIN	7.87	17.1	14.9	9.33	10.1	8.90	8.49	8.63	22.4	46.7	18.1	26.1	
(WY)	1987	1989	1992	1982	1987	1981	1981	1981	1981	1992	1987	1991	

e Estimated

† Monthend contents, in millions of gallons, in Triadelphia Reservoir (contents on Sept. 30, 1993, 5,920,000,000 gal). Records provided by Washington Suburban Sanitary Commission.

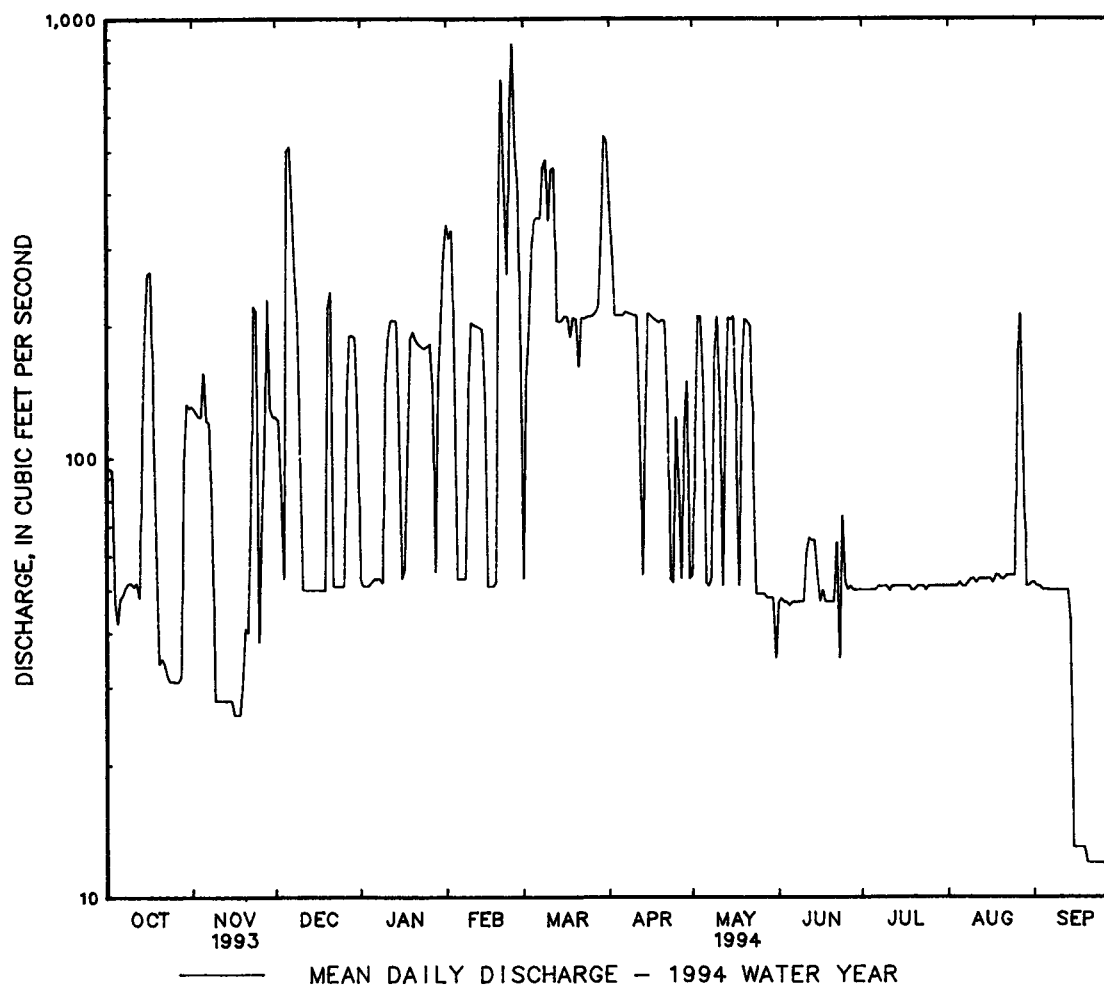
01591610 PATUXENT RIVER BELOW BRIGHTON DAM NEAR BRIGHTON, MD--Continued

SUMMARY STATISTICS	FOR 1993 CALENDAR YEAR		FOR 1994 WATER YEAR		WATER YEARS 1981 - 1994	
ANNUAL TOTAL	44268.4		43913			
ANNUAL MEAN	121		120		80.0	
ANNUAL MEAN ^a	129		151		82.4	
HIGHEST ANNUAL MEAN					134	
LOWEST ANNUAL MEAN					47.5	
HIGHEST DAILY MEAN	801	Apr 19	880	Feb 25	1730	May 6 1989
LOWEST DAILY MEAN	6.8	Jan 1	12	(a)	2.1	(b)
ANNUAL SEVEN-DAY MINIMUM	8.8	Feb 11	12	Sep 20	4.0	Oct 16 1980
INSTANTANEOUS PEAK FLOW			1140	Dec 5	2650	May 6 1989
INSTANTANEOUS PEAK STAGE			5.31	Dec 5	10.26	May 6 1985
INSTANTANEOUS LOW FLOW			5.3	Feb 2	1.2	Dec 3 1985
ANNUAL RUNOFF (CFSM)	1.54		1.53		1.02	
ANNUAL RUNOFF (CFSM) ^a	1.64		1.92		1.05	
ANNUAL RUNOFF (INCHES)	20.95		20.78		13.83	
ANNUAL RUNOFF (INCHES) ^a	22.29		26.09		14.24	
10 PERCENT EXCEEDS	352		220		168	
50 PERCENT EXCEEDS	56		53		53	
90 PERCENT EXCEEDS	26		35		9.0	

^a Adjusted for change in reservoir contents.

a Sept. 20-27, 29.

b Jan. 27, 28, 1983.



PATUXENT RIVER BASIN

01591700 HAWLINGS RIVER NEAR SANDY SPRING, MD

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

DRAINAGE AREA.--27.0 mi².

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder. Elevation of gage is 320 ft above sea level, from topographic map.

REMARKS.--Water-discharge records good except those for estimated daily discharges (backwater from leaves, ice effect, doubtful or no gage height record), which are fair.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 700 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 28	0615	*3,490	*8.33	Feb. 19	UNKNOWN	UNKNOWN	UNKNOWN
Dec. 5	1115	1,210	5.84	Feb. 20	UNKNOWN	754	4.64

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.0	21	30	e23	e30	e37	60	33	18	13	12	14
2	5.5	18	25	e23	e28	e45	53	30	17	11	11	12
3	5.1	16	24	e23	e27	e70	50	28	16	16	11	11
4	5.1	16	40	45	e26	e100	49	36	16	19	10	11
5	5.0	18	705	35	e25	e250	46	40	16	14	11	11
6	4.4	19	86	28	e37	e130	47	32	17	12	11	11
7	4.6	18	49	40	e34	e100	67	44	18	14	9.4	11
8	4.8	17	36	94	e32	e80	49	102	21	11	8.5	11
9	5.0	16	30	e35	e35	e55	44	46	17	10	8.3	11
10	5.5	17	28	e28	e29	e280	46	36	16	10	8.2	11
11	6.0	16	29	e26	e27	e60	46	32	16	9.7	8.5	11
12	18	16	24	e52	e26	e54	43	31	16	9.1	17	11
13	9.5	17	23	e40	e26	e52	70	29	15	9.2	11	10
14	6.1	20	23	e33	e25	50	84	27	14	10	11	10
15	5.9	19	29	e29	e25	48	54	29	13	16	12	9.9
16	e5.8	18	45	e28	e27	45	71	39	20	11	11	9.9
17	e5.7	20	29	e29	e33	40	53	28	17	12	42	9.9
18	e5.6	34	26	e80	e80	41	45	27	14	15	37	11
19	e6.5	18	27	e30	e470	42	42	26	13	12	19	11
20	e8.0	15	25	e27	e530	39	40	27	12	11	15	11
21	e15	13	65	e26	e200	44	37	26	13	11	113	10
22	25	11	40	e26	e70	64	36	24	14	12	69	11
23	13	11	31	e26	e150	45	35	23	12	12	27	14
24	12	11	28	e130	e450	42	34	23	21	10	18	16
25	12	11	27	e80	e50	47	33	28	15	10	15	14
26	12	11	e25	e200	e40	41	32	27	12	14	87	45
27	13	89	e25	e35	e36	192	34	25	12	40	26	53
28	14	1420	e24	e300	e35	191	34	21	18	109	19	21
29	15	75	e24	e100	---	205	33	20	13	30	16	17
30	21	42	e23	e45	---	88	34	20	13	18	15	14
31	28	---	e23	e35	---	67	---	19	---	14	13	---
TOTAL	308.1	2063	1668	1751	2603	2644	1401	978	465	525.0	701.9	433.7
MEAN	9.94	68.8	53.8	56.5	93.0	85.3	46.7	31.5	15.5	16.9	22.6	14.5
MAX	28	1420	705	300	530	280	84	102	21	109	113	53
MIN	4.4	11	23	23	25	37	32	19	12	9.1	8.2	9.9
CFSM	.37	2.55	1.99	2.09	3.44	3.16	1.73	1.17	.57	.63	.84	.54
IN.	.42	2.84	2.30	2.41	3.59	3.64	1.93	1.35	.64	.72	.97	.60

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1978 - 1994, BY WATER YEAR (WY)

	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994
MEAN	21.9	27.6	32.5	33.7	44.5	48.7	43.0	38.0	26.2	16.2	12.7	14.7					
MAX	129	68.8	88.9	99.5	112	116	90.7	94.3	68.3	33.1	26.5	85.3					
(WY)	1980	1994	1984	1979	1993	1993	1989	1989	1978	1990	1979						
MIN	2.68	7.27	11.8	9.31	20.3	18.8	19.2	15.1	6.21	4.72	3.98	3.11					
(WY)	1987	1982	1981	1981	1992	1981	1985	1986	1986	1986	1987	1986					

01591700 HAWLINGS RIVER NEAR SANDY SPRING, MD--Continued

SUMMARY STATISTICS

FOR 1993 CALENDAR YEAR

FOR 1994 WATER YEAR

WATER YEARS 1978 - 1994

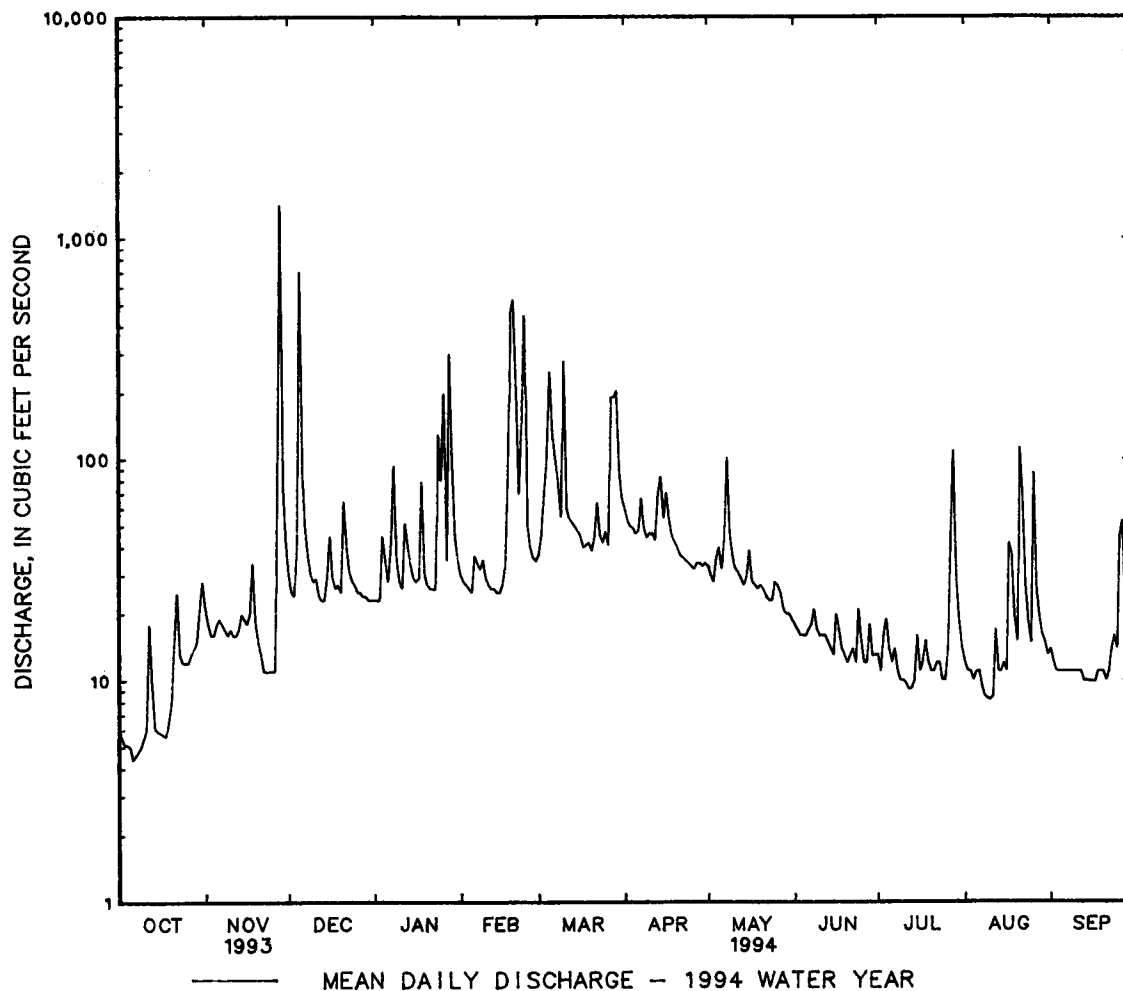
ANNUAL TOTAL	14680.7		15541.7			
ANNUAL MEAN	40.2		42.6		29.8	
HIGHEST ANNUAL MEAN					48.3	1979
LOWEST ANNUAL MEAN					16.0	1986
HIGHEST DAILY MEAN	1420	Nov 28	1420	Nov 28	1500	Oct 1 1979
LOWEST DAILY MEAN	3.3	Sep 15	4.4	Oct 6	2.0	(a)
ANNUAL SEVEN-DAY MINIMUM	4.0	Sep 10	4.9	Oct 3	2.2	Oct 6 1986
INSTANTANEOUS PEAK FLOW			3490	Nov 28	(b)4300	Sep 6 1979
INSTANTANEOUS PEAK STAGE			8.33	Nov 28	8.80	Sep 6 1979
INSTANTANEOUS LOW FLOW			4.2	(c)	(d).75	Jan 30 1981
ANNUAL RUNOFF (CFSM)	1.49		1.58		1.10	
ANNUAL RUNOFF (INCHES)	20.23		21.41		14.98	
10 PERCENT EXCEEDS	73		70		49	
50 PERCENT EXCEEDS	21		25		18	
90 PERCENT EXCEEDS	5.5		10		5.8	

a Oct. 11, 12, 1986.

b From rating curve extended above 1,200 ft³/s on basis of contracted-opening and flow-over-road measurement of peak flow.

c Oct. 6, 7.

d Result of freezeup.



PATUXENT RIVER BASIN

01591700 HAWLINGS RIVER NEAR SANDY SPRING, MD--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1993 to September 1994.

WATER QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH WATER WHOLE FIELD (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	TEMPER- ATURE AIR (DEG C)	HARD- NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
OCT 1993											
15...	1230	5.0	133	6.4	11.0	14.0	44	11	3.9	5.4	2.9
SEP 1994											
02...	1145	12	143	6.7	18.0	22.0	44	11	4.0	6.0	2.4

DATE	TIME	ALKA- LINITY WAT DIS TOT IT FIELD MG/L AS CACO3	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	IRON, DIS- SOLVED (UG/L AS FE)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)
OCT 1993												
15...	30	7.9	11	--	12	--	<0.010	1.40	1.40		140	46
SEP 1994												
02...	30	6.6	12	<0.10	14	83	<0.010	1.80	1.80		120	54

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 mi².

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.

PEAK DISCHARGE FOR CURRENT YEAR.--Peak discharge, 1,520 ft³/s, Feb. 22, gage height, 8.32 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	19	19	20	21	218	216	512	24	23	29	20	20
2	19	20	20	21	219	216	445	24	23	29	20	20
3	19	20	69	21	218	214	218	25	22	28	20	20
4	18	20	154	21	220	337	219	23	22	28	20	20
5	19	20	34	21	220	413	220	21	22	24	20	20
6	19	20	20	21	218	419	221	21	22	20	20	20
7	19	20	21	21	218	424	221	55	22	21	20	20
8	18	20	21	22	218	542	219	83	22	21	20	20
9	18	20	36	22	220	353	221	129	23	21	20	20
10	18	20	276	149	216	288	221	138	23	21	20	20
11	18	20	21	224	216	326	219	159	22	21	20	20
12	19	20	21	223	216	322	222	158	21	21	20	20
13	19	20	21	223	213	217	208	159	22	20	20	20
14	19	20	21	159	175	216	207	159	22	21	20	20
15	19	19	21	22	73	215	223	158	22	20	21	20
16	19	20	21	22	21	214	194	157	22	20	21	20
17	19	20	21	22	21	216	223	157	21	20	21	20
18	19	19	21	207	21	215	223	157	21	20	20	21
19	19	20	21	336	21	213	223	123	22	20	20	21
20	19	20	21	161	60	215	223	86	25	20	20	20
21	19	20	21	161	216	215	209	87	29	20	21	20
22	19	20	21	161	959	215	214	88	29	20	21	21
23	20	19	21	159	1080	217	221	90	28	20	21	20
24	20	19	21	159	705	218	221	91	28	20	21	20
25	20	19	21	159	809	218	220	91	28	20	21	20
26	20	19	22	146	901	218	193	93	29	20	20	21
27	19	20	76	176	875	219	155	41	28	20	20	21
28	19	20	230	218	431	304	93	22	28	20	20	20
29	19	20	227	501	---	395	39	22	28	19	21	20
30	19	22	166	410	---	476	24	22	29	19	20	20
31	19	---	22	210	---	506	---	22	---	19	20	---
TOTAL	588	595	1729	4399	9198	8992	6471	2685	728	662	629	605
MEAN	19.0	19.8	55.8	142	328	290	216	86.6	24.3	21.4	20.3	20.2
MAX	20	22	276	501	1080	542	512	159	29	29	21	21
MIN	18	19	20	21	21	213	24	21	21	19	20	20
(†)	7350	9780	11560	12060	11530	12200	11470	11910	11590	10770	10610	9600
(#)	92.2	75.9	97.2	85.3	96.4	98.5	77.0	77.4	79.9	90.3	97.7	91.8

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1945 - 1994, BY WATER YEAR (WY)

	MEAN	44.0	48.1	74.8	106	119	137	141	116	86.5	59.8	49.1	63.3
MAX	379	272	390	480	462	557	444	397	822	280	226	587	
(WY)	1980	1953	1984	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, 1993, 8,620,000,000 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.

PATUXENT RIVER BASIN

01592500 PATUXENT RIVER NEAR LAUREL, MD--Continued

SUMMARY STATISTICS	FOR 1993 CALENDAR YEAR		FOR 1994 WATER YEAR		WATER YEARS 1945 - 1994	
ANNUAL TOTAL	42192		37281			
ANNUAL MEAN	116		102		86.8	
ANNUAL MEAN ^a	206		190			
HIGHEST ANNUAL MEAN					241	1972
LOWEST ANNUAL MEAN					9.09	1966
HIGHEST DAILY MEAN	1060	Mar 26	1080	Feb 23	13000	Jun 22 1972
LOWEST DAILY MEAN	18	(a)	18	(b)	1.1	Jun 26 1956
ANNUAL SEVEN-DAY MINIMUM	18	Sep 17	18	Oct 4	3.7	Aug 29 1966
INSTANTANEOUS PEAK FLOW			1520	Feb 22	(c)26000	Jun 22 1972
INSTANTANEOUS PEAK STAGE			8.32	Feb 22	(d)25.00	Jun 22 1972
INSTANTANEOUS LOW FLOW			8.4	Aug 1	(f).05	Jul 18 1985
ANNUAL RUNOFF (CFSM)	.88		.77		.66	
ANNUAL RUNOFF (INCHES)	11.89		10.51		8.93	
10 PERCENT EXCEEDS	367		222		192	
50 PERCENT EXCEEDS	21		21		23	
90 PERCENT EXCEEDS	19		19		11	

* Adjusted for diversions.

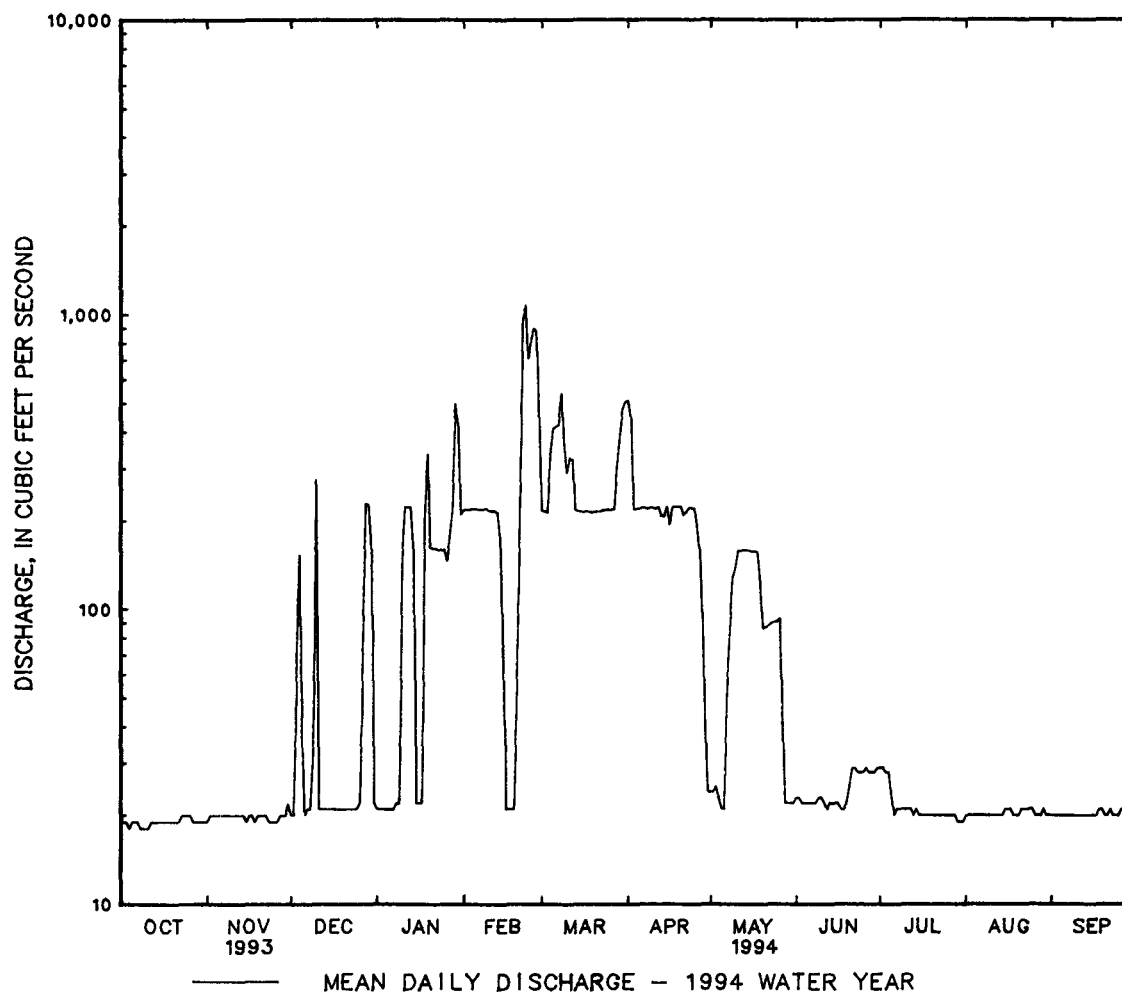
a Sept. 19-23, 30, Oct. 4, 8-11.

b Oct. 4, 8-11.

c From rating curve extended above 6,600 ft³/s on basis of contracted-opening measurement of peak flow.

d From floodmarks.

f Valve closed for repair.



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 mi²

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 800 ft³/s and maximum (*):

Discharge				Gage height		Discharge				Gage height	
Date	Time	(ft ³ /s)	(ft)	Date	Time	(ft ³ /s)	(ft)	Date	Time	(ft ³ /s)	(ft)
Nov. 28	UNKNOWN	*3,180	*11.42	Mar. 3	0330	1,150	7.60				
Dec. 5	UNKNOWN	UNKNOWN	UNKNOWN	Mar. 10	1100	932	6.69				
Jan. 28	1730	910	6.59	Mar. 27	1330	912	6.60				
Feb. 23	1730	949	6.77	Mar. 28	0900	848	6.29				
Feb. 24	1430	840	6.25	Aug. 21	1930	1,050	7.21				

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	e19	e25	24	42	45	69	42	26	19	16	13
2	e10	e17	e26	24	44	82	60	36	24	14	14	12
3	e10	e16	e60	25	48	873	55	34	22	16	16	11
4	e9.8	e19	e450	69	44	293	53	71	22	26	12	11
5	e9.6	e21	e150	43	33	270	47	70	21	17	23	10
6	e9.8	e18	e70	29	32	139	51	42	21	15	18	16
7	e10	e16	e52	61	35	89	93	62	30	12	12	e29
8	e11	e17	38	177	36	99	55	177	32	11	10	e26
9	e11	e15	33	48	57	95	48	56	19	9.7	8.6	e15
10	e10	e15	32	49	42	580	59	47	19	8.8	8.0	e10
11	17	e15	34	28	36	103	53	40	22	6.4	8.3	e9.0
12	82	e16	26	118	41	63	46	45	21	5.2	37	e8.6
13	25	e19	23	66	36	57	160	37	19	4.6	17	e8.5
14	15	e18	23	43	39	55	184	33	18	29	33	e8.4
15	14	e16	34	e40	37	51	70	54	17	32	27	e25
16	12	e20	54	e34	48	47	82	205	179	14	15	e19
17	12	e45	30	30	71	42	60	51	57	17	56	e13
18	12	e26	26	e29	139	47	52	40	24	21	57	e15
19	11	e20	31	e28	342	47	48	36	19	15	24	e11
20	13	e17	26	e30	416	41	46	37	17	11	17	e9.5
21	34	e16	143	e34	269	58	43	34	20	14	289	e8.8
22	39	e15	51	e38	117	93	42	31	22	27	214	91
23	19	e15	33	e45	509	51	42	30	22	15	33	159
24	15	e15	28	e60	627	46	42	28	32	12	21	33
25	14	e20	26	79	118	59	40	49	20	48	17	21
26	13	e150	25	265	68	46	39	47	15	37	66	88
27	13	e700	23	51	50	491	44	44	19	44	25	122
28	14	e150	23	444	46	577	42	30	28	196	18	27
29	13	e60	e22	174	---	552	41	27	19	38	18	19
30	37	e30	e26	66	---	108	42	26	18	22	17	15
31	e25	---	e25	46	---	73	---	24	---	18	14	---
TOTAL	551.2	1556	1668	2297	3422	5272	1808	1585	844	774.7	1160.9	863.8
MEAN	17.8	51.9	53.8	74.1	122	170	60.3	51.1	28.1	25.0	37.4	28.8
MAX	82	700	444	444	627	873	184	205	179	196	289	159
MIN	9.6	15	22	24	32	41	39	24	15	4.6	8.0	8.4
CFSM	.47	1.36	1.42	1.95	3.22	4.48	1.59	1.35	.74	.66	.99	.76
IN.	.54	1.52	1.63	2.25	3.35	5.16	1.77	1.55	.83	.76	1.14	.85

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1932 - 1994, BY WATER YEAR (WY)

MEAN	26.0	36.7	44.8	51.8	61.3	65.5	59.5	49.8	38.5	29.5	27.6	30.8
MAX	107	108	119	145	147	181	160	197	265	119	130	214
(WY)	1980	1973	1973	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

PATUXENT RIVER BASIN

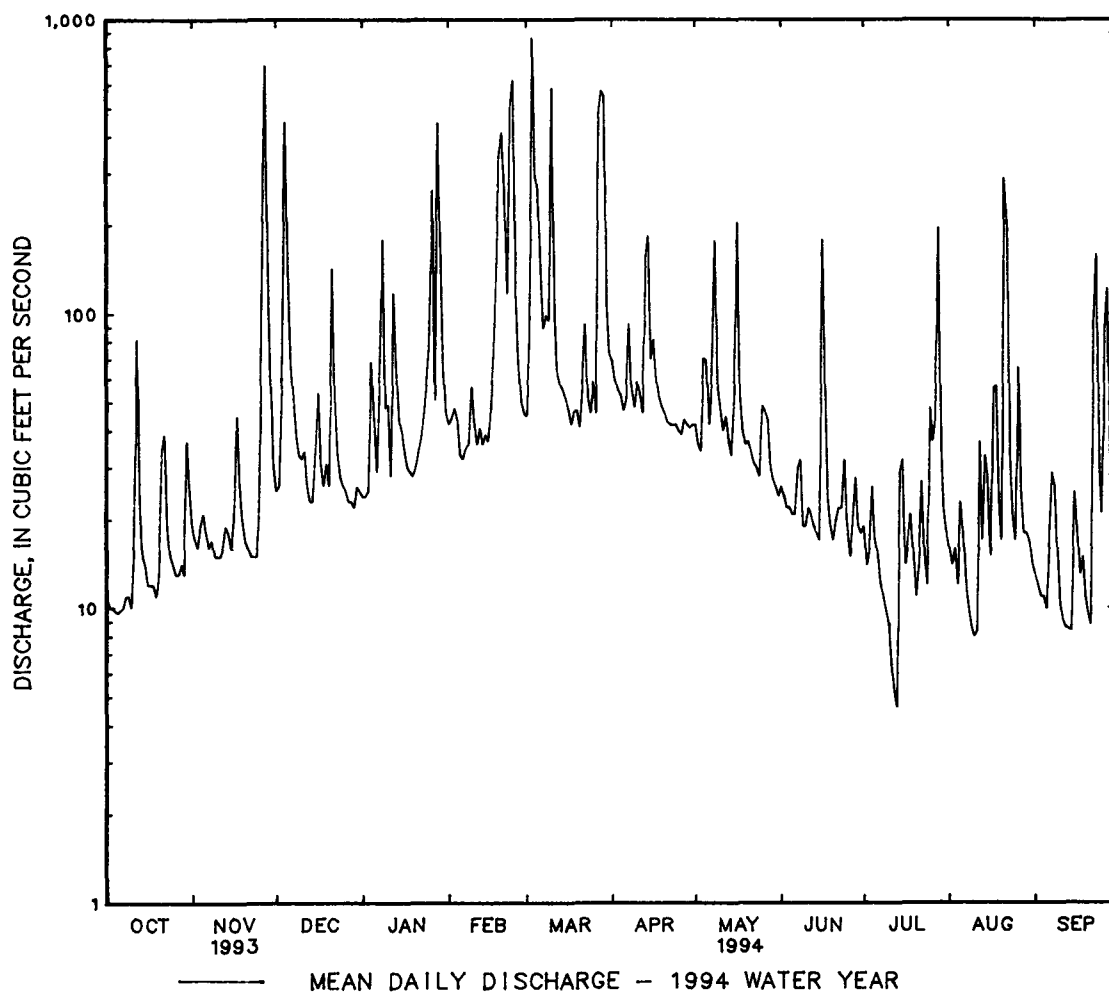
01593500 LITTLE PATUXENT RIVER AT GUILFORD, MD--Continued

SUMMARY STATISTICS	FOR 1993 CALENDAR YEAR		FOR 1994 WATER YEAR		WATER YEARS 1932 - 1994	
ANNUAL TOTAL	21393.1		21802.6			
ANNUAL MEAN	58.6		59.7		43.3	
HIGHEST ANNUAL MEAN					93.7	
LOWEST ANNUAL MEAN					17.7	
HIGHEST DAILY MEAN	968	Mar 4	873	Mar 3	4680	Jun 22 1972
LOWEST DAILY MEAN	6.6	Sep 3	4.6	Jul 13	.00	Sep 8 1966
ANNUAL SEVEN-DAY MINIMUM	7.8	Aug 28	8.2	Jul 7	.73	Sep 6 1966
INSTANTANEOUS PEAK FLOW			3180	Nov 28	(a)12400	Jun 22 1972
INSTANTANEOUS PEAK STAGE			11.42	Nov 28	(b)18.38	Jun 22 1972
INSTANTANEOUS LOW FLOW			2.8	Jul 14	.00	(c)
ANNUAL RUNOFF (CFSM)	1.54		1.57		1.14	
ANNUAL RUNOFF (INCHES)	20.94		21.34		15.50	
10 PERCENT EXCEEDS	92		117		72	
50 PERCENT EXCEEDS	35		31		26	
90 PERCENT EXCEEDS	12		12		10	

a From rating curve extended above 1,800 ft³/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.



PATUXENT RIVER BASIN

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01593500 LITTLE PATUXENT RIVER AT GUILFORD, MD--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1989, October 1993 to September 1994.

WATER QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH WATER WHOLE FIELD (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	TEMPER- ATURE AIR (DEG C)	HARD- NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
OCT 1993 15...	1100	10	274	6.8	12.0	12.0	90	27	5.4	13	3.8
AUG 1994 11...	1100	5.6	319	6.7	21.0	27.0	110	32	7.0	16	3.0
SEP 02...	0845	12	307	7.1	19.0	17.0	100	30	6.6	15	3.6

DATE	ALKA- LINITY WAT DIS TOT IT FIELD MG/L AS CACO3	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	IRON, DIS- SOLVED (UG/L AS FE)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)
OCT 1993 15...	66	10	31	--	12	--	<0.010	1.00	1.00	62	65
AUG 1994 11...	71	11	39	0.10	13	185	<0.010	1.30	1.30	47	100
SEP 02...	72	11	36	<0.10	14	166	<0.010	1.30	1.30	68	92

PATUXENT RIVER BASIN

01593710 MIDDLE PATUXENT RIVER NEAR SIMPSONVILLE, MD

LOCATION.--Lat 39°11'48", long 76°53'59", Howard County, Hydrologic Unit 02060006, on right bank 0.8 mi upstream from bridge on State Highway 32 on W. R. Grace Company property, 1.3 mi northwest of Simpsonville, and 7.8 mi upstream from Little Patuxent River.

DRAINAGE AREA.--48.4 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August 1987 to current year.

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

GAGE.--Water-stage recorder. Elevation of gage is 275 ft above sea level.

REMARKS--Water-discharge records good except those for estimated daily discharges (backwater, missing record, ice effect), which are fair.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 900 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 28	UNKNOWN	*3,590	*7.54	Feb. 24	1545	1,110	4.51
Dec. 5	UNKNOWN	2,200	5.96	Mar. 5	1845	984	4.33
Jan. 28	1530	1,340	4.86	Mar. 10	1030	1,020	4.39
Feb. 19	1815	1,860	5.54	Mar. 27	1330	1,250	4.72
Feb. 20	1630	1,610	5.22	Aug. 21	2015	1,500	5.07
Feb. 23	1445	944	4.27				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20	28	e45	e38	53	59	100	62	37	32	25	21
2	19	23	e40	e40	43	75	89	56	36	26	24	19
3	18	e21	e50	41	44	448	84	54	36	25	24	19
4	17	e22	e80	74	40	273	81	75	36	28	22	18
5	17	e25	e800	52	41	383	80	77	36	26	25	18
6	17	e28	e150	43	46	168	87	60	36	24	23	18
7	17	e23	e80	63	50	137	122	77	36	23	20	17
8	18	e22	e65	145	46	144	82	191	38	22	20	18
9	18	e21	e55	59	56	123	76	77	33	21	19	19
10	17	e20	e50	e55	44	452	84	64	32	21	19	19
11	18	e19	e45	e60	45	140	81	58	34	20	20	18
12	42	e20	e40	109	63	101	74	58	36	19	29	18
13	23	e22	e38	78	49	93	132	56	33	18	22	18
14	21	e25	e43	68	44	91	133	53	31	27	35	17
15	e19	e23	e50	49	38	86	87	64	30	34	34	25
16	e19	e22	61	e45	43	79	102	186	59	23	21	20
17	e18	e30	45	e43	69	70	80	64	46	23	50	19
18	e18	e40	42	e41	176	72	75	57	33	26	50	20
19	e19	e30	46	e40	548	73	76	54	30	22	30	17
20	e22	e25	42	e43	515	66	71	55	28	20	24	16
21	33	e22	127	e47	231	79	68	52	31	25	283	16
22	40	e21	62	e52	119	121	66	48	31	31	98	35
23	25	e20	52	57	386	78	64	45	31	29	38	56
24	e21	e20	49	e70	518	75	64	44	36	22	28	23
25	e20	e19	47	e90	126	88	63	52	31	40	25	20
26	e20	e19	45	e200	87	73	61	54	27	28	66	56
27	e20	e300	40	62	67	386	61	62	30	48	31	42
28	e20	e1500	e38	535	61	369	62	43	44	155	26	29
29	e21	e100	e39	186	---	398	59	41	29	39	24	26
30	32	e55	e40	82	---	144	62	40	31	29	24	23
31	40	---	e38	59	---	112	---	38	---	25	22	---
TOTAL	689	2565	2444	2626	3648	5056	2426	2017	1037	951	1201	700
MEAN	22.2	85.5	78.8	84.7	130	163	80.9	65.1	34.6	30.7	38.7	23.3
MAX	42	1500	800	535	548	452	133	191	59	155	283	56
MIN	17	19	38	38	38	59	59	38	27	18	19	16
CFSM	.46	1.77	1.63	1.75	2.69	3.37	1.67	1.34	.71	.63	.80	.48
IN.	.53	1.97	1.88	2.02	2.80	3.89	1.86	1.55	.80	.73	.92	.54

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1987 - 1994, BY WATER YEAR (WY)

	1987	1988	1989	1990	1991	1992	1993	1994
MEAN	30.4	52.1	55.6	64.5	64.2	97.1	71.0	75.6
MAX	66.6	85.5	84.0	85.0	130	184	143	169
(WY)	1990	1994	1993	1991	1994	1993	1993	1989
MIN	14.6	21.0	26.5	36.5	40.5	47.5	41.2	36.4
(WY)	1992	1992	1989	1992	1992	1988	1992	1991

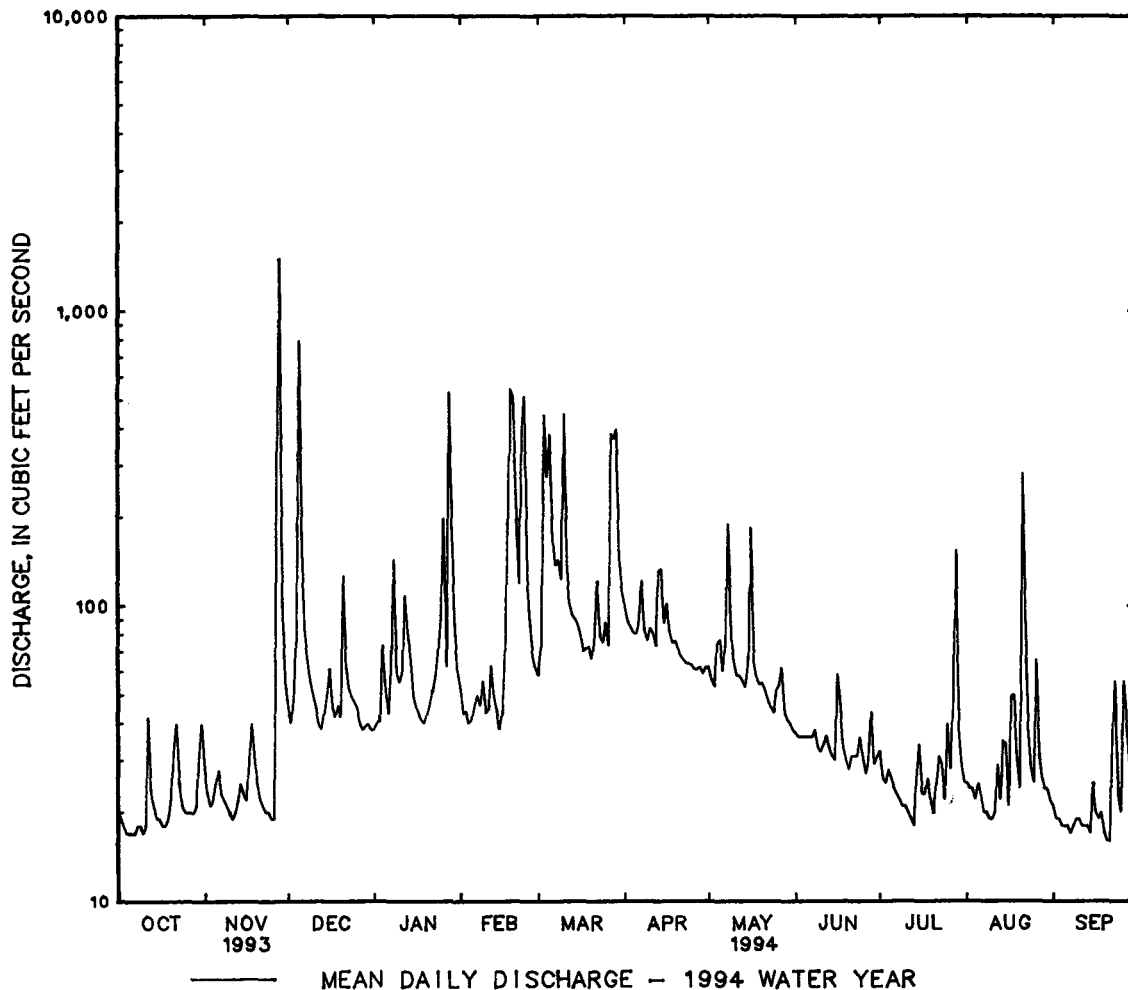
PATUXENT RIVER BASIN

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01593710 MIDDLE PATUXENT RIVER NEAR SIMPSONVILLE, MD--Continued

SUMMARY STATISTICS	FOR 1993 CALENDAR YEAR		FOR 1994 WATER YEAR		WATER YEARS 1987 - 1994	
ANNUAL TOTAL	24752		25360			
ANNUAL MEAN	67.8		69.5		53.6	
HIGHEST ANNUAL MEAN					69.5	
LOWEST ANNUAL MEAN					32.8	
HIGHEST DAILY MEAN	1500	Nov 28	1500	Nov 28	2100	May 6 1989
LOWEST DAILY MEAN	14	Sep 3	16	(a)	6.6	Sep 4 1987
ANNUAL SEVEN-DAY MINIMUM	15	Aug 29	17	Oct 4	7.3	Sep 9 1991
INSTANTANEOUS PEAK FLOW			3590	Nov 28	(b)4800	May 6 1989
INSTANTANEOUS PEAK STAGE			7.54	Nov 28	8.84	May 6 1989
INSTANTANEOUS LOW FLOW			15	Sep 21	6.4	Aug 6 1991
ANNUAL RUNOFF (CFSM)	1.40		1.44		1.11	
ANNUAL RUNOFF (INCHES)	19.03		19.50		15.05	
10 PERCENT EXCEEDS	107		121		84	
50 PERCENT EXCEEDS	41		41		37	
90 PERCENT EXCEEDS	18		19		15	

a Sept. 20, 21.

b From rating curve extended above 300 ft³/s on the basis of slope-area measurement of peak flow.

PATUXENT RIVER BASIN

01593710 MIDDLE PATUXENT RIVER NEAR SIMPSONVILLE, MD--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1989, October 1993 to September 1994.

WATER QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH WATER WHOLE FIELD (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	TEMPER- ATURE AIR (DEG C)	HARD- NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
OCT 1993											
15...	1145	20	214	6.8	12.0	12.0	73	20	5.5	10	3.1
AUG 1994											
11...	0915	28	211	6.9	19.0	22.0	73	20	5.7	9.9	2.2
SEP											
02...	0930	16	216	7.0	18.0	17.0	71	19	5.6	10	2.6

DATE	ALKA- LITY WAT DIS TOT IT FIELD MG/L AS CACO3	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	IRON, DIS- SOLVED (UG/L AS FE)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)
OCT 1993											
15...	50	7.5	21	--	14	--	<0.010	2.40	2.40	85	30
AUG 1994											
11...	47	6.0	23	<0.10	12	134	<0.010	2.50	2.50	57	36
SEP											
02...	45	6.3	24	<0.10	13	139	<0.010	2.40	2.40	65	31

DRAINAGE AREA.--98.4 mi².

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.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,500 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 28	1130	*7,910	*14.21	Feb. 24	1630	1,670	8.24
Dec. 5	0915	4,070	11.16	Mar. 3	0530	1,970	8.69
Feb. 19	2000	2,220	9.05	Mar. 10	1245	1,740	8.35
Feb. 20	1830	2,020	8.76	Mar. 27	1545	1,740	8.35
Feb. 23	1645	1,740	8.35				

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	31	71	92	e68	121	121	218	115	66	57	45	38
2	29	49	84	e73	106	171	186	101	63	44	41	34
3	28	43	77	78	109	1310	173	96	61	43	43	31
4	26	41	142	166	97	643	167	156	60	56	37	31
5	25	52	2510	124	85	696	152	183	59	44	48	30
6	24	56	344	85	84	422	158	113	60	40	48	30
7	24	45	160	137	97	291	271	136	67	36	35	50
8	26	42	120	410	95	304	167	433	81	35	31	47
9	27	43	101	143	124	256	148	156	57	32	30	35
10	27	39	94	103	105	995	175	128	53	31	28	27
11	24	38	98	108	84	373	167	111	57	29	31	25
12	175	39	81	264	e130	219	145	114	61	27	71	24
13	71	41	75	207	e94	194	280	101	54	27	43	24
14	38	50	75	137	e86	189	405	92	51	49	67	23
15	35	47	95	102	e80	178	192	105	51	87	68	48
16	33	43	147	e90	101	162	221	406	170	41	40	39
17	31	45	88	e84	155	140	168	129	147	40	106	32
18	31	135	79	e80	335	145	144	104	65	58	125	38
19	29	64	88	e78	790	153	138	97	55	42	62	30
20	32	58	79	e85	898	132	130	98	50	33	46	29
21	69	44	319	e95	564	155	122	93	48	35	326	25
22	121	41	151	e105	321	305	118	87	63	67	408	95
23	49	40	100	e120	824	162	115	82	49	49	88	244
24	38	40	87	e140	1120	142	115	78	80	38	58	60
25	35	39	83	e170	352	173	111	104	56	88	49	42
26	34	37	80	e380	198	141	108	108	45	89	161	161
27	34	166	74	148	144	767	122	117	46	68	67	213
28	37	4420	e70	714	124	936	116	78	80	436	50	67
29	34	271	e68	496	---	940	108	72	54	97	46	48
30	89	126	e74	219	---	360	117	70	62	58	46	40
31	134	---	e70	130	---	242	---	66	---	48	39	---
TOTAL	1440	6265	5805	5339	7423	11417	4957	3929	1971	1924	2383	1660
MEAN	46.5	209	187	172	265	368	165	127	65.7	62.1	76.9	55.3
MAX	175	4420	2510	714	1120	1310	405	433	170	436	408	244
MIN	24	37	68	68	80	121	108	66	45	27	28	23
CFSM	.47	2.12	1.90	1.75	2.69	3.74	1.68	1.29	.67	.63	.78	.56
IN.	.54	2.37	2.19	2.02	2.81	4.32	1.87	1.49	.75	.73	.90	.63

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1940 - 1994, BY WATER YEAR (WY)

MEAN	71.0	96.2	116	142	142	165	142	127	93.5	75.6	64.0	66.1
MAX	336	228	260	386	375	368	351	367	294	312	315	432
(WY)	1980	1953	1978	1979	1979	1994	1952	1989	1951	1945	1955	1979
MIN	14.7	22.5	35.8	34.0	57.7	85.3	60.0	39.5	25.5	21.9	15.1	12.8
(WY)	1942	1942	1942	1942	1942	1947	1947	1955	1986	1957	1957	1986

PATUXENT RIVER BASIN

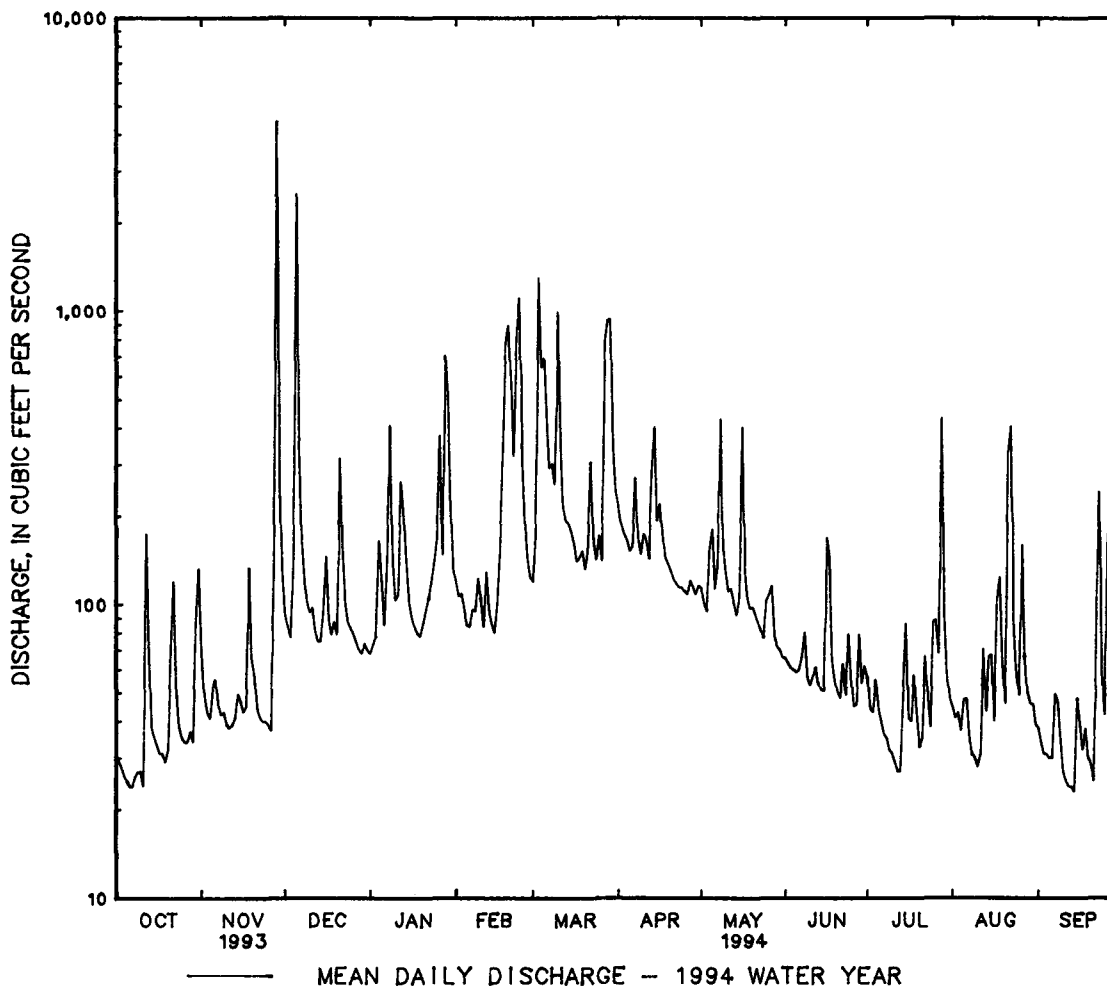
01594000 LITTLE PATUXENT RIVER AT SAVAGE, MD--Continued

SUMMARY STATISTICS	FOR 1993 CALENDAR YEAR		FOR 1994 WATER YEAR		WATER YEARS 1940 - 1994	
ANNUAL TOTAL	52145		54513			
ANNUAL MEAN	143		149		109	
HIGHEST ANNUAL MEAN					196	1979
LOWEST ANNUAL MEAN					59.3	1942
HIGHEST DAILY MEAN	4420	Nov 28	4420	Nov 28	5250	Sep 6 1979
LOWEST DAILY MEAN	18	(a)	23	Sep 14	7.0	Sep 19 1943
ANNUAL SEVEN-DAY MINIMUM	21	Aug 28	25	Oct 5	8.7	Oct 6 1986
INSTANTANEOUS PEAK FLOW			7910	Nov 28	(b)35400	Jun 22 1972
INSTANTANEOUS PEAK STAGE			14.21	Nov 28	(c)25.40	Jun 22 1972
INSTANTANEOUS LOW FLOW			22	Sep 15	1.6	Aug 26 1944
ANNUAL RUNOFF (CFSM)	1.45		1.52		1.10	
ANNUAL RUNOFF (INCHES)	19.71		20.61		14.99	
10 PERCENT EXCEEDS	253		275		184	
50 PERCENT EXCEEDS	83		84		71	
90 PERCENT EXCEEDS	29		32		28	

a Sept. 14, 15.

b From rating curve extended above 11,000 ft³/s on basis of contracted-opening measurement of peak flow.

c From floodmarks.



PATUXENT RIVER BASIN

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01594000 LITTLE PATUXENT RIVER AT SAVAGE, MD--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1969, 1985-92, October 1992 to September 1993.

WATER QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH WATER WHOLE FIELD (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	TEMPER- ATURE AIR (DEG C)	TUR- BID- ITY (NTU)	OXYGEN DEMAND, CHEM- ICAL (LOW LEVEL) (MG/L)	OXYGEN DEMAND, BIO- CHEM- ICAL, 5 DAY (MG/L)	ALKA- LINITY WAT WH TOT WH FIELD MG/L AS CAO3
OCT 1992										
06...	0930	25	249	7.2	9.0	10.5	2.0	<10	0.5	66
27...	1145	36	247	7.8	11.0	9.0	0.80	--	1.5	--
NOV										
03...	0958	1030	--	--	--	--	170	22	--	--
03...	1530	488	--	--	--	--	130	24	--	--
04...	0759	136	--	--	--	--	22	17	--	--
13...	0746	818	--	--	--	--	240	15	--	--
18...	1217	57	--	--	--	--	3.0	<10	0.5	--
23...	0636	2610	--	--	--	--	1300	14	--	--
23...	0956	1870	--	--	--	--	820	24	--	--
23...	1251	1180	--	--	--	--	400	44	--	--
23...	1632	1040	124	6.8	13.0	10.0	250	21	--	--
DEC										
10...	2315	1110	--	--	--	--	180	12	--	--
11...	0233	1390	--	--	--	--	280	13	--	--
11...	0533	1490	--	--	--	--	210	<10	--	--
11...	0805	1710	--	--	--	--	190	16	--	--
18...	0213	249	--	--	--	--	35	<10	--	--
22...	1300	94	236	6.3	4.5	1.0	5.6	<10	0.8	47
JAN 1993										
05...	1220	837	--	--	--	--	280	<10	--	--
05...	1415	751	193	6.9	10.0	13.0	290	<10	--	37
06...	0549	189	--	--	--	--	68	<10	--	--
11...	1215	108	289	6.4	3.0	0.0	4.3	<10	1.1	48
FEB										
16...	2248	436	--	--	--	--	67	--	--	--
17...	1130	238	--	--	--	--	39	--	--	--
17...	1151	236	584	6.8	3.0	4.5	26	--	--	38
23...	0537	240	--	--	--	--	40	<10	--	--
24...	1150	110	496	6.6	1.5	4.0	5.7	<10	1.1	42
MAR										
04...	1230	1630	--	--	--	--	--	--	--	--
05...	0823	886	--	--	--	--	--	--	--	--
05...	1858	606	--	--	--	--	9.6	<10	--	--
06...	1542	278	--	--	--	--	3.8	<10	--	8
08...	0805	173	--	--	--	--	14	<10	--	--
17...	1130	555	--	--	--	--	89	--	--	--
24...	1410	1170	--	--	--	--	180	<10	--	--
24...	1842	759	--	--	--	--	120	<10	--	--
APR										
01...	0846	1030	--	--	--	--	240	<10	--	--
02...	0451	1360	--	--	--	--	900	<10	--	--
13...	0843	205	222	7.0	10.0	11.0	7.4	<10	1.2	45
22...	0238	1220	--	--	--	--	310	19	--	--
22...	0620	1070	--	--	--	--	230	24	--	--
30...	0730	159	--	--	--	--	3.2	<10	1.5	--
MAY										
05...	1051	163	235	7.6	16.0	19.0	7.1	<10	--	50
26...	1000	92	236	8.0	18.0	19.0	2.9	<10	0.7	50
JUN										
23...	1030	67	218	7.3	21.0	24.0	6.1	<10	1.3	51
JUL										
27...	0930	33	243	7.7	23.0	26.0	4.2	<10	1.0	59
SEP										
28...	0537	177	--	--	--	--	72	<10	--	--
28...	0930	116	195	6.9	15.0	14.0	27	<10	0.8	48

PATUXENT RIVER BASIN

01594000 LITTLE PATUXENT RIVER AT SAVAGE, MD--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	SILICA, DIS- SOLVED (MG/L AS SIO2)	RESIDUE TOTAL AT 105 DEG. C, SUS- PENDE (MG/L)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS NO3)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N)
OCT 1992									
06...	13	13	8.8	0.007	2.00	2.00	<0.008	0.20	0.30
27...	12	3	6.1	0.022	1.40	1.40	0.008	0.25	--
NOV									
03...	8.1	285	3.4	0.028	0.800	0.800	0.053	2.1	0.55
03...	7.7	138	3.8	0.038	0.900	0.900	0.008	1.8	0.50
04...	9.8	12	3.9	0.028	0.900	0.900	0.028	0.65	0.45
13...	8.8	3	3.9	0.008	0.900	0.900	0.008	1.9	0.65
18...	15	5	9.3	0.005	2.10	2.10	0.016	0.25	0.10
23...	7.7	1320	3.4	0.009	0.780	0.780	0.032	--	--
23...	6.0	1280	2.8	0.012	0.640	0.640	0.060	--	--
23...	6.6	570	2.8	0.011	0.650	0.650	0.036	--	--
23...	7.1	310	3.1	0.013	0.720	0.720	0.044	1.8	0.55
DEC									
10...	--	380	--	--	--	--	--	2.0	--
11...	--	450	--	--	--	--	--	2.1	--
11...	5.6	315	4.2	0.010	0.960	0.960	0.160	2.0	0.55
11...	5.3	250	4.1	0.010	0.930	0.930	0.152	1.8	0.55
18...	12	32	8.4	0.009	1.90	1.90	0.044	0.55	0.40
22...	15	7	10	0.007	2.30	2.30	0.028	0.30	0.25
JAN 1993									
05...	7.9	455	5.3	0.008	1.20	1.20	0.052	1.6	0.50
05...	9.0	500	6.2	0.008	1.40	1.40	0.036	1.8	0.35
06...	10	1210	5.7	0.010	1.30	1.30	0.028	0.65	0.40
11...	14	3	9.3	0.008	2.10	2.10	0.012	0.25	0.15
FEB									
16...	8.8	96	7.5	0.013	1.70	1.70	0.147	1.8	0.80
17...	9.6	52	8.4	0.013	1.90	1.90	0.108	1.2	0.60
17...	9.7	28	8.4	0.012	1.90	1.90	0.089	0.60	0.50
23...	9.7	79	8.5	0.014	1.94	1.94	0.127	0.90	0.50
24...	12	40	9.4	0.009	2.14	2.14	<0.008	0.40	0.30
MAR									
04...	--	--	--	--	--	--	--	5.7	--
05...	--	--	--	--	--	--	--	1.6	--
05...	8.3	146	7.5	0.015	1.70	1.70	0.143	0.90	0.50
06...	10	56	8.4	0.011	1.90	1.90	0.104	0.70	0.50
08...	13	20	10	0.009	2.30	2.30	0.033	0.40	0.25
17...	7.3	190	5.7	0.010	1.30	1.30	0.194	1.8	1.1
24...	6.0	9	5.3	0.011	1.20	1.20	0.096	1.5	0.50
24...	7.3	136	6.1	0.014	1.40	1.40	0.098	1.4	0.45
APR									
01...	--	175	7.0	0.012	1.60	1.60	0.079	--	--
02...	7.2	910	6.1	0.014	1.40	1.40	0.089	5.3	0.50
13...	22	15	9.3	0.008	2.10	2.10	0.014	0.73	0.27
22...	6.8	650	4.8	0.013	1.10	1.10	0.076	2.7	--
22...	6.6	360	4.4	0.013	1.00	1.00	0.078	0.60	0.32
30...	17	13	8.4	0.006	1.90	1.90	0.009	0.27	0.26
MAY									
05...	8.7	18	8.4	0.012	1.90	1.90	0.011	0.33	0.12
26...	9.8	3	9.2	0.012	2.10	2.10	<0.008	0.69	0.66
JUN									
23...	14	5	8.1	0.011	1.85	1.85	0.009	0.35	0.24
JUL									
27...	13	2	8.9	0.008	2.01	2.01	0.011	0.23	<0.10
SEP									
28...	9.8	137	6.3	0.013	1.43	1.43	0.074	0.98	0.38
28...	12	39	6.9	0.010	1.56	1.56	0.066	0.68	0.27

PATUXENT RIVER BASIN

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01594000 LITTLE PATUXENT RIVER AT SAVAGE, MD--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	PHOS- PHORUS TOTAL (MG/L AS P)	PHOS- PHORUS DIS- SOLVED (MG/L AS P)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P)	CHLORO- PHYLL A PHYTO- PLANK- TON, UNCORR. (UG/L)	CHLORO- PHYLL B PHYTO- PLANK- TON, UNCORR. (UG/L)	CHLORO- PHYLL C PHYTO- PLANK- TON, UNCORR. (UG/L)	PHEO- PHYTIN PHYTO- PLANK- TON, ACID M. (UG/L)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)
OCT 1992									
06...	<0.010	<0.010	<0.004	1.60	<0.001	0.200	<0.001	2.1	2.3
27...	0.030	--	--	0.200	<0.001	<0.001	<0.001	2.8	--
NOV									
03...	0.500	0.070	0.054	--	--	--	--	9.4	8.3
03...	0.450	0.070	0.042	--	--	--	--	10	9.7
04...	0.120	0.060	0.034	--	--	--	--	7.6	7.0
13...	0.500	0.090	0.036	--	--	--	--	8.4	8.0
18...	0.050	0.010	0.004	--	--	--	--	2.5	2.5
23...	--	--	--	--	--	--	--	32	6.9
23...	--	--	--	--	--	--	--	20	9.3
23...	--	--	--	--	--	--	--	18	9.6
23...	0.500	0.070	0.030	--	--	--	--	14	11
DEC									
10...	0.700	--	--	--	--	--	--	8.4	--
11...	0.900	--	--	--	--	--	--	12	--
11...	0.700	0.070	0.052	--	--	--	--	11	8.7
11...	0.700	0.080	0.068	--	--	--	--	11	8.8
18...	0.130	0.090	0.018	--	--	--	--	4.5	--
22...	0.050	0.030	0.010	<0.001	<0.001	<0.001	--	2.5	2.5
JAN 1993									
05...	1.00	0.020	0.010	--	--	--	--	6.4	--
05...	1.00	0.020	0.014	--	--	--	--	9.1	5.1
06...	0.120	0.030	0.008	--	--	--	--	5.7	6.1
11...	0.040	0.020	0.006	0.200	<0.001	<0.001	<0.001	2.1	2.3
FEB									
16...	0.290	<0.010	<0.004	--	--	--	--	4.8	4.4
17...	0.210	0.010	<0.004	--	--	--	--	4.5	--
17...	0.110	0.010	0.009	--	--	--	--	4.3	--
23...	0.120	<0.010	0.008	--	--	--	--	3.6	--
24...	0.030	<0.010	0.008	0.400	<0.001	<0.001	<0.001	2.1	2.1
MAR									
04...	1.40	--	--	--	--	--	--	12	--
05...	0.460	--	--	--	--	--	--	8.2	--
05...	0.180	0.040	0.028	--	--	--	--	2.6	--
06...	0.110	0.030	0.025	--	--	--	--	4.0	--
08...	0.040	0.030	0.012	--	--	--	--	2.3	--
17...	0.180	0.030	0.021	--	--	--	--	5.2	3.5
24...	0.600	0.050	0.038	--	--	--	--	6.1	4.8
24...	0.600	0.040	0.036	--	--	--	--	6.3	--
APR									
01...	--	--	--	--	--	--	--	4.7	--
02...	1.70	0.020	0.039	--	--	--	--	31	7.7
13...	0.090	0.040	0.011	--	--	--	--	2.7	2.7
22...	0.560	0.100	0.028	--	--	--	--	10	6.8
22...	0.070	<0.010	0.035	--	--	--	--	12	9.3
30...	0.060	0.080	0.007	0.400	<0.001	<0.001	<0.001	2.2	2.0
MAY									
05...	0.040	0.010	<0.004	--	--	--	--	2.8	2.3
26...	0.020	0.060	<0.004	1.20	<0.001	0.400	0.400	2.2	2.2
JUN									
23...	0.080	0.070	0.023	0.400	<0.001	<0.001	0.200	3.6	3.8
JUL									
27...	0.050	0.030	0.011	0.200	<0.001	<0.001	<0.001	2.5	2.9
SEP									
28...	0.200	0.030	0.028	--	--	--	--	5.9	4.7
28...	0.130	0.020	0.033	0.600	<0.001	<0.001	0.400	4.8	4.2

PATUXENT RIVER BASIN

01594000 LITTLE PATUXENT RIVER AT SAVAGE, MD--Continued

SUSPENDED SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)
OCT 1992				
06...	0930	25	4	0.27
27...	1145	36	4	0.38
NOV				
03...	0958	1030	298	826
03...	1530	488	142	187
04...	0759	136	19	7.0
13...	0746	818	317	700
18...	1217	57	1	0.15
23...	0636	2610	2300	16200
23...	0956	1870	1220	6150
23...	1251	1180	542	1730
23...	1632	1040	319	897
DEC				
10...	2315	1110	376	1130
11...	0233	1390	439	1640
11...	0533	1490	387	1560
11...	0805	1710	354	1640
18...	0213	249	40	27
22...	1300	94	3	0.76
JAN 1993				
05...	1220	837	427	965
05...	1415	751	395	801
06...	0549	189	62	32
11...	1215	108	2	0.58
FEB				
13...	0446	397	184	197
13...	2059	218	81	48
16...	2248	436	130	153
17...	1130	238	87	56
17...	1151	236	29	18
23...	0537	240	73	47
24...	1150	110	7	2.1
MAR				
04...	1230	1630	1320	5790
05...	0823	886	561	1340
05...	1858	606	177	290
06...	1542	278	60	45
08...	0805	173	19	8.9
17...	1130	555	191	286
18...	1652	456	81	100
19...	0342	310	61	51
24...	1410	1170	339	1070
24...	1842	759	279	571
25...	0145	502	169	229
APR				
01...	0846	1030	927	2590
02...	0451	1360	1830	6710
13...	0843	205	11	6.1
22...	0238	1220	1010	3320
22...	0620	1070	376	1090
30...	0730	159	8	3.4
MAY				
05...	1051	163	23	10
26...	1000	92	4	1.0
JUN				
23...	1030	67	7	1.3
JUL				
27...	0930	33	4	0.36
SEP				
28...	0537	175	116	55
28...	0537	177	116	55
28...	0930	116	48	15
28...	0930	116	48	15

PATUXENT RIVER BASIN

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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 west 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 mi².

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-records good except those for estimated daily discharges (manometer malfunction), which are fair. Flow regulated by T. Howard Duckett Reservoir, usable capacity 5,600,000 gal, 21 mi upstream from station.

PEAK DISCHARGE FOR CURRENT YEAR.--Peak discharge, 6,960 ft³/s, Nov. 29, gage height, 15.05 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	113	246	364	215	600	926	1250	263	165	346	163	136
2	108	165	274	237	509	690	1170	253	162	161	145	129
3	105	138	246	254	479	3090	1030	226	156	151	137	121
4	104	132	302	373	471	3190	706	258	156	175	131	118
5	98	137	1930	524	452	1750	625	556	155	147	426	116
6	94	186	4430	286	438	1530	608	306	158	125	508	117
7	91	149	877	323	449	1130	852	263	155	119	168	115
8	93	133	429	1060	450	1060	824	812	260	110	136	128
9	95	130	328	817	537	1170	615	619	181	104	123	126
10	101	126	325	325	590	1810	632	406	154	100	117	113
11	98	123	520	436	469	2490	764	384	148	97	189	108
12	305	123	277	639	479	1330	608	367	166	92	1880	105
13	338	121	236	1040	478	1270	644	366	159	89	455	102
14	143	143	225	690	506	836	1140	331	149	89	210	102
15	119	143	261	435	438	685	814	326	144	227	326	111
16	114	132	634	228	331	638	664	651	184	141	198	142
17	111	127	352	277	450	575	634	502	551	112	315	119
18	112	263	266	e500	628	563	563	356	204	141	495	139
19	108	212	261	e640	990	600	535	336	180	534	259	124
20	111	159	250	781	1600	546	512	303	160	140	184	110
21	123	143	530	636	1600	539	478	280	143	113	165	106
22	233	130	725	567	1300	900	455	263	152	172	932	192
23	167	125	333	567	1520	728	449	254	148	234	432	936
24	128	127	275	573	3770	589	456	242	248	131	195	339
25	120	123	251	880	2690	672	450	403	235	155	163	173
26	116	121	231	984	1370	706	437	389	154	335	477	179
27	129	130	215	985	1270	907	410	307	138	302	301	930
28	138	1720	276	792	1180	3280	521	217	169	1680	183	478
29	125	5190	393	2040	---	3200	316	184	163	703	164	195
30	150	886	403	1340	---	2210	293	175	191	232	168	159
31	409	---	296	942	---	1240	---	172	---	175	144	---
TOTAL	4399	11783	16715	20386	26044	40850	19455	10770	5488	7432	9889	6068
MEAN	142	393	539	658	930	1318	648	347	183	240	319	202
MAX	409	5190	4430	2040	3770	3280	1250	812	551	1680	1880	936
MIN	91	121	215	215	331	539	293	172	138	89	117	102
CFSM	.41	1.13	1.55	1.89	2.67	3.79	1.86	1.00	.53	.69	.92	.58
IN.	.47	1.26	1.79	2.18	2.78	4.37	2.08	1.15	.59	.79	1.06	.65

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1977 - 1994, BY WATER YEAR (WY)

	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994
MEAN	236	280	387	477	468	603	528	489	322	206	198	224						
MAX	1093	459	1030	1316	1232	1358	1247	1291	846	492	532	1358						
(WY)	1980	1980	1984	1978	1979	1993	1983	1989	1989	1989	1979	1979						
MIN	80.4	108	136	119	252	173	167	154	113	102	86.1	65.2						
(WY)	1987	1982	1981	1981	1992	1981	1985	1986	1977	1986	1987	1986						

PATUXENT RIVER BASIN

01594440 PATUXENT RIVER NEAR BOWIE, MD--Continued

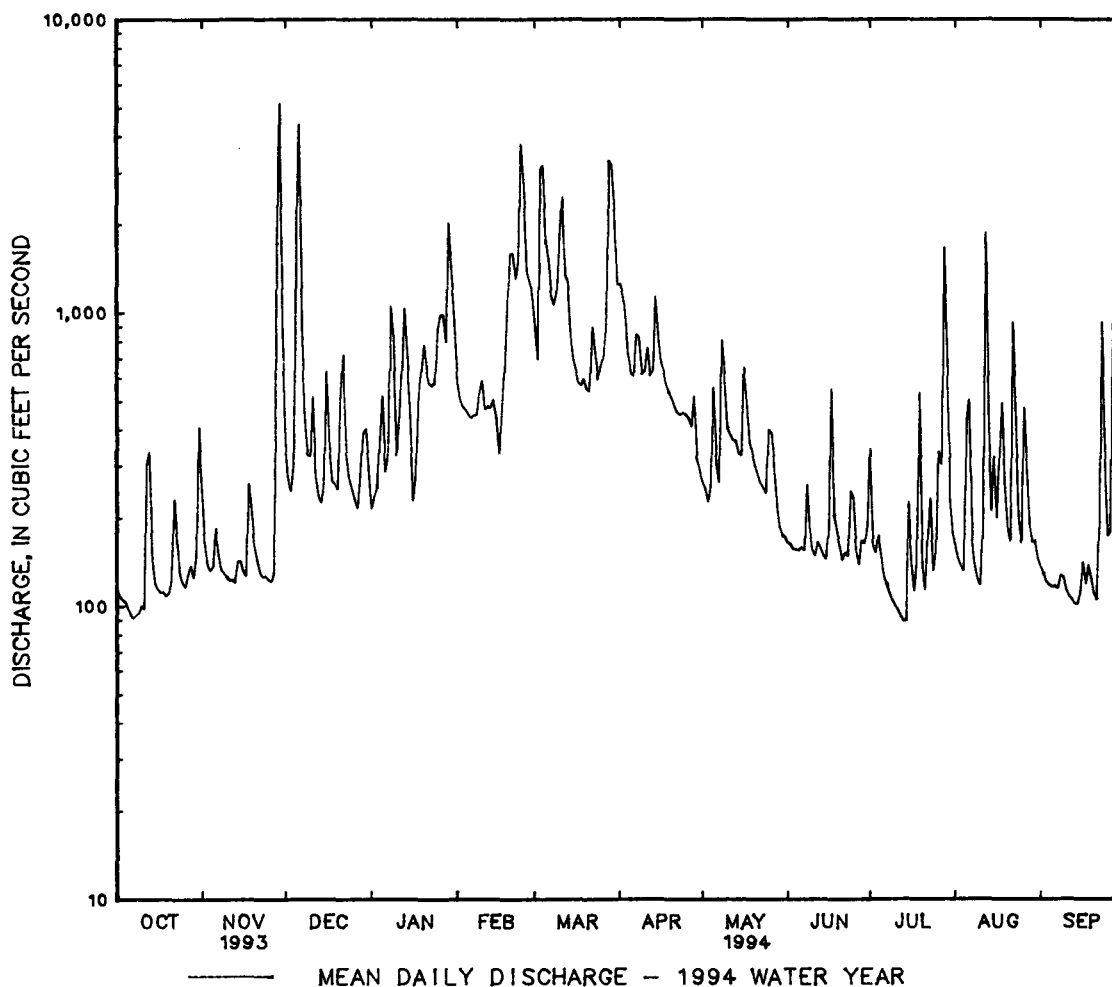
SUMMARY STATISTICS	FOR 1993 CALENDAR YEAR		FOR 1994 WATER YEAR		WATER YEARS 1977 - 1994	
ANNUAL TOTAL	163220		179279			
ANNUAL MEAN	447		491		365	
HIGHEST ANNUAL MEAN					637	1979
LOWEST ANNUAL MEAN					112	1977
HIGHEST DAILY MEAN	5190	Nov 29	5190	Nov 29	8860	Jan 27 1978
LOWEST DAILY MEAN	78	Sep 2	89	(a)	56	(b)
ANNUAL SEVEN-DAY MINIMUM	81	Aug 29	96	Oct 5	57	Sep 15 1986
INSTANTANEOUS PEAK FLOW			6960	Nov 29	(c)1100	Jun 22 1972
INSTANTANEOUS PEAK STAGE			15.05	Nov 29	(d)27.90	Jun 22 1972
INSTANTANEOUS LOW FLOW			83	Oct 6	32	Aug 9 1966
ANNUAL RUNOFF (CFSM)	1.28		1.41		1.05	
ANNUAL RUNOFF (INCHES)	17.45		19.16		14.26	
10 PERCENT EXCEEDS	1060		1050		774	
50 PERCENT EXCEEDS	250		275		212	
90 PERCENT EXCEEDS	98		117		99	

a Sept. 13, 14.

b Sept. 17-19, 1986.

c On basis of contracted-opening measurement of peak flow.

d From floodmarks.



PATUXENT RIVER BASIN

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

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.--Trace metals and organics collected and analyzed using ultraclean methodologies on May 6, 1994 were not available at time of publication. Data are available upon request.

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: Maximum 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 1993 TO SEPTEMBER 1994

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH WATER WHOLE FIELD (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	TEMPER- ATURE AIR (DEG C)	BARO- METRIC PRES- SURE (MM OF HG)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)
OCT 1993												
13...	1120	313	196	7.4	12.0	14.0	764	--	9.0	83	--	--
NOV												
01...	1415	234	243	7.5	11.0	8.0	760	--	8.8	80	--	--
18...	1630	331	286	7.4	13.0	--	765	18	8.1	77	450	900
29...	1500	5410	108	6.8	10.0	9.5	765	--	8.3	73	--	--
30...	1440	679	180	6.9	8.0	6.0	775	--	9.4	78	--	--
DEC												
06...	1230	5070	101	7.0	9.0	12.0	759	--	9.4	82	--	--
JAN 1994												
29...	1030	2190	640	6.9	1.0	6.0	764	--	--	--	--	--
FEB												
22...	1500	1380	284	6.6	5.0	13.0	770	28	11.7	91	E25	1300
25...	1715	2250	202	6.5	4.0	3.0	760	--	12.0	92	--	--
MAR												
03...	1830	4110	252	6.7	2.0	5.0	746	--	--	--	--	--
11...	1400	2450	198	7.1	5.0	5.0	768	--	12.1	94	--	--
22...	1330	994	255	7.3	9.0	12.0	758	--	11.1	97	--	--
APR												
13...	1200	603	207	7.1	11.5	22.0	758	--	9.7	90	--	--
19...	1100	534	210	7.5	15.0	25.5	761	--	8.5	84	--	--
MAY												
06...	1200	311	243	7.2	14.0	17.5	760	3.4	8.4	81	260	230
18...	1045	363	221	7.4	14.0	17.0	760	--	8.2	80	--	--
JUN												
30...	0915	178	280	7.5	23.0	23.0	756	--	6.3	75	--	--
JUL												
14...	0830	87	329	7.6	23.5	26.5	762	--	6.6	78	--	--
AUG												
10...	1000	118	305	7.3	21.5	27.5	765	--	7.0	79	--	--
18...	1200	489	208	7.4	22.0	25.0	760	--	7.1	81	--	--
SEP												
16...	1045	146	326	7.5	21.5	25.0	765	3.1	6.8	77	K340	280
29...	0800	204	244	7.2	17.5	15.5	758	--				

E: Estimated

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

PATUXENT RIVER BASIN

01594440 PATUXENT RIVER NEAR BOWIE, MD--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	HARD- NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LITY WAT DIS TOT IT FIELD (MG/L AS CACO3)	BICAR- BONATE WATER DIS IT FIELD (MG/L AS HCO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)
OCT 1993												
13...	--	--	--	--	--	40	48	--	--	--	6.5	--
NOV												
01...	--	--	--	--	--	51	60	--	--	--	9.6	--
18...	77	23	4.6	21	5.3	58	70	20	30	0.30	7.4	154
29...	--	--	--	--	--	17	21	--	--	--	4.9	--
30...	--	--	--	--	--	28	34	--	--	--	4.9	--
DEC												
06...	--	--	--	--	--	18	22	--	--	--	5.3	--
JAN 1994												
29...	--	--	--	--	--	14	17	--	--	--	4.8	--
FEB												
22...	45	13	3.1	27	4.1	26	31	13	45	<0.10	5.8	148
25...	--	--	--	--	--	20	25	--	--	--	5.7	--
MAR												
03...	--	--	--	--	--	16	20	--	--	--	3.9	--
11...	--	--	--	--	--	22	27	--	--	--	5.7	--
22...	--	--	--	--	--	32	39	--	--	--	7.1	--
APR												
13...	--	--	--	--	--	35	43	--	--	--	6.0	--
19...	--	--	--	--	--	37	45	--	--	--	6.0	--
MAY												
06...	64	19	4.1	17	2.6	46	56	14	30	0.20	8.6	136
18...	--	--	--	--	--	41	50	--	--	--	7.7	--
JUN												
30...	--	--	--	--	--	56	68	--	--	--	8.9	--
JUL												
14...	--	--	--	--	--	70	85	--	--	--	7.0	--
AUG												
10...	--	--	--	--	--	58	70	--	--	--	9.8	--
18...	--	--	--	--	--	42	51	--	--	--	8.1	--
SEP												
16...	89	28	4.7	27	5.6	56	69	19	37	0.40	7.0	181
29...	--	--	--	--	--	49	59	--	--	--	9.0	--

DATE	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS NO3)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC DIS- SOLVED (MG/L AS N)	PHOS- PHORUS TOTAL (MG/L AS P)	PHOS- PHORUS DIS- SOLVED (MG/L AS P)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P)	ALUM- INUM, DIS- SOLVED (UG/L AS AL)
OCT 1993											
13...	--	<0.010	0.850	0.850	0.030	0.40	0.30	0.230	0.080	0.080	--
NOV											
01...	5.2	0.020	1.20	1.20	0.120	0.30	0.20	0.020	<0.010	<0.010	--
18...	5.9	0.060	1.40	1.40	0.400	1.0	0.70	0.220	0.050	0.050	30
29...	3.3	0.010	0.750	0.750	0.030	0.60	0.40	0.200	0.050	0.040	280
30...	4.8	0.020	1.10	1.10	0.220	0.60	0.40	0.110	0.020	0.040	230
DEC											
06...	--	<0.010	0.600	0.600	0.060	0.60	0.20	0.150	0.040	0.040	270
JAN 1994											
29...	4.7	0.030	1.10	1.10	0.370	1.9	1.2	0.250	0.060	0.030	--
FEB											
22...	4.7	0.030	1.10	1.10	0.330	0.90	0.70	0.130	0.040	0.030	20
25...	4.8	0.010	1.10	1.10	0.170	0.60	0.40	0.080	0.050	0.020	100
MAR											
03...	--	<0.010	0.620	0.620	0.220	0.60	0.40	0.070	0.030	0.020	120
11...	4.3	0.020	1.00	1.00	0.170	0.60	0.40	0.070	0.040	0.030	190
22...	6.4	0.050	1.50	1.50	0.200	0.70	0.40	0.150	0.030	0.030	130
APR											
13...	5.7	0.010	1.30	1.30	0.040	0.40	0.20	0.060	0.030	0.020	50
19...	5.7	0.020	1.30	1.30	0.050	0.30	0.30	0.040	0.020	<0.010	40
MAY											
06...	--	--	--	--	--	0.40	0.30	0.120	--	--	40
18...	6.1	0.020	1.40	1.40	0.090	0.50	0.30	0.060	0.020	0.020	30
JUN											
30...	6.1	0.030	1.40	1.40	0.070	0.50	0.30	0.120	0.060	0.040	20
JUL											
14...	6.2	0.010	1.40	1.40	0.050	0.50	0.30	0.120	0.050	0.050	20
AUG											
10...	6.1	0.020	1.40	1.40	0.090	0.50	0.40	0.090	0.040	0.030	30
18...	3.1	0.020	0.710	0.710	0.060	0.50	0.30	0.160	0.070	0.070	90
SEP											
16...	7.9	0.020	1.80	1.80	0.050	0.40	0.30	0.080	0.060	0.050	10
29...	3.5	0.020	0.810	0.810	0.070	0.40	0.40	0.070	0.040	0.030	60

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WATER QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

[illegible][illegible]

PATUXENT RIVER BASIN

01594440 PATUXENT RIVER NEAR BOWIE, MD--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

RADIOCHEMICAL ANALYSES

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	URANIUM NATURAL DIS- SOLVED (UG/L AS U)
MAY 1994			
06...	1200	311	<1.0
SEP			
16...	1045	146	<1.0

SUSPENDED SEDIMENT DISCHARGE

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SEDI- MENT, DIS- SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT 1993					
13...	1120	313	50	42	--
NOV					
01...	1415	234	11	6.9	--
18...	1630	331	42	38	90
29...	1500	5410	83	1210	92
30...	1440	679	40	73	97
DEC					
06...	1230	5070	64	876	93
JAN 1994					
29...	1030	2190	183	1080	--
FEB					
22...	1500	1380	73	272	96
25...	1715	2250	45	273	--
MAR					
03...	1830	4110	135	1500	--
11...	1400	2450	59	390	--
22...	1330	994	98	263	--
APR					
13...	1200	603	13	21	--
19...	1100	534	15	22	--
MAY					
06...	1200	311	17	14	95
18...	1045	363	24	24	--
JUN					
30...	0915	178	27	13	--
JUL					
14...	0830	87	18	4.2	--
AUG					
10...	1000	118	20	6.4	--
18...	1200	489	62	82	--
SEP					
16...	1045	146	15	5.9	99
29...	0800	204	27	15	--

PATUXENT RIVER BASIN

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01594526 WESTERN BRANCH AT UPPER MARLBORO, MD

LOCATION.--Lat 38°48'52", long 76°44'53", 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 mi².

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 (ice effect), which are fair.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 28	1930	1,400	10.57	Mar. 28	1545	2,690	12.64
Feb. 24	0230	1,340	10.34	July 28	1645	1,290	10.17
Mar. 3	1300	*2,930	*12.80				

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18	69	78	43	94	107	372	67	27	42	42	27
2	15	36	62	60	79	270	228	60	24	31	103	24
3	13	26	53	71	71	2100	176	56	22	168	63	22
4	11	22	63	169	64	1330	155	81	22	50	38	20
5	9.9	28	590	146	64	452	141	170	22	31	143	20
6	9.0	37	483	82	63	231	146	90	22	24	237	20
7	9.1	28	144	127	61	173	331	93	21	38	70	19
8	8.8	21	90	514	62	185	203	211	31	19	40	18
9	9.4	19	71	220	123	182	144	117	36	31	31	17
10	19	19	64	105	126	711	141	79	26	50	27	17
11	11	19	69	85	115	669	154	66	22	19	29	17
12	137	18	54	258	92	220	127	64	23	16	625	16
13	61	18	48	235	72	166	187	59	21	19	209	17
14	32	21	47	130	91	146	177	53	18	20	77	17
15	20	20	78	84	108	134	130	51	17	48	128	18
16	16	19	229	e82	153	123	132	65	38	74	80	19
17	14	19	102	80	230	107	114	53	38	73	165	19
18	13	98	72	242	309	109	99	49	22	83	132	51
19	12	49	65	e140	426	108	96	48	22	77	74	22
20	23	33	55	e90	483	95	89	51	25	49	53	20
21	21	24	217	74	348	112	84	50	16	29	44	19
22	47	21	139	68	246	283	80	46	15	28	58	141
23	23	20	82	e70	576	145	76	41	20	34	46	489
24	18	20	64	e170	1160	116	75	38	79	24	34	115
25	16	19	57	251	491	185	71	44	77	20	30	59
26	15	18	51	313	200	162	68	58	33	86	174	70
27	21	39	44	127	135	446	95	47	23	192	66	251
28	30	1010	42	345	111	1900	110	36	22	895	43	99
29	22	616	45	632	---	1730	74	32	30	490	35	49
30	74	140	e46	186	---	805	72	29	45	103	36	35
31	125	---	e45	117	---	299	---	27	---	58	29	---
TOTAL	873.2	2546	3349	5316	6153	13801	4147	2031	859	2921	2961	1747
MEAN	28.2	84.9	108	171	220	445	138	65.5	28.6	94.2	95.5	58.2
MAX	137	1010	590	632	1160	2100	372	211	79	895	625	489
MIN	8.8	18	42	43	61	95	68	27	15	16	27	16
CFSM	.31	.95	1.20	1.91	2.45	4.96	1.54	.73	.32	1.05	1.06	.65
IN.	.36	1.06	1.39	2.20	2.55	5.72	1.72	.84	.36	1.21	1.23	.72

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1986 - 1994, BY WATER YEAR (WY)

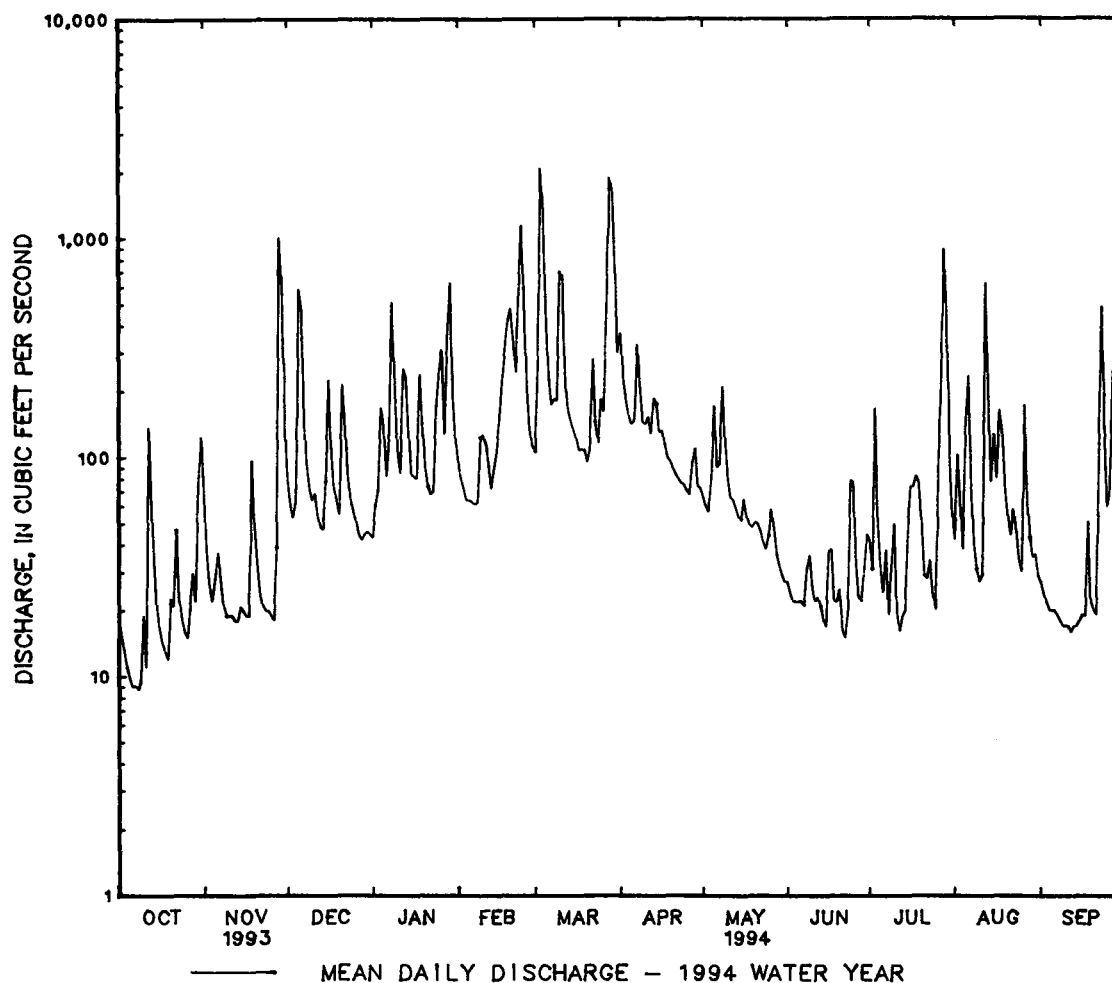
	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997
MEAN	30.2	85.8	94.8	107	131	203	116	70.0	31.1	43.2	44.1	36.8
MAX	70.5	95.2	146	171	220	445	191	122	45.5	94.2	95.5	58.2
(WY)	1986	1986	1987	1994	1994	1994	1993	1988	1987	1994	1994	1994
MIN	10.9	73.6	38.4	54.5	85.5	76.8	63.6	23.3	9.42	12.3	13.1	9.35
(WY)	1987	1993	1989	1986	1993	1986	1986	1986	1986	1987	1987	1986

PATUXENT RIVER BASIN

01594526 WESTERN BRANCH AT UPPER MARLBORO, MD--Continued

SUMMARY STATISTICS	FOR 1993 CALENDAR YEAR		FOR 1994 WATER YEAR		WATER YEARS 1986 - 1994	
ANNUAL TOTAL	35427.4		46704.2		85.9	
ANNUAL MEAN	97.1		128		128	
HIGHEST ANNUAL MEAN					54.8	
LOWEST ANNUAL MEAN					2100	
HIGHEST DAILY MEAN	1500	Mar 5	2100	Mar 3	2100	Mar 3 1994
LOWEST DAILY MEAN	6.8	Jul 31	8.8	Oct 8	2.8	Oct 7 1986
ANNUAL SEVEN-DAY MINIMUM	7.6	Jul 26	10	Oct 3	4.2	Oct 2 1986
INSTANTANEOUS PEAK FLOW			2930	Mar 3	2930	Mar 3 1994
INSTANTANEOUS PEAK STAGE			12.80	Mar 3	12.80	Mar 3 1994
INSTANTANEOUS LOW FLOW			8.1	(a)	6.6	Jul 31 0000
ANNUAL RUNOFF (CFSM)	1.08		1.43		.96	
ANNUAL RUNOFF (INCHES)	14.69		19.37		13.01	
10 PERCENT EXCEEDS	219		248		177	
50 PERCENT EXCEEDS	50		64		48	
90 PERCENT EXCEEDS	10		19		10	

a Oct. 7, 8.



PATUXENT RIVER BASIN

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01594526 WESTERN BRANCH AT UPPER MARLBORO, MD--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1986 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH WATER WHOLE FIELD (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	TEMPER- ATURE AIR (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN DEMAND, CHEM- ICAL (LOW LEVEL) (MG/L)	OXYGEN DEMAND, BIO- CHEM- ICAL, 5 DAY (MG/L)
OCT 1992										
06...	1150	16	271	7.1	13.0	12.5	10	--	<10	1.1
14...	0955	23	221	7.6	14.0	17.0	--	9.2	--	--
28...	0800	16	242	7.0	10.0	8.5	10	--	11	1.0
29...	0905	16	254	7.5	11.0	11.5	--	8.9	--	--
NOV										
03...	1411	353	--	--	--	--	120	--	19	--
04...	0609	137	--	--	--	--	45	--	19	--
16...	1111	35	231	7.8	5.0	6.0	--	11.7	--	--
30...	1400	43	233	6.8	7.0	8.0	9.9	--	<10	1.6
DEC										
11...	0312	588	--	--	--	--	140	--	10	--
11...	0839	618	--	--	--	--	140	--	10	--
11...	1349	665	--	--	--	--	110	--	17	--
11...	1829	759	--	--	--	--	150	--	<10	--
11...	2253	749	--	--	--	--	130	--	<10	--
12...	0318	749	--	--	--	--	110	--	<10	--
12...	0742	752	--	--	--	--	93	--	<10	--
12...	1205	768	--	--	--	--	88	--	<10	--
14...	1245	120	208	7.3	5.5	4.5	--	11.3	--	--
21...	1615	78	213	6.0	5.0	1.0	15	--	<10	1.9
JAN 1993										
05...	1134	548	--	--	--	--	660	--	<10	--
06...	1345	319	--	--	--	--	140	--	<10	--
11...	1108	145	255	9.1	3.5	1.5	--	12.2	--	--
11...	1113	145	255	9.1	3.5	1.5	--	12.2	--	--
12...	1645	169	321	5.9	5.0	6.0	22	--	<10	2.7
FEB										
22...	1015	215	--	--	--	--	--	--	--	--
22...	1621	311	--	--	--	--	94	--	15	--
23...	0341	257	--	--	--	--	85	--	12	--
24...	1400	92	318	6.1	2.0	1.0	18	--	<10	1.1
MAR										
04...	1338	652	--	--	--	--	--	--	--	--
04...	2053	650	--	--	--	--	--	--	--	--
05...	0202	611	--	--	--	--	--	--	--	--
08...	1015	147	242	7.4	7.0	13.5	--	11.1	--	--
17...	1143	490	--	--	--	--	73	--	--	--
17...	2332	1220	--	--	--	--	170	--	--	--
18...	0451	1440	--	--	--	--	120	--	--	--
18...	1801	1070	--	--	--	--	80	--	44	--
18...	2119	960	--	--	--	--	77	--	14	--
19...	0107	797	--	--	--	--	70	--	15	--
19...	0605	541	--	--	--	--	60	--	13	--
22...	0940	251	247	7.3	7.0	12.0	--	11.4	--	--
24...	0923	666	--	--	--	--	190	--	<10	--
24...	1417	685	--	--	--	--	130	--	<10	--
24...	1908	683	--	--	--	--	100	--	<10	--
28...	0043	673	--	--	--	--	290	--	<10	--
28...	0952	785	--	--	--	--	120	--	<10	--
28...	1411	746	--	--	--	--	100	--	13	--

PATUXENT RIVER BASIN

01594526 WESTERN BRANCH AT UPPER MARLBORO, MD--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH WATER WHOLE FIELD (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	TEMPER- ATURE AIR (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN DEMAND, CHEM- ICAL (LOW LEVEL) (MG/L)	OXYGEN DEMAND, BIO- CHEM- ICAL, 5 DAY (MG/L)
APR 1994										
05...	0825	140	222	7.1	8.0	7.0	--	10.9	--	--
16...	2016	682	--	--	--	--	280	--	<10	--
17...	0124	610	--	--	--	--	160	--	13	--
17...	0730	456	--	--	--	--	87	--	14	--
19...	0905	127	209	7.1	12.5	17.0	--	10.0	--	--
22...	0621	528	--	--	--	--	170	--	18	--
29...	1430	106	--	--	--	--	9.8	--	<10	1.6
MAY										
05...	1020	81	225	7.4	17.0	20.0	--	9.1	--	--
19...	0930	225	186	7.2	16.0	17.0	--	8.1	--	--
27...	1345	41	241	7.1	18.0	25.0	8.1	--	<10	1.6
JUN										
02...	0835	53	206	7.5	16.5	17.5	--	8.4	--	--
17...	0913	23	256	7.8	21.5	27.0	--	10.1	--	--
23...	1215	18	272	7.8	23.0	26.0	7.2	--	10	1.1
JUL										
06...	1100	19	270	7.6	27.0	33.0	--	8.0	--	--
19...	0950	8.1	309	7.5	23.5	28.0	--	8.6	--	--
27...	1200	7.9	337	7.5	26.0	31.0	13	--	<10	1.6
AUG										
02...	0940	6.3	358	7.7	24.5	28.5	--	9.2	--	--
06...	2225	490	--	--	--	--	250	--	30	--
07...	0622	292	--	--	--	--	170	--	13	--
08...	0402	155	--	--	--	--	160	--	11	--
19...	1050	16	257	7.7	24.5	25.5	--	9.0	--	--
SEP										
01...	1555	8.6	--	--	--	--	7.7	--	11	--
02...	1010	8.1	318	7.7	25.5	34.0	--	9.9	--	--
20...	1130	16	238	7.5	19.0	23.5	--	8.4	--	--
22...	1200	33	235	6.8	18.0	21.0	14	--	--	1.6
28...	0318	154	--	--	--	--	200	--	12	--

PATUXENT RIVER BASIN

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01594526 WESTERN BRANCH AT UPPER MARLBORO, MD--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	ALKA- LITY WAT WE TOT FET FIELD MG/L AS CACO3	SILICA, DIS- SOLVED (MG/L AS SIO2)	RESIDUE TOTAL AT 105 DEG. C, SUS- PENDED (MG/L)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS NO3)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N)
OCT 1992										
06...	74	14	18	1.1	0.009	0.250	0.250	0.020	0.35	0.45
14...	--	11	3	0.71	0.009	0.170	0.170	0.038	--	--
28...	65	12	5	0.28	0.007	0.070	0.070	0.028	0.40	0.35
29...	--	13	2	0.47	0.003	0.110	0.110	0.026	--	--
NOV										
03...	--	6.6	305	1.1	0.023	0.270	0.270	0.008	1.9	0.35
04...	--	8.8	96	0.88	0.022	0.220	0.220	0.020	0.75	0.45
16...	--	13	4	0.60	0.005	0.140	0.140	0.030	--	--
30...	49	14	5	1.0	0.004	0.230	0.230	0.044	0.30	0.25
DEC										
11...	--	6.4	325	2.1	0.011	0.480	0.480	0.220	1.6	0.60
11...	--	6.4	142	2.4	0.012	0.560	0.560	0.168	1.9	0.80
11...	--	7.1	176	2.4	0.011	0.550	0.550	0.144	1.6	0.70
11...	--	7.1	200	2.4	0.010	0.560	0.560	0.104	1.7	0.55
11...	--	6.6	160	2.6	0.010	0.600	0.600	0.092	1.4	0.50
12...	--	6.6	440	2.6	0.009	0.600	0.600	0.084	1.3	0.25
12...	--	6.6	340	2.7	0.009	0.610	0.610	0.080	1.1	0.25
12...	--	6.8	108	2.7	0.009	0.620	0.620	0.072	1.0	0.25
14...	--	11	12	2.8	0.009	0.640	0.640	0.086	--	--
21...	33	13	12	1.9	0.009	0.440	0.440	0.044	0.40	0.30
JAN 1993										
05...	--	8.1	690	1.7	0.011	0.390	0.390	0.056	5.3	0.45
06...	--	8.1	540	1.7	0.008	0.400	0.400	0.040	1.1	0.40
11...	--	12	14	2.6	0.010	0.590	0.590	0.084	--	--
11...	--	--	--	--	--	--	--	--	--	--
12...	30	12	25	2.8	0.012	0.640	0.640	0.076	0.60	0.45
FEB										
22...	--	8.2	37	2.6	0.012	0.610	0.610	0.170	--	--
22...	--	7.9	252	2.0	0.012	0.460	0.460	0.125	1.6	1.0
23...	--	7.9	160	2.2	0.014	0.510	0.510	0.240	1.5	1.0
24...	29	11	45	2.3	0.009	0.520	0.520	0.093	0.50	0.40
MAR										
04...	--	--	--	--	--	--	--	--	8.2	--
04...	--	--	--	--	--	--	--	--	3.1	--
05...	--	--	--	--	--	--	--	--	1.6	--
08...	--	13	25	3.2	0.008	0.740	0.740	0.093	--	--
17...	--	7.1	122	2.4	0.008	0.560	0.560	0.241	2.9	1.7
17...	--	4.5	188	1.7	0.007	0.380	0.380	0.148	1.7	0.80
18...	--	4.5	148	1.6	0.006	0.360	0.360	0.117	1.0	0.60
18...	--	5.8	73	2.0	0.010	0.460	0.460	0.114	0.80	0.60
18...	--	6.0	97	2.1	0.010	0.490	0.490	0.113	0.80	0.60
19...	--	6.8	76	2.3	0.010	0.530	0.530	0.119	0.60	0.60
19...	--	7.9	91	2.5	0.010	0.570	0.570	0.114	0.70	0.50
22...	--	11	17	3.1	0.008	0.710	0.710	0.064	--	--
24...	--	6.4	296	2.2	0.013	0.510	0.510	0.120	2.0	0.55
24...	--	6.7	268	2.2	0.013	0.520	0.520	0.125	1.0	0.65
24...	--	7.2	182	2.4	0.012	0.560	0.560	0.111	1.0	0.50
28...	--	5.9	485	1.5	0.016	0.360	0.360	0.074	2.1	0.50
28...	--	6.7	174	1.9	0.015	0.450	0.450	0.075	0.85	0.40
28...	--	6.3	146	1.9	0.014	0.440	0.440	0.070	1.0	0.40

PATUXENT RIVER BASIN

01594526 WESTERN BRANCH AT UPPER MARLBORO, MD--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	ALKA- LINITY WAT WE TOT FET FIELD MG/L AS CACO3	SILICA, DIS- SOLVED (MG/L AS SIO2)	RESIDUE TOTAL AT 105 DEG. C, SUS- PENDE (MG/L)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS NO3)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N)
APR 1994										
05...	--	12	11	2.9	0.006	0.670	0.670	0.031	--	--
16...	--	6.1	270	1.9	0.012	0.450	0.450	0.062	2.9	0.61
17...	--	7.1	505	1.7	0.011	0.400	0.400	0.071	1.6	0.60
17...	--	8.1	38	1.9	0.011	0.430	0.430	0.068	1.2	0.68
19...	--	12	14	2.5	0.010	0.570	0.570	0.020	--	--
22...	--	6.6	350	1.8	0.010	0.410	0.410	0.066	1.3	0.56
29...	--	20	16	2.1	0.005	0.490	0.490	0.025	0.41	0.23
MAY										
05...	--	12	6	2.1	0.005	0.480	0.480	0.022	--	--
19...	--	8.5	57	2.1	0.018	0.490	0.490	0.096	--	--
27...	46	16	6	2.5	0.014	0.570	0.570	0.040	0.32	0.25
JUN										
02...	--	12	8	1.9	0.012	0.430	0.430	0.049	--	--
17...	--	15	<2	1.8	0.011	0.420	0.420	0.023	--	--
23...	64	16	2	1.4	0.010	0.320	0.320	0.011	0.42	0.29
JUL										
06...	--	9.1	7	1.5	0.016	0.360	0.360	0.074	--	--
19...	--	14	4	0.81	0.008	0.190	0.190	0.036	--	--
27...	88	13	<1	0.77	0.006	0.180	0.180	0.039	0.40	0.23
AUG										
02...	--	14	2	0.98	0.008	0.230	0.230	0.046	--	--
06...	--	4.7	465	3.3	0.028	0.780	0.780	0.157	2.5	0.45
07...	--	5.5	180	--	<0.028	0.860	0.860	0.120	1.3	0.46
08...	--	9.1	150	2.6	0.013	0.590	0.590	0.078	1.3	0.42
19...	--	10	4	1.5	0.008	0.340	0.340	0.043	--	--
SEP										
01...	--	13	6	0.97	0.011	0.230	0.230	0.027	0.37	0.37
02...	--	12	2	1.1	0.008	0.260	0.260	0.028	--	--
20...	--	9.6	3	1.2	0.007	0.280	0.280	0.034	--	--
22...	47	10	20	0.90	0.006	0.210	0.210	0.021	0.65	0.46
28...	--	5.9	290	2.1	0.016	0.490	0.490	0.114	1.6	0.40

PATUXENT RIVER BASIN

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01594526 WESTERN BRANCH AT UPPER MARLBORO, MD--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	PHOS- PHORUS TOTAL (MG/L AS P)	PHOS- PHORUS DIS- SOLVED (MG/L AS P)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P)	CHLORO- PHYLL A PHYTO- PLANK- TON, UNCORR. (UG/L)	CHLORO- PHYLL B PHYTO- PLANK- TON, UNCORR. (UG/L)	CHLORO- PHYLL C PHYTO- PLANK- TON, UNCORR. (UG/L)	PHEO- PHYTIN PHYTO- PLANK- TON, ACID M. (UG/L)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)
OCT 1992									
06...	0.020	<0.010	0.010	1.80	<0.001	<0.001	0.400	4.5	--
14...	0.060	0.030	0.016	1.60	<0.001	<0.001	--	6.1	5.2
28...	0.100	0.020	0.012	0.200	<0.001	<0.001	<0.001	5.4	5.4
29...	0.050	0.020	0.012	1.60	0.200	0.800	--	5.2	4.6
NOV									
03...	1.20	0.040	0.016	--	--	--	--	10	7.5
04...	0.210	0.040	0.014	--	--	--	--	7.8	7.1
16...	0.070	0.030	0.015	0.800	<0.001	<0.001	--	6.0	5.4
30...	0.020	<0.010	0.012	0.200	<0.001	<0.001	--	4.4	4.3
DEC									
11...	0.900	0.030	0.014	--	--	--	--	9.9	7.6
11...	0.700	0.030	--	--	--	--	--	10	7.9
11...	0.600	0.040	--	--	--	--	--	9.1	7.9
11...	0.800	0.040	--	--	--	--	--	10	7.9
11...	0.600	0.040	--	--	--	--	--	9.8	7.6
12...	0.500	0.020	0.058	--	--	--	--	9.3	7.7
12...	0.430	<0.010	0.054	--	--	--	--	9.0	8.0
12...	0.350	0.010	0.084	--	--	--	--	8.7	8.4
14...	0.080	0.030	0.016	0.200	<0.001	<0.001	--	5.5	4.4
21...	0.090	0.080	0.012	0.200	<0.001	<0.001	<0.001	4.0	3.9
JAN 1993									
05...	3.60	0.020	0.012	--	--	--	--	20	6.5
06...	0.310	0.020	0.008	--	--	--	--	7.8	7.0
11...	0.070	0.020	0.015	--	--	--	--	5.1	4.0
11...	--	--	--	--	--	--	--	--	--
12...	0.120	0.040	0.010	0.200	<0.001	<0.001	--	4.8	--
FEB									
22...	0.120	0.020	0.011	--	--	--	<0.001	7.2	4.0
22...	0.400	<0.010	0.013	--	--	--	--	5.5	--
23...	0.280	<0.010	0.011	--	--	--	--	5.9	4.9
24...	0.050	<0.010	0.012	0.200	<0.001	<0.001	--	3.4	--
MAR									
04...	4.80	--	--	--	--	--	--	24	--
04...	1.60	--	--	--	--	--	--	10	--
05...	0.800	--	--	--	--	--	--	9.8	--
08...	0.090	0.020	0.005	--	--	--	0.200	4.6	3.4
17...	0.800	0.040	0.009	--	--	--	--	7.3	5.9
17...	0.900	0.030	0.011	--	--	--	--	7.0	5.1
18...	0.310	0.030	0.015	--	--	--	--	6.2	5.1
18...	0.210	0.050	0.013	--	--	--	--	5.7	5.4
18...	0.140	0.030	0.012	--	--	--	--	5.3	4.7
19...	0.080	0.030	0.012	--	--	--	--	5.2	5.4
19...	0.150	0.030	0.010	--	--	--	--	4.8	4.5
22...	0.080	0.020	0.012	--	--	--	0.200	5.1	3.6
24...	1.10	0.030	0.019	--	--	--	--	9.6	6.3
24...	0.370	0.020	0.017	--	--	--	--	8.1	--
24...	0.420	0.020	0.016	--	--	--	--	7.2	--
28...	1.50	0.010	0.040	--	--	--	--	12	6.4
28...	0.500	<0.010	0.043	--	--	--	--	7.5	7.0
28...	0.430	<0.010	0.034	--	--	--	--	7.1	6.7

PATUXENT RIVER BASIN

01594526 WESTERN BRANCH AT UPPER MARLBORO, MD--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	PHOS- PHORUS TOTAL (MG/L AS P)	PHOS- PHORUS DIS- SOLVED (MG/L AS P)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P)	CHLORO- PHYLL A PHYTO- PLANK- TON, UNCORR. (UG/L)	CHLORO- PHYLL B PHYTO- PLANK- TON, UNCORR. (UG/L)	CHLORO- PHYLL C PHYTO- PLANK- TON, UNCORR. (UG/L)	PHEO- PHYTIN PHYTO- PLANK- TON, ACID M. (UG/L)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)
APR 1994									
05...	0.060	0.020	0.014	--	--	--	0.400	4.8	3.9
16...	--	--	--	--	--	--	--	14	6.0
17...	--	--	--	--	--	--	--	10	7.1
17...	0.410	0.040	0.017	--	--	--	--	8.5	--
19...	0.070	0.030	0.017	--	--	--	0.400	4.7	3.7
22...	0.580	0.060	0.019	--	--	--	--	9.8	6.5
29...	0.140	0.080	0.019	0.200	<0.001	<0.001	<0.001	4.2	4.0
MAY									
05...	0.060	0.030	0.017	--	--	--	<0.001	5.4	4.2
19...	0.190	0.040	0.029	--	--	--	<0.001	11	6.4
27...	0.080	<0.010	0.020	0.200	<0.001	<0.001	--	3.7	3.9
JUN									
02...	0.090	0.040	0.020	--	--	--	0.001	6.5	5.2
17...	0.060	0.030	0.017	--	--	--	0.600	4.8	4.0
23...	0.120	0.060	0.022	0.400	<0.001	<0.001	<0.001	4.5	4.7
JUL									
06...	0.100	0.060	0.045	--	--	--	<0.001	5.4	4.5
19...	0.080	0.040	0.025	--	--	--	<0.001	5.4	4.7
27...	0.080	0.030	0.017	0.200	<0.001	<0.001	<0.001	5.1	--
AUG									
02...	0.060	0.020	0.017	--	--	--	1.40	4.7	3.9
06...	1.20	0.030	0.021	--	--	--	--	12	6.8
07...	0.500	0.030	0.017	--	--	--	--	11	9.3
08...	0.600	0.270	0.016	--	--	--	--	10	9.1
19...	0.070	0.030	0.025	--	--	--	<0.001	5.7	5.1
SEP									
01...	0.050	0.040	0.027	--	--	--	--	5.1	5.1
02...	0.070	0.040	0.027	--	--	--	<0.001	5.6	4.9
20...	0.180	0.140	0.053	--	--	--	<0.001	5.8	5.1
22...	0.090	<0.010	0.016	0.800	<0.001	<0.001	0.200	6.0	6.0
28...	0.670	0.020	0.022	--	--	--	--	9.7	7.5

PATUXENT RIVER BASIN

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01594526 WESTERN BRANCH AT UPPER MARLBORO, MD--Continued

SUSPENDED SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)
OCT 1992				
06...	1150	16	11	0.49
28...	0800	16	6	0.27
NOV				
03...	1411	353	190	181
04...	0609	137	92	34
30...	1400	43	6	0.70
DEC				
11...	0312	588	399	633
11...	0839	618	376	627
11...	1349	665	325	583
11...	1829	759	366	750
11...	2253	749	297	601
12...	0318	749	256	518
12...	0742	752	229	465
12...	1205	768	209	434
21...	1615	78	11	2.3
JAN 1993				
05...	1134	548	1250	1850
06...	1345	319	155	133
12...	1645	169	41	19
FEB				
13...	0418	414	392	438
13...	1419	274	320	237
14...	0728	138	208	77
22...	1621	311	368	309
23...	0341	257	212	147
24...	1400	92	1400	350
MAR				
04...	1338	652	80	141
04...	2053	650	898	1570
05...	0202	611	385	635
17...	1143	490	279	369
17...	2029	970	554	1450
17...	2332	1220	341	1120
18...	0211	1390	209	786
18...	0451	1440	148	575
18...	0730	1420	117	447
18...	1801	1070	109	315
18...	2119	960	102	265
19...	0107	797	116	250
19...	0605	541	131	191
24...	0923	666	806	1450
24...	1417	685	455	841
24...	1908	683	236	435
25...	0015	610	148	244
25...	0641	422	194	221
28...	0043	673	850	1540
28...	0531	723	239	466
28...	0952	785	230	487
28...	1411	746	141	284
28...	1859	652	134	236
29...	0034	538	125	182
APR				
16...	2016	682	790	1450
17...	0124	610	355	584
17...	0730	456	275	339
22...	0621	528	479	683
29...	1430	106	14	4.0
MAY				
27...	1345	41	4	0.44
JUN				
23...	1215	18	3	0.15
JUL				
27...	1200	7.9	2	0.04
AUG				
06...	2225	490	451	596
07...	0622	292	254	200
08...	0402	155	203	85
SEP				
22...	1200	33	13	1.2
28...	0318	154	277	115

PATUXENT RIVER BASIN

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 mi².

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder and timber control. Elevation of gage is 10 ft above sea level, from topographic map.

REMARKS.--No estimated daily discharges. Water-discharge records good above 5.0 ft³/s and poor below due to leakage around and under control.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 250 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Mar. 3	0500	*502	*9.29	No other peak greater than base discharge.			

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.1	3.7	5.8	5.6	11	22	48	17	5.5	13	5.6	4.4
2	.92	2.8	5.2	14	10	63	36	15	5.0	4.8	5.5	3.8
3	.86	2.7	4.9	13	9.6	274	33	13	4.7	15	6.8	3.4
4	.71	2.7	5.4	25	9.5	73	31	16	4.7	35	4.8	3.3
5	.63	2.9	27	16	9.7	46	29	23	4.6	8.2	4.3	3.0
6	.59	3.3	16	10	10	36	31	16	4.7	5.7	4.1	3.1
7	.57	4.3	8.7	9.9	9.2	32	39	15	4.6	4.9	3.4	3.0
8	.57	3.3	6.6	22	9.3	29	29	21	4.5	4.2	3.1	2.9
9	.57	3.0	6.0	12	19	33	26	16	4.5	3.7	3.0	2.8
10	.63	2.9	5.8	8.5	15	47	26	13	4.1	5.7	2.9	2.7
11	.62	2.9	7.5	9.1	9.4	37	25	13	5.1	4.2	2.8	2.6
12	.91	2.9	5.9	22	16	27	24	12	6.5	3.5	2.8	2.4
13	.90	2.8	5.2	19	16	26	29	11	4.8	3.2	3.0	2.2
14	.74	3.0	5.2	13	19	25	28	10	4.1	3.1	4.2	2.2
15	.68	3.0	6.1	9.9	20	24	23	10	3.6	2.9	24	2.4
16	.66	2.9	11	6.9	22	23	27	14	13	3.0	7.0	2.5
17	.66	3.1	6.7	6.9	22	22	24	11	8.0	2.9	9.7	2.9
18	.67	10	5.6	18	22	22	21	9.8	4.9	2.9	8.5	12
19	.65	5.4	5.5	11	23	22	20	9.8	4.0	2.8	5.5	4.8
20	.72	3.8	5.1	6.5	24	20	20	13	3.7	2.6	4.4	3.4
21	1.2	3.2	17	7.8	24	22	18	12	3.5	2.4	8.1	3.1
22	2.7	3.1	10	7.8	21	30	19	9.7	3.3	2.8	32	43
23	1.5	3.0	7.1	7.6	78	22	18	8.8	3.4	3.3	10	125
24	1.1	3.1	6.5	11	94	21	17	7.9	5.1	3.3	5.9	18
25	1.2	3.1	6.3	12	41	25	17	7.8	3.6	2.9	4.7	10
26	1.6	3.0	5.8	16	29	23	16	12	3.0	4.1	26	16
27	3.1	3.4	5.3	11	24	36	17	8.7	3.1	17	11	66
28	2.9	77	4.8	32	22	116	20	6.7	3.0	17	6.9	16
29	2.4	20	5.0	27	---	110	16	6.2	4.6	8.6	5.7	10
30	4.2	8.6	6.7	15	---	59	19	6.0	27	6.2	5.3	7.4
31	9.2	---	5.7	13	---	43	---	5.6	---	7.0	4.7	---
TOTAL	45.46	198.9	235.4	418.5	638.7	1410	746	370.0	164.2	205.9	235.7	384.3
MEAN	1.47	6.63	7.59	13.5	22.8	45.5	24.9	11.9	5.47	6.64	7.60	12.8
MAX	9.2	77	27	32	94	274	48	23	27	35	32	125
MIN	.57	2.7	4.8	5.6	9.2	20	16	5.6	3.0	2.4	2.8	2.2
CFSM	.16	.71	.81	1.44	2.43	4.85	2.65	1.27	.58	.71	.81	1.37
IN.	.18	.79	.93	1.66	2.53	5.59	2.96	1.47	.65	.82	.93	1.52

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1989 - 1994, BY WATER YEAR (WY)

	1989	1990	1991	1992	1993	1994
MEAN	4.03	6.25	7.98	11.8	11.9	23.4
MAX	10.3	11.4	12.8	18.6	22.8	45.5
(WY)	1990	1990	1993	1990	1994	1993
MIN	.52	1.43	3.80	4.77	5.54	12.5
(WY)	1989	1992	1989	1992	1992	1990

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SUMMARY STATISTICS	FOR 1993 CALENDAR YEAR	FOR 1994 WATER YEAR	WATER YEARS 1989 - 1994
ANNUAL TOTAL	4199.16	5053.06	
ANNUAL MEAN	11.5	13.8	11.1
HIGHEST ANNUAL MEAN			14.7
LOWEST ANNUAL MEAN			5.79
HIGHEST DAILY MEAN	147 Mar 4	274 Mar 3	274 Mar 3 1994
LOWEST DAILY MEAN	.00 (a)	.57 (b)	.00 (c)
ANNUAL SEVEN-DAY MINIMUM	.00 Aug 27	.60 Oct 5	.00 Aug 27 1993
INSTANTANEOUS PEAK FLOW		502 Mar 3	568 Jun 15 1990
INSTANTANEOUS PEAK STAGE		9.29 Mar 3	9.54 Jun 15 1990
INSTANTANEOUS LOW FLOW		.56 (d)	.00 (f)
ANNUAL RUNOFF (CFSM)	1.23	1.48	1.18
ANNUAL RUNOFF (INCHES)	16.65	20.04	16.05
10 PERCENT EXCEEDS	28	28	23
50 PERCENT EXCEEDS	6.3	7.4	7.3
90 PERCENT EXCEEDS	.27	2.7	.80

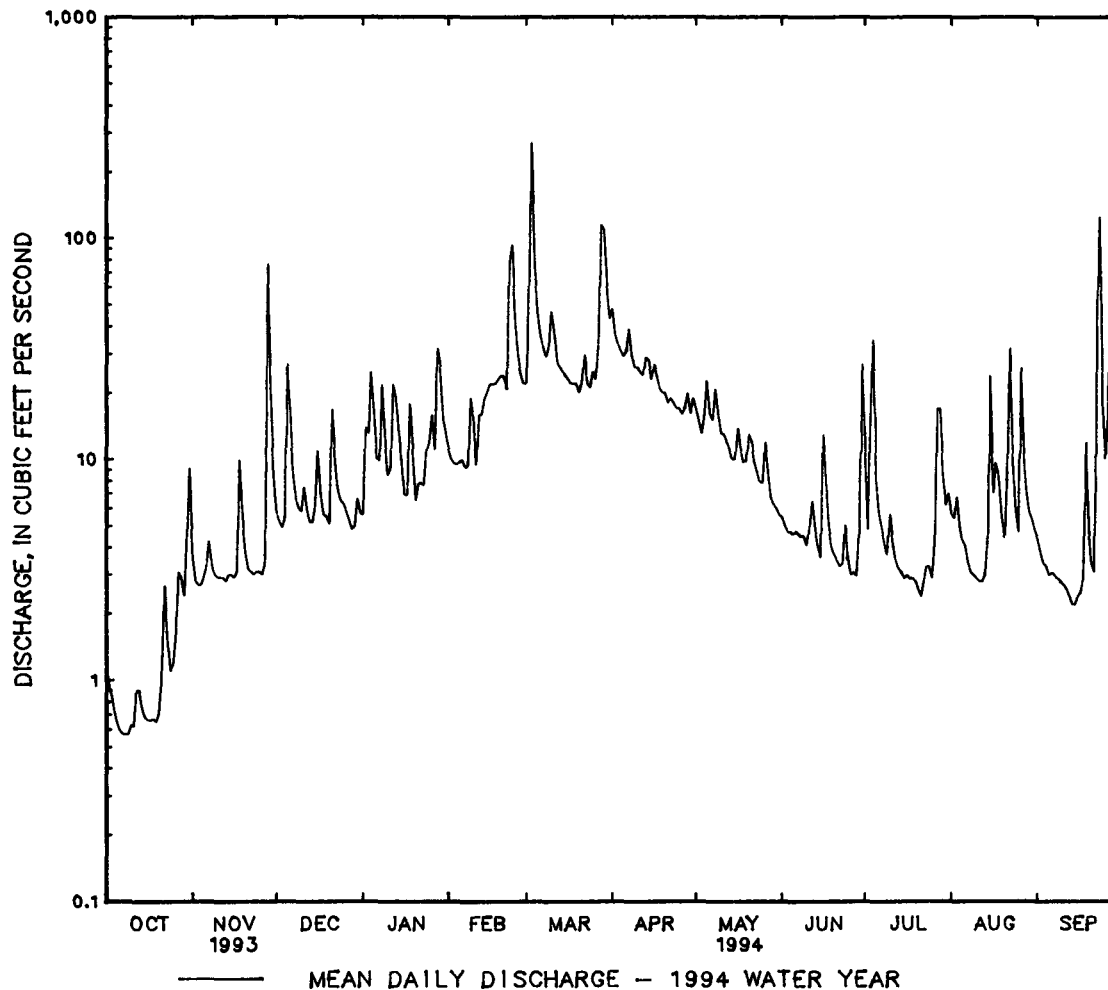
a July 18, 25-27, Aug. 1-5, 27-31, Sept. 1-6.

b Oct. 7-9.

c Sept. 12, 16, 17, 19-23, 1991.

d Oct. 7, 8.

f Sept. 10-24, 1991.



PATUXENT RIVER BASIN

01594670 HUNTING CREEK NEAR HUNTINGTOWN, MD--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1986, 1988 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH WATER WHOLE FIELD (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	TEMPER- ATURE AIR (DEG C)	TUR- BID- ITY (NTU)	OXYGEN DEMAND, CHEM- ICAL (LOW LEVEL) (MG/L)	OXYGEN DEMAND, BIO- CHEM- ICAL, 5 DAY (MG/L)	ALKA- LINITY WAT WH TOT FET FIELD MG/L AS CACO3
OCT 1992										
07...	0730	3.0	132	6.6	9.5	5.5	9.8	<10	0.5	38
07...	0735	3.0	--	--	--	--	11	<10	0.5	--
28...	1330	2.5	156	6.7	10.0	12.0	6.1	10	0.5	46
NOV										
30...	1240	4.9	143	6.6	6.0	7.0	9.8	11	1.3	40
DEC										
11...	0042	60	--	--	--	--	28	10	--	--
11...	0507	59	--	--	--	--	24	<10	--	--
11...	0948	56	--	--	--	--	20	12	--	--
11...	1448	53	--	--	--	--	20	<10	--	--
11...	2000	55	--	--	--	--	20	10	--	--
12...	0054	55	--	--	--	--	20	<10	--	--
12...	0558	49	--	--	--	--	19	<10	--	--
12...	1212	38	--	--	--	--	15	12	--	--
21...	1515	10	121	6.4	5.0	3.0	8.8	<10	2.0	28
JAN 1993										
12...	1430	15	127	6.2	5.0	6.5	7.1	<10	1.2	25
FEB										
23...	1000	12	122	6.5	3.0	2.0	4.9	<10	0.8	26
MAR										
04...	0930	44	--	--	--	--	--	--	--	--
04...	1200	161	--	--	--	--	--	--	--	--
04...	1318	242	--	--	--	--	--	--	--	--
04...	1430	296	--	--	--	--	--	--	--	--
04...	1612	326	--	--	--	--	--	--	--	--
04...	1724	322	--	--	--	--	--	--	--	--
04...	1836	298	--	--	--	--	--	--	--	--
04...	2033	245	--	--	--	--	--	--	--	--
04...	2148	212	--	--	--	--	--	--	--	--
04...	2312	176	--	--	--	--	--	--	--	--
05...	0054	141	--	--	--	--	--	--	--	--
05...	0300	111	--	--	--	--	--	--	--	--
05...	0548	84	--	--	--	--	--	--	--	--
18...	0945	68	--	--	--	--	23	--	--	--
18...	1412	53	--	--	--	--	17	13	--	--
18...	1948	47	--	--	--	--	11	<10	--	--
19...	0230	40	--	--	--	--	8.6	10	--	--
24...	1118	40	--	--	--	--	9.0	<10	--	--
27...	1800	34	--	--	--	--	7.3	<10	--	--
27...	2312	66	--	--	--	--	25	<10	--	--
28...	0342	57	--	--	--	--	17	<10	--	--
APR										
28...	1100	16	117	6.8	13.0	16.0	5.9	<10	1.4	30
MAY										
27...	1230	7.2	135	6.6	18.0	25.0	15	<10	1.0	37
JUN										
22...	0945	2.4	170	6.8	22.0	25.0	19	17	1.8	60
AUG										
06...	1830	61	--	--	--	--	89	14	--	2
06...	2140	80	--	--	--	--	55	15	--	--
07...	0100	70	--	--	--	--	40	13	--	--
07...	0445	52	--	--	--	--	35	15	--	--
SEP										
07...	1800	40	--	--	--	--	120	29	--	--
07...	2220	49	--	--	--	--	140	32	--	--
09...	1113	3.0	--	--	--	--	11	18	--	--
22...	1040	2.6	155	6.2	18.0	21.0	9.3	--	0.7	18

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WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	SILICA, DIS- SOLVED (MG/L AS SIO2)	RESIDUE TOTAL AT 105 DEG. C, SUS- PENDED (MG/L)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS NO3)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN, AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, AM- MONIA + ORGANIC DIS, (MG/L AS N)
OCT 1992									
07...	16	17	0.20	0.004	0.050	0.050	0.028	0.25	0.10
07...	16	18	0.20	0.004	0.050	0.050	0.028	0.20	0.15
28...	15	2	0.08	0.002	0.020	0.020	0.024	0.30	0.20
NOV									
30...	15	5	0.34	0.003	0.080	0.080	0.016	0.25	0.25
DEC									
11...	9.8	20	1.1	0.008	0.260	0.260	0.032	0.65	0.25
11...	10	12	0.99	0.007	0.230	0.230	0.176	0.45	0.25
11...	10	10	0.86	0.005	0.200	0.200	<0.008	0.45	<0.10
11...	10	10	0.86	0.005	0.200	0.200	0.020	0.45	0.15
11...	10	10	0.82	0.005	0.190	0.190	<0.008	0.45	<0.10
12...	11	9	0.82	0.005	0.190	0.190	<0.008	0.45	<0.10
12...	11	6	0.82	0.005	0.190	0.190	<0.008	0.40	<0.10
12...	12	12	0.77	0.005	0.180	0.180	<0.008	0.40	0.0
21...	15	5	0.54	0.007	0.130	0.130	0.012	0.15	0.20
JAN 1993									
12...	16	5	0.90	0.006	0.210	0.210	0.020	0.30	0.25
FEB									
23...	14	7	0.61	0.003	0.140	0.140	0.011	0.30	0.30
MAR									
04...	--	--	--	--	--	--	--	0.50	--
04...	--	--	--	--	--	--	--	1.3	--
04...	--	--	--	--	--	--	--	1.4	--
04...	--	--	--	--	--	--	--	1.6	--
04...	--	--	--	--	--	--	--	1.0	--
04...	--	--	--	--	--	--	--	1.0	--
04...	--	--	--	--	--	--	--	0.60	--
04...	--	--	--	--	--	--	--	0.60	--
04...	--	--	--	--	--	--	--	0.50	--
04...	--	--	--	--	--	--	--	0.50	--
05...	--	--	--	--	--	--	--	0.50	--
05...	--	--	--	--	--	--	--	0.40	--
05...	--	--	--	--	--	--	--	0.40	--
18...	13	29	0.79	0.002	0.180	0.180	0.018	0.50	0.30
18...	15	30	0.68	0.006	0.160	0.160	0.018	0.30	0.20
18...	16	21	0.73	0.006	0.170	0.170	0.020	0.30	0.20
19...	17	24	0.77	0.005	0.180	0.180	0.022	0.30	0.20
24...	18	13	0.50	0.007	0.120	0.120	0.025	0.30	0.30
27...	15	16	0.54	0.009	0.130	0.130	0.026	0.60	0.45
27...	13	28	0.61	0.012	0.150	0.150	0.026	0.45	0.30
28...	13	23	0.57	0.012	0.140	0.140	0.021	0.45	0.30
APR									
28...	21	15	0.39	0.003	0.090	0.090	0.033	0.34	0.33
MAY									
27...	17	17	0.79	0.002	0.180	0.180	0.042	0.35	0.29
JUN									
22...	21	8	0.50	0.008	0.120	0.120	0.017	0.49	0.45
AUG									
06...	9.0	122	--	<0.002	--	<0.020	0.059	0.93	0.29
06...	9.5	72	1.2	0.005	0.270	0.270	0.037	0.64	0.24
07...	12	10	0.96	0.003	0.220	0.220	0.036	0.55	0.24
07...	11	72	--	<0.002	0.180	0.180	0.044	0.60	0.45
SEP									
07...	7.2	196	3.2	0.018	0.750	0.750	--	1.6	--
07...	8.9	73	3.1	0.016	0.720	0.720	--	1.1	--
09...	21	5	0.59	0.007	0.140	0.140	--	0.74	--
22...	21	11	0.42	0.005	0.100	0.100	0.082	0.54	0.47

PATUXENT RIVER BASIN

01594670 HUNTING CREEK NEAR HUNTINGTOWN, MD

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	PHOS- PHORUS TOTAL (MG/L AS P)	PHOS- PHORUS DIS- SOLVED (MG/L AS P)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P)	CHLORO- PHYLL A PHYTO- PLANK- TON, UNCORR. (UG/L)	CHLORO- PHYLL B PHYTO- PLANK- TON, UNCORR. (UG/L)	CHLORO- PHYLL C PHYTO- PLANK- TON, UNCORR. (UG/L)	PHEO- PHYTIN PHYTO- PLANK- TON, ACID M. (UG/L)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)
OCT 1992									
07...	0.030	<0.010	0.008	0.001	<0.001	<0.001	0.200	5.4	5.9
07...	0.040	<0.010	0.006	--	--	--	--	5.5	--
28...	0.040	0.020	0.008	<0.001	<0.001	<0.001	<0.001	5.4	5.5
NOV									
30...	<0.010	<0.010	0.012	<0.001	<0.001	<0.001	--	4.8	4.8
DEC									
11...	0.190	0.040	0.022	--	--	--	--	7.1	6.4
11...	0.140	0.020	0.014	--	--	--	--	6.7	--
11...	0.110	<0.010	0.012	--	--	--	--	6.4	6.5
11...	0.090	<0.010	0.012	--	--	--	--	2.9	--
11...	0.090	<0.010	0.012	--	--	--	--	6.5	6.1
12...	0.080	<0.010	0.012	--	--	--	--	6.3	6.3
12...	0.070	<0.010	0.010	--	--	--	--	6.1	6.1
12...	0.090	0.020	0.010	--	--	--	--	5.8	5.7
21...	0.060	0.040	0.014	<0.001	<0.001	<0.001	<0.001	3.9	--
JAN 1993									
12...	0.060	0.060	0.020	<0.001	<0.001	<0.001	<0.001	3.6	--
FEB									
23...	0.100	<0.010	0.029	0.200	<0.001	<0.001	--	2.9	--
MAR									
04...	0.180	--	--	--	--	--	--	4.1	--
04...	0.600	--	--	--	--	--	--	6.6	--
04...	0.700	--	--	--	--	--	--	8.9	--
04...	0.700	--	--	--	--	--	--	8.4	--
04...	0.460	--	--	--	--	--	--	7.9	--
04...	0.310	--	--	--	--	--	--	7.2	--
04...	0.230	--	--	--	--	--	--	6.8	--
04...	0.180	--	--	--	--	--	--	6.4	--
04...	0.170	--	--	--	--	--	--	6.4	--
04...	0.170	--	--	--	--	--	--	6.0	--
05...	0.110	--	--	--	--	--	--	5.6	--
05...	0.090	--	--	--	--	--	--	5.6	--
05...	0.090	--	--	--	--	--	--	5.1	--
18...	0.050	0.020	0.006	--	--	--	--	3.8	3.8
18...	0.080	0.030	0.009	--	--	--	--	3.5	--
18...	0.100	0.040	0.010	--	--	--	--	3.2	--
19...	0.100	0.030	0.007	--	--	--	--	2.9	--
24...	0.070	0.010	0.021	--	--	--	--	3.1	3.0
27...	0.080	<0.010	0.023	--	--	--	--	3.7	--
27...	0.090	<0.010	0.030	--	--	--	--	4.6	4.3
28...	0.110	<0.010	0.030	--	--	--	--	4.2	4.6
APR									
28...	0.090	0.100	0.017	0.200	<0.001	<0.001	<0.001	4.4	--
MAY									
27...	0.070	0.020	0.047	<0.001	<0.001	<0.001	<0.001	5.2	5.5
JUN									
22...	0.120	0.070	0.021	<0.001	<0.001	<0.001	<0.001	7.6	7.5
AUG									
06...	0.500	0.030	0.015	--	--	--	--	9.6	7.2
06...	0.300	--	--	--	--	--	--	9.3	8.6
07...	0.220	0.030	0.018	--	--	--	--	9.0	8.9
07...	0.200	0.010	0.012	--	--	--	--	8.9	9.4
SEP									
07...	0.630	--	--	--	--	--	--	13	12
07...	0.320	--	--	--	--	--	--	10	8.7
09...	0.080	--	--	--	--	--	--	5.0	4.4
22...	0.050	<0.010	0.015	0.200	<0.001	<0.001	<0.001	4.9	4.9

PATUXENT RIVER BASIN

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01594670 HUNTING CREEK NEAR HUNTINGTOWN, MD

SUSPENDED SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)
OCT 1992				
07...	0730	3.0	4	0.03
28...	1330	2.5	20	0.14
NOV				
30...	1240	4.9	3	0.04
DEC				
11...	0042	60	30	4.8
11...	0507	59	21	3.3
11...	0948	56	14	2.1
11...	1448	53	15	2.1
11...	2000	55	14	2.1
12...	0054	55	14	2.1
12...	0558	49	14	1.9
12...	1212	38	10	1.0
21...	1515	10	5	0.14
JAN 1993				
12...	1430	15	4	0.17
FEB				
13...	0040	38	56	5.8
13...	0645	38	37	3.8
23...	1000	12	3	0.10
MAR				
04...	0930	44	75	8.9
04...	1200	161	204	89
04...	1318	242	264	172
04...	1430	296	281	224
04...	1612	326	188	166
04...	1724	322	150	131
04...	1836	298	103	83
04...	2033	245	104	69
04...	2148	212	75	43
04...	2312	176	62	29
05...	0054	141	43	16
05...	0300	111	33	9.9
05...	0548	84	28	6.3
18...	0945	68	16	2.9
18...	1412	53	34	4.9
18...	1948	47	23	2.9
19...	0230	40	13	1.4
24...	1118	40	14	1.5
27...	1800	34	14	1.3
27...	2312	66	36	6.4
28...	0342	57	34	5.2
APR				
28...	1100	16	4	0.17
MAY				
19...	0545	33	32	2.9
19...	1435	22	27	1.6
27...	1230	7.2	27	0.52
JUN				
22...	0945	2.4	15	0.10
AUG				
06...	1830	61	122	20
06...	2140	80	81	17
07...	0100	70	58	11
07...	0445	52	46	6.5
SEP				
07...	1800	40	214	23
07...	2220	49	96	13
22...	1040	2.6	13	0.09

PATUXENT RIVER BASIN

01594710 KILLPECK CREEK AT HUNTERSVILLE, MD

LOCATION.--Lat 38°28'37", long 76°44'08", St Marys County, Hydrologic Unit 02060006, on left bank at private footbridge, 600 ft upstream from culvert on All Faith Church Road, 0.65 mi north of Huntersville, and 2.3 mi upstream from mouth.

DRAINAGE AREA.--3.54 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1985 to current year.

GAGE.--Water-stage recorder and concrete block control. Elevation of gage is 50 ft above sea level, from topographic map.

REMARKS.--Water-discharge records good except those for estimated daily discharges (missing record), which are fair.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 100 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 28	0700	196	4.91	Mar. 28	0400	101	3.85
Feb. 23	1530	154	4.49	Mar. 28	1045	102	3.86
Mar. 3	0015	*213	*5.08	Sep. 22	2100	147	4.41

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.1	1.8	2.8	3.3	4.3	6.9	12	5.0	2.7	2.9	2.2	1.6
2	1.0	1.6	2.5	5.8	3.9	47	9.7	4.7	2.6	2.1	4.0	1.4
3	.98	1.5	2.4	4.4	3.9	e80	9.2	4.7	2.4	8.3	3.0	1.4
4	.88	1.4	3.8	11	3.6	e18	7.9	5.9	2.3	4.4	2.2	1.4
5	.83	1.3	15	5.1	4.6	e12	8.0	6.4	2.3	2.7	2.3	1.4
6	.82	2.3	6.0	4.2	4.3	e10	9.3	5.3	2.2	2.3	2.1	1.4
7	.87	1.8	4.3	4.4	3.7	e9.6	12	5.2	2.1	1.9	1.8	1.4
8	.94	1.5	3.8	9.1	4.0	8.6	9.3	7.6	2.0	1.6	1.7	1.3
9	1.0	1.5	3.6	4.3	8.4	9.0	8.8	5.7	2.0	3.0	1.5	1.2
10	1.4	1.5	3.5	3.7	5.4	15	8.6	4.9	1.8	2.4	1.4	1.1
11	.99	1.5	3.8	3.6	5.9	9.2	8.1	4.7	2.2	1.9	1.4	1.1
12	2.8	1.5	3.2	9.9	5.8	8.4	7.9	4.6	2.3	1.7	1.4	1.1
13	1.4	1.5	3.1	5.3	5.4	8.0	10	4.3	1.9	1.6	1.4	1.1
14	1.3	2.0	3.1	4.8	5.9	7.9	8.9	4.1	1.8	1.5	4.7	1.0
15	1.2	1.8	3.9	4.3	6.5	7.6	7.7	4.0	1.8	1.7	3.3	.99
16	1.0	1.8	4.4	3.7	7.9	7.5	8.9	4.6	7.5	1.9	2.3	1.1
17	1.0	3.2	3.2	5.8	8.0	7.2	7.7	4.3	3.0	2.0	7.5	2.3
18	1.0	4.5	3.1	7.9	8.6	7.2	7.2	4.2	2.4	2.2	4.0	3.9
19	1.0	2.3	3.1	4.3	9.0	6.9	7.2	4.4	2.0	1.9	2.5	1.7
20	1.1	2.0	3.3	4.4	8.3	6.5	6.9	4.8	1.9	1.6	2.1	1.4
21	1.7	1.8	8.2	3.6	7.9	7.2	6.5	4.5	2.4	1.5	7.0	1.3
22	1.5	1.8	4.1	3.4	6.8	7.6	7.3	4.0	2.3	1.5	5.1	31
23	1.3	1.8	3.5	4.4	44	6.0	6.8	3.4	4.7	1.8	2.8	8.6
24	1.3	1.7	3.1	4.8	17	5.4	6.4	3.3	3.3	1.6	2.1	4.0
25	1.1	1.5	3.1	3.9	10	8.1	5.7	3.3	2.3	1.4	1.9	3.6
26	1.5	1.5	2.9	5.8	8.5	6.1	5.1	3.7	2.2	3.8	4.1	9.7
27	1.6	3.4	2.9	4.0	7.6	14	5.3	3.3	2.3	4.9	2.3	5.2
28	1.5	38	2.9	20	6.9	43	5.0	3.1	1.9	5.2	1.9	3.3
29	1.3	4.5	2.9	7.0	---	24	5.1	3.0	2.3	4.5	2.0	3.0
30	4.0	3.2	2.8	5.2	---	13	5.8	2.9	6.0	2.8	1.9	2.6
31	2.4	---	3.0	4.6	---	11	---	2.8	---	2.4	1.7	---
TOTAL	41.81	97.5	121.3	176.0	226.1	437.9	234.3	136.7	78.9	81.0	85.6	101.59
MEAN	1.35	3.25	3.91	5.68	8.07	14.1	7.81	4.41	2.63	2.61	2.76	3.39
MAX	4.0	38	15	20	44	80	12	7.6	7.5	8.3	7.5	31
MIN	.82	1.3	2.4	3.3	3.6	5.4	5.0	2.8	1.8	1.4	1.4	.99
CFSM	.38	.92	1.11	1.60	2.28	3.99	2.21	1.25	.74	.74	.78	.96
IN.	.44	1.02	1.27	1.85	2.38	4.60	2.46	1.44	.83	.85	.90	1.07

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1986 - 1994, BY WATER YEAR (WY)

	1986	1987	1988	1989	1990	1991	1992	1993	1994
MEAN	2.24	3.23	3.79	4.61	4.99	7.03	5.46	4.74	3.27
MAX	4.83	7.20	5.92	6.60	8.07	14.1	7.81	9.43	8.10
(WY)	1990	1986	1987	1990	1994	1994	1990	1990	1989
MIN	.83	.94	2.09	2.45	2.27	3.90	2.97	1.93	.98
(WY)	1989	1992	1989	1992	1992	1988	1992	1986	1986

PATUXENT RIVER BASIN

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01594710 KILLPECK CREEK AT HUNTERSVILLE, MD--Continued

SUMMARY STATISTICS

FOR 1993 CALENDAR YEAR

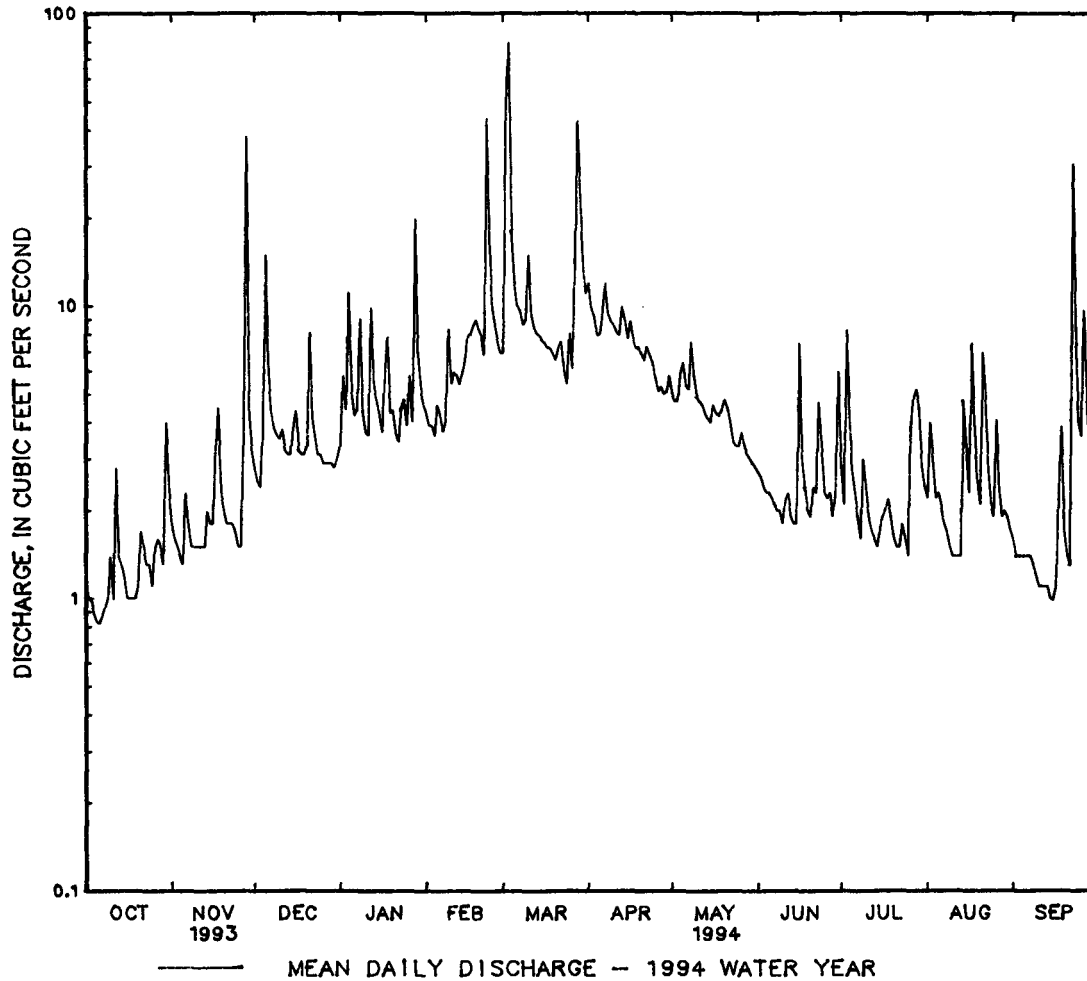
FOR 1994 WATER YEAR

WATER YEARS 1986 - 1994

ANNUAL TOTAL	1564.88	1818.70		
ANNUAL MEAN	4.29	4.98	3.84	
HIGHEST ANNUAL MEAN			5.33	1990
LOWEST ANNUAL MEAN			2.43	1988
HIGHEST DAILY MEAN	86 Mar 4	80 Mar 3	86 Mar 4	1993
LOWEST DAILY MEAN	.74 Sep 13	.82 Oct 6	.27 Sep 12	1991
ANNUAL SEVEN-DAY MINIMUM	.85 Sep 9	.90 Oct 2	.31 Sep 9	1991
INSTANTANEOUS PEAK FLOW		213 Mar 3	255 May 29	1990
INSTANTANEOUS PEAK STAGE		5.08 Mar 3	5.50 May 29	1990
INSTANTANEOUS LOW FLOW		.76 (a)	.16 (b)	
ANNUAL RUNOFF (CFSM)	1.21	1.41	1.08	
ANNUAL RUNOFF (INCHES)	16.44	19.11	14.73	
10 PERCENT EXCEEDS	8.4	8.7	7.2	
50 PERCENT EXCEEDS	2.9	3.4	2.9	
90 PERCENT EXCEEDS	1.0	1.4	.83	

a Oct. 5-7.

b Aug. 6, Sept. 18, 1991.



PATUXENT RIVER BASIN

01594710 KILLPECK CREEK AT HUNTERSVILLE, MD--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1986 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH WATER WHOLE FIELD (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	TEMPER- ATURE AIR (DEG C)	TUR- BID- ITY (NTU)	OXYGEN DEMAND, CHEM- ICAL (LOW LEVEL) (MG/L)	OXYGEN DEMAND, BIO- CHEM- ICAL, 5 DAY (MG/L)	ALKA- LITY WAT WH TOT FET FIELD MG/L AS CACO3
OCT 1992										
07...	1100	2.9	151	6.4	12.0	15.5	8.1	<10	0.5	29
28...	0915	2.2	164	6.5	11.0	13.0	6.3	<10	0.6	29
28...	0920	2.2	--	--	--	--	6.0	<10	0.9	--
NOV										
03...	0754	20	--	--	--	--	180	24	--	--
30...	1000	2.9	155	6.6	6.0	3.5	7.6	11	0.9	30
DEC										
10...	1750	17	--	--	--	--	120	<10	--	--
10...	2225	63	--	--	--	--	780	18	--	--
11...	0030	40	--	--	--	--	280	70	--	--
21...	0945	4.8	135	6.6	5.0	0.0	10	<10	0.8	25
JAN 1993										
05...	1200	9.4	--	--	--	--	73	12	--	--
12...	0935	5.1	126	6.4	6.0	4.0	13	<10	1.3	22
FEB										
23...	1345	4.8	135	6.3	5.0	4.0	7.2	<10	0.5	23
MAR										
04...	0840	58	--	--	--	--	--	--	--	--
04...	1007	114	--	--	--	--	--	--	--	--
04...	1115	150	--	--	--	--	--	--	--	--
04...	1200	171	--	--	--	--	--	--	--	--
04...	1242	178	--	--	--	--	--	--	--	--
04...	1325	188	--	--	--	--	--	--	--	--
04...	1405	200	--	--	--	--	--	--	--	--
04...	1448	213	--	--	--	--	--	--	--	--
04...	1536	225	--	--	--	--	--	--	--	--
04...	1624	219	--	--	--	--	--	--	--	--
04...	1700	207	--	--	--	--	--	--	--	--
04...	1742	202	--	--	--	--	--	--	--	--
04...	1952	46	--	--	--	--	--	--	--	--
04...	2340	20	--	--	--	--	--	--	--	--
17...	1435	66	--	--	--	--	400	--	--	--
17...	1606	104	--	--	--	--	400	--	--	--
17...	1730	84	--	--	--	--	250	--	--	--
APR										
29...	1230	6.1	131	6.6	15.0	20.0	8.0	<10	1.2	21
MAY										
05...	2345	29	--	--	--	--	280	27	--	--
27...	1030	3.9	148	6.6	15.0	23.5	9.0	<10	1.0	25
JUN										
22...	1400	1.8	151	7.0	20.0	27.0	5.8	<10	0.8	26
JUL										
28...	1030	1.1	164	6.8	23.0	30.0	2.8	<10	1.0	23
SEP										
22...	0745	1.6	147	6.8	17.0	19.0	7.2	--	0.9	28

PATUXENT RIVER BASIN

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01594710 KILLPECK CREEK AT HUNTERSVILLE, MD--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	SILICA, DIS- SOLVED (MG/L AS SIO2)	RESIDUE TOTAL AT 105 DEG. C, SUS- PENDE (MG/L)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS NO3)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N)
OCT 1992									
07...	12	28	6.2	0.009	1.40	1.40	0.036	0.25	0.10
28...	11	7	7.9	0.022	1.80	1.80	0.028	0.30	0.30
28...	11	3	7.9	0.021	1.80	1.80	0.024	0.20	0.20
NOV									
03...	6.8	110	1.7	0.029	0.420	0.420	0.008	0.90	0.45
30...	10	2	6.6	0.006	1.50	1.50	0.048	0.25	0.20
DEC									
10...	6.8	132	2.3	0.006	0.520	0.520	0.072	1.0	0.55
10...	4.3	725	1.6	0.007	0.370	0.370	0.200	--	--
11...	5.1	450	1.8	0.007	0.410	0.410	0.112	2.0	0.50
21...	10	8	5.3	0.006	1.20	1.20	0.036	0.30	0.30
JAN 1993									
05...	8.1	274	2.4	0.006	0.550	0.550	0.024	0.75	0.35
12...	9.8	12	4.4	0.006	1.00	1.00	0.048	0.15	0.30
FEB									
23...	9.7	7	5.7	0.009	1.30	1.30	0.075	0.40	0.30
MAR									
04...	--	--	--	--	--	--	--	7.3	--
04...	--	--	--	--	--	--	--	6.1	--
04...	--	--	--	--	--	--	--	4.2	--
04...	--	--	--	--	--	--	--	3.5	--
04...	--	--	--	--	--	--	--	3.3	--
04...	--	--	--	--	--	--	--	5.5	--
04...	--	--	--	--	--	--	--	2.8	--
04...	--	--	--	--	--	--	--	3.7	--
04...	--	--	--	--	--	--	--	2.2	--
04...	--	--	--	--	--	--	--	2.2	--
04...	--	--	--	--	--	--	--	2.0	--
04...	--	--	--	--	--	--	--	1.4	--
04...	--	--	--	--	--	--	--	1.7	--
04...	--	--	--	--	--	--	--	1.3	--
17...	4.5	590	1.8	0.006	0.410	0.410	0.073	2.0	0.60
17...	3.4	610	1.2	0.004	0.280	0.280	0.055	3.1	0.40
17...	3.9	420	1.2	0.004	0.280	0.280	0.046	1.2	0.40
APR									
29...	9.3	12	6.6	0.010	1.50	1.50	0.047	0.37	0.24
MAY									
05...	4.7	370	1.8	0.010	0.410	0.410	0.179	1.8	0.70
27...	9.9	15	7.9	0.017	1.80	1.80	0.074	0.47	0.32
JUN									
22...	11	2	8.1	0.009	1.83	1.83	0.009	0.30	0.28
JUL									
28...	9.0	<1	4.2	0.005	0.960	0.960	0.026	0.19	0.20
SEP									
22...	9.7	13	5.3	0.007	1.21	1.21	0.017	0.45	0.38

01594710 KILLPECK CREEK AT HUNTERSVILLE, MD--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	PHOS- PHORUS TOTAL (MG/L AS P)	PHOS- PHORUS DIS- SOLVED (MG/L AS P)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P)	CHLORO- PHYLL A PHYTO- PLANK- TON, UNCORR. (UG/L)	CHLORO- PHYLL B PHYTO- PLANK- TON, UNCORR. (UG/L)	CHLORO- PHYLL C PHYTO- PLANK- TON, UNCORR. (UG/L)	PHEO- PHYTIN PHYTO- PLANK- TON, ACID M. (UG/L)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)
OCT 1992									
07...	0.050	<0.010	0.014	1.60	<0.001	<0.001	0.800	3.8	3.4
28...	0.110	0.030	0.014	<0.001	<0.001	<0.001	--	3.2	--
28...	0.030	0.020	0.016	--	--	--	--	3.1	3.1
NOV									
03...	0.310	0.050	0.032	--	--	--	--	12	11
30...	<0.010	<0.010	0.012	<0.001	<0.001	<0.001	--	2.9	2.7
DEC									
10...	0.360	0.060	0.012	--	--	--	--	9.9	8.9
10...	--	--	--	--	--	--	--	24	8.7
11...	1.20	0.060	0.020	--	--	--	--	17	9.5
21...	0.090	0.050	0.014	<0.001	<0.001	<0.001	<0.001	3.7	--
JAN 1993									
05...	0.170	0.030	0.016	--	--	--	--	8.0	7.0
12...	0.070	0.040	0.012	<0.001	<0.001	<0.001	<0.001	3.7	--
FEB									
23...	0.040	<0.010	0.016	<0.001	<0.001	<0.001	<0.001	2.3	2.4
MAR									
04...	2.40	--	--	--	--	--	--	18	--
04...	2.80	--	--	--	--	--	--	21	--
04...	1.60	--	--	--	--	--	--	16	--
04...	1.30	--	--	--	--	--	--	13	--
04...	1.20	--	--	--	--	--	--	12	--
04...	2.20	--	--	--	--	--	--	14	--
04...	1.40	--	--	--	--	--	--	15	--
04...	1.70	--	--	--	--	--	--	14	--
04...	1.10	--	--	--	--	--	--	13	--
04...	0.900	--	--	--	--	--	--	12	--
04...	0.800	--	--	--	--	--	--	12	--
04...	0.700	--	--	--	--	--	--	12	--
04...	0.500	--	--	--	--	--	--	11	--
04...	0.370	--	--	--	--	--	--	8.4	--
17...	1.10	0.100	0.078	--	--	--	--	11	7.0
17...	1.50	0.040	0.036	--	--	--	--	11	7.0
17...	0.600	0.040	0.033	--	--	--	--	9.5	7.3
APR									
29...	0.110	0.100	0.029	0.200	<0.001	<0.001	--	3.4	3.1
MAY									
05...	0.560	0.040	0.023	--	--	--	--	20	13
27...	0.080	0.030	0.042	0.200	<0.001	<0.001	--	3.3	3.0
JUN									
22...	0.110	0.090	0.046	0.800	<0.001	<0.001	<0.001	3.5	3.6
JUL									
28...	0.050	0.040	0.042	<0.001	<0.001	<0.001	<0.001	2.9	2.8
SEP									
22...	0.060	<0.010	0.041	<0.001	<0.001	<0.001	<0.001	4.3	4.3

PATUXENT RIVER BASIN

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01594710 KILLPECK CREEK AT HUNTERSVILLE, MD

SUSPENDED SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)
OCT 1992				
07...	1100	2.9	42	0.33
28...	0915	2.2	7	0.04
NOV				
03...	0754	20	186	10
30...	1000	2.9	6	0.05
DEC				
10...	1750	17	153	6.8
10...	2225	63	2150	365
11...	0030	40	982	106
21...	0945	4.8	10	0.13
JAN 1993				
05...	1200	9.4	67	1.7
08...	1250	12	46	1.5
09...	0130	14	76	2.8
09...	1400	21	188	11
10...	0030	9.0	25	0.61
12...	0935	5.1	17	0.23
FEB				
23...	1345	4.8	8	0.10
MAR				
04...	0840	58	2820	440
04...	1007	114	3810	1170
04...	1115	150	1420	574
04...	1200	171	817	376
04...	1242	178	1120	537
04...	1325	188	1360	689
04...	1405	200	1120	605
04...	1448	213	904	519
04...	1536	225	613	373
04...	1624	219	609	361
04...	1700	207	638	356
04...	1742	202	693	378
04...	1952	46	1120	140
04...	2340	20	389	21
17...	1435	66	1320	236
17...	1606	104	2120	594
17...	1730	84	853	193
17...	2005	40	555	60
APR				
16...	1454	106	2380	681
16...	1606	94	1170	298
29...	1230	6.1	12	0.20
MAY				
05...	2345	29	484	38
27...	1030	3.9	13	0.14
JUN				
22...	1400	1.8	4	0.02
JUL				
28...	1030	1.1	1	0.00
SEP				
22...	0745	1.6	7	0.03

POTOMAC RIVER BASIN

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 mi².

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 fair. 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.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 170 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 5	0830	212	4.10	Mar. 10	0800	181	3.85
Jan. 7	2330	235	4.28	Mar. 22	0030	206	4.05
Jan. 28	2200	201	4.01	Apr. 13	1000	267	4.52
Feb. 9	0715	*662	*7.92	May 8	0115	363	5.24
Mar. 8	0130	222	3.85	July 3	2015	175	3.80

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e5.0	e13	19	13	34	33	48	32	13	7.9	20	30
2	e4.5	e11	17	13	30	30	42	20	11	6.4	16	18
3	e5.0	e13	16	12	25	30	39	17	10	37	14	15
4	e5.5	e23	19	28	26	27	39	27	9.6	32	12	17
5	e4.1	e30	132	21	19	25	32	28	9.0	15	31	13
6	e3.6	e35	57	14	17	24	29	41	8.3	10	23	12
7	3.7	e28	41	128	15	50	43	91	8.0	18	16	11
8	3.7	e20	32	121	46	155	32	188	7.3	22	14	9.6
9	e4.0	e16	26	53	492	83	29	71	6.9	15	12	8.9
10	e4.2	e13	30	43	145	143	69	47	6.5	14	11	9.5
11	e4.2	e11	33	31	73	76	62	36	6.5	10	9.9	8.8
12	e7.0	e10	26	41	51	54	52	36	6.6	8.6	9.3	7.7
13	e6.5	e13	23	39	45	48	151	28	6.0	7.8	8.6	7.2
14	e5.5	e22	22	33	39	57	83	23	5.6	13	9.0	6.7
15	e5.0	e20	22	34	35	86	64	24	5.3	16	9.5	6.5
16	e4.5	e16	32	35	32	79	77	53	6.4	14	8.1	6.2
17	e4.0	e25	26	31	30	54	54	32	8.8	10	25	6.4
18	e5.5	e45	26	27	30	56	43	28	5.7	9.5	25	8.1
19	e5.0	e33	35	26	37	56	35	24	5.1	8.0	16	6.5
20	e5.0	e26	27	25	54	46	29	21	5.9	9.9	13	6.0
21	e8.0	e23	27	23	109	79	24	19	6.4	13	13	5.7
22	e12	e19	23	22	96	141	21	16	7.4	10	50	5.7
23	e10	e15	20	21	120	97	19	15	8.2	11	30	5.7
24	e8.0	e14	19	37	111	121	17	13	10	9.2	21	5.3
25	e6.5	e12	18	34	72	89	15	19	9.5	9.4	18	5.1
26	e5.5	e11	19	83	54	56	14	40	6.3	21	22	5.8
27	e4.5	e24	17	48	44	96	18	38	8.5	48	16	5.5
28	e4.4	e50	15	125	38	125	16	25	12	60	13	5.1
29	e4.2	e30	14	112	---	89	13	21	10	39	13	5.0
30	e8.0	e22	14	56	---	62	13	17	11	34	11	4.8
31	e17	---	14	42	---	52	---	15	---	24	17	---
TOTAL	183.6	643	861	1371	1919	2219	1222	1105	240.8	562.7	526.4	267.8
MEAN	5.92	21.4	27.8	44.2	68.5	71.6	40.7	35.6	8.03	18.2	17.0	8.93
MAX	17	50	132	128	492	155	151	188	13	60	50	30
MIN	3.6	10	14	12	15	24	13	13	5.1	6.4	8.1	4.8
CFSM	.72	2.60	3.37	5.37	8.33	8.70	4.95	4.33	.98	2.21	2.06	1.08
IN.	.83	2.91	3.89	6.20	8.67	10.03	5.52	4.99	1.09	2.54	2.38	1.21

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1980 - 1994, BY WATER YEAR (WY)

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994
MEAN	10.2	25.1	31.2	25.2	37.2	40.9	34.0	27.5	19.7	18.5	10.9	7.19			
MAX	20.4	90.8	51.9	44.2	68.5	71.6	61.0	46.9	62.8	42.8	40.2	13.6			
(WY)	1990	1986	1985	1994	1994	1994	1984	1983	1981	1992	1980	1987			
MIN	3.27	6.21	16.8	8.85	7.24	13.9	19.2	9.35	6.36	2.88	2.30	2.99			
(WY)	1992	1992	1990	1981	1993	1990	1988	1991	1991	1988	1993	1991			

POTOMAC RIVER BASIN

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

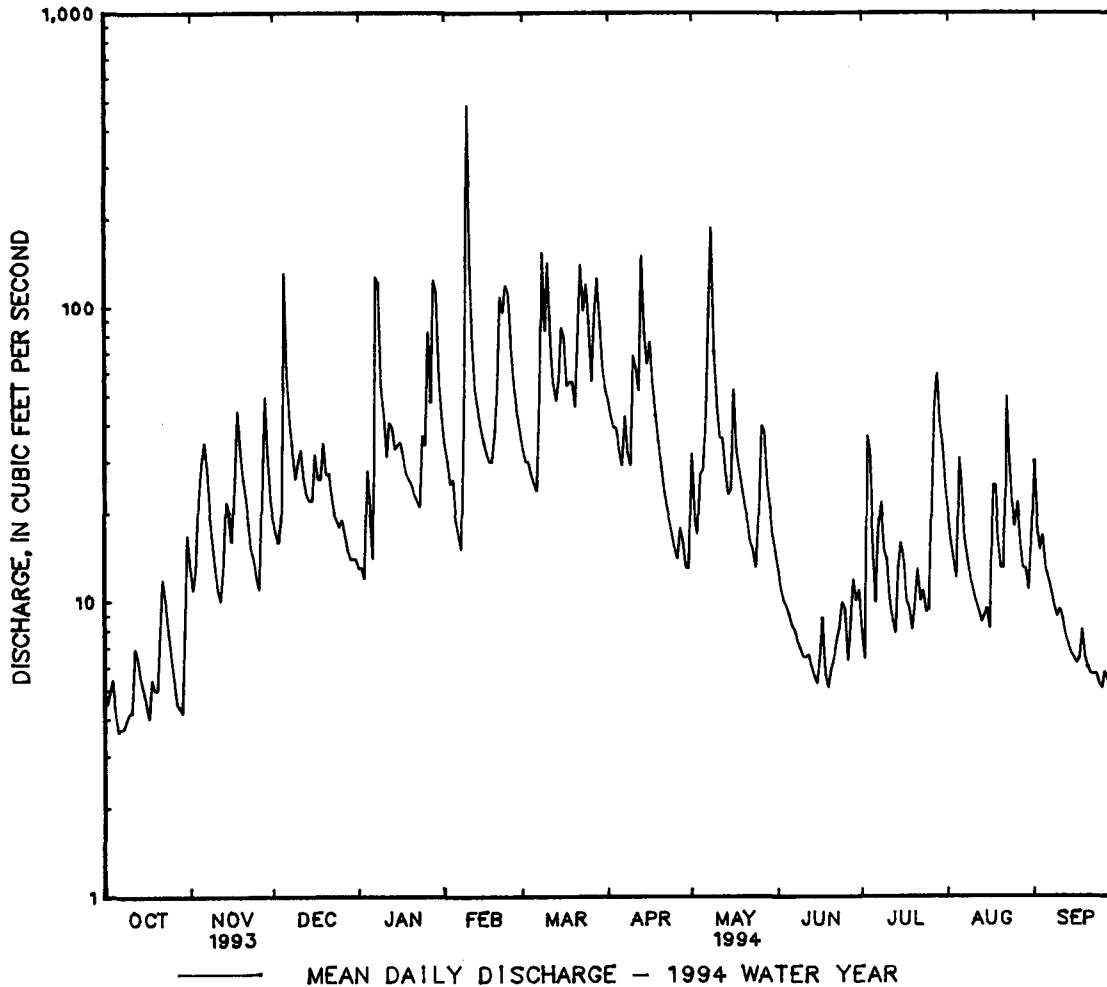
SUMMARY STATISTICS	FOR 1993 CALENDAR YEAR		FOR 1994 WATER YEAR		WATER YEARS 1980 - 1994	
ANNUAL TOTAL	7191.8		11121.3		23.5	
ANNUAL MEAN	19.7		30.5		30.5	
HIGHEST ANNUAL MEAN					17.3	
LOWEST ANNUAL MEAN					800	
HIGHEST DAILY MEAN	205	Mar 24	492	Feb 9	800	Nov 4 1985
LOWEST DAILY MEAN	(e)1.1	(a)	(e)3.6	Oct 6	(e)1.1	(a)
ANNUAL SEVEN-DAY MINIMUM	1.3	Aug 23	3.9	Oct 5	1.3	Aug 23 1993
INSTANTANEOUS PEAK FLOW			662	Feb 9	(b)863	Nov 5 1985
INSTANTANEOUS PEAK STAGE			7.92	Feb 9	10.10	Nov 5 1985
INSTANTANEOUS LOW FLOW			3.6	(c)	UNKNOWN	
ANNUAL RUNOFF (CFSM)	2.39		3.70		2.85	
ANNUAL RUNOFF (INCHES)	32.51		50.27		38.77	
10 PERCENT EXCEEDS	40		63		49	
50 PERCENT EXCEEDS	9.7		19		15	
90 PERCENT EXCEEDS	2.9		5.9		4.2	

e Estimated

a Aug. 15, 27, 1993.

b From rating curve extended above 450 ft³/s on basis of runoff comparisons with nearby stations.

c Oct. 6-8.



POTOMAC RIVER BASIN

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-Corunna Road, 0.1 mi upstream from mouth and 0.8 mi northwest of Wilson.

DRAINAGE AREA.--1.91 mi².

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 ft³/s and fair below, except those for estimated daily discharges (ice effect), which are also fair. Several measurements of water temperature were made during the year. Water-quality records for some prior years have been collected at this location.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 40 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 5	0730	47	3.35	Mar. 21	2130	45	3.31
Jan. 7	2045	41	3.25	Mar. 27	0845	45	3.32
Jan. 28	1900	45	3.31	Apr. 13	0730	52	3.42
Feb. 9	0415	*280	*5.71	May 7	2230	113	4.17
Mar. 10	0600	45	3.31	May 26	1615	57	3.49

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.74	2.2	3.7	2.1	7.2	6.1	12	6.6	3.1	1.2	1.1	8.1
2	.52	2.0	3.5	2.2	5.9	5.6	9.6	3.5	2.7	.63	1.2	3.5
3	.76	2.6	3.4	2.2	5.6	5.3	8.9	3.5	2.3	2.9	1.1	2.7
4	.63	4.8	3.9	2.5	4.6	4.7	9.3	5.9	1.9	2.8	.89	2.8
5	.48	10	26	2.9	4.1	5.1	7.8	5.9	1.5	1.0	6.3	1.9
6	.37	9.1	12	2.1	3.6	4.8	6.9	10	1.3	.69	3.8	1.6
7	.30	5.2	9.2	24	3.5	14	10	28	1.2	.65	1.5	1.5
8	.31	3.6	6.8	19	15	29	7.4	32	1.2	.73	1.3	1.7
9	.30	3.2	5.9	11	141	17	6.5	14	1.1	.78	1.2	1.3
10	.40	2.8	6.6	7.4	25	31	17	10	1.0	.94	1.1	1.9
11	.39	2.4	6.9	6.0	14	16	14	7.5	1.1	.54	1.0	1.2
12	1.9	1.8	5.0	9.6	11	12	12	8.1	.81	.67	1.0	.96
13	1.5	3.0	4.6	8.6	9.0	11	27	6.4	.65	1.1	1.2	.94
14	1.0	4.3	4.6	6.8	6.6	15	15	5.2	.69	2.0	.75	1.0
15	.84	3.1	4.6	5.4	6.6	21	13	4.4	.70	1.5	1.1	.90
16	.69	2.9	7.3	4.6	6.2	17	14	7.1	2.1	1.2	.88	.84
17	.55	5.4	5.7	4.0	5.6	12	9.8	4.4	3.2	.71	5.8	.89
18	.75	8.2	5.3	e3.8	6.3	14	8.0	3.8	.91	.64	5.1	1.1
19	.80	5.3	6.7	e3.6	9.3	14	6.6	3.4	.58	.50	3.0	.73
20	1.2	4.6	5.1	e3.5	14	11	5.8	3.1	.68	.72	1.8	.64
21	2.5	3.5	5.3	e3.3	23	21	4.8	2.8	1.1	1.1	1.3	.78
22	2.4	3.1	4.7	e3.2	19	26	4.3	2.2	1.4	.86	9.3	.78
23	1.3	3.0	4.2	3.1	20	21	3.5	1.9	.76	1.0	4.6	.88
24	.92	2.8	3.5	6.1	19	25	2.8	1.9	.88	.62	3.2	.73
25	.76	2.4	3.3	8.9	14	19	2.5	4.7	1.3	.68	2.4	.51
26	.68	1.9	3.0	18	11	14	2.8	17	.94	1.3	2.3	.53
27	.66	5.0	2.8	11	7.8	26	3.9	11	1.7	5.6	1.9	.79
28	.68	10	2.5	26	6.5	30	3.2	7.0	1.8	7.1	1.3	.71
29	.66	5.7	2.3	19	---	21	2.7	5.1	1.1	3.4	1.2	.63
30	2.5	4.7	3.1	12	---	16	2.9	3.9	2.7	2.8	1.2	.50
31	3.3	---	3.0	8.6	---	13	---	3.4	---	1.4	4.3	---
TOTAL	30.79	128.6	174.5	250.5	424.4	497.6	254.0	233.7	42.40	47.76	74.12	43.04
MEAN	.99	4.29	5.63	8.08	15.2	16.1	8.47	7.54	1.41	1.54	2.39	1.43
MAX	3.3	10	26	26	141	31	27	32	3.2	7.1	9.3	8.1
MIN	.30	1.8	2.3	2.1	3.5	4.7	2.5	1.9	.58	.50	.75	.50
CFSM	.52	2.24	2.95	4.23	7.94	8.40	4.43	3.95	.74	.81	1.25	.75
IN.	.60	2.50	3.40	4.88	8.27	9.69	4.95	4.55	.83	.93	1.44	.84

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1980 - 1994, BY WATER YEAR (WY)

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994
MEAN	1.51	4.46	5.84	5.10	7.76	8.78	7.10	5.45	3.47	3.21	1.65	1.20			
MAX	3.65	17.5	8.67	9.75	15.9	16.1	13.4	9.25	12.7	8.78	7.91	3.42			
(WY)	1990	1986	1991	1991	1986	1994	1984	1988	1981	1992	1980	1981			
MIN	.21	.62	2.83	1.29	1.37	2.52	3.70	1.58	.63	.28	.30	.19			
(WY)	1992	1992	1990	1981	1993	1990	1992	1991	1991	1988	1983	1991			

POTOMAC RIVER BASIN

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

SUMMARY STATISTICS	FOR 1993 CALENDAR YEAR	FOR 1994 WATER YEAR	WATER YEARS 1980 - 1994
ANNUAL TOTAL	1406.44	2201.41	
ANNUAL MEAN	3.85	6.03	4.54
HIGHEST ANNUAL MEAN			6.03
LOWEST ANNUAL MEAN			3.43
HIGHEST DAILY MEAN	44 Mar 26	141 Feb 9	141 Feb 9 1994
LOWEST DAILY MEAN	.09 Aug 24	.30 (a)	.09 (b)
ANNUAL SEVEN-DAY MINIMUM	.17 Aug 13	.36 Oct 5	.12 Aug 12 1988
INSTANTANEOUS PEAK FLOW		280 Feb 9	(c)895 May 31 1985
INSTANTANEOUS PEAK STAGE		5.71 Feb 9	10.47 May 31 1985
INSTANTANEOUS LOW FLOW		.25 (d)	.01 (f)
ANNUAL RUNOFF (CFSM)	2.02	3.16	2.38
ANNUAL RUNOFF (INCHES)	27.39	42.88	32.33
10 PERCENT EXCEEDS	7.7	14	10
50 PERCENT EXCEEDS	1.7	3.3	2.8
90 PERCENT EXCEEDS	.26	.72	.43

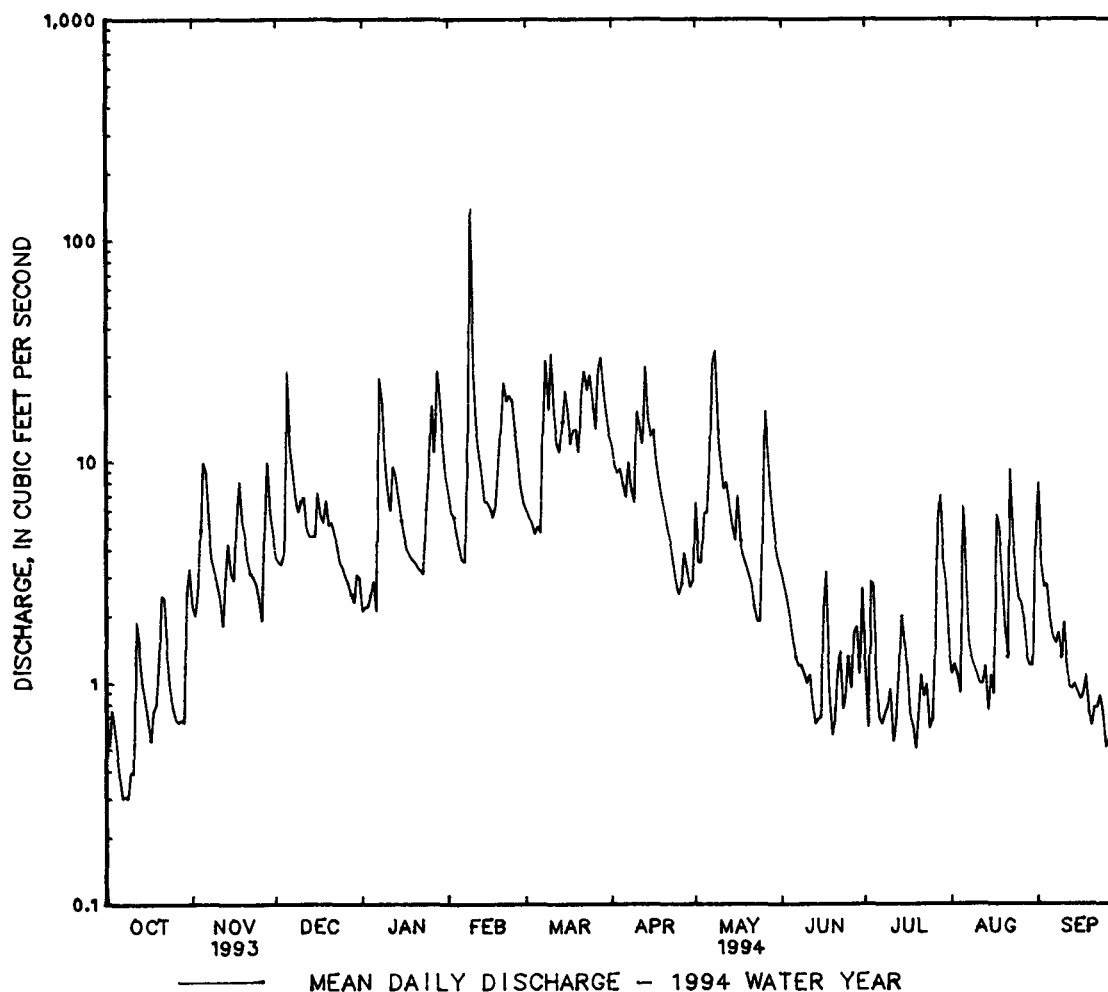
a Oct. 7, 9.

b Aug. 22, 1985, Aug. 24, 1993.

c From rating curve extended above 90 ft³/s on basis of contracted-opening measurement of peak flow.

d Oct. 7, 8.

f July 18 and Aug. 9, 1988, result of beaver activity upstream.



POTOMAC RIVER BASIN

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-Corunna 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 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1986 to current year.

GAGE.--Water-stage recorder and sacrete bag control. Datum of gage is 2,441.94 ft above sea level (Garrett County bench mark).

REMARKS.--Water-discharge records good except those for estimated daily discharges (missing record), which are fair.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 40 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 5	0745	46	2.38	Mar. 24	1800	46	2.36
Jan. 28	1915	49	2.46	Mar. 27	0815	54	2.57
Feb. 9	UNKNOWN	*340	*a7.23	Apr. 13	0715	63	2.80
Mar. 7	2145	51	2.50	May 7	2330	134	4.03
Mar. 10	0200	46	2.36	May 26	1530	62	2.76

a Affected by backwater

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.16	1.0	2.9	e1.8	6.8	5.0	12	5.3	2.9	1.1	.49	4.4
2	.11	.67	2.6	e1.8	8.8	4.5	10	3.3	2.4	.62	.38	2.1
3	.21	.99	2.4	e1.7	4.5	4.4	9.8	2.9	1.9	2.1	.38	1.5
4	.09	2.9	2.9	e4.5	3.9	3.8	8.7	4.5	1.5	1.9	.30	1.9
5	.05	6.9	27	e3.5	3.5	3.6	6.9	4.8	1.2	.76	4.0	1.2
6	.03	6.4	12	e2.3	3.2	3.7	6.1	8.3	.98	.47	2.7	.93
7	.03	3.7	7.8	e20	2.9	15	7.8	e20	.83	.51	1.3	.82
8	.03	2.5	6.2	e19	14	27	5.8	41	.71	.52	.87	.70
9	.04	1.8	5.0	e13	e100	18	5.1	17	.61	.48	.66	.58
10	.06	1.4	5.1	e8.0	62	32	14	11	.50	.56	.52	.66
11	.04	1.2	5.9	5.2	16	14	13	7.6	.44	.30	.44	.59
12	.34	.96	5.8	6.5	10	11	11	6.9	.39	.23	.38	.40
13	.33	1.8	4.7	6.4	8.4	14	33	5.2	.33	.21	.28	.31
14	.14	2.9	3.6	5.5	6.5	23	19	4.3	.27	.39	.46	.28
15	.09	2.2	3.7	7.3	5.6	17	14	4.0	.25	.42	.91	.24
16	.07	1.7	5.5	5.6	4.8	e13	14	5.3	2.0	.38	.39	.20
17	.12	3.5	4.7	4.3	4.1	e10	11	3.9	3.3	.26	4.5	.25
18	.17	5.8	4.6	3.4	4.5	e10	8.3	3.5	.68	.20	4.4	.45
19	.20	4.0	5.7	3.4	6.9	e10	6.7	3.1	.37	.17	2.6	.24
20	.28	3.4	4.7	3.3	12	e9.0	5.5	2.8	.44	.16	1.6	.18
21	.80	2.6	4.6	2.3	23	e20	4.7	2.4	.86	.19	1.2	.16
22	.86	2.1	3.9	2.2	21	e40	4.0	2.0	1.0	.21	6.0	.15
23	.39	1.6	3.5	2.1	20	e26	3.5	1.6	.39	.21	3.4	.16
24	.24	1.4	e3.1	4.6	19	37	3.1	1.3	.41	.13	2.3	.15
25	.17	1.2	e2.7	7.1	13	29	2.7	3.4	.54	.17	1.7	.14
26	.12	.99	e2.8	19	9.8	18	2.4	17	.29	.25	1.5	.21
27	.10	4.1	e2.5	10	7.2	35	3.2	12	.74	2.6	1.4	.17
28	.09	8.5	e2.3	27	9.0	38	2.6	7.1	1.1	3.6	.99	.14
29	.07	4.8	e2.1	23	---	25	2.1	5.3	.78	1.4	.85	.13
30	.97	3.6	e2.0	13	---	17	2.3	4.2	2.9	1.1	.69	.11
31	1.8	---	e1.9	9.0	---	13	---	3.5	---	.65	2.5	---
TOTAL	8.20	86.61	154.2	245.8	410.4	546.0	252.3	224.5	31.01	22.25	50.09	19.45
MEAN	.26	2.89	4.97	7.93	14.7	17.6	8.41	7.24	1.03	.72	1.62	.65
MAX	1.8	8.5	27	27	100	40	33	41	3.3	3.6	6.0	4.4
MIN	.03	.67	1.9	1.7	2.9	3.6	2.1	1.3	.25	.13	.28	.11
CFSM	.12	1.26	2.16	3.45	6.37	7.66	3.66	3.15	.45	.31	.70	.28
IN.	.13	1.40	2.49	3.98	6.64	8.83	4.08	3.63	.50	.36	.81	.31

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1987 - 1994, BY WATER YEAR (WY)

	1987	1988	1989	1990	1991	1992	1993	1994
MEAN	1.56	3.54	6.13	7.29	7.41	9.62	7.31	6.05
MAX	4.57	10.2	10.0	11.5	14.7	17.6	11.3	12.2
(WY)	1990	1987	1991	1990	1994	1994	1987	1989
MIN	.11	.30	3.92	4.05	1.27	3.34	4.25	1.12
(WY)	1993	1992	1990	1992	1993	1990	1992	1993

01594950 MCMILLAN FORK NEAR FORT PENDLETON, MD--Continued

SUMMARY STATISTICS	FOR 1993 CALENDAR YEAR	FOR 1994 WATER YEAR	WATER YEARS 1987 - 1994
ANNUAL TOTAL	1329.81	2050.81	
ANNUAL MEAN	3.64	5.62	4.63
HIGHEST ANNUAL MEAN			5.62
LOWEST ANNUAL MEAN			3.60
HIGHEST DAILY MEAN	61 Apr 1	(e)100 Feb 9	110 May 26 1990
LOWEST DAILY MEAN	.03 (a)	.03 (b)	.03 (a)
ANNUAL SEVEN-DAY MINIMUM	.03 Aug 23	.04 Oct 5	.03 Aug 23 1993
INSTANTANEOUS PEAK FLOW		340 Feb 9	340 Feb 9 1994
INSTANTANEOUS PEAK STAGE		7.23 Feb 9	(c)7.23 Feb 9 1994
INSTANTANEOUS LOW FLOW		.03 (d)	.02 (f)
ANNUAL RUNOFF (CFSM)	1.58	2.44	2.01
ANNUAL RUNOFF (INCHES)	21.51	33.17	27.36
10 PERCENT EXCEEDS	7.8	14	11
50 PERCENT EXCEEDS	1.1	2.7	3.0
90 PERCENT EXCEEDS	.06	.20	.16

e Estimated.

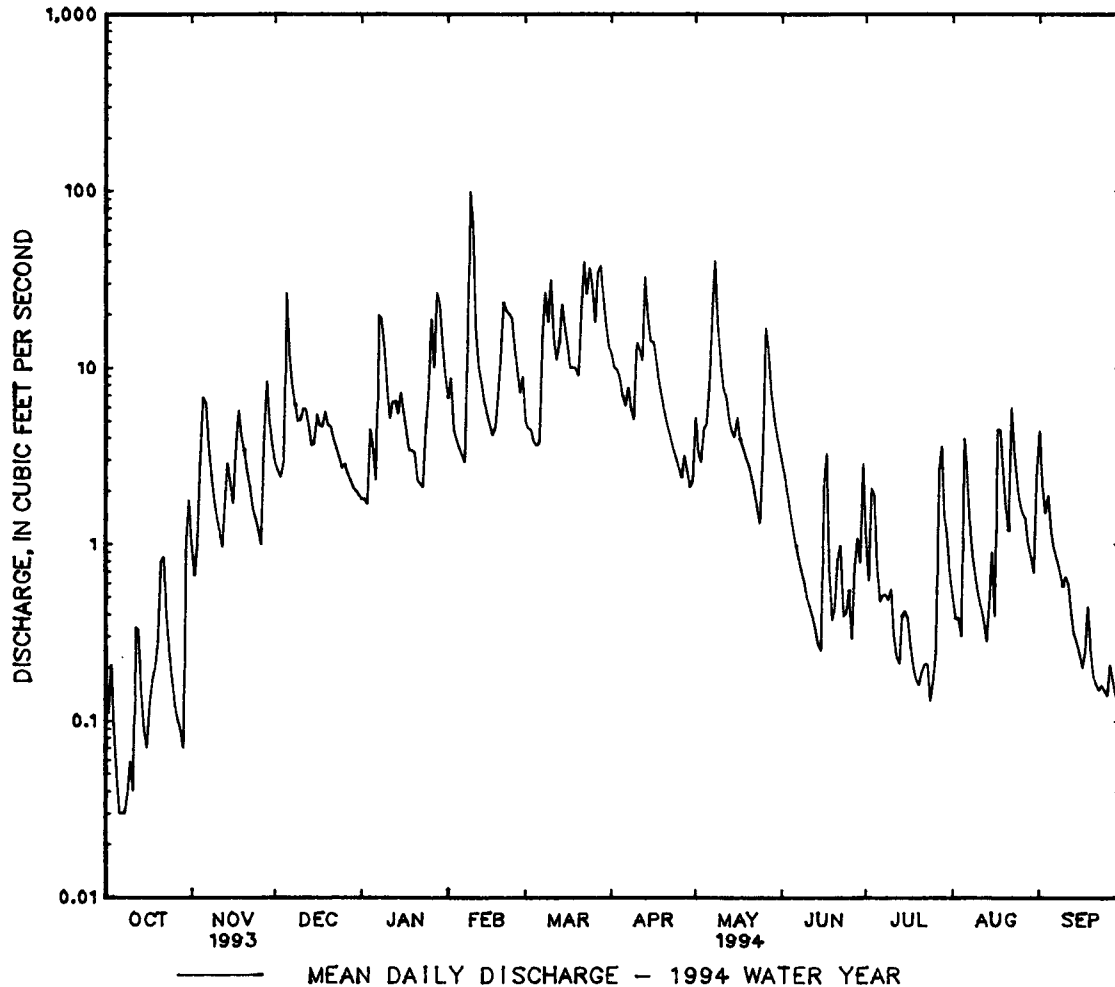
a Aug. 23-30, Sept. 20-23, 1993.

b Oct. 6-8.

c Affected by backwater.

d Oct. 5-9.

f Sept. 24, 25, 1993.



POTOMAC RIVER BASIN

01594950 MCMILLAN FORK NEAR FORT PENDLETON, MD--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1987 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: November 1986 to current year.

pH: November 1986 to current year.

WATER TEMPERATURE: November 1986 to current year.

INSTRUMENTATION.--Water-quality monitor since November 1986. Digital recorder set for one-hour-interval punches.

REMARKS.--Periods of missing record due to monitor malfunction or probes buried by sediment.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 281 microsiemens, Sept. 4, 1988; minimum, 54 microsiemens, Feb. 9, 1994.

pH: Maximum, 9.4 units, Sept. 15, 1993; minimum, 4.9 units, Nov. 21, 22, 1988.

WATER TEMPERATURE: Maximum, 23.3°C, July 28, 1993; minimum, 0.0°C on many days during winter periods.

EXTREMES FOR CURRENT PERIOD.--

SPECIFIC CONDUCTANCE: Maximum, 188 microsiemens, Oct. 22; minimum, 54 microsiemens, Feb. 9.

pH: Maximum, 7.8 units, Jan. 21-23, Apr. 25; minimum 5.6 units, July 27, 28.

WATER TEMPERATURE: Maximum, 21.6°C, July 24; minimum, 0.0°C, on many days during winter periods.

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CELSIUS, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			DECEMBER			JANUARY			
1	156	150	153	---	---	---	112	107	110	143	138	140
2	152	146	149	---	---	---	114	112	113	139	137	138
3	152	138	143	---	---	---	119	114	116	138	136	137
4	146	139	143	---	---	---	121	101	116	137	136	136
5	143	140	139	125	108	115	101	79	83	137	136	136
6	142	134	137	112	105	108	89	81	85	138	136	137
7	136	131	134	106	104	105	100	89	95	137	99	117
8	134	130	132	111	106	108	106	100	103	99	93	95
9	133	129	131	110	108	109	108	105	106	109	96	103
10	132	128	130	111	109	110	107	103	106	120	109	116
11	132	130	131	113	110	112	104	102	103	129	116	125
12	130	113	123	116	113	114	107	104	105	129	112	119
13	169	123	158	116	105	112	111	106	109	120	112	116
14	167	153	160	116	111	114	113	111	112	126	120	122
15	153	144	148	118	112	114	114	107	112	128	122	125
16	145	138	140	118	114	116	107	103	105	138	126	131
17	138	128	133	116	98	111	107	104	105	138	132	135
18	133	128	131	109	100	103	108	103	107	139	136	138
19	148	129	141	101	98	99	106	100	104	141	139	140
20	148	131	137	101	98	99	109	106	107	140	136	137
21	166	133	149	104	100	102	114	108	110	140	136	138
22	188	166	181	108	104	106	118	113	116	140	138	139
23	175	162	168	112	108	110	122	118	120	140	134	138
24	162	151	157	116	112	113	124	121	123	134	108	119
25	152	143	148	118	115	117	125	123	124	108	76	102
26	143	135	138	121	118	120	129	124	128	77	70	72
27	---	---	---	121	100	114	130	127	129	82	71	75
28	---	---	---	111	99	104	131	130	131	84	68	77
29	---	---	---	102	99	100	134	131	132	79	68	74
30	---	---	---	107	101	104	138	132	135	91	79	86
31	---	---	---	---	---	---	141	136	138	97	91	95
MONTH	---	---	---	---	---	---	141	79	113	143	68	118

POTOMAC RIVER BASIN

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01594950 MCMILLAN FORT NEAR FORT PENDLETON, MD--CONTINUED

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CENTIGRADE, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY			MARCH			APRIL			MAY			
1	100	96	98	132	131	132	113	107	110	113	103	106
2	104	99	103	133	131	132	110	107	108	107	104	105
3	109	103	105	136	132	135	110	105	108	108	106	107
4	108	104	106	138	131	136	114	105	109	---	---	---
5	109	106	108	135	131	133	122	114	118	---	---	---
6	108	104	106	137	121	133	126	121	123	101	82	92
7	108	104	106	125	92	115	121	105	110	86	65	80
8	110	73	101	92	72	75	114	109	111	80	65	71
9	73	54	63	90	76	84	123	113	118	100	80	89
10	89	69	77	86	77	80	123	84	105	109	100	105
11	111	89	101	107	86	96	93	82	88	117	108	113
12	123	111	117	117	106	113	111	93	100	121	114	118
13	132	123	127	117	113	116	109	67	81	126	121	123
14	142	132	137	116	99	108	98	76	87	126	124	125
15	149	142	146	101	83	92	105	95	101	132	125	129
16	154	147	151	101	85	93	96	90	93	136	130	133
17	152	147	150	110	101	106	100	92	97	135	127	130
18	149	130	143	111	97	107	106	100	103	129	124	126
19	147	112	135	105	98	100	110	105	108	134	127	131
20	140	96	131	108	104	106	116	110	113	138	134	135
21	96	87	91	109	71	97	118	115	116	142	137	139
22	102	90	97	76	69	73	122	118	120	145	140	142
23	104	98	100	84	72	79	124	121	122	152	145	148
24	104	95	100	85	68	76	127	124	126	153	149	151
25	112	102	108	85	74	80	129	126	128	159	143	152
26	120	112	116	96	85	92	131	129	129	145	88	126
27	125	120	123	97	66	77	131	118	126	90	83	86
28	131	125	128	78	68	72	126	123	124	102	90	96
29	---	---	---	93	77	85	126	124	125	113	102	108
30	---	---	---	106	92	100	127	111	121	122	113	117
31	---	---	---	113	106	109	---	---	---	129	122	125
MONTH	154	54	113	138	66	101	131	67	111	---	---	---
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
JUNE			JULY			AUGUST			SEPTEMBER			
1	135	129	132	146	143	144	113	107	110	97	89	92
2	136	134	135	148	144	145	113	106	110	93	89	90
3	139	136	137	147	107	135	109	103	106	96	92	95
4	142	139	140	129	119	127	107	102	105	98	95	97
5	147	142	145	135	129	131	111	90	105	99	97	98
6	150	147	148	138	133	135	107	105	106	101	98	99
7	152	149	150	137	114	128	106	104	105	107	101	104
8	153	148	151	135	121	129	107	104	105	113	107	110
9	153	149	150	135	110	125	108	107	107	118	112	115
10	156	151	153	129	121	126	111	108	109	118	113	116
11	159	152	156	133	122	125	112	109	110	117	114	116
12	157	152	155	123	120	121	113	110	112	118	116	117
13	162	156	158	125	117	121	114	109	111	118	113	114
14	165	161	163	121	106	115	114	104	110	114	112	113
15	187	165	169	116	109	114	135	113	127	116	114	115
16	179	106	158	124	115	119	122	115	117	120	116	118
17	179	139	146	124	115	119	116	90	107	123	107	118
18	149	142	144	115	113	114	107	98	102	114	102	107
19	163	149	152	118	114	116	99	97	98	116	114	115
20	151	145	147	116	112	115	103	98	100	122	115	117
21	150	119	141	115	110	113	105	102	103	123	118	121
22	151	122	141	112	102	109	103	89	94	120	118	119
23	151	148	150	108	104	106	95	92	94	122	119	121
24	150	136	148	119	108	113	103	95	100	122	120	121
25	142	136	139	122	103	108	107	101	103	122	120	121
26	146	141	143	120	98	104	107	102	105	121	113	119
27	158	127	139	118	86	100	110	104	107	117	114	117
28	163	158	161	118	108	111	109	107	107	119	115	116
29	160	138	149	110	107	108	107	105	106	119	117	117
30	184	136	154	112	108	110	121	106	108	120	118	119
31	---	---	---	110	108	109	115	85	102	---	---	---
MONTH	187	106	148	148	86	119	135	85	106	123	89	112

POTOMAC RIVER BASIN

01594950 MCMILLAN FORT NEAR FORT PENDLETON, MD--CONTINUED

PH, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

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

POTOMAC RIVER BASIN

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01594950 MCMILLAN FORT NEAR FORT PENDLETON, MD--CONTINUED

PH, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
JUNE			JULY			AUGUST			SEPTEMBER			
1	7.4	7.3	7.3	6.1	6.0	6.1	6.6	6.3	6.4	6.3	6.2	6.2
2	7.4	7.3	7.3	6.3	6.1	6.2	6.6	6.4	6.5	6.4	6.2	6.3
3	7.3	7.3	7.3	6.4	5.8	6.1	6.7	6.5	6.6	6.3	6.2	6.2
4	7.4	7.2	7.3	6.1	5.8	6.0	6.7	6.5	6.6	6.3	6.2	6.2
5	7.4	7.2	7.3	6.2	6.1	6.2	6.6	5.9	6.2	6.3	6.2	6.2
6	7.5	7.3	7.4	6.4	6.2	6.3	6.2	6.0	6.1	6.2	6.2	6.2
7	7.4	7.2	7.3	6.5	6.3	6.4	6.4	6.2	6.3	6.2	6.2	6.2
8	7.4	7.1	7.3	6.6	6.5	6.6	6.4	6.2	6.3	6.3	6.2	6.2
9	7.2	7.1	7.2	6.8	6.5	6.6	6.5	6.3	6.4	6.4	6.2	6.3
10	---	---	---	6.6	6.5	6.6	6.7	6.3	6.5	6.4	6.3	6.3
11	---	---	---	6.8	6.6	6.7	6.9	6.7	6.8	6.3	6.2	6.3
12	---	---	---	6.9	6.7	6.8	6.8	6.7	6.7	6.3	6.3	6.3
13	---	---	---	6.9	6.6	6.7	6.9	6.7	6.8	6.5	6.3	6.4
14	---	---	---	6.8	6.6	6.7	6.9	6.6	6.8	6.6	6.3	6.5
15	---	---	---	6.7	6.6	6.6	6.7	6.5	6.6	6.6	6.4	6.5
16	---	---	---	6.7	6.6	6.7	6.9	6.7	6.8	6.7	6.5	6.6
17	---	---	---	6.8	6.6	6.7	6.8	6.0	6.5	6.7	6.4	6.6
18	---	---	---	6.8	6.7	6.7	6.1	6.0	6.0	6.6	6.5	6.6
19	---	---	---	6.9	6.7	6.8	6.2	6.0	6.1	6.9	6.6	6.8
20	---	---	---	6.9	6.6	6.7	6.3	6.2	6.3	6.9	6.8	6.9
21	---	---	---	6.8	6.6	6.7	6.5	6.3	6.4	7.0	6.9	7.0
22	---	---	---	6.8	6.5	6.7	6.4	5.9	6.1	7.1	6.9	7.0
23	---	---	---	6.7	6.4	6.6	6.4	6.1	6.2	7.1	6.9	7.0
24	---	---	---	6.5	6.1	6.4	6.5	6.2	6.4	7.1	6.9	7.0
25	6.4	6.3	6.4	6.2	6.1	6.1	6.5	6.2	6.4	7.1	6.9	7.0
26	6.6	6.4	6.5	6.2	6.0	6.1	6.3	5.9	6.0	7.0	6.8	6.9
27	6.4	6.1	6.3	6.4	5.6	6.0	6.2	6.1	6.2	7.1	6.9	7.0
28	6.2	6.1	6.1	5.9	5.6	5.7	6.3	6.2	6.2	7.2	7.0	7.1
29	6.3	6.1	6.2	6.1	5.9	6.0	6.4	6.2	6.3	7.2	7.1	7.2
30	6.1	5.8	5.9	6.3	6.1	6.2	6.5	6.4	6.4	7.2	7.1	7.1
31	---	---	---	6.5	6.2	6.4	6.5	6.3	6.4	---	---	---
MONTH	---	---	---	6.9	5.6	6.4	6.9	5.9	6.4	7.2	6.2	6.6

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			DECEMBER			JANUARY			
1	8.1	3.7	5.9	3.8	2.5	2.9	3.4	2.2	2.7	.6	.0	.2
2	12.1	6.8	9.6	3.1	1.2	2.4	3.8	1.5	2.7	1.1	.5	.9
3	10.0	6.5	8.3	4.5	3.0	3.7	5.4	3.6	4.7	1.1	.0	.8
4	9.4	5.8	7.6	6.5	4.1	5.3	6.2	4.9	5.5	.0	.0	.0
5	9.7	5.6	8.4	8.6	6.4	7.7	6.5	5.8	6.2	.0	.0	.0
6	8.8	3.7	6.1	8.2	5.5	6.7	6.0	5.0	5.7	.5	.0	.2
7	11.2	5.6	8.3	5.5	3.8	4.7	5.0	4.3	4.8	1.7	.0	.5
8	12.0	6.7	9.3	4.0	2.5	3.4	4.7	3.3	4.0	1.9	.2	1.2
9	12.6	7.7	10.2	3.9	2.0	3.0	4.6	3.1	3.9	.8	.0	.3
10	9.6	3.6	6.4	3.7	1.8	2.8	6.0	4.1	5.2	.6	.0	.1
11	5.9	2.4	4.0	4.1	1.5	2.9	5.6	1.2	3.2	2.2	.0	1.0
12	7.3	5.3	6.6	5.9	4.1	4.9	1.6	.8	1.2	2.5	2.0	2.3
13	7.8	6.7	7.1	7.2	4.4	5.6	2.3	.1	1.3	2.8	2.5	2.7
14	8.1	6.6	7.3	9.7	7.2	8.6	3.3	2.0	2.7	2.6	.0	1.3
15	9.0	6.2	7.5	10.8	9.4	10.1	3.6	3.2	3.4	.0	.0	.0
16	10.7	6.8	8.7	9.5	8.3	8.9	4.0	3.6	3.9	.0	.0	.0
17	12.2	9.3	10.7	10.0	8.1	9.0	4.1	3.1	3.5	.1	.0	.0
18	10.9	9.7	10.3	9.0	6.6	7.9	4.7	3.3	4.0	.0	.0	.0
19	11.0	9.4	10.2	7.7	6.3	7.0	3.6	2.9	3.3	.0	.0	.0
20	12.5	10.9	11.6	7.3	3.7	5.4	3.9	3.1	3.5	.2	.0	.1
21	12.3	9.2	11.3	4.5	3.2	3.8	3.5	1.1	2.2	.2	.0	.1
22	9.2	6.7	7.9	4.5	2.5	3.5	2.1	.9	1.5	.5	.1	.3
23	7.3	5.1	6.2	4.5	2.5	3.5	2.1	1.4	1.9	.9	.4	.7
24	7.3	4.0	5.7	5.4	3.3	4.4	1.5	.9	1.2	.9	.3	.6
25	7.4	4.1	5.7	5.4	4.1	4.8	1.3	.0	.8	1.7	.7	1.2
26	7.8	5.1	6.6	5.0	4.0	4.5	.0	.0	.0	2.1	.7	1.7
27	8.9	6.6	7.7	6.3	4.7	5.3	.9	.0	.4	2.3	1.4	1.9
28	7.0	3.3	5.4	6.3	4.2	5.5	.5	.1	.4	3.3	2.3	2.7
29	6.3	2.6	4.5	4.2	3.6	3.9	.6	.0	.2	2.6	2.5	2.6
30	6.4	5.2	5.8	3.6	2.7	3.3	.0	.0	.0	2.7	2.3	2.5
31	6.3	3.8	5.2	---	---	---	.2	.0	.1	2.8	2.0	2.4
MONTH	12.6	2.4	7.6	10.8	1.2	5.2	6.5	.0	2.7	3.3	.0	.9

POTOMAC RIVER BASIN

01594950 MCMILLAN FORT NEAR FORT PENDLETON, MD--CONTINUED

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY			MARCH			APRIL			MAY			
1	2.0	.0	.9	2.4	1.3	2.0	7.5	3.9	5.3	12.8	8.5	10.9
2	.5	.0	.1	1.7	.0	.6	8.7	3.9	6.0	10.5	7.4	8.8
3	.5	.0	.3	1.0	.0	.5	8.5	6.0	6.9	8.2	6.6	7.6
4	1.9	.1	1.0	2.5	1.0	1.9	7.9	4.9	6.1	---	---	---
5	2.5	1.2	1.8	3.1	1.8	2.3	9.3	4.2	6.7	---	---	---
6	2.5	.8	1.6	4.3	1.1	2.5	8.2	7.0	7.7	10.0	7.8	8.5
7	2.6	.9	1.7	5.0	1.5	2.7	7.6	4.2	5.4	9.0	7.0	8.0
8	1.6	.2	1.1	2.7	1.7	2.4	7.7	2.9	5.1	8.8	7.6	8.3
9	2.0	.1	1.3	2.3	.0	1.4	8.9	4.1	6.5	11.6	7.3	9.2
10	2.8	1.1	2.2	2.5	2.0	2.3	8.3	6.7	7.5	11.0	8.3	9.6
11	2.0	.3	1.3	4.2	1.9	2.8	7.0	5.6	6.3	11.8	7.0	9.3
12	3.2	1.9	2.5	4.9	1.2	2.9	9.9	6.0	7.7	10.5	8.7	9.7
13	3.1	1.6	2.7	5.2	2.3	3.7	9.8	8.0	8.6	10.8	7.4	9.0
14	2.4	1.2	1.8	5.6	3.1	4.2	11.5	7.3	9.0	11.4	7.1	9.4
15	3.5	1.6	2.4	4.6	3.2	3.9	12.2	7.4	9.6	12.1	9.6	10.9
16	3.5	1.7	2.5	3.3	1.5	2.6	9.6	7.1	8.6	12.0	10.7	11.4
17	3.5	.4	1.9	3.6	.8	2.0	9.4	6.4	7.7	10.7	8.5	9.2
18	4.3	1.0	2.4	3.6	1.7	2.7	10.9	6.2	8.4	8.5	8.1	8.3
19	4.5	1.5	2.8	4.1	1.5	2.6	12.5	8.3	10.2	8.6	7.7	8.1
20	4.9	2.4	3.2	5.7	2.2	3.6	11.6	8.1	9.7	9.4	8.3	8.8
21	4.3	3.5	3.9	4.4	3.2	3.7	9.9	7.3	8.5	11.0	7.6	9.3
22	5.3	2.8	4.3	5.9	3.1	4.2	10.3	6.7	8.2	11.7	9.0	10.4
23	3.5	.1	2.5	7.2	3.9	5.1	10.1	5.0	7.5	13.4	10.0	11.7
24	3.6	1.7	2.8	6.4	4.3	5.1	11.6	5.8	8.7	13.5	10.7	12.2
25	4.1	1.6	2.8	6.1	4.1	5.2	13.9	8.1	10.9	12.9	12.3	12.6
26	3.1	.5	1.5	6.0	3.5	4.6	13.9	9.1	11.7	12.6	10.8	11.9
27	1.4	.0	.5	7.0	4.5	5.5	14.3	10.6	12.5	11.4	8.7	10.1
28	2.0	.0	.9	5.6	5.0	5.4	15.2	10.8	13.0	12.0	7.4	9.5
29	---	---	---	5.0	3.9	4.4	14.9	11.8	13.4	13.0	7.8	10.3
30	---	---	---	5.8	3.8	4.6	14.0	11.7	13.0	13.0	9.1	11.2
31	---	---	---	5.6	3.9	4.6	---	---	---	14.4	10.6	12.4
MONTH	5.3	.0	2.0	7.2	.0	3.3	15.2	2.9	8.5	---	---	---
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
JUNE			JULY			AUGUST			SEPTEMBER			
1	14.7	12.5	13.4	17.4	14.7	16.1	18.2	15.8	17.0	16.4	14.7	15.7
2	12.8	10.8	11.8	18.2	14.7	16.5	17.9	16.1	17.0	15.0	13.2	14.2
3	12.8	8.8	10.9	17.9	16.0	16.9	18.3	15.5	16.9	14.1	12.9	13.5
4	13.4	9.5	11.6	18.4	15.4	16.9	19.9	15.7	17.7	13.7	12.5	13.1
5	14.9	10.7	12.9	19.6	16.2	17.8	17.8	15.3	16.8	13.2	11.0	12.2
6	16.0	12.0	14.1	20.4	17.2	18.8	15.7	13.8	14.7	13.7	12.0	12.9
7	16.9	14.0	15.4	20.4	17.8	18.7	15.4	12.0	13.9	14.4	13.2	13.8
8	16.2	14.0	15.2	21.1	17.2	18.9	16.6	13.4	15.1	13.7	11.4	12.7
9	15.3	11.7	13.5	20.4	18.0	19.0	17.6	14.4	16.0	13.7	10.9	12.5
10	14.9	11.1	13.0	19.0	17.3	18.1	18.1	15.9	17.0	14.5	12.4	13.5
11	16.2	12.8	14.2	18.9	15.6	17.0	18.1	14.8	16.4	13.5	12.1	12.9
12	17.1	13.2	15.0	19.6	13.9	16.6	19.8	16.3	17.8	12.8	10.4	11.8
13	18.5	12.8	15.5	20.2	14.8	17.3	20.4	17.1	18.7	13.7	10.4	12.0
14	20.1	14.8	17.2	18.5	16.8	17.6	19.1	16.8	18.4	16.0	12.1	14.0
15	20.1	15.2	17.4	20.2	17.2	18.3	16.8	14.8	15.9	16.8	14.0	15.2
16	19.7	15.8	17.5	19.4	17.1	18.1	15.3	13.7	14.8	17.6	14.1	15.6
17	18.7	15.5	17.1	19.1	16.7	17.7	15.9	14.9	15.4	16.6	14.6	15.6
18	19.7	16.6	17.9	20.6	16.9	18.6	16.9	15.5	16.1	15.0	11.9	14.1
19	19.7	16.3	18.0	21.6	16.2	18.6	17.3	14.8	16.1	12.9	9.9	11.4
20	19.9	16.6	18.2	21.2	17.0	18.6	17.2	14.7	16.1	12.5	8.5	10.5
21	20.6	16.7	18.2	20.3	17.5	18.4	16.8	16.2	16.6	12.7	8.7	10.8
22	19.2	16.6	17.7	20.7	17.2	18.6	16.8	15.3	16.1	12.8	10.5	11.7
23	19.0	15.6	17.2	20.7	17.3	18.6	16.1	13.8	15.0	13.1	11.7	12.4
24	20.0	16.2	17.9	21.6	16.6	18.8	16.2	12.8	14.6	15.1	11.5	13.1
25	17.3	14.8	16.3	18.5	17.0	17.6	16.7	14.0	15.5	15.7	12.9	14.1
26	18.0	13.7	15.8	18.7	16.3	17.3	17.2	14.7	16.1	15.2	13.3	14.1
27	16.1	15.4	15.7	16.8	15.3	15.8	17.8	15.8	16.7	13.5	11.2	12.6
28	17.4	15.1	16.3	16.9	15.3	16.0	18.3	15.7	17.1	13.3	11.0	12.1
29	18.3	15.7	16.9	16.9	15.1	16.1	17.7	15.6	17.3	11.4	9.4	10.5
30	17.1	15.9	16.5	17.3	15.0	16.2	15.8	13.4	14.8	11.0	8.7	9.7
31	---	---	---	17.5	15.2	16.3	16.7	14.4	15.7	---	---	---
MONTH	20.6	8.8	15.6	21.6	13.9	17.6	20.4	12.0	16.2	17.6	8.5	12.9

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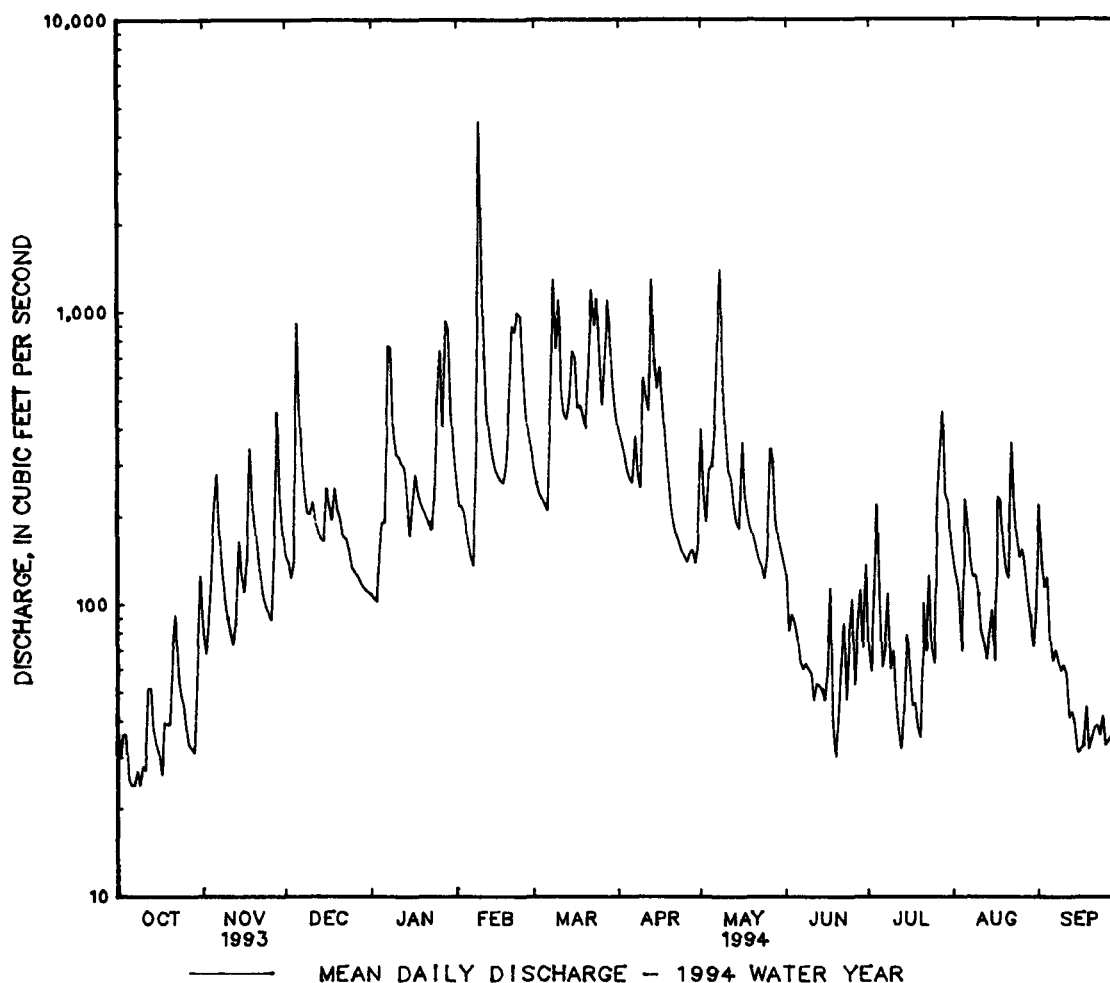
MEAN	73.5	137	232	233	262	346	285	192	118	89.7	71.3	49.7
MAX	316	588	527	569	604	885	573	419	442	340	334	238
(WY)	1977	1986	1973	1974	1994	1963	1958	1967	1981	1978	1956	1971
MIN	12.8	26.2	56.7	41.8	65.9	112	106	62.5	15.5	14.3	6.72	5.99
(WY)	1964	1966	1966	1977	1993	1990	1968	1965	1965	1965	1965	1959

POTOMAC RIVER BASIN

01595000 NORTH BRANCH POTOMAC RIVER AT STEYER, MD--Continued

SUMMARY STATISTICS	FOR 1993 CALENDAR YEAR		FOR 1994 WATER YEAR		WATER YEARS 1956 - 1994	
ANNUAL TOTAL	52273.4		90012		173	
ANNUAL MEAN	143		247		250	
HIGHEST ANNUAL MEAN					115	
LOWEST ANNUAL MEAN					1994	
HIGHEST DAILY MEAN	1420	Mar 24	4530	Feb 9	4530	Feb 9 1994
LOWEST DAILY MEAN	7.2	Aug 27	24	(a)	3.1	Sep 9 1965
ANNUAL SEVEN-DAY MINIMUM	9.7	Aug 23	26	Oct 5	3.6	Sep 23 1959
INSTANTANEOUS PEAK FLOW			7290	Feb 9	(b)11500	Nov 5 1985
INSTANTANEOUS PEAK STAGE			10.40	Feb 9	13.14	Nov 5 1985
INSTANTANEOUS LOW FLOW			21	Sep 12	2.9	Sep 10 1965
ANNUAL RUNOFF (CFSM)	1.96		3.38		2.37	
ANNUAL RUNOFF (INCHES)	26.64		45.87		32.22	
10 PERCENT EXCEEDS	271		538		386	
50 PERCENT EXCEEDS	73		154		102	
90 PERCENT EXCEEDS	22		39		20	

a Oct. 6, 7, 9.

b From rating curve extended above 3,000 ft³/s on basis of slope-area measurement at gage height 10.30 ft.

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 Mt. Storm, and at mile 6.4.

DRAINAGE AREA.--48.8 mi².

WATER-DISCHARGE RECORDS

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

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

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

PEAK DISCHARGE FOR CURRENT YEAR.--Peak discharge, 4,500 ft³/s, Feb. 9, gage height, 9.89 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e10	e13	69	32	265	86	199	94	36	10	70	37
2	e8.0	e12	57	27	158	86	186	73	33	9.3	68	31
3	e9.0	e13	59	29	62	88	200	95	29	11	57	27
4	e9.0	e15	61	46	68	128	177	576	29	15	44	28
5	e7.0	e22	391	51	60	529	148	230	22	10	99	26
6	e6.5	e35	414	43	39	51	161	176	21	9.0	66	27
7	e6.4	25	375	134	39	112	609	767	22	18	44	28
8	e7.4	20	332	221	111	280	129	1480	19	18	38	27
9	e6.3	19	266	815	3210	545	66	255	18	14	36	22
10	e7.5	22	192	61	737	644	122	310	17	14	32	21
11	e9.0	19	54	55	581	264	172	456	16	10	28	20
12	e14	22	45	63	482	244	425	254	14	8.8	31	19
13	e12	21	40	63	400	222	515	105	13	8.5	24	20
14	e10	28	41	58	810	175	304	83	17	9.4	16	19
15	e9.0	21	45	55	305	199	144	76	14	10	14	19
16	e8.0	25	76	55	50	194	165	125	14	8.9	12	19
17	e7.5	36	64	60	43	231	185	93	15	8.8	162	19
18	e9.0	59	58	63	52	358	187	83	12	9.3	131	20
19	e11	34	74	63	66	289	180	75	12	8.5	119	19
20	e10	27	89	63	110	138	117	69	10	8.0	159	22
21	e13	21	106	63	201	259	96	82	15	11	384	22
22	e17	19	91	63	217	416	84	84	16	15	135	19
23	e11	20	86	65	959	396	74	78	18	26	91	20
24	e9.0	20	96	81	657	858	59	71	20	15	66	16
25	e8.0	20	110	357	127	725	56	68	21	11	50	13
26	e7.4	15	96	708	107	400	63	74	12	32	46	13
27	e7.1	97	85	79	95	1350	57	65	14	66	41	17
28	e7.0	176	79	211	86	1130	47	51	13	76	32	15
29	e6.9	63	71	215	---	886	49	43	12	50	29	14
30	e15	62	36	323	---	303	44	38	13	101	27	14
31	e24	---	39	311	---	189	---	36	---	65	29	---
TOTAL	302.0	1001	3697	4533	10097	11775	5020	6165	537	686.5	2180	633
MEAN	9.74	33.4	119	146	361	380	167	199	17.9	22.1	70.3	21.1
MAX	24	176	414	815	3210	1350	609	1480	36	101	384	37
MIN	6.3	12	36	27	39	51	44	36	10	8.0	12	13

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1962 - 1994, BY WATER YEAR (WY)

	50.1	89.3	113	113	141	221	162	118	69.5	45.4	29.6	29.9
MEAN	50.1	89.3	113	113	141	221	162	118	69.5	45.4	29.6	29.9
MAX	234	669	301	239	361	537	371	271	237	205	104	140
(WY)	1977	1986	1973	1974	1994	1963	1987	1988	1981	1978	1975	1979
MIN	3.36	7.00	10.8	20.9	21.3	46.9	62.8	28.3	9.91	4.36	3.92	3.89
(WY)	1992	1992	1966	1981	1978	1990	1967	1964	1964	1968	1988	1985

POTOMAC RIVER BASIN

01595200 STONY RIVER NEAR MOUNT STORM, WV--Continued

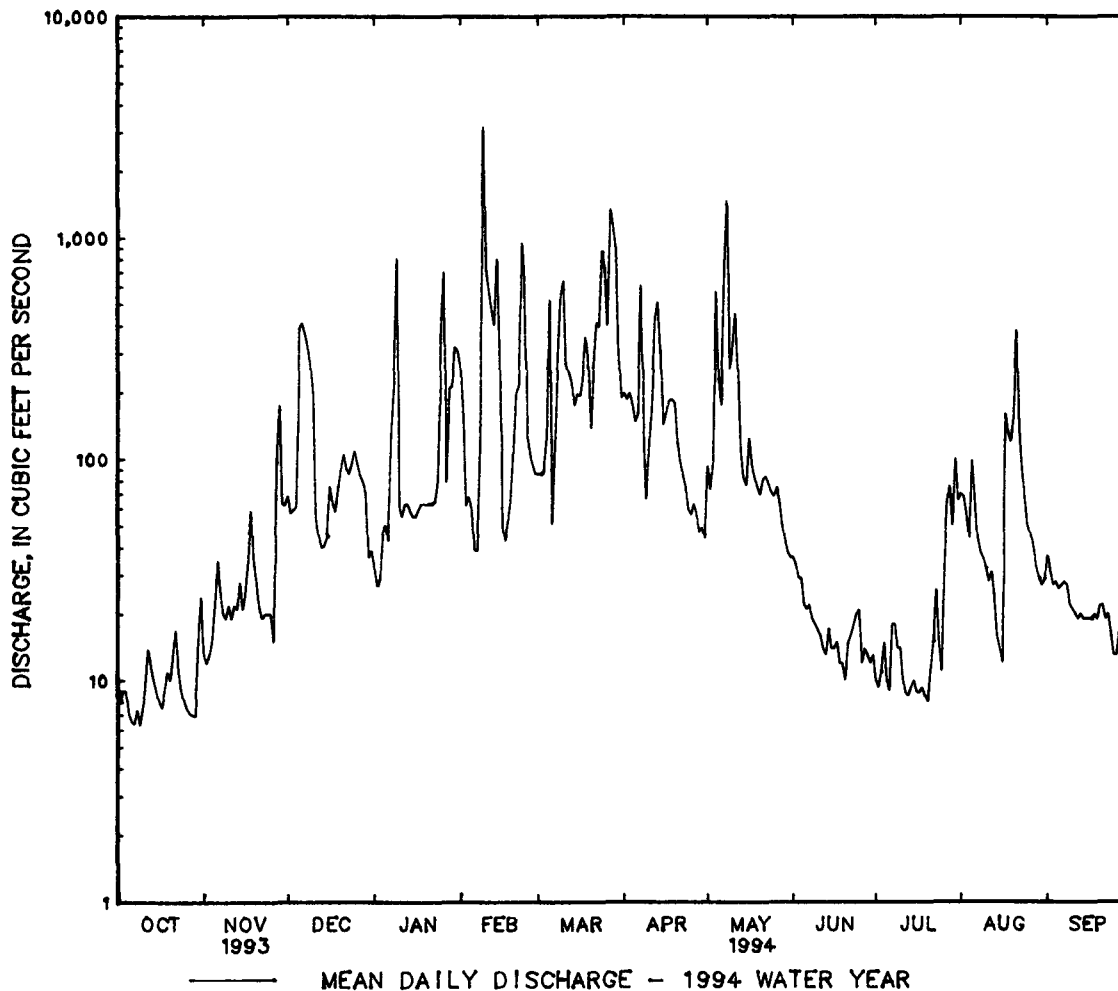
SUMMARY STATISTICS	FOR 1993 CALENDAR YEAR		FOR 1994 WATER YEAR		WATER YEARS 1962 - 1994	
ANNUAL TOTAL	33435.4		46626.5		(a)98.3	
ANNUAL MEAN	(a)91.6		(a)128		134	
HIGHEST ANNUAL MEAN					42.0	
LOWEST ANNUAL MEAN					9880	
HIGHEST DAILY MEAN	1460	Mar 27	3210	Feb 9	1.3	Nov 5 1985
LOWEST DAILY MEAN	1.7	Jul 24	6.3	Oct 9	1.3	Aug 28 1988
ANNUAL SEVEN-DAY MINIMUM	2.9	Jul 16	7.2	Oct 4	1.7	Aug 28 1988
INSTANTANEOUS PEAK FLOW			4500	Feb 9	(b)14000	Nov 5 1985
INSTANTANEOUS PEAK STAGE			9.88	Feb 9	(c)16.41	Nov 5 1985
INSTANTANEOUS LOW FLOW			UNKNOWN		1.3	(d)
10 PERCENT EXCEEDS	199		316		230	
50 PERCENT EXCEEDS	25		51		48	
90 PERCENT EXCEEDS	5.7		10		8.6	

a Unadjusted.

b From rating curve extended above 7,500 ft³/s on basis of slope-area measurement of peak flow.

c From floodmarks.

d Aug. 22, 23, 28, 29, 1988.



POTOMAC RIVER BASIN

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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 TEMPERATURE: December 1961 to March 1974, September 1974 to current year.

INSTRUMENTATION.--Temperature recorder (continuous ethyl alcohol - actuated thermograph) since December 1961.

REMARKS.--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 PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: Maximum, 27.5°C, Aug. 14, 1984 and July 19, 1990; minimum, 0.0°C on many days during winter periods.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum, 25.0°C, Aug. 21, 22; minimum, 0.0°C, Jan. 20-25.

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

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

POTOMAC RIVER BASIN

01595200 STONY RIVER NEAR MOUNT STORM, WV--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	8.5	7.0	17.0	13.0	19.5	18.5	21.5	18.0	23.5	21.5	21.5	21.5
2	9.5	7.5	14.5	12.0	19.5	17.5	22.5	18.0	23.5	23.0	22.0	21.0
3	9.5	9.0	14.0	12.5	20.0	15.5	22.0	19.0	23.0	22.0	21.0	19.0
4	9.5	8.5	15.5	13.0	20.0	17.0	20.5	18.0	23.5	22.5	19.0	18.5
5	9.5	7.5	15.5	12.5	20.0	17.5	23.5	19.0	23.5	21.5	19.0	18.5
6	9.5	9.5	13.0	12.5	20.0	18.5	24.5	20.5	21.5	19.0	19.0	18.5
7	9.5	9.5	15.0	12.5	23.0	19.0	24.0	20.5	20.5	19.0	19.5	19.0
8	9.5	8.0	16.0	13.0	21.0	19.0	23.0	20.5	20.5	20.0	19.0	19.0
9	9.5	7.5	16.0	12.5	19.5	15.5	22.5	21.0	22.5	20.5	19.0	18.5
10	9.5	9.0	16.0	15.0	18.5	15.0	21.5	21.0	22.5	21.5	19.0	18.5
11	9.5	8.5	18.5	16.0	18.5	16.0	22.0	19.0	21.0	20.5	19.5	18.0
12	11.5	9.5	18.0	15.5	19.5	16.5	22.5	17.5	21.5	20.0	18.5	17.0
13	11.5	10.5	16.0	13.0	21.0	16.5	22.0	18.5	21.5	21.0	19.0	17.5
14	12.0	11.5	16.0	13.0	22.0	19.0	21.5	20.5	21.0	20.0	20.5	18.5
15	12.0	11.0	17.5	15.5	22.5	19.0	23.0	20.5	20.0	19.5	19.5	18.5
16	11.5	11.0	17.5	16.0	22.5	19.5	23.0	20.5	20.0	17.0	19.0	18.5
17	11.5	11.0	16.0	13.5	22.5	18.0	22.0	20.0	17.0	17.0	19.0	18.5
18	11.5	11.0	13.5	13.5	23.0	19.5	22.0	19.5	19.0	17.0	18.5	17.5
19	12.5	11.5	13.5	13.5	23.0	20.0	23.0	20.0	23.0	19.0	17.5	15.0
20	12.5	11.5	14.0	13.5	24.0	20.0	23.0	20.5	24.0	23.0	16.5	15.0
21	12.5	11.5	18.0	14.0	23.5	21.0	21.5	20.0	25.0	24.0	16.0	15.0
22	12.5	11.0	18.5	15.5	23.5	21.0	21.0	19.5	25.0	20.5	16.0	15.5
23	13.5	10.5	19.0	17.0	22.5	21.5	21.0	20.0	20.5	20.0	16.0	15.5
24	14.0	11.0	19.0	17.0	21.5	21.5	22.5	20.0	21.0	20.0	17.0	15.5
25	16.5	13.0	19.0	18.0	21.5	18.5	22.0	20.5	22.0	21.0	17.0	16.0
26	16.5	14.5	18.0	17.5	20.5	17.0	20.5	20.0	22.0	21.5	17.0	16.5
27	17.0	15.5	18.0	16.0	19.5	18.0	20.0	18.0	22.0	21.5	17.0	15.5
28	18.0	15.5	18.0	14.5	20.5	17.5	18.0	18.0	22.0	21.5	15.5	15.0
29	18.0	17.0	19.0	15.0	21.5	18.5	19.0	18.0	22.0	22.0	15.0	13.5
30	17.5	16.0	18.5	16.5	21.0	18.0	20.0	18.5	22.0	21.5	14.0	13.5
31	---	---	19.0	17.5	---	---	21.5	20.0	21.5	21.5	---	---
MONTH	18.0	7.0	19.0	12.0	24.0	15.0	24.5	17.5	25.0	17.0	22.0	13.5

e Estimated

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 mi².

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 no contact between well and stream), 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.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 800 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 28	0130	*1,190	*3.83	Mar. 28	0530	966	3.56
Mar. 24	2015	1,120	3.75				

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	22	79	129	e40	e110	112	221	34	22	5.3	6.3	25
2	18	66	102	e42	e70	96	244	28	20	4.5	5.6	16
3	16	62	87	e40	e55	97	364	25	18	4.7	4.8	12
4	13	66	86	e40	e50	97	352	43	16	5.4	4.0	12
5	11	77	423	e42	e48	99	237	55	15	4.5	16	9.1
6	9.1	84	401	e40	e46	91	215	68	14	4.4	19	7.9
7	8.2	72	229	e50	e44	134	203	166	14	53	9.8	7.1
8	7.6	59	149	e80	40	517	131	622	13	38	6.7	6.1
9	7.1	47	115	e70	470	401	105	320	12	16	5.5	5.2
10	6.6	39	112	e65	e290	398	284	174	9.8	14	4.6	4.9
11	5.9	32	108	e60	e160	307	422	120	9.1	9.0	4.0	4.7
12	15	28	95	e70	e110	211	309	103	9.2	6.5	3.8	4.1
13	17	26	86	e70	e80	178	601	82	8.4	5.5	3.8	4.0
14	12	36	83	e65	68	194	554	67	7.4	6.4	4.5	4.0
15	11	31	80	e50	58	332	331	59	6.8	6.6	5.9	4.0
16	10	29	82	e42	55	444	234	71	8.8	5.5	4.5	3.8
17	11	36	74	e40	52	269	161	59	12	4.5	42	4.0
18	24	105	72	e40	58	201	128	52	8.0	4.4	64	4.3
19	20	106	82	e40	104	192	107	50	7.6	4.0	31	3.7
20	37	91	77	e40	265	170	90	45	16	3.8	21	e3.2
21	47	68	82	e40	622	261	74	39	8.8	6.8	17	e2.8
22	39	54	77	e40	603	660	62	35	9.5	9.6	34	e2.5
23	31	44	69	e46	478	703	53	31	7.3	8.5	29	e3.2
24	24	38	62	e70	301	856	47	27	7.5	5.7	20	e3.0
25	20	33	e60	e100	202	828	43	31	7.5	5.2	16	e2.8
26	17	28	e55	e200	159	516	38	44	6.6	5.7	13	e3.0
27	16	164	e50	e150	128	639	34	46	7.3	6.3	13	e2.8
28	14	804	e48	e250	121	859	30	35	7.4	17	12	e2.5
29	13	376	e46	e350	---	601	29	31	7.3	9.7	9.2	e2.4
30	27	201	e44	e280	---	450	27	27	6.5	14	8.5	e2.3
31	84	---	e40	e200	---	305	---	24	---	8.4	13	---
TOTAL	613.5	2981	3305	2752	4847	11218	5730	2613	322.8	302.9	451.5	172.4
MEAN	19.8	99.4	107	88.8	173	362	191	84.3	10.8	9.77	14.6	5.75
MAX	84	804	423	350	622	859	601	622	22	53	64	25
MIN	5.9	26	40	40	40	91	27	24	6.5	3.8	3.8	2.3
CFM	.40	2.02	2.17	1.81	3.53	7.37	3.89	1.72	.22	.20	.30	.12
IN.	.46	2.26	2.50	2.09	3.67	8.50	4.34	1.98	.24	.23	.34	.13

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1948 - 1994, BY WATER YEAR (WY)

	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959
MEAN	27.6	51.4	91.7	93.7	125	184	146	91.0	43.8	19.8	16.5	15.1
MAX	157	336	256	251	307	362	343	205	154	111	116	98.1
(WY)	1955	1986	1973	1952	1956	1994	1993	1968	1981	1989	1956	1950
MIN	1.52	2.32	5.96	13.7	19.4	30.8	33.0	21.8	5.48	2.68	2.05	1.78
(WY)	1964	1954	1954	1977	1954	1990	1968	1991	1965	1965	1966	1991

POTOMAC RIVER BASIN

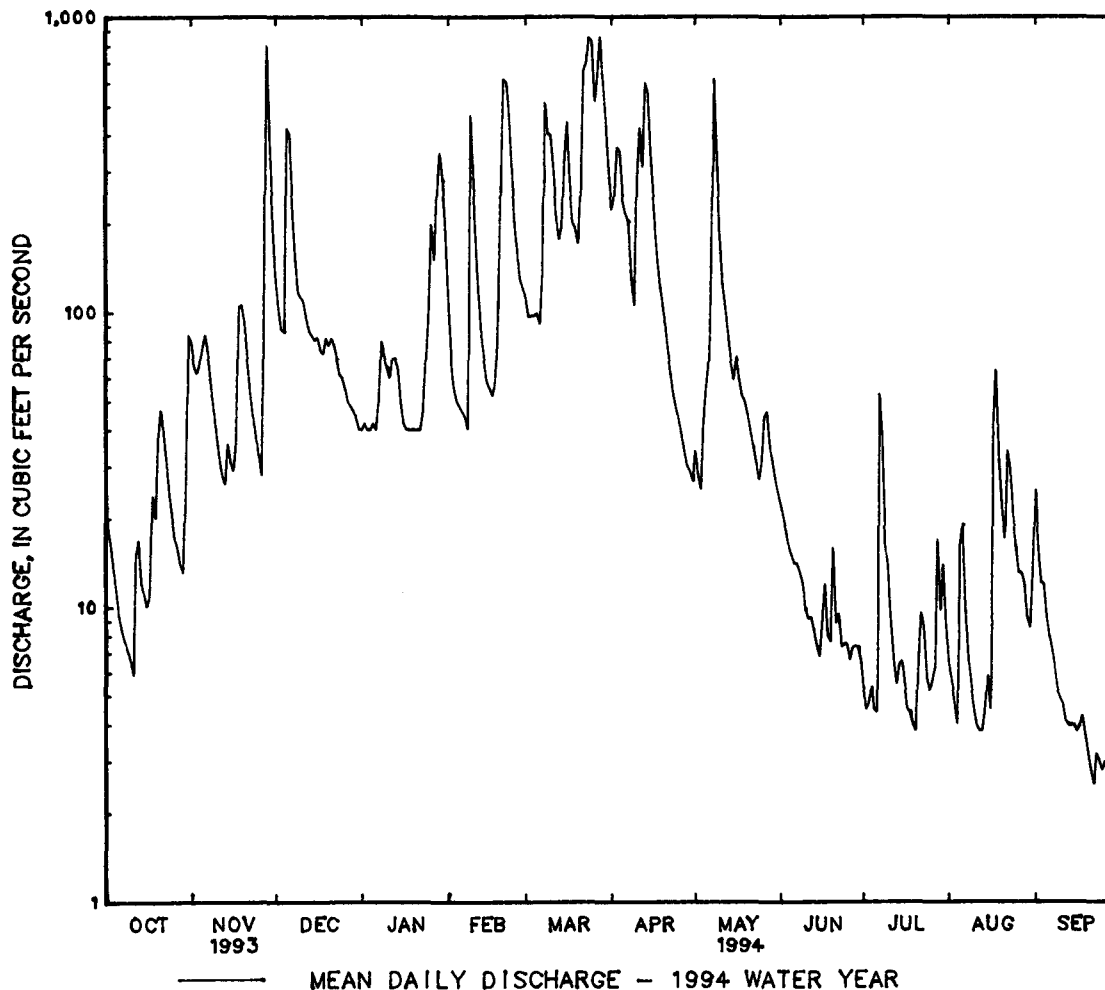
01596500 SAVAGE RIVER NEAR BARTON, MD--Continued

SUMMARY STATISTICS	FOR 1993 CALENDAR YEAR		FOR 1994 WATER YEAR		WATER YEARS 1948 - 1994	
ANNUAL TOTAL	35623.4		35309.1		75.2	
ANNUAL MEAN	97.6		96.7		102	
HIGHEST ANNUAL MEAN					34.9	
LOWEST ANNUAL MEAN					2180	
HIGHEST DAILY MEAN	1320	Apr 1	859	Mar 28	Nov 5 1985	
LOWEST DAILY MEAN	2.3	Jul 25	2.3	Sep 30	(a)	
ANNUAL SEVEN-DAY MINIMUM	2.6	Jul 20	2.7	Sep 24	Aug 29 1966	
INSTANTANEOUS PEAK FLOW			1190	Nov 28	(b) 7510	
INSTANTANEOUS PEAK STAGE			3.83	Nov 28	Oct 15 1954	
INSTANTANEOUS LOW FLOW	UNKNOWN		UNKNOWN		8.45	
ANNUAL RUNOFF (CFSM)	1.99		1.97		.40	
ANNUAL RUNOFF (INCHES)	26.99		26.75		1.53	
10 PERCENT EXCEEDS	172		286		20.82	
50 PERCENT EXCEEDS	43		40		187	
90 PERCENT EXCEEDS	4.8		4.9		33	
					4.0	

a Sept. 2, 3, 12, 1966

b From rating curve extended above 1,600 ft³/s on basis of slope-area measurement of peak flow.

c Sept. 3, 4, 1966.



POTOMAC RIVER BASIN

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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 upstream from mouth.

DRAINAGE AREA.--106 mi².

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

REVISED RECORDS.--WSP 1432: 1955.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 1,276.40 ft above sea level.

REMARKS.--No estimated daily discharges. Records good. Diversions upstream from station by Baltimore and Ohio Railroad and by cities of Frostburg and Westernport for municipal supply. Flow regulated by Savage River Reservoir beginning December 1950, capacity 20,000 acre-ft. 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.

PEAK DISCHARGE FOR CURRENT YEAR.--Peak discharge, 3,100 ft³/s, May 8, gage height, 5.12 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	57	53	599	92	756	310	602	91	69	55	55	56
2	56	53	593	92	744	257	555	126	69	58	54	56
3	56	53	585	92	731	428	557	129	69	58	53	56
4	56	67	576	92	463	594	560	127	69	57	53	56
5	56	79	583	92	218	400	470	130	69	56	55	56
6	56	79	589	92	192	307	428	145	69	56	55	56
7	56	79	589	92	178	308	427	142	69	57	53	56
8	56	79	388	93	179	273	427	1710	69	56	53	56
9	56	79	269	94	415	407	423	1030	69	56	53	56
10	56	79	269	136	707	624	428	503	69	56	53	56
11	56	79	268	161	707	766	434	500	70	56	53	56
12	57	79	265	161	705	760	447	413	69	56	53	55
13	56	79	264	161	691	753	1470	260	69	56	53	55
14	56	79	196	161	680	747	1510	173	69	56	55	56
15	56	79	158	161	449	750	842	173	69	56	55	56
16	56	79	157	161	318	763	629	149	70	56	54	55
17	57	80	157	161	315	761	490	149	69	55	59	56
18	58	80	159	161	258	713	434	135	70	55	57	56
19	58	80	159	161	230	625	353	135	71	55	56	55
20	58	80	159	161	403	551	243	127	70	55	55	55
21	54	80	159	161	724	511	232	123	69	55	55	55
22	58	103	200	159	1100	535	219	123	69	55	56	55
23	229	118	192	159	1180	882	138	123	68	55	55	55
24	236	117	175	160	1170	1390	136	93	69	55	55	235
25	53	118	175	162	835	2040	167	94	69	55	55	221
26	52	116	175	206	665	1660	155	133	68	55	55	53
27	52	120	136	233	653	1640	151	99	68	55	55	53
28	52	543	114	379	566	1930	135	69	68	55	55	52
29	52	930	114	462	---	1730	129	69	68	55	55	52
30	53	733	100	465	---	1630	91	69	55	55	55	52
31	53	---	92	658	---	1060	---	69	---	55	55	---
TOTAL	2073	4472	8614	5781	16232	26105	13282	7411	2057	1726	1693	1998
MEAN	66.9	149	278	186	580	842	443	239	68.6	55.7	54.6	66.6
MAX	236	930	599	658	1180	2040	1510	1710	71	58	59	235
MIN	52	53	92	92	178	257	91	69	55	55	53	52
(†)	8240	12100	9410	13260	9840	17990	19100	18490	16120	13860	13090	10020

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1951 - 1994, BY WATER YEAR (WY)

	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962
MEAN	111	123	215	213	275	342	223	196	106	67.6	69.8	86.9
MAX	446	641	655	713	596	842	813	488	298	329	262	206
(WY)	1955	1986	1973	1952	1956	1994	1993	1989	1951	1990	1956	1975
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, 1993, 9,900 acre-feet).
Records furnished by U.S. Army Corps of Engineers.

POTOMAC RIVER BASIN

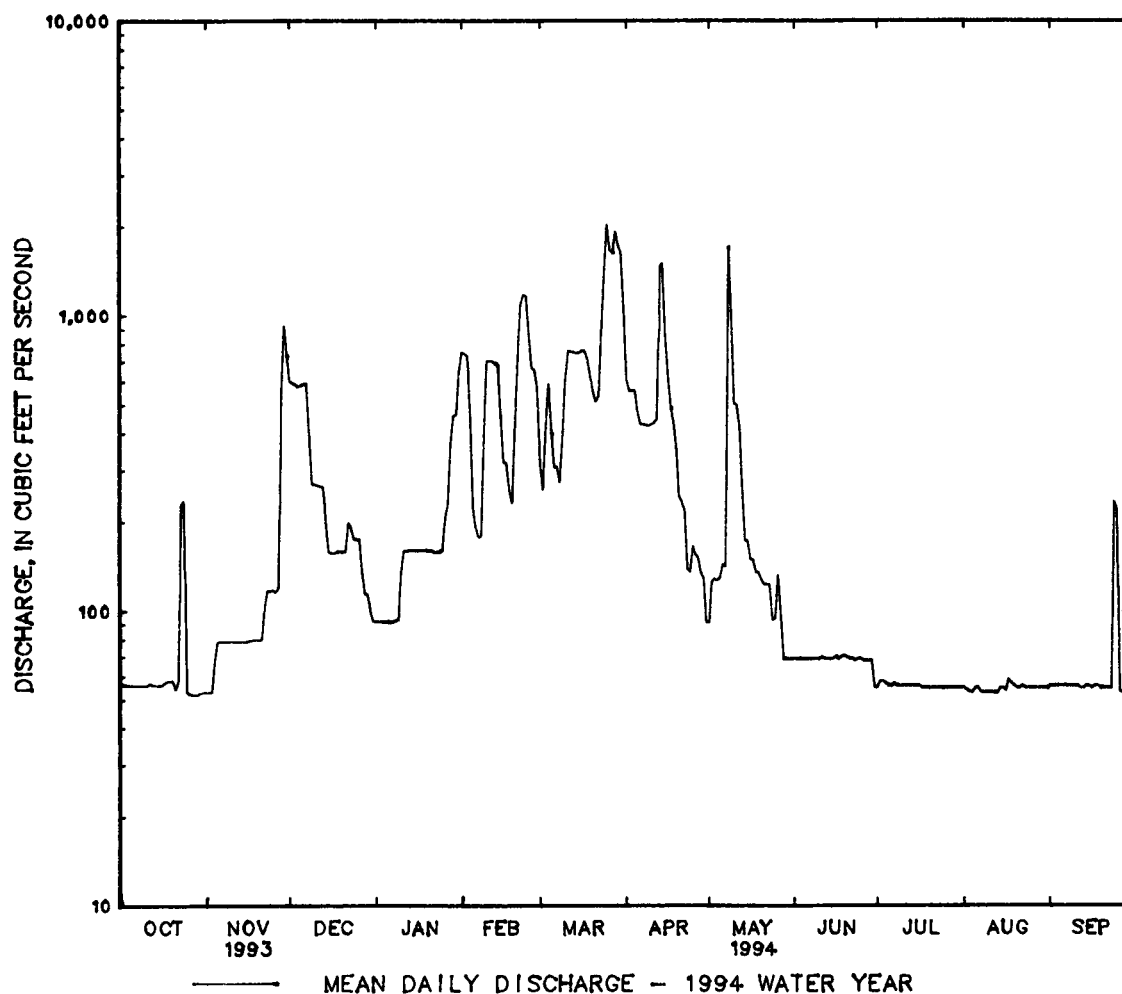
01597500 SAVAGE RIVER, BELOW SAVAGE RIVER DAM, NEAR BLOOMINGTON, MD--Continued

SUMMARY STATISTICS	FOR 1993 CALENDAR YEAR		FOR 1994 WATER YEAR		WATER YEARS 1951 - 1994	
ANNUAL TOTAL	83915		91444			
ANNUAL MEAN	230		251		168	
ANNUAL MEAN*	220		251		169	
HIGHEST ANNUAL MEAN					251	1994
LOWEST ANNUAL MEAN					69.7	1954
HIGHEST DAILY MEAN	3460	Apr 1	2040	Mar 25	3790	Oct 16 1954
LOWEST DAILY MEAN	52	(a)	52	(a)	.60	(b)
ANNUAL SEVEN-DAY MINIMUM	52	Oct 25	52	Oct 25	.64	Aug 4 1951
INSTANTANEOUS PEAK FLOW			3100	May 8	8550	Nov 4 1985
INSTANTANEOUS PEAK STAGE			5.12	May 8	7.81	Nov 4 1985
INSTANTANEOUS LOW FLOW			7.9	Oct 21	.35	Oct 27 1966
ANNUAL RUNOFF (CFSM)	2.17		2.36		1.59	
ANNUAL RUNOFF (INCHES)	29.45		32.09		21.59	
10 PERCENT EXCEEDS	556		684		419	
50 PERCENT EXCEEDS	80		92		84	
90 PERCENT EXCEEDS	56		55		21	

* Adjusted for change in reservoir contents since December 1950.

a Oct. 26-29, Nov. 28-30.

b July 27-31, Aug. 5, 6, 9, 10, 1951.



POTOMAC RIVER BASIN

219

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.--404 mi².

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

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

GAGE.--Water-stage recorder and concrete control. Datum of gage is 946.22 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.

PEAK DISCHARGE FOR CURRENT YEAR.--Peak discharge, 8,140 ft³/s, Mar. 28, gage height, 8.70 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	212	227	1270	640	2400	907	3450	762	482	261	243	495
2	216	226	1250	640	2150	835	4740	1710	354	262	242	489
3	214	224	1240	643	1570	982	3210	998	353	264	240	489
4	214	234	1240	648	1390	1230	1950	1330	352	264	240	488
5	213	257	1470	638	1100	1670	1380	2250	352	264	267	486
6	215	266	1360	636	1070	1830	1210	1900	351	267	869	440
7	207	255	1330	654	1040	1230	1140	2290	349	273	567	351
8	211	250	1110	778	1050	1200	1130	5070	348	273	238	353
9	213	266	967	1350	4240	1440	1420	4090	331	270	236	358
10	211	309	1060	1750	4950	2400	2010	3470	306	267	267	361
11	211	308	1130	1770	3790	2850	1960	3350	306	266	301	358
12	231	306	1120	1780	3720	3670	1830	2920	306	265	301	356
13	213	308	1110	1440	3650	3630	3930	1620	305	253	301	356
14	210	301	1030	1030	3590	2790	4650	729	305	239	310	355
15	216	286	980	1010	2510	2900	3660	666	304	237	305	353
16	216	283	988	1010	2070	2890	4160	953	306	236	303	353
17	220	293	977	1010	1720	2810	2740	1660	307	236	679	355
18	222	341	977	1000	1500	2740	1270	1220	305	236	903	354
19	219	396	995	853	1920	3340	1220	666	309	236	380	352
20	223	409	984	736	2450	2760	995	571	311	237	378	350
21	219	407	988	732	2640	2030	836	786	308	239	377	349
22	219	426	1030	729	3160	2310	666	769	305	242	510	349
23	898	442	1030	725	3270	3220	733	516	306	239	529	350
24	1060	442	923	753	3220	4180	671	490	307	236	512	1040
25	209	440	851	1200	2660	5560	495	439	303	237	506	1120
26	208	438	800	1910	2790	7550	463	486	297	246	502	357
27	208	532	702	1900	2550	7740	479	547	301	258	497	353
28	207	1060	672	2030	1460	6210	544	499	298	256	495	353
29	206	1440	668	2180	---	5980	548	497	301	249	493	346
30	234	1390	653	2150	---	5180	547	496	282	261	490	341
31	242	---	640	2310	---	3300	---	553	---	244	493	---
TOTAL	8217	12762	31545	36635	69630	97364	54037	44303	9650	7813	12974	12810
MEAN	265	425	1018	1182	2487	3141	1801	1429	322	252	419	427
MAX	1060	1440	1470	2310	4950	7740	4740	5070	482	273	903	1120
MIN	206	224	640	636	1040	835	463	439	282	236	236	341
CFSM	.66	1.05	2.52	2.93	6.16	7.77	4.46	3.54	.80	.62	1.04	1.06
IN.	.76	1.18	2.90	3.37	6.41	8.97	4.98	4.08	.89	.72	1.19	1.18

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1950 - 1994, BY WATER YEAR (WY)

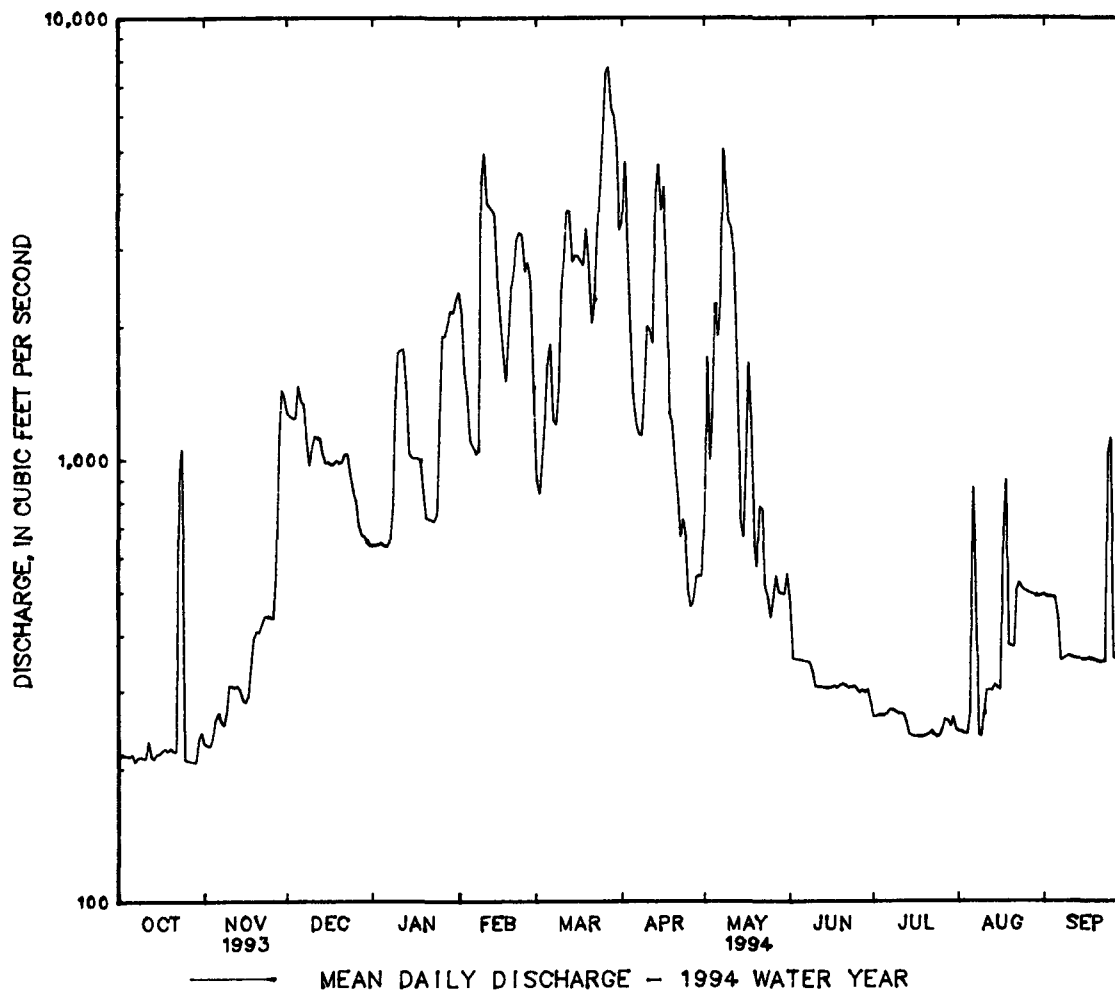
MEAN	363	479	829	903	1131	1553	1204	914	503	320	310	271
MAX	1423	2806	2536	2276	2487	3414	3098	2238	1493	1294	1401	737
(WY)	1955	1986	1973	1952	1994	1963	1993	1988	1981	1990	1955	1971
MIN	45.5	91.8	131	166	322	467	374	165	108	91.4	61.4	66.9
(WY)	1952	1954	1954	1977	1978	1988	1990	1982	1969	1953	1951	1951

POTOMAC RIVER BASIN

01598500 NORTH BRANCH POTOMAC RIVER AT LUKE, MD--Continued

SUMMARY STATISTICS	FOR 1993 CALENDAR YEAR		FOR 1994 WATER YEAR		WATER YEARS 1950 - 1994	
ANNUAL TOTAL	316210		397740			
ANNUAL MEAN	866		1090		730	
ANNUAL MEAN*	839		1112		725	
HIGHEST ANNUAL MEAN					1090	1994
LOWEST ANNUAL MEAN					412	1969
HIGHEST DAILY MEAN	9820	Apr 1	7740	Mar 27	18400	Aug 18 1955
LOWEST DAILY MEAN	206	Oct 29	206	Oct 29	36	Oct 20 1951
ANNUAL SEVEN-DAY MINIMUM	212	Oct 5	212	Oct 5	38	Oct 18 1951
INSTANTANEOUS PEAK FLOW			8140	Mar 28	(a)39400	Oct 15 1954
INSTANTANEOUS PEAK STAGE			8.70	Mar 28	17.15	Oct 15 1954
INSTANTANEOUS LOW FLOW			158	Oct 6	UNKNOWN	
ANNUAL RUNOFF (CFSM)	2.14		2.70		1.81	
ANNUAL RUNOFF (CFSM)*	2.08		2.75		1.79	
ANNUAL RUNOFF (INCHES)	29.12		36.62		24.55	
ANNUAL RUNOFF (INCHES)*	28.19		37.36		24.37	
10 PERCENT EXCEEDS	1460		2830		1640	
50 PERCENT EXCEEDS	412		544		412	
90 PERCENT EXCEEDS	216		236		114	

* Adjusted for change in reservoir contents since October 1949.

a From rating curve extended above 25,000 ft³/s on basis of slope-area measurement of peak flow.

POTOMAC RIVER BASIN

221

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 mi².

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 958.96 ft above sea level (Westvaco Corporation bench mark). 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 ft³/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 Welch Hill. An undetermined amount of water is diverted from the upper third of basin into the Wills Creek basin by the Hoffman drainage tunnel (see station 01601500). Several 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.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,200 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 28	0015	1,390	6.75	Mar. 27	1000	*1,530	*6.96
Mar. 23	1815	1,470	6.86	Apr. 13	1545	1,460	6.85
Mar. 24	1500	1,520	6.94	May 7	2400	1,460	6.84

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13	46	89	41	142	160	388	136	39	16	17	20
2	12	30	77	45	107	147	335	88	36	15	14	15
3	11	25	73	44	97	146	317	80	34	15	12	13
4	9.8	24	78	43	89	165	284	149	32	15	11	14
5	8.7	33	428	45	86	193	245	161	31	14	28	12
6	8.4	52	217	42	83	172	216	157	29	13	20	12
7	8.4	37	142	61	80	250	192	263	27	14	14	11
8	8.4	29	109	80	80	582	162	797	27	15	12	11
9	8.4	24	92	64	572	449	136	396	25	13	11	10
10	8.4	21	109	e60	348	697	300	278	23	13	11	10
11	8.4	19	102	62	241	499	264	212	24	12	10	10
12	20	18	84	73	188	383	244	181	24	11	10	9.1
13	15	20	77	74	154	353	953	146	21	11	8.7	8.3
14	12	27	75	72	125	412	670	118	20	18	15	8.1
15	11	23	77	46	114	593	461	108	19	17	15	8.2
16	10	20	80	e44	113	607	374	138	23	13	12	7.8
17	12	22	73	e44	108	416	274	101	36	12	86	8.4
18	17	62	69	e44	128	381	228	92	22	12	69	11
19	14	44	82	e44	202	368	196	88	19	11	29	8.8
20	16	37	75	e44	366	328	170	83	19	11	20	7.6
21	17	30	76	e44	720	488	148	77	19	14	19	6.9
22	16	26	73	e46	694	900	124	72	20	16	45	7.3
23	14	23	68	48	576	1040	109	66	19	17	35	9.5
24	13	21	61	83	437	1240	100	59	28	12	20	9.4
25	12	20	59	141	329	1240	92	62	39	12	16	7.9
26	11	18	51	307	267	781	87	77	22	17	15	8.6
27	11	188	53	194	210	1110	83	70	22	21	18	8.0
28	11	618	48	261	177	1230	80	55	21	30	15	7.6
29	11	195	46	348	---	945	76	49	19	16	13	7.2
30	31	114	41	235	---	649	84	45	18	14	12	6.6
31	64	---	41	181	---	505	---	42	---	13	14	---
TOTAL	442.9	1866	2825	2960	6833	17429	7392	4446	757	453	646.7	294.3
MEAN	14.3	62.2	91.1	95.5	244	562	246	143	25.2	14.6	20.9	9.81
MAX	64	618	428	348	720	1240	953	797	39	30	86	20
MIN	8.4	18	41	41	80	146	76	42	18	11	8.7	6.6
CFSM	.20	.86	1.26	1.32	3.37	7.77	3.40	1.98	.35	.20	.29	.14
IN.	.23	.96	1.45	1.52	3.51	8.96	3.80	2.28	.39	.23	.33	.15

• Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1905 - 1994, BY WATER YEAR (WY)

	MEAN	33.5	41.5	77.1	92.1	124	208	177	121	55.8	30.4	22.0	19.5
MAX	270	355	314	371	283	682	420	294	161	185	120	141	
(WY)	1943	1986	1973	1937	1971	1936	1993	1989	1951	1989	1955	1945	
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	

POTOMAC RIVER BASIN

01599000 GEORGES CREEK AT FRANKLIN, MD--Continued

SUMMARY STATISTICS

FOR 1993 CALENDAR YEAR

FOR 1994 WATER YEAR

WATER YEARS 1905 - 1994

ANNUAL TOTAL	38542.3	46344.9	82.1	
ANNUAL MEAN	106	127	129	1984
HIGHEST ANNUAL MEAN			30.7	1969
LOWEST ANNUAL MEAN			4130	Mar 17 1936
HIGHEST DAILY MEAN	1410 Apr 1	1240 Mar 24	1.6	(b)
LOWEST DAILY MEAN	6.6 (a)	6.6 Sep 30	1.6	Sep 29 1930
ANNUAL SEVEN-DAY MINIMUM	6.8 Aug 24	7.9 Sep 24	(c) 8500	Mar 17 1936
INSTANTANEOUS PEAK FLOW		1530 Mar 27	(d) 9.60	Mar 17 1936
INSTANTANEOUS PEAK STAGE		6.96 Mar 27	1.6	(g)
INSTANTANEOUS LOW FLOW		6.6 (f)	1.13	
ANNUAL RUNOFF (CFSM)	1.46	1.75	15.41	
ANNUAL RUNOFF (INCHES)	19.80	23.81	199	
10 PERCENT EXCEEDS	215	367	37	
50 PERCENT EXCEEDS	37	44	7.1	
90 PERCENT EXCEEDS	8.5	11		

a Aug. 26-28, 30.

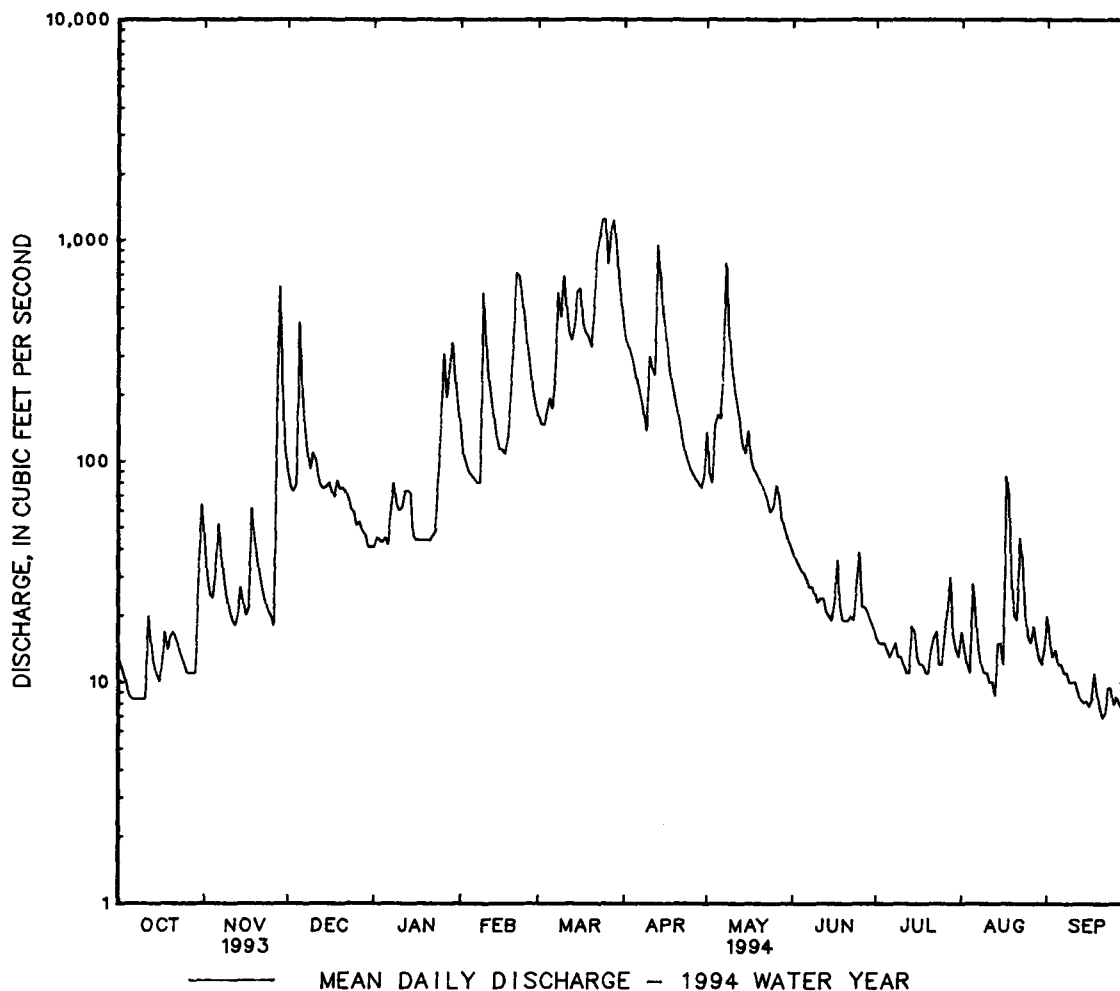
b Sept. 29, 30, 1930.

c From rating curve extended above 2,000 ft³/s on basis of slope-area measurement of peak flow.

d At site then in use.

f Sept. 21, 22, 29, 30.

g Sept. 29 to Oct. 13, 1930.



01600000 NORTH BRANCH POTOMAC RIVER AT PINTO, MD

WATER-QUALITY RECORDS

LOCATION.--Lat 39°33'59", long 78°50'25", Mineral County, W. Va., Hydrologic Unit 02070002, on right bank at downstream side of Western Maryland Railway bridge at Pinto, 2.8 mi downstream from Mill Run, and at mile 32.6.

DRAINAGE AREA.--596 mi².

PERIOD OF RECORD.--Water years 1969-74, 1976-85, 1992, October 1993 to September 1994.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1980 to September 1985.

pH: October 1980 to September 1985.

WATER TEMPERATURES: October 1980 to September 1985.

DISSOLVED OXYGEN: October 1980 to September 1985.

INSTRUMENTATION.--Water-quality monitor October 1980 to September 1985.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE (water years 1982-85): Maximum, 1,240 microsiemens, Oct. 20, 1982; minimum, 160 microsiemens, July 5, 1982.

pH (water years 1982-85): Maximum, 8.6 units, June 27, 1982; minimum, 6.4 units, Oct. 30, 31, 1982.

WATER TEMPERATURE (water years 1982-85): Maximum, 28.5°C, Aug. 20, 21, 1983; minimum, 0.5°C on many days during winter periods.

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH WATER WHOLE FIELD (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	TEMPER-ATURE AIR (DEG C)	BARO-METRIC PRES-SURE (MM OF HG)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, (PER-CENT SATUR-ATION)	ALKA-LINITY WAT DIS TOT IT FIELD MG/L AS CACO3	BICAR-BONATE WATER DIS IT FIELD MG/L AS HCO3	NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS NO3)	
JUN 1994 06...	0730	435	472	7.3	20.0	24.0	742	7.8	88	33	40	2.0	
DATE		NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NO2+NO3 (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA + ORGANIC DIS. (MG/L AS N)	PHOS-PHORUS TOTAL (MG/L AS P)	PHOS-PHORUS DIS-SOLVED (MG/L AS P)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P)	DIMETH-OATE WATER FLTRD 0.7 U GG, REC (UG/L)	ETHAL-FLUR-ALIN WAT FLT 0.7 U GF, REC (UG/L)	PHORATE WATER FLTRD 0.7 U GF, REC (UG/L)
JUN 1994 06...	0.020	0.480	0.480	0.030	<0.20	<0.20	0.010	<0.010	<0.010	<0.02	<0.01	<0.01	
DATE		TER-BACIL WATER FLTRD 0.7 U GF, REC (UG/L)	TRI-FLUR-ALIN WAT FLT 0.7 U GF, REC (UG/L)	2,6-DI-ETHYL ANILINE WAT FLT 0.7 U GF, REC (UG/L)	ALA-CHLOR, WATER, DISS, REC, (UG/L)	ALPHA BHC DIS-SOLVED (UG/L)	ATRA-ZINE, WATER, DISS, REC (UG/L)	BEN-FLUR-ALIN WAT FLD 0.7 U GF, REC (UG/L)	BUTYL-ATE, WATER, DISS, REC (UG/L)	CAR-BARYL WATER FLTRD 0.7 U GF, REC (UG/L)	CARBO-FURAN WATER FLTRD 0.7 U GF, REC (UG/L)	CHLOR-PYRIFOS DIS-SOLVED (UG/L)	
JUN 1994 06...		0.20	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.01	<0.05	<0.01	<0.01	

POTOMAC RIVER BASIN

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

WATER-QUALITY RECORDS

DATE	CYANA- ZINE, WATER, DISS, REC (UG/L)	DCPA WATER FLTRD 0.7 U GF, REC (UG/L)	P,P' DDE DISSOLV (UG/L)	DEETHYL ATRA- ZINE, WATER, DISS, REC (UG/L)	DI- AZINON, DIS- SOLVED (UG/L)	DI- ELDRIN DIS- SOLVED (UG/L)	DISUL- FOTON WATER FLTRD 0.7 U GF, REC (UG/L)	EPTC WATER FLTRD 0.7 U GF, REC (UG/L)	ETHO- PROP WATER FLTRD 0.7 U GF, REC (UG/L)	FONOFOS WATER DISS REC (UG/L)	LINDANE DIS- SOLVED (UG/L)
JUN 1994 06...	<0.01	<0.004	<0.01	<0.005	<0.01	<0.01	<0.06	<0.005	<0.01	<0.01	<0.01

DATE	LIN- URON WATER FLTRD 0.7 U GF, REC (UG/L)	MALA- THION, DIS- SOLVED (UG/L)	METHYL AZIN- PHOS WAT FLT 0.7 U GF, REC (UG/L)	METHYL PARA- THION WAT FLT 0.7 U GF, REC (UG/L)	METO- LACHLOR WATER DISSOLV (UG/L)	METRI- BUZIN SENCOR WATER DISSOLV (UG/L)	MOL- INATE WATER FLTRD 0.7 U GF, REC (UG/L)	NAPROP- AMIDE WATER FLTRD 0.7 U GF, REC (UG/L)	PEB- ULATE WATER FLTRD 0.7 U GF, REC (UG/L)	PARA- THION, DIS- SOLVED (UG/L)	PENDI- METH- ALIN WAT FLT 0.7 U GF, REC (UG/L)
JUN 1994 06...	<0.04	<0.01	<0.05	<0.03	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02

DATE	PER- METHRIN CIS WAT FLT 0.7 U GF, REC (UG/L)	PRO- METON, WATER, DISS, REC (UG/L)	PRON- AMIDE WATER FLTRD 0.7 U GF, REC (UG/L)	PROP- CHLOR, WATER, DISS, REC (UG/L)	PRO- PARGITE WATER FLTRD 0.7 U GF, REC (UG/L)	PRO- PANIL WATER FLTRD 0.7 U GF, REC (UG/L)	SI- MAZINE, WATER, DISS, REC (UG/L)	TEBU- THIURON WATER FLTRD 0.7 U GF, REC (UG/L)	TER- BUFOS WATER FLTRD 0.7 U GF, REC (UG/L)	THIO- BENCARB WATER FLTRD 0.7 U GF, REC (UG/L)	TRIAL- LATE WATER FLTRD 0.7 U GF, REC (UG/L)
JUN 1994 06...	<0.02	<0.01	<0.01	<0.02	<0.01	<0.02	<0.01	<0.02	<0.01	<0.01	<0.01

SUSPENDED SEDIMENT DISCHARGE

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)
JUN 1994 06...	0730	435	11	13

POTOMAC RIVER BASIN

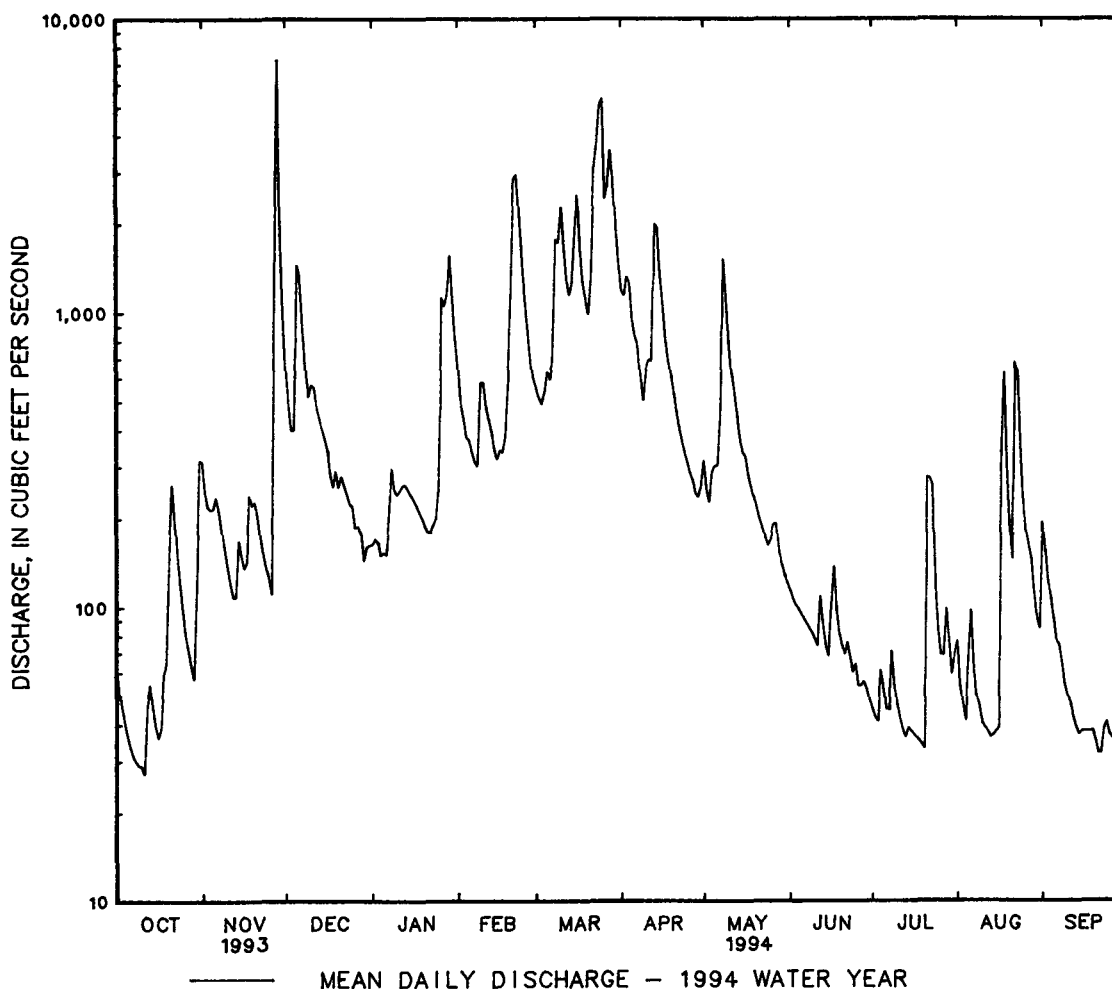
01601500 WILLS CREEK NEAR CUMBERLAND, MD--Continued

SUMMARY STATISTICS	FOR 1993 CALENDAR YEAR		FOR 1994 WATER YEAR		WATER YEARS 1905 - 1994	
ANNUAL TOTAL	188403		169568		334	
ANNUAL MEAN	516		465		499	
HIGHEST ANNUAL MEAN					122	
LOWEST ANNUAL MEAN					15700	
HIGHEST DAILY MEAN	7630	Apr 17	7230	Nov 28	15700	Oct 15 1942
LOWEST DAILY MEAN	27	Oct 11	27	Oct 11	10	(a)
ANNUAL SEVEN-DAY MINIMUM	30	Aug 26	31	Oct 5	10	Oct 8 1930
INSTANTANEOUS PEAK FLOW			11800	Nov 28	(b)38100	Mar 17 1936
INSTANTANEOUS PEAK STAGE			10.26	Nov 28	(c)20.20	Mar 17 1936
INSTANTANEOUS LOW FLOW			26	Oct 11	9.0	Oct 14 1930
ANNUAL RUNOFF (CFSM)	2.09		1.88		1.35	
ANNUAL RUNOFF (INCHES)	28.37		25.54		18.38	
10 PERCENT EXCEEDS	1190		1250		795	
50 PERCENT EXCEEDS	169		200		146	
90 PERCENT EXCEEDS	37		39		30	

a Oct. 8-10, 1930.

b From rating curve extended above 11,000 ft³/s on basis of slope-area measurements at gage heights of 13.45 and 20.2 ft.

c From floodmarks at present site.



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.--875 mi².

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.

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.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known, 29.2 ft June 1, 1889, discharge, about 89,000 ft³/s.

Flood of Mar. 29, 1924, reached a stage of 28.4 ft., discharge, about 82,000 ft³/s.

PEAK DISCHARGE FOR CURRENT YEAR.--Peak discharge, 14,900 ft³/s, Mar. 25, gage height, 12.96 ft.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	304	677	1890	857	3060	1880	4600	1290	824	360	475	774
2	289	546	1710	882	2750	1710	6410	2010	628	344	355	706
3	283	489	1610	913	2100	1670	4940	1450	582	344	330	660
4	276	471	1600	925	1860	2040	4060	1370	573	365	319	646
5	270	501	3710	899	1590	2770	2760	2850	562	360	386	624
6	263	574	3320	883	1530	3210	2360	2460	553	348	540	605
7	264	542	2480	955	1480	2800	2150	2710	544	346	1100	513
8	259	489	2020	1180	1510	4980	1890	7740	534	397	371	452
9	261	450	1620	1320	4260	4660	1820	6660	526	366	328	445
10	260	452	1660	1790	7660	6720	2320	4570	486	351	314	444
11	257	462	1800	1840	4710	6360	3340	4100	465	341	347	442
12	315	446	1650	1930	4270	5770	2500	3810	513	332	365	430
13	329	448	1580	1920	4040	5630	6420	2580	480	328	361	425
14	288	525	1520	1440	3850	5220	8720	1390	453	351	366	419
15	275	492	1420	1280	3340	6090	6120	1290	439	355	395	420
16	275	465	1430	1100	2740	7370	5560	1290	487	314	373	420
17	280	471	1350	1050	2380	5490	4630	2030	573	303	875	421
18	308	616	1310	1000	2220	4740	2490	1710	487	304	2190	427
19	315	661	1410	980	2760	4970	2200	1150	450	296	999	416
20	385	689	1370	960	4340	4310	1850	981	446	292	703	408
21	509	659	1420	940	7780	4450	1630	1010	444	571	650	403
22	430	622	1390	940	8350	6910	1390	1090	450	687	1170	404
23	395	628	1390	960	7240	8680	1290	997	443	752	1370	424
24	1350	617	1300	1000	6190	10900	1260	851	445	426	982	505
25	636	602	1190	1050	5070	12700	1190	816	515	365	829	1320
26	322	584	1130	1150	4060	10800	1020	856	431	371	757	662
27	314	1480	1040	3320	3720	11800	982	943	420	398	720	421
28	304	9380	961	3430	2940	12500	1010	842	422	540	708	412
29	294	3620	911	4410	---	11200	1000	795	407	417	661	406
30	372	2520	909	3620	---	9060	990	774	405	376	633	393
31	713	---	851	3170	---	6140	---	757	---	368	627	---
TOTAL	11395	31178	48952	48094	107800	193530	88902	63172	14987	12068	20599	15447
MEAN	368	1039	1579	1551	3850	6243	2963	2038	500	389	664	515
MAX	1350	9380	3710	4410	8350	12700	8720	7740	824	752	2190	1320
MIN	257	446	851	857	1480	1670	982	757	405	292	314	393
CFSM	.42	1.19	1.80	1.77	4.40	7.13	3.39	2.33	.5			

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1929 - 1994, BY WATER YEAR (WY)

MEAN	603	758	1297	1541	1995	2924	2397	1710	876	511	436	388
MAX	3791	5350	4652	5115	4125	8763	5866	3902	2375	2270	2028	2036
(WY)	1943	1986	1973	1937	1961	1936	1993	1988	1981	1989	1955	1945
MIN	28.9	44.8	134	269	393	789	723	374	209	89.7	57.7	40.3
(WY)	1931	1931	1931	1940	1934	1990	1968	1934	1965	1930	1930	1932

POTOMAC RIVER BASIN

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

SUMMARY STATISTICS	FOR 1993 CALENDAR YEAR		FOR 1994 WATER YEAR		WATER YEARS 1929 - 1994	
ANNUAL TOTAL	590342		656124			
ANNUAL MEAN	1617		1798		1284	
ANNUAL MEAN*	1590		1820		1285	
HIGHEST ANNUAL MEAN					1801	
LOWEST ANNUAL MEAN					632	
HIGHEST DAILY MEAN	17700	Apr 17	12700	Mar 25	47400	Mar 18 1936
LOWEST DAILY MEAN	245	(a)	257	Oct 11	13	(b)
ANNUAL SEVEN-DAY MINIMUM	248	Aug 25	262	Oct 5	16	Sep 20 1932
INSTANTANEOUS PEAK FLOW			14900	Mar 25	(c)88200	Mar 17 1936
INSTANTANEOUS PEAK STAGE			12.96	Mar 25	29.10	Mar 17 1936
INSTANTANEOUS LOW FLOW			254	(d)	12	Sep 22 1932
ANNUAL RUNOFF (CFSM)	1.85		2.05		1.47	
ANNUAL RUNOFF (CFSM)*	1.82		2.08		1.47	
ANNUAL RUNOFF (INCHES)	25.10		27.89		19.94	
ANNUAL RUNOFF (INCHES)*	24.67		28.23		19.94	
10 PERCENT EXCEEDS	3110		4720		2970	
50 PERCENT EXCEEDS	786		899		667	
90 PERCENT EXCEEDS	271		344		166	

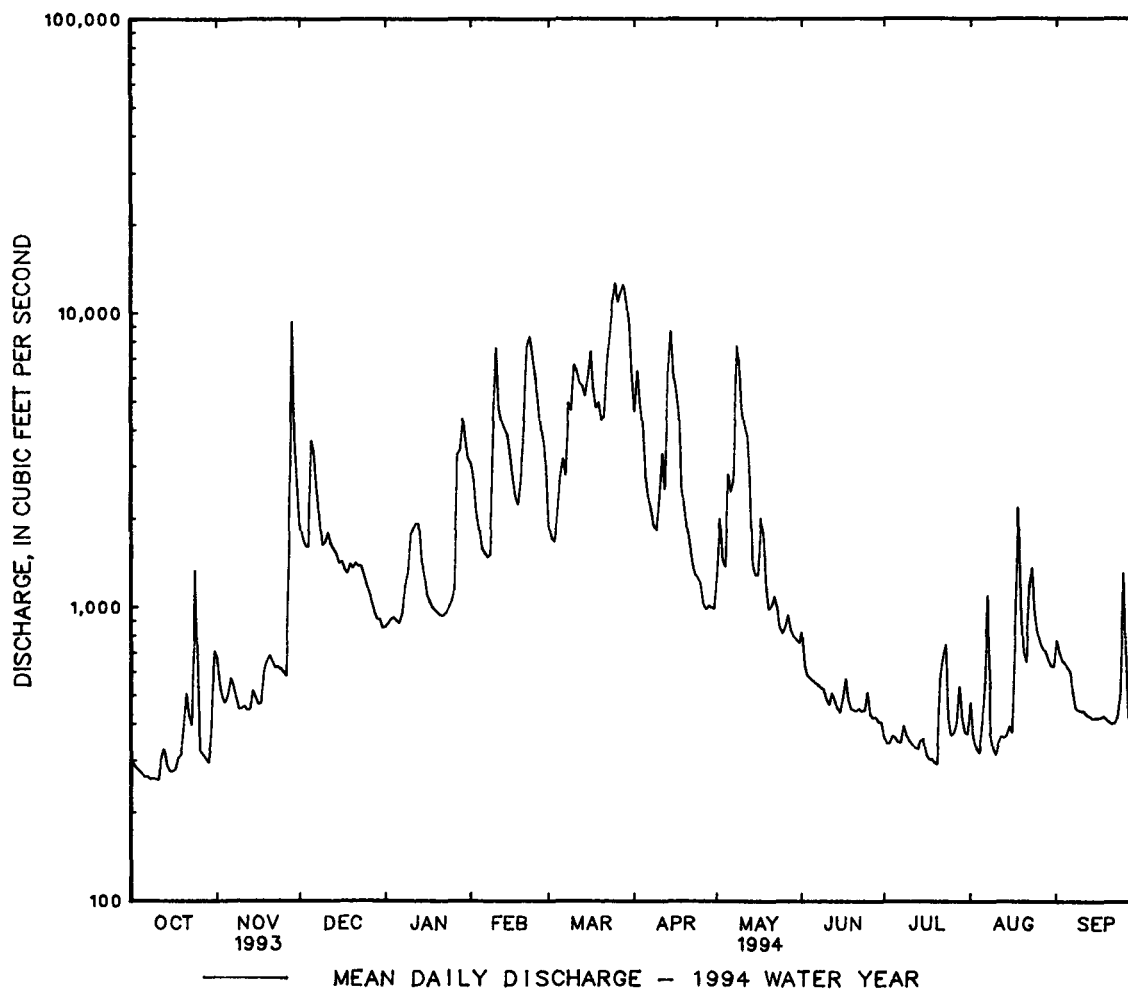
* Adjusted for change in reservoir contents since October 1981.

a Aug. 28, 30.

b Sept. 21-24, 1932.

c From rating curve extended above 33,000 ft³/s on basis of slope-area measurement of peak flow.

d Oct. 6, 8, 11.



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

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1965-83, 1993-94.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: October 1964 to September 1982.

SUSPENDED SEDIMENT DISCHARGE: October 1964 to September 1982.

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

EXTREMES FOR PERIOD OF DAILY RECORD.--

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

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

SEDIMENT LOAD: Maximum daily, 66,300 tons, July 4, 1978; minimum daily, 2.0 tons, Jan. 28, 1982.

WATER QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH WATER WHOLE FIELD (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	TEMPER- ATURE AIR (DEG C)	BARO- METRIC PRES- SURE (MM OF HG)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	HARD- NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	
OCT 1993													
07...	1130	272	725	7.3	13.5	11.0	753	8.8	86	240	72	15	
NOV													
04...	1300	467	512	7.4	8.0	13.0	749	11.5	99	200	57	13	
DEC													
07...	1145	2480	262	7.1	7.0	6.0	752	10.4	87	97	28	6.6	
JAN 1994													
10...	1000	1760	420	7.0	0.5	-10.0	766	14.2	98	170	49	11	
FEB													
07...	1215	1450	349	7.0	3.5	7.5	750	13.8	106	130	36	9.0	
MAR													
10...	1515	7940	222	7.1	3.5	4.0	743	13.1	101	86	24	6.3	
APR													
06...	1130	2770	299	7.0	9.5	15.0	738	10.8	98	120	31	9.7	
JUN													
06...	1015	590	528	7.5	21.5	31.0	743	8.5	99	--	--	--	
DATE		SODIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY WAT DIS TOT IT FIELD MG/L AS CACO3	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS NO3)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)
OCT 1993													
07...	47	4.7	52	63	180	57	0.20	3.9	473	--	<0.010	0.600	
NOV													
04...	24	2.8	48	59	160	30	0.20	5.2	335	--	<0.010	0.740	
DEC													
07...	7.9	1.6	20	24	78	9.1	<0.10	5.8	160	--	<0.010	1.00	
JAN 1994													
10...	11	2.1	17	22	140	13	<0.10	5.0	262	4.2	0.010	0.960	
FEB													
07...	13	2.2	21	26	110	17	<0.10	5.2	222	4.2	0.040	1.00	
MAR													
10...	7.9	1.5	20	24	62	12	<0.10	5.2	133	5.3	0.010	1.20	
APR													
06...	8.0	1.3	22	27	94	11	<0.10	5.3	182	3.7	0.030	0.860	
JUN													
06...	--	--	45	55	--	--	--	--	--	4.4	0.010	1.00	

POTOMAC RIVER BASIN

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

WATER-QUALITY RECORDS

DATE	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N)	PHOS- PHORUS TOTAL (MG/L AS P)	PHOS- PHORUS DIS- SOLVED (MG/L AS P)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P)	IRON, DIS- SOLVED (UG/L AS FE)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	CARBON, ORGANIC SUS- PENDED TOTAL (MG/L AS C)	DIMETH- OATE WATER FLTRD 0.7 U GG, REC (UG/L)
OCT 1993												
07...	0.600	0.020	0.40	<0.20	0.100	0.040	0.020	100	300	11	0.4	--
NOV												
04...	0.740	0.050	0.20	<0.20	0.060	0.020	0.010	66	290	6.8	0.4	--
DEC												
07...	1.00	0.040	0.20	<0.20	0.020	<0.010	<0.010	32	190	3.0	0.6	--
JAN 1994												
10...	0.960	0.110	0.30	<0.20	0.060	0.010	<0.010	26	450	2.8	1.1	--
FEB												
07...	1.00	0.070	0.20	<0.20	0.010	0.020	<0.010	42	370	3.3	0.3	--
MAR												
10...	1.20	0.070	0.30	<0.20	0.050	<0.010	<0.010	31	200	1.8	1.2	--
APR												
06...	0.860	0.070	0.20	<0.20	0.030	<0.010	<0.010	42	270	2.4	0.5	--
JUN												
06...	1.00	0.020	<0.20	<0.20	<0.010	<0.010	<0.010	--	--	--	--	<0.02
	ETHAL- FLUR- ALIN WAT FLT 0.7 U GF, REC (UG/L)	PHORATE WATER FLTRD 0.7 U GF, REC (UG/L)	TER- BACIL WATER FLTRD 0.7 U GF, REC (UG/L)	TRI- FLUR- ALIN WAT FLT 0.7 U GF, REC (UG/L)	2,6-DI- ETHYL ANILINE WAT FLT 0.7 U GF, REC (UG/L)	ALA- CHLOR, WATER, DISS, REC, (UG/L)	ALPHA BHC DIS- SOLVED (UG/L)	ATRA- ZINE, WATER, DISS, REC (UG/L)	BEN- FLUR- ALIN WAT FLT 0.7 U GF, REC (UG/L)	BUTYL- ATE, WATER, DISS, REC (UG/L)	CAR- BARYL WATER FLTRD 0.7 U GF, REC (UG/L)	CARBO- FURAN WATER FLTRD 0.7 U GF, REC (UG/L)
JUN 1994												
06...	<0.01	<0.01	0.12	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.01	<0.05	<0.01
	CHLOR- PYRIFOS DIS- SOLVED (UG/L)	CYANA- ZINE, WATER, DISS, REC (UG/L)	DCPA WATER FLTRD 0.7 U GF, REC (UG/L)	P,P' DDE DISSOLV (UG/L)	DEETHYL ATRA- ZINE, WATER, DISS, REC (UG/L)	DI- AZINON, DIS- SOLVED (UG/L)	DI- ELDRIN DIS- SOLVED (UG/L)	DISUL- FOTON WATER FLTRD 0.7 U GF, REC (UG/L)	EPTC WATER FLTRD 0.7 U GF, REC (UG/L)	ETHO- PROP WATER FLTRD 0.7 U GF, REC (UG/L)	FONOFOS WATER DISS REC (UG/L)	LINDANE DIS- SOLVED (UG/L)
JUN 1994												
06...	<0.01	<0.01	<0.004	<0.01	<0.005	<0.01	<0.01	<0.06	<0.005	<0.01	<0.01	<0.01
	LIN- URON WATER FLTRD 0.7 U GF, REC (UG/L)	MALA- THION, DIS- SOLVED (UG/L)	METHYL AZIN- PHOS WAT FLT 0.7 U GF, REC (UG/L)	METHYL PARA- THION WAT FLT 0.7 U GF, REC (UG/L)	METO- LACHLOR WATER DISSOLV (UG/L)	METRI- BUZIN WATER DISSOLV (UG/L)	MOL- INATE WATER FLTRD 0.7 U GF, REC (UG/L)	NAFROP- AMIDE WATER FLTRD 0.7 U GF, REC (UG/L)	FEB- ULATE WATER FLTRD 0.7 U GF, REC (UG/L)	PARA- THION, DIS- SOLVED (UG/L)	PENDI- METH- ALIN WAT FLT 0.7 U GF, REC (UG/L)	
JUN 1994												
06...	<0.04	<0.01	<0.05	<0.03	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02
	PER- METHRIN CIS WAT FLT 0.7 U GF, REC (UG/L)	PRO- METON, WATER, DISS, REC (UG/L)	PRON- AMIDE WATER FLTRD 0.7 U GF, REC (UG/L)	PROP- CHLOR, WATER, DISS, REC (UG/L)	PRO- PARGITE WATER FLTRD 0.7 U GF, REC (UG/L)	PRO- PANIL WATER FLTRD 0.7 U GF, REC (UG/L)	SI- MAZINE, WATER, DISS, REC (UG/L)	TEBU- THIURON WATER FLTRD 0.7 U GF, REC (UG/L)	TER- BUFOS WATER FLTRD 0.7 U GF, REC (UG/L)	THIO- BENCARB WATER FLTRD 0.7 U GF, REC (UG/L)	TRIAL- LATE WATER FLTRD 0.7 U GF, REC (UG/L)	
JUN 1994												
06...	<0.02	<0.01	<0.01	<0.02	<0.01	<0.02	<0.01	<0.02	<0.01	<0.01	<0.01	<0.01

POTOMAC RIVER BASIN

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

SUSPENDED SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY)
OCT 1993				
07...	1130	272	12	8.8
NOV				
04...	1300	467	9	11
DEC				
07...	1145	2480	13	87

POTOMAC RIVER BASIN

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 12.5.

DRAINAGE AREA.--219 mi².

WATER-DISCHARGE RECORDS

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

REVISED RECORDS.--WSP 951: 1939-40.

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.--Water-discharge records good except those for estimated daily discharges (backwater from beaverdams, ice effect), which are fair. The flow from 115 mi² 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.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 16,000 ft³/s, Aug. 19, 1955, gage height, 12.20 ft, from rating curve extended above 4,900 ft³/s, on basis of contracted-opening measurement at gage height 11.53 ft; minimum daily discharge, 1.2 ft³/s, Aug. 18, 1988.

PEAK DISCHARGE FOR CURRENT YEAR.--Peak discharge, 3,460 ft³/s, May 8, gage height, 9.56 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e20	95	267	70	512	656	836	180	47	20	50	38
2	e15	66	187	70	440	607	716	181	43	18	39	32
3	e11	49	135	70	386	573	640	153	39	18	32	29
4	e10	37	111	70	329	642	568	258	36	18	28	27
5	e9.8	34	1330	89	290	1250	509	442	35	18	33	24
6	9.5	32	868	86	271	1200	459	413	34	17	44	23
7	8.9	27	588	95	264	1120	405	438	33	18	42	21
8	8.8	25	472	167	266	1720	344	2630	32	21	34	19
9	8.1	22	389	241	1830	1540	293	1430	31	26	29	18
10	7.4	20	330	212	2170	2380	277	900	30	26	25	17
11	7.3	18	273	184	1310	1910	255	632	29	21	22	16
12	e8.0	17	205	178	1010	1350	226	546	43	18	20	15
13	e10	e17	155	205	713	1100	930	475	35	19	20	14
14	e12	e16	126	230	580	1050	950	416	31	23	19	13
15	e13	e16	120	289	534	1170	670	369	29	31	17	13
16	e14	e50	178	236	621	1140	637	329	28	24	16	12
17	e10	e42	196	196	683	860	535	280	28	21	70	13
18	e8.7	e60	183	e150	719	745	463	238	29	20	337	13
19	e8.2	e75	202	e130	909	698	409	202	25	20	255	12
20	e9.0	e63	185	e120	1100	640	353	170	23	18	187	12
21	e9.7	e54	209	e130	1420	684	308	142	26	18	134	11
22	e10	e48	214	e140	1260	962	269	118	24	25	109	11
23	e10	e40	193	e150	1270	840	228	101	22	34	103	13
24	e11	e38	168	e350	1820	747	198	88	25	29	92	13
25	e11	e34	150	e1000	1540	659	171	87	35	26	71	13
26	e10	e33	126	1320	1180	561	151	94	28	29	55	13
27	e9.4	92	108	906	845	1090	147	87	27	33	46	14
28	e8.6	1140	99	742	719	1740	126	74	26	73	38	13
29	e8.2	532	110	781	---	2210	112	64	24	73	34	12
30	e31	373	76	669	---	1570	107	56	22	56	31	11
31	100	---	65	580	---	1040	---	52	---	42	30	---
TOTAL	427.6	3165	8018	9856	24991	34454	12292	11645	919	853	2062	505
MEAN	13.8	105	259	318	893	1111	410	376	30.6	27.5	66.5	16.8
MAX	100	1140	1330	1320	2170	2380	950	2630	47	73	337	38
MIN	7.3	16	65	70	264	561	107	52	22	17	16	11
CFSM	.06	.48	1.18	1.45	4.08	5.07	1.87	1.72	.14	.13	.30	.08
IN.	.07	.54	1.36	1.67	4.25	5.85	2.09	1.98	.16	.14	.35	.09

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1938 - 1994, BY WATER YEAR (WY)

	1938	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949
MEAN	76.9	80.7	163	197	308	432	323	222	106	58.9	49.3	38.9
MAX	745	901	825	558	893	1346	1085	763	379	415	475	395
(WY)	1943	1986	1973	1991	1994	1963	1993	1988	1940	1989	1955	1945
MIN	2.24	4.39	9.70	22.0	30.7	58.3	54.1	21.2	13.4	4.45	5.20	2.80
(WY)	1992	1992	1944	1981	1954	1990	1969	1969	1969	1966	1966	1991

01604500 PATTERSON CREEK NEAR HEADSVILLE, WV--Continued

SUMMARY STATISTICS

FOR 1993 CALENDAR YEAR

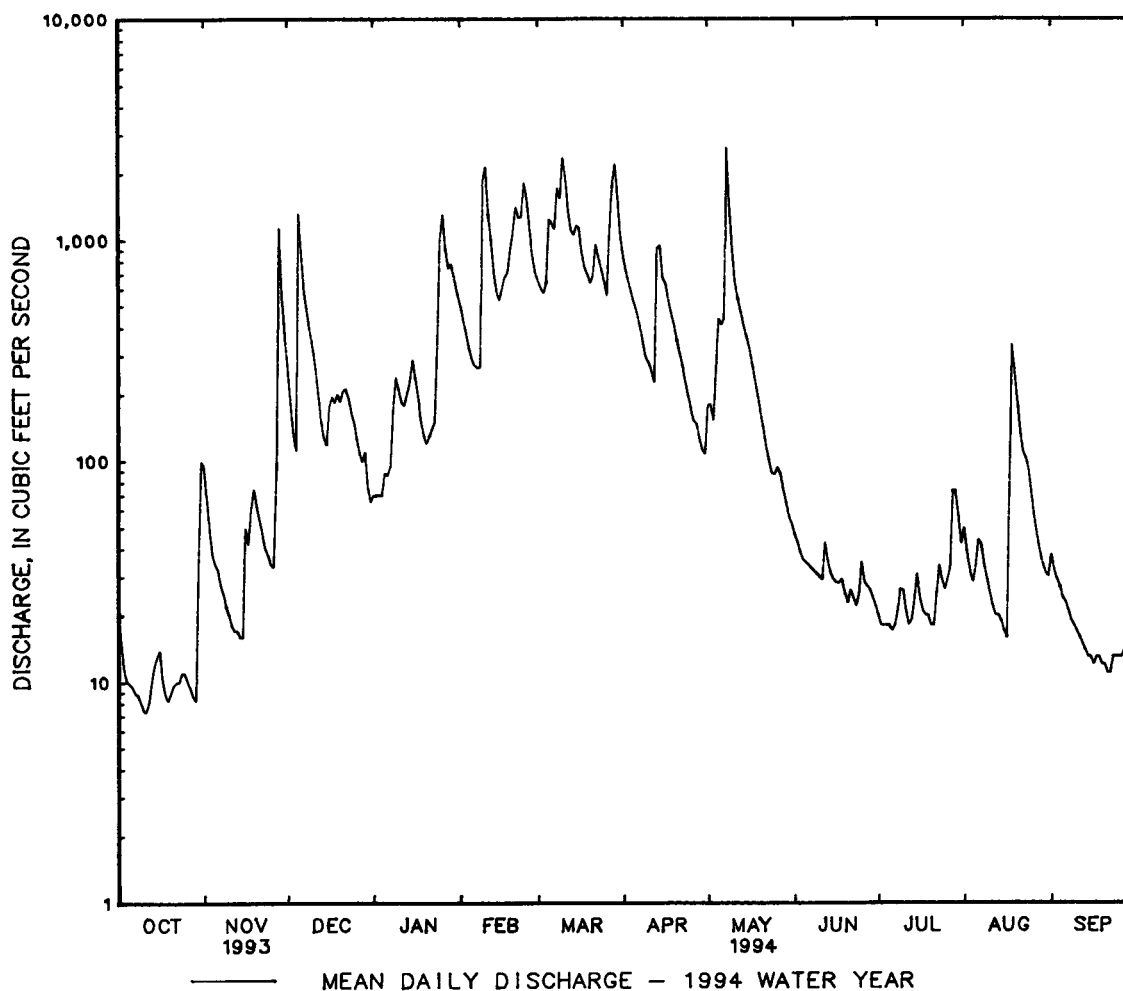
FOR 1994 WATER YEAR

WATER YEARS 1938 - 1994

ANNUAL TOTAL	91369.8		109187.6		
ANNUAL MEAN	250		299		171
HIGHEST ANNUAL MEAN					299
LOWEST ANNUAL MEAN					35.1
HIGHEST DAILY MEAN	5080	Apr 16	2630	May 8	11100
LOWEST DAILY MEAN	4.8	Aug 29	7.3	Oct 11	1.2
ANNUAL SEVEN-DAY MINIMUM	5.2	Aug 25	8.3	Oct 6	1.7
INSTANTANEOUS PEAK FLOW			3460	May 8	(a)16000
INSTANTANEOUS PEAK STAGE			9.56	May 8	12.20
INSTANTANEOUS LOW FLOW			6.4	Oct 11	1.1
ANNUAL RUNOFF (CFSM)	1.14		1.37		.78
ANNUAL RUNOFF (INCHES)	15.52		18.55		10.59
10 PERCENT EXCEEDS	809		938		434
50 PERCENT EXCEEDS	56		87		58
90 PERCENT EXCEEDS	7.7		13		9.7

a From rating curve extended above 4,900 ft³/s on basis of contracted-opening measurement of peak flow.

b Aug. 18, 19, 1988.



POTOMAC RIVER BASIN

01604500 PATTERSON CREEK NEAR HEADSVILLE, WV---Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1960-61, 1969 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH WATER WHOLE FIELD (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	BARO- METRIC PRES- SURE (MM HG)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)
OCT 1993								
06...	1525	8.9	297	7.8	14.5	756	9.2	91
NOV								
03...	1630	47	260	7.7	7.0	748	11.2	94
MAR 1994								
07...	1000	1100	117	6.9	3.5	747	12.2	94
APR								
13...	1715	1690	100	6.4	11.5	737	9.5	90
SEP								
01...	1500	36	248	7.3	22.0	--	8.4	--
21...	1445	11	296	7.8	20.0	750	8.8	98

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 72.7.

DRAINAGE AREA.--642 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--June 1928 to current year.

REVISED RECORDS.--WSP 951: 1939-41. WSP 1141: 1932, 1933(M), 1936-38.

GAGE.--Water-stage recorder. Datum of gage is 966.00 ft above sea level. Prior to Dec. 4, 1928, nonrecording gage at site 700 ft downstream and at different datum. June 1928 to Nov. 5, 1985, water-stage recorder at site 700 ft downstream at datum 4.00 ft lower. Nov. 5, 1985 to June 22, 1994, water-stage recorder at site 700 ft downstream at datum 2.34 ft higher.

REMARKS.--Water-discharge records good except those for estimated daily discharges (ice effect, missing record), which are fair. National Weather Service gage-height telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in 1877 reached a stage of 21.2 ft, from floodmarks at previous site and datum.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 6,000 ft³/s and maximum(*):

Date	Time	Discharge (ft ³ /s)	Gage Height (ft)	Date	Time	Discharge (ft ³ /s)	Gage Height (ft)
Nov. 28	0715	6,930	5.97	Mar. 8	UNKNOWN	UNKNOWN	UNKNOWN
Dec. 5	1215	10,300	7.27	Mar. 10	UNKNOWN	UNKNOWN	UNKNOWN
Jan. 29	0015	9,050	6.80	Mar. 29	UNKNOWN	UNKNOWN	UNKNOWN
Feb. 9	UNKNOWN	*UNKNOWN	*UNKNOWN	May 8	UNKNOWN	UNKNOWN	UNKNOWN
Feb. 23	UNKNOWN	UNKNOWN	UNKNOWN	Aug. 17	2315	6,810	8.83

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	184	257	1320	405	2210	e2200	e3000	e950	e290	165	626	257
2	161	219	1090	495	1770	e2000	e2400	e1100	e280	155	512	256
3	146	187	952	487	1580	e1800	e2100	e1000	e260	149	559	213
4	137	175	836	541	1400	e1800	e1850	e1500	e250	157	450	201
5	119	179	6660	517	1310	e3600	e1700	e2200	e240	178	419	193
6	108	229	6120	452	1210	e3400	e1600	e3100	e230	154	496	182
7	93	264	3340	882	1120	e4800	e1500	e2700	e220	155	396	175
8	90	218	2460	2850	1120	e6200	e1400	e13000	e210	186	329	165
9	91	192	1720	2070	e4500	e6300	e1400	e9000	e210	184	304	154
10	89	177	1400	1580	e14000	e6700	e1300	e5000	e210	176	305	147
11	90	172	1290	1420	e6000	e7000	e1300	e3000	e200	232	248	153
12	110	161	1230	1630	e3500	e5000	e1300	e1800	e480	191	260	149
13	130	158	1090	2940	e3600	e3500	e1600	e1400	e350	166	277	135
14	148	1090	1000	2350	e2100	e2700	e2400	e1200	e300	160	227	126
15	135	1180	982	1830	e1900	e2400	e1800	e1000	e250	159	204	122
16	123	872	1090	e1200	e2000	e2200	e1900	e900	e190	166	195	121
17	103	642	1230	e1000	e2200	e2000	e1500	e800	e230	162	1160	120
18	95	1120	1200	e900	e2500	e1900	e1350	e700	e300	181	3400	121
19	100	1250	1200	e800	e2900	e1900	e1200	e650	e240	242	1550	122
20	106	1090	1150	e680	e3200	e1800	e1100	e600	e170	359	965	118
21	109	853	1130	e640	e3500	e1700	e1000	e560	e190	832	717	112
22	136	605	1040	e610	e4000	e2000	e950	e520	e205	817	644	109
23	134	449	931	e900	e6000	e2900	e920	e490	e211	579	562	110
24	130	347	827	e1000	e8400	e2500	e890	e460	e231	475	446	108
25	123	290	730	e1700	e6000	e2300	e860	e430	e205	378	385	105
26	119	241	635	3400	e4500	e2400	e840	e420	e195	823	343	105
27	118	316	563	3250	e3300	e4000	e810	e410	e196	980	318	105
28	109	4940	558	4630	e2700	e5500	e800	e400	e208	2010	291	105
29	102	2710	491	7210	---	e9000	e790	e370	e192	1320	263	100
30	113	1760	408	4230	---	e7000	e780	e340	e172	925	243	98
31	153	---	286	2870	---	e4800	---	e320	---	657	228	---
TOTAL	3704	22343	44959	55469	98520	113300	42340	56320	7115	13473	17322	4287
MEAN	119	745	1450	1789	3519	3655	1411	1817	237	435	559	143
MAX	184	4940	6660	7210	14000	9000	3000	13000	480	2010	3400	257
MIN	89	158	286	405	1120	1700	780	320	170	149	195	98
CFSM	.19	1.16	2.26	2.79	5.48	5.69	2.20	2.83	.37	.68	.87	.22
IN.	.21	1.29	2.61	3.21	5.71	6.57	2.45	3.26	.41	.78	1.00	.25

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1928 - 1994, BY WATER YEAR (WY)

	334	481	711	887	1146	1624	1290	973	527	285	275	221
MEAN	334	481	711	887	1146	1624	1290	973	527	285	275	221
MAX	1863	5569	2511	2355	3519	4090	2888	2374	2175	1479	1290	1196
(WY)	1977	1986	1973	1937	1994	1936	1993	1989	1949	1949	1955	1950
MIN	49.3	62.7	95.1	143	212	543	398	233	128	70.5	54.1	52.3
(WY)	1931	1931	1966	1981	1934	1990	1986	1930	1991	1930	1930	1930

POTOMAC RIVER BASIN

01606500 SOUTH BRANCH POTOMAC RIVER NEAR PETERSBURG, WV--Continued

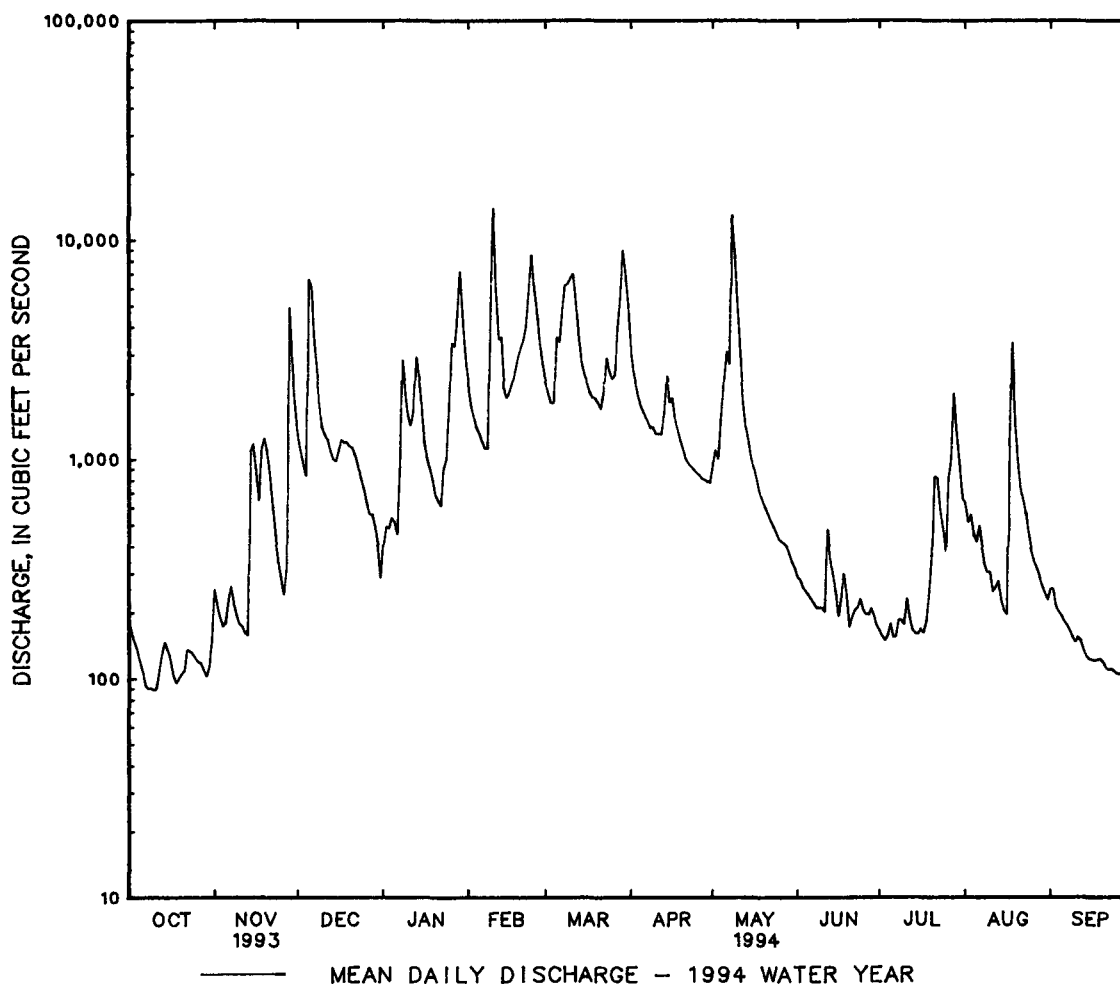
SUMMARY STATISTICS	FOR 1993 CALENDAR YEAR		FOR 1994 WATER YEAR		WATER YEARS 1928 - 1994	
ANNUAL TOTAL	329663		479152		727	
ANNUAL MEAN	903		1313		1313	
HIGHEST ANNUAL MEAN					365	
LOWEST ANNUAL MEAN					77000	
HIGHEST DAILY MEAN	11000	Apr 16	14000	Feb 10	Nov 5	1985
LOWEST DAILY MEAN	46	Aug 26	89	Oct 10	(a)	
ANNUAL SEVEN-DAY MINIMUM	57	Aug 21	96	Oct 6	Sep 6	1966
INSTANTANEOUS PEAK FLOW			UNKNOWN		(b)130000	
INSTANTANEOUS PEAK STAGE			UNKNOWN		(c)21.80	
INSTANTANEOUS LOW FLOW			71	Oct 18	42	(d)
ANNUAL RUNOFF (CFSM)	1.41		2.04		1.13	
ANNUAL RUNOFF (INCHES)	19.10		27.76		15.39	
10 PERCENT EXCEEDS	2080		3360		1630	
50 PERCENT EXCEEDS	320		635		372	
90 PERCENT EXCEEDS	73		125		95	

a Sept. 27-29, 1959, Sept. 11, 12, 1966.

b From rating curve extended above 63,000 ft³/s on basis of slope-area measurement of peak flow.

c From floodmarks.

d Sept. 28, 29, 1959, Sept. 11, 12, 1966.



POTOMAC RIVER BASIN

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01606500 SOUTH BRANCH POTOMAC RIVER NEAR PETERSBURG, WV---Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1969-83, October 1993 to October 1994.

WATER QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH WATER WHOLE FIELD (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	TEMPER-ATURE AIR (DEG C)	BARO-METRIC PRES-SURE (MM OF HG)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, (PER-CENT SATUR-ATION)	ALKA-LINITY WAT DIS TOT IT FIELD MG/L AS CACO3	BICAR-BONATE WATER DIS IT FIELD MG/L AS HCO3	NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS NO3)
JUN 1994 05...	1530	226	224	8.5	23.5	30.5	735	9.0	110	95	116	1.3
DATE		NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC DIS. (MG/L AS N)	PHOS-PHORUS TOTAL (MG/L AS P)	PHOS-PHORUS DIS-SOLVED (MG/L AS P)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P)	DIMETH-OATE WATER FLTRD 0.7 U GG, REC (UG/L)	ETHAL-FLUR-ALIN WAT FLT 0.7 U GF, REC (UG/L)	PHORATE WATER FLTRD 0.7 U GF, REC (UG/L)
JUN 1994 05...	0.010	0.310	0.310	0.010	<0.20	<0.20	<0.010	<0.010	<0.010	<0.02	<0.01	<0.01
DATE		TER-BACIL WATER FLTRD 0.7 U GF, REC (UG/L)	TRI-FLUR-ALIN WAT FLT 0.7 U GF, REC (UG/L)	2,6-DI-ETHYL ANILINE WAT FLT 0.7 U GF, REC (UG/L)	ALA-CHLOR, WATER, DISS, REC, (UG/L)	ALPHA BHC DIS-SOLVED (UG/L)	ATRA-ZINE, WATER, DISS, REC (UG/L)	BEN-FLUR-ALIN WAT FLD 0.7 U GF, REC (UG/L)	BUTYL-ATE, WATER, DISS, REC (UG/L)	CAR-BARYL WATER FLTRD 0.7 U GF, REC (UG/L)	CARBO-FURAN WATER FLTRD 0.7 U GF, REC (UG/L)	CHLOR-PYRIFOS DIS-SOLVED (UG/L)
JUN 1994 05...	<0.03	<0.01	<0.01	<0.01	<0.01	<0.01	0.004	<0.01	<0.01	<0.05	<0.01	<0.01
DATE		CYANA-ZINE, WATER, DISS, REC (UG/L)	DCPA WATER FLTRD 0.7 U GF, REC (UG/L)	P,P' DDE DISSOLV (UG/L)	DEETHYL ATRA-ZINE, WATER, DISS, REC (UG/L)	DI-AZINON, DIS-SOLVED (UG/L)	DI-ELDRIN DIS-SOLVED (UG/L)	DISUL-FOTON WATER FLTRD 0.7 U GF, REC (UG/L)	EPTC WATER FLTRD 0.7 U GF, REC (UG/L)	ETHO-PROP WATER FLTRD 0.7 U GF, REC (UG/L)	FONOFOS WATER DISS REC (UG/L)	LINDANE DIS-SOLVED (UG/L)
JUN 1994 05...	<0.01	<0.004	<0.01	<0.01	<0.005	<0.01	<0.01	<0.06	<0.005	<0.01	<0.01	<0.01
DATE		LIN-URON WATER FLTRD 0.7 U GF, REC (UG/L)	MALA-THION, DIS-SOLVED (UG/L)	METHYL AZIN-PROS WAT FLT 0.7 U GF, REC (UG/L)	METHYL PARA-THION WAT FLT 0.7 U GF, REC (UG/L)	METO-LACHLOR WATER DISSOLV (UG/L)	METRI-BUZIN SENCOR WATER DISSOLV (UG/L)	MOL-INATE WATER FLTRD 0.7 U GF, REC (UG/L)	NAPROP-AMIDE WATER FLTRD 0.7 U GF, REC (UG/L)	PEB-ULATE WATER FILTRD 0.7 U GF, REC (UG/L)	PARA-THION, DIS-SOLVED (UG/L)	PENDI-METH-ALIN WAT FLT 0.7 U GF, REC (UG/L)
JUN 1994 05...	<0.04	<0.01	<0.01	<0.05	<0.03	0.00	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02
DATE		PER-METHRIN CIS WAT FLT 0.7 U GF, REC (UG/L)	PRO-METON, WATER, DISS, REC (UG/L)	PRON-AMIDE WATER FLTRD 0.7 U GF, REC (UG/L)	PROP-CHLOR, WATER, DISS, REC (UG/L)	PRO-PARGITE WATER FLTRD 0.7 U GF, REC (UG/L)	PRO-PANIL WATER FLTRD 0.7 U GF, REC (UG/L)	SI-MAZINE, WATER, DISS, REC (UG/L)	TEBU-THIURON WATER FLTRD 0.7 U GF, REC (UG/L)	TER-BUFOS WATER FLTRD 0.7 U GF, REC (UG/L)	THIO-BENCARB WATER FLTRD 0.7 U GF, REC (UG/L)	TRIAL-LATE WATER FLTRD 0.7 U GF, REC (UG/L)
JUN 1994 05...	<0.02	<0.01	<0.01	<0.01	<0.02	<0.01	<0.02	0.03	<0.02	<0.01	<0.01	<0.01

POTOMAC RIVER BASIN

01606500 SOUTH BRANCH POTOMAC RIVER NEAR PETERSBURG, WV---Continued

SUSPENDED SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY)
JUN 1994 05...	1530	226	3	1.8

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 6.0.

DRAINAGE AREA.--283 mi².

WATER-DISCHARGE RECORDS

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: 1931(M), 1935(M).

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.--Water-discharge records good except those for estimated discharges (frozen float), which are fair. The flow from 92.7 mi² 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.

PEAK DISCHARGE FOR CURRENT YEAR.--Peak discharge, 5,300 ft³/s, May 8, gage height, 6.79 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	40	29	314	81	590	519	968	191	66	39	377	76
2	35	42	220	75	442	466	717	167	61	36	309	69
3	32	45	176	74	358	419	578	151	58	35	228	61
4	28	41	144	115	298	411	487	231	55	35	207	58
5	26	38	1910	87	254	943	422	546	52	55	205	56
6	24	37	2320	83	228	1270	389	741	50	48	197	52
7	21	34	1030	96	207	1810	408	649	57	45	173	49
8	21	32	560	392	196	3520	451	3830	52	52	141	46
9	21	31	380	444	1850	2570	429	2250	51	47	118	44
10	21	29	280	329	2090	2540	409	1130	46	46	132	44
11	20	27	232	271	1190	2260	379	698	43	45	118	44
12	25	27	192	312	778	1310	339	522	41	40	128	43
13	24	30	155	936	563	930	338	404	38	40	163	40
14	24	44	136	771	459	763	650	314	35	38	124	38
15	24	68	129	569	395	694	567	258	35	42	104	35
16	23	68	154	383	431	696	515	230	35	52	88	32
17	20	64	267	320	516	614	442	198	35	44	384	29
18	20	70	303	335	586	507	382	176	36	45	3060	35
19	19	98	273	e550	761	444	333	158	34	76	1570	29
20	21	98	238	e650	998	373	293	145	42	143	963	26
21	21	85	219	e430	1130	332	255	136	51	152	547	26
22	19	75	194	e350	1080	417	233	123	52	216	341	26
23	20	66	168	e300	1870	561	228	115	46	249	251	29
24	22	58	147	429	2870	524	206	106	69	178	191	27
25	21	50	132	597	2240	593	191	104	57	136	155	26
26	20	44	118	790	1340	607	181	103	53	133	132	27
27	20	71	109	892	897	927	175	97	56	178	116	25
28	19	1220	104	1040	651	2310	166	88	51	247	102	24
29	19	1000	99	2350	---	3640	168	82	45	462	92	23
30	22	508	97	1370	---	2700	182	76	42	656	82	22
31	27	---	88	819	---	1520	---	70	---	477	77	---
TOTAL	719	4129	10888	16240	25268	37190	11481	14089	1444	4087	10875	1161
MEAN	23.2	138	351	524	902	1200	383	454	48.1	132	351	38.7
MAX	40	1220	2320	2350	2870	3640	968	3830	69	656	3060	76
MIN	19	27	88	74	196	332	166	70	34	35	77	22
CFSM	.08	.49	1.24	1.85	3.19	4.24	1.35	1.61	.17	.47	1.24	.14
IN.	.09	.54	1.43	2.13	3.32	4.89	1.51	1.85	.19	.54	1.43	.15

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1928 - 1994, BY WATER YEAR (WY)

	1928	1929	1930	1931	1932	1933	1934	1935	1936	1937	1938	1939
MEAN	133	176	210	246	327	488	414	324	165	83.6	105	75.9
MAX	776	2951	879	716	902	1327	1787	946	1071	510	801	497
(WY)	1977	1986	1974	1991	1994	1993	1987	1988	1949	1949	1955	1945
MIN	12.8	17.1	17.4	21.3	25.2	72.2	91.7	51.2	28.1	13.7	10.4	10.2
(WY)	1992	1932	1966	1981	1934	1981	1981	1930	1977	1966	1965	1968

POTOMAC RIVER BASIN

01608000 SOUTH FORK SOUTH BRANCH POTOMAC RIVER NEAR MOOREFIELD, WV--Continued

SUMMARY STATISTICS	FOR 1993 CALENDAR YEAR		FOR 1994 WATER YEAR		WATER YEARS 1928 - 1994	
ANNUAL TOTAL	98912		137571		228	
ANNUAL MEAN	271		377		418	
HIGHEST ANNUAL MEAN					85.9	
LOWEST ANNUAL MEAN					1949	
HIGHEST DAILY MEAN	3770	Mar 5	3830	May 8	28000	Nov 5 1985
LOWEST DAILY MEAN	15	(a)	19	(b)	4.4	Sep 10 1966
ANNUAL SEVEN-DAY MINIMUM	16	Aug 27	20	Oct 17	5.3	Sep 5 1966
INSTANTANEOUS PEAK FLOW			5300	May 8	(c)110000	Nov 5 1985
INSTANTANEOUS PEAK STAGE			6.79	May 8	(d)19.99	Nov 5 1985
INSTANTANEOUS LOW FLOW			18	(f)	4.4	(g)
ANNUAL RUNOFF (CFSM)	.96		1.33			
ANNUAL RUNOFF (INCHES)	13.00		18.08			
10 PERCENT EXCEEDS	799		951		500	
50 PERCENT EXCEEDS	66		145		95	
90 PERCENT EXCEEDS	19		27		21	

a Sept. 1, 2.

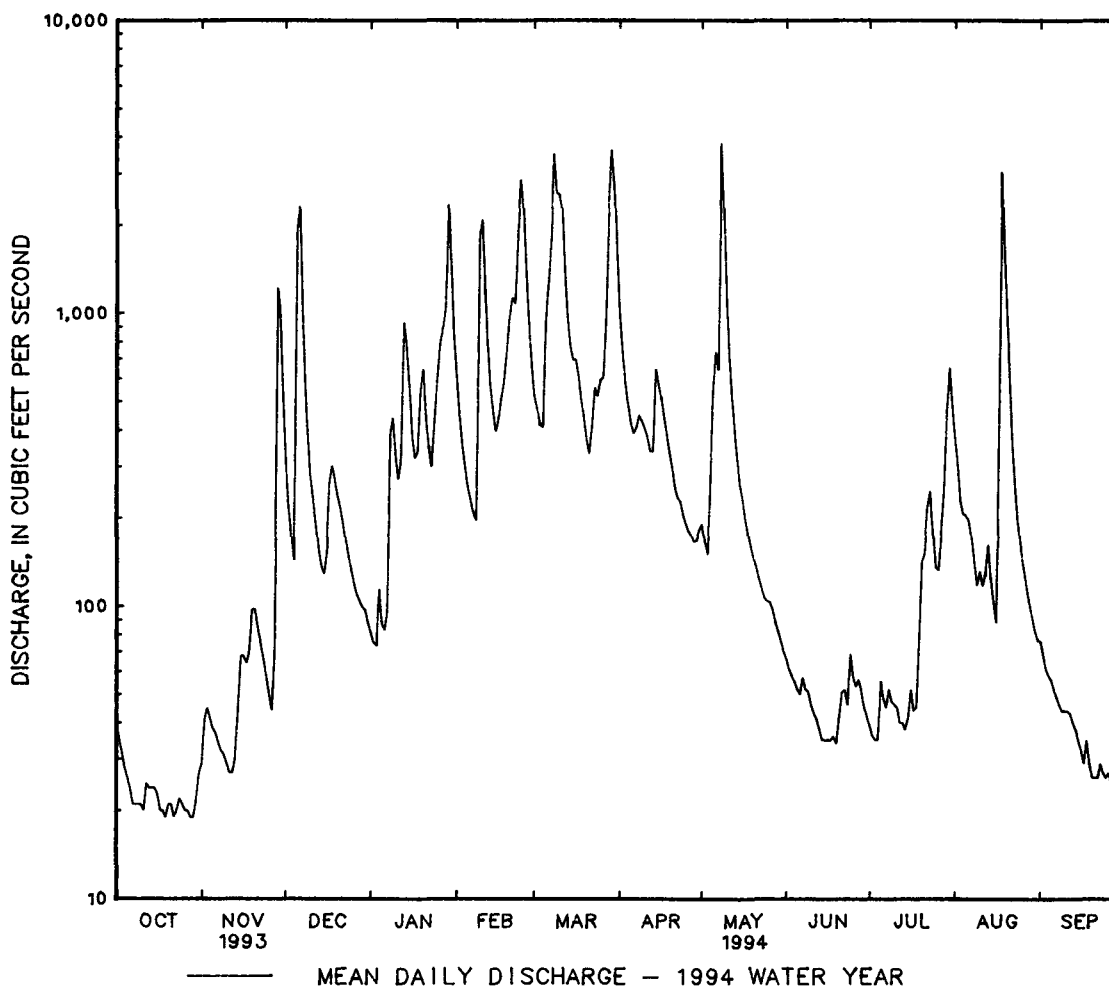
b Oct. 19, 22, 28, 29.

c From rating curve extended above 39,000 ft³/s on basis of slope-area measurement of peak flow.

d From floodmarks.

f Oct. 19, 29, 30.

g Sept. 10, 11, 1965, Sept. 9-11, 1966.



01608000 SOUTH FORK SOUTH BRANCH POTOMAC RIVER NEAR MOOREFIELD, WV--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1969 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH WATER WHOLE FIELD (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	TEMPER- ATURE AIR (DEG C)	BARO- METRIC PRES- SURE (MM OF HG)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, (PER- CENT SATUR- ATION)	HARD- NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	
OCT 1993													
04...	1145	28	218	8.1	13.5	17.0	739	9.8	97	110	34	5.8	
NOV													
01...	1415	30	237	7.8	10.0	7.0	742	11.1	101	110	36	6.0	
DEC													
05...	1500	2660	95	7.0	9.0	9.0	730	10.3	93	37	11	2.4	
JAN 1994													
03...	1000	74	187	7.5	3.0	1.0	760	12.6	94	80	25	4.3	
FEB													
03...	1130	368	130	7.1	2.0	3.5	741	13.3	99	59	18	3.3	
24...	1015	2800	98	7.1	5.5	7.5	731	11.5	95	37	11	2.4	
MAR													
14...	1045	767	131	7.2	6.0	12.0	737	11.8	98	58	18	3.2	
APR													
05...	1115	417	134	7.6	10.0	21.0	736	10.8	99	69	22	3.5	
MAY													
03...	1245	150	170	6.8	13.0	15.5	747	9.2	89	85	27	4.2	
08...	1315	5230	90	6.8	11.0	14.5	735	9.9	93	37	11	2.2	
JUN													
05...	1015	52	215	7.8	21.0	26.5	740	7.9	91	120	40	5.7	
JUL													
01...	1300	40	201	8.1	26.0	29.0	741	9.2	117	93	29	5.0	
AUG													
03...	1215	237	175	7.9	23.5	28.0	743	8.2	99	77	24	4.2	
18...	1115	3400	99	6.9	18.0	22.5	740	8.2	89	41	12	2.6	
SEP													
20...	1230	26	218	8.0	19.0	22.0	746	9.5	105	100	32	5.5	
DATE		SODIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY WAT DIS TOT IT FIELD MG/L AS CACO3	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS NO3)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)
OCT 1993													
04...	2.6	1.6	88	107	22	2.5	<0.10	5.5	131	--	<0.010	0.200	
NOV													
01...	2.0	1.6	93	113	23	2.5	0.10	5.7	135	--	<0.010	0.250	
DEC													
05...	1.7	1.7	23	28	14	1.5	<0.10	5.8	71	--	<0.010	0.590	
JAN 1994													
03...	2.3	0.70	56	68	19	2.8	<0.10	4.8	97	--	<0.010	1.40	
FEB													
03...	2.1	1.1	37	46	15	2.6	<0.10	5.4	83	6.6	0.020	1.50	
24...	1.6	1.2	26	32	12	1.7	<0.10	5.9	61	--	<0.010	0.650	
MAR													
14...	1.9	1.0	39	48	14	2.1	<0.10	5.4	80	--	<0.010	1.40	
APR													
05...	1.8	0.80	48	59	16	2.2	<0.10	4.9	82	5.7	0.020	1.30	
MAY													
03...	2.1	1.2	64	78	18	2.2	<0.10	5.7	99	--	<0.010	0.830	
08...	1.3	1.6	26	32	11	1.0	<0.10	7.2	65	--	<0.010	0.280	
JUN													
05...	3.3	1.8	80	98	25	4.6	<0.10	2.9	133	4.2	0.020	0.980	
JUL													
01...	2.4	1.5	76	93	19	2.5	0.10	5.2	111	--	<0.010	0.340	
AUG													
03...	2.3	1.6	66	81	13	1.8	<0.10	6.0	112	--	<0.010	0.430	
18...	1.6	1.7	30	37	10	1.1	<0.10	7.6	72	--	<0.010	0.310	
SEP													
20...	2.6	1.6	84	102	19	2.4	<0.10	5.7	135	--	<0.010	0.640	

POTOMAC RIVER BASIN

01608000 SOUTH FORK SOUTH BRANCH POTOMAC RIVER NEAR MOOREFIELD, WV--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN, AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, AM- MONIA + ORGANIC DIS. (MG/L AS N)	PHOS- PHORUS TOTAL (MG/L AS P)	PHOS- PHORUS DIS- SOLVED (MG/L AS P)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P)	IRON, DIS- SOLVED (UG/L AS FE)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	CARBON, ORGANIC SUS- PENDE TOTAL (MG/L AS C)	DIMETH- OATE WATER FLTRD 0.7 U GG, REC (UG/L)
OCT 1993												
04...	0.200	0.020	<0.20	<0.20	<0.010	<0.010	0.020	7	3	1.0	0.1	--
NOV												
01...	0.250	0.020	<0.20	<0.20	0.020	<0.010	<0.010	9	3	1.2	0.2	--
DEC												
05...	0.590	0.030	1.4	<0.20	0.200	<0.010	0.010	31	2	6.2	7.8	--
JAN 1994												
03...	1.40	<0.010	0.20	<0.20	<0.010	<0.010	<0.010	8	1	0.9	0.1	--
FEB												
03...	1.50	<0.010	<0.20	<0.20	<0.010	<0.010	<0.010	12	2	1.6	0.1	--
24...	0.650	0.020	0.20	<0.20	0.030	0.010	<0.010	47	3	3.1	0.2	--
MAR												
14...	1.40	0.020	<0.20	<0.20	<0.010	<0.010	<0.010	15	2	1.6	0.1	--
APR												
05...	1.30	0.040	<0.20	<0.20	<0.010	<0.010	<0.010	7	2	1.5	0.1	--
MAY												
03...	0.830	0.030	<0.20	<0.20	<0.010	<0.010	<0.010	19	3	1.4	0.1	--
08...	0.280	0.040	0.90	0.30	0.170	0.030	0.010	240	4	4.7	3.3	--
JUN												
05...	0.980	0.020	<0.20	<0.20	<0.010	<0.010	<0.010	14	3	14	0.3	<0.02
JUL												
01...	0.340	0.020	<0.20	<0.20	0.020	0.030	<0.010	10	3	1.2	0.1	--
AUG												
03...	0.430	0.010	<0.20	<0.20	0.010	<0.010	<0.010	30	3	2.1	0.1	--
18...	0.310	0.020	0.50	<0.20	0.050	0.020	<0.010	200	5	4.8	2.2	--
SEP												
20...	0.640	0.030	<0.20	<0.20	<0.010	<0.010	<0.010	6	2	2.9	0.1	--
DATE	ETHAL- FLUR- ALIN WAT FLT 0.7 U GF, REC (UG/L)	PHORATE WATER FLTRD 0.7 U GF, REC (UG/L)	TER- BACIL WATER FLTRD 0.7 U GF, REC (UG/L)	TRI- FLUR- ALIN WAT FLT 0.7 U GF, REC (UG/L)	2,6-DI- ETHYL ANILINE WAT FLT 0.7 U GF, REC (UG/L)	ALA- CHLOR, WATER, DISS, REC, (UG/L)	ALPHA BHC DIS- SOLVED (UG/L)	ATRA- ZINE, WATER, DISS, REC (UG/L)	BEN- FLUR- ALIN WAT FLD 0.7 U GF, REC (UG/L)	BUTYL- ATE, WATER, DISS, REC (UG/L)	CAR- BARYL WATER FLTRD 0.7 U GF, REC (UG/L)	CARBO- FURAN WATER FLTRD 0.7 U GF, REC (UG/L)
JUN 1994												
05...	<0.01	<0.01	0.12	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.01	<0.05	<0.01
DATE	CHLOR- PYRIP DIS- SOLVED (UG/L)	CYANA- ZINE, WATER, DISS, REC (UG/L)	DCPA WATER FLTRD 0.7 U GF, REC (UG/L)	P,P' DDE DISSOLV (UG/L)	DEETHYL ATRA- ZINE, WATER, DISS, REC (UG/L)	DI- AZINON, DIS- SOLVED (UG/L)	DI- ELDRIN DIS- SOLVED (UG/L)	DISUL- FOTON WATER FLTRD 0.7 U GF, REC (UG/L)	EPTC WATER FLTRD 0.7 U GF, REC (UG/L)	ETHO- PROP WATER FLTRD 0.7 U GF, REC (UG/L)	FONOFOS WATER DISS REC (UG/L)	LINDANE DIS- SOLVED (UG/L)
JUN 1994												
05...	<0.01	<0.01	<0.004	<0.01	<0.005	<0.01	<0.01	<0.06	<0.005	<0.01	<0.01	<0.01
DATE	LIN- URON WATER FLTRD 0.7 U GF, REC (UG/L)	MALA- THION, DIS- SOLVED (UG/L)	METHYL AZIN- PHOS WAT FLT 0.7 U GF, REC (UG/L)	METHYL PARA- THION WAT FLT 0.7 U GF, REC (UG/L)	METO- LACHLOR WATER DISSOLV (UG/L)	METRI- BUZIN WATER DISSOLV (UG/L)	MOL- INATE WATER FLTRD 0.7 U GF, REC (UG/L)	NAPROP- AMIDE WATER FLTRD 0.7 U GF, REC (UG/L)	PEB- ULATE WATER FLTRD 0.7 U GF, REC (UG/L)	PARA- THION, DIS- SOLVED (UG/L)	PENDI- METH- ALIN WAT FLT 0.7 U GF, REC (UG/L)	
JUN 1994												
05...	<0.04	<0.01	<0.05	<0.03	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02	
DATE	PER- METHRIN CIS WAT FLT 0.7 U GF, REC (UG/L)	PRO- METON, WATER, DISS, REC (UG/L)	FRON- AMIDE WATER FLTRD 0.7 U GF, REC (UG/L)	PROP- CHLOR, WATER, DISS, REC (UG/L)	PRO- PARGITE WATER FLTRD 0.7 U GF, REC (UG/L)	PRO- PANIL WATER FLTRD 0.7 U GF, REC (UG/L)	SI- MAZINE, WATER, DISS, REC (UG/L)	TEBU- THIURON WATER FLTRD 0.7 U GF, REC (UG/L)	TER- BUFOS WATER FLTRD 0.7 U GF, REC (UG/L)	THIO- BENCARB WATER FLTRD 0.7 U GF, REC (UG/L)	TRIAL- LATE WATER FLTRD 0.7 U GF, REC (UG/L)	
JUN 1994												
05...	<0.02	<0.01	<0.01	<0.02	<0.01	<0.02	<0.01	<0.02	<0.01	<0.01	<0.01	

POTOMAC RIVER BASIN

01608000 SOUTH FORK SOUTH BRANCH POTOMAC RIVER NEAR MOOREFIELD, WV--Continued

SUSPENDED SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY)
OCT 1993				
04...	1145	28	186	14
NOV				
01...	1415	30	2	0.16
DEC				
05...	1500	4870	237	3120
MAY 1994				
03...	1245	150	<1	--
08...	1315	5230	182	2570
JUL				
01...	1300	40	<1	--
AUG				
03...	1215	237	<1	--
18...	1115	3400	82	753

POTOMAC RIVER BASIN

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 13.4.

DRAINAGE AREA.--1,471 mi².

WATER-DISCHARGE RECORDS

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

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

GAGE.--Water-stage recorder. Datum of gage is 562.02 ft above sea level. June 1984 to February 1986, 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.--Water-discharge records good except those for estimated daily discharges (ice effect), which are fair. National Weather Service gage-height telemeter and U.S. Army Corps of Engineers satellite telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in November 1877 reached a stage of about 34 ft, from floodmarks, discharge, 140,000 ft³/s.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 10,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 6	0200	19,300	13.69	Mar. 11	0215	18,200	13.24
Jan. 29	1330	14,400	11.64	Mar. 29	2345	19,000	13.56
Feb. 10	0445	*38,500	*19.19	May 8	2200	33,000	17.90
Feb. 24	0700	20,400	14.14	Aug. 18	1345	11,000	9.89
Mar. 8	2215	16,400	12.50				

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	403	276	1930	632	3460	3110	6030	1740	569	307	1430	466
2	314	341	1470	708	2600	2740	4360	1770	527	277	1410	456
3	260	373	1230	712	2100	2540	3460	1500	491	258	1150	451
4	225	329	1100	722	1840	2430	2940	1750	464	275	1110	390
5	194	290	6450	822	1630	5560	2580	3630	439	312	1010	355
6	173	283	13600	801	1540	7420	2290	4490	425	291	1110	337
7	158	296	5730	797	1460	7210	2140	3830	400	441	1060	319
8	149	362	3180	1730	1400	13400	2180	21500	395	319	888	301
9	141	339	2270	3280	10900	13600	1970	17400	411	345	719	282
10	134	306	1840	2210	27300	13500	1880	7710	391	346	610	266
11	129	275	1590	1810	9920	14900	1880	4620	368	292	617	254
12	145	252	1460	1650	5820	9090	1800	3340	506	305	536	243
13	155	239	1290	2900	3900	6180	2640	2710	437	339	504	244
14	177	241	1160	3700	3170	5050	4230	2220	357	301	624	233
15	193	740	1110	2910	2670	4730	3570	1910	323	300	502	216
16	206	948	1270	2080	2780	4460	3720	1740	302	265	425	204
17	182	771	1490	1590	3140	3680	3140	1600	352	274	488	199
18	163	666	1620	1380	3230	3050	2580	1430	398	290	6320	200
19	148	988	1560	1210	3920	2800	2230	1310	348	284	5060	198
20	146	1160	1490	927	5430	2530	1980	1220	305	364	2950	190
21	156	1010	1450	e980	6940	2390	1770	1140	352	852	2080	187
22	173	860	1430	e1050	7130	3770	1590	1060	352	1530	1620	184
23	165	707	1290	e1100	8120	5060	1520	985	379	1540	1430	191
24	186	605	1180	e1200	19100	4190	1460	920	374	1220	1200	179
25	183	535	1080	e3500	14400	3970	1340	892	559	1000	991	179
26	170	481	996	e4500	8910	4050	1260	891	451	813	846	180
27	167	488	919	5940	5540	5120	1220	886	376	1310	727	181
28	156	5380	833	4340	3840	13300	1190	813	369	1850	635	175
29	148	5990	831	11800	---	16500	1160	726	367	2480	571	170
30	161	2860	746	8760	---	15400	1140	658	353	2370	504	161
31	225	---	625	4990	---	9090	---	608	---	1770	463	---
TOTAL	5685	28391	64220	80731	172190	210820	71250	96999	12140	22920	39590	7591
MEAN	183	946	2072	2604	6150	6801	2375	3129	405	739	1277	253
MAX	403	5990	13600	11800	27300	16500	6030	21500	569	2480	6320	466
MIN	129	239	625	632	1400	2390	1140	608	302	258	425	161
CFSM	.12	.64	1.41	1.77	4.18	4.62	1.61	2.13	.28	.50	.87	.17
IN.	.14	.72	1.62	2.04	4.35	5.33	1.80	2.45	.31	.58	1.00	.19

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1899 - 1994, BY WATER YEAR (WY)

	MEAN	635	846	1241	1552	2028	3000	2408	1778	1014	519	511	392
MAX	4629	12850	5000	4595	6150	10490	6421	4079	5231	2638	3923	1980	
(WY)	1977	1986	1973	1937	1994	1936	1987	1989	1949	1949	1955	1950	
MIN	79.4	82.2	147	271	362	791	829	366	225	105	73.5	76.6	
(WY)	1931	1905	1966	1981	1934	1981	1976	1977	1991	1930	1930	1930	

01608500 SOUTH BRANCH POTOMAC RIVER NEAR SPRINGFIELD, WV--Continued

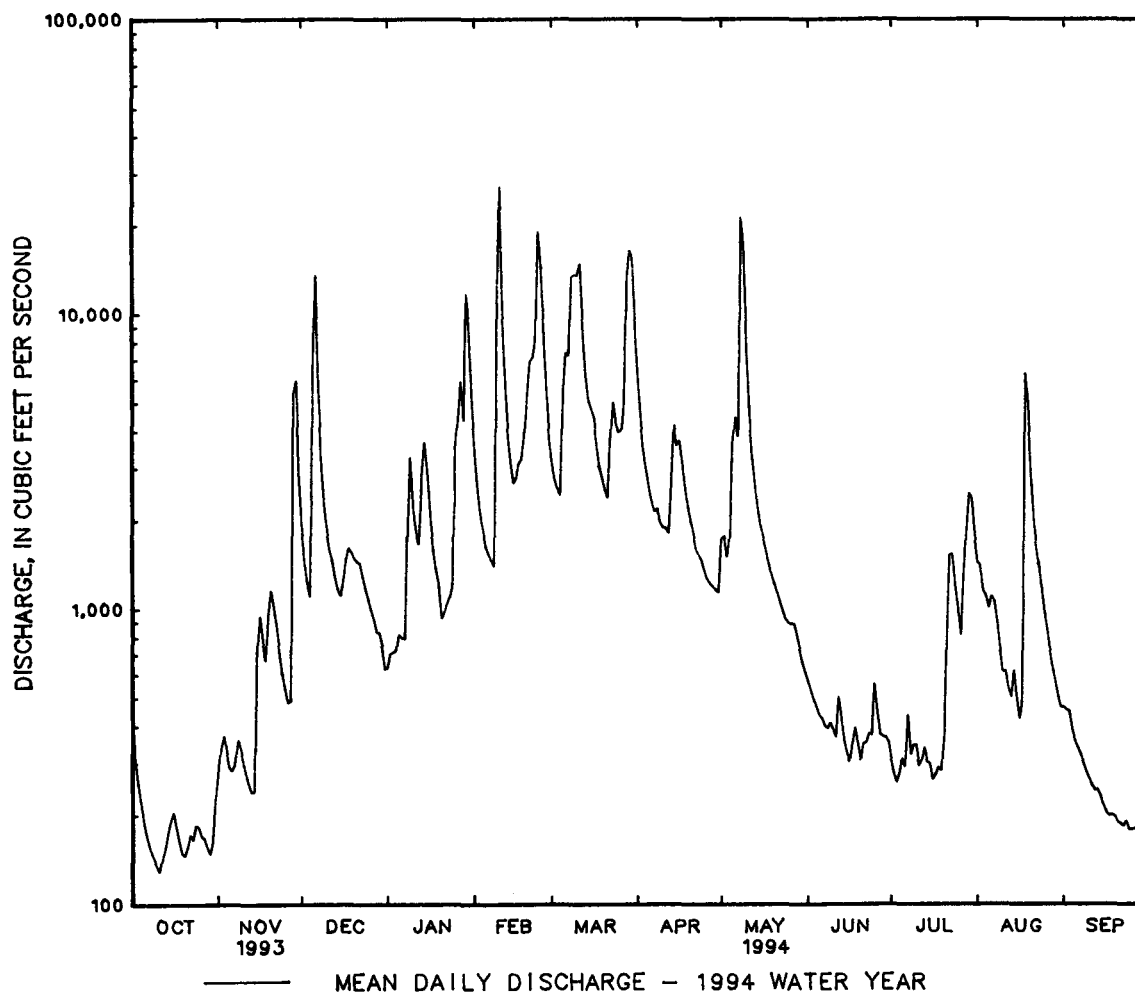
SUMMARY STATISTICS	FOR 1993 CALENDAR YEAR		FOR 1994 WATER YEAR		WATER YEARS 1899 - 1994	
ANNUAL TOTAL	576722		812527		1323	
ANNUAL MEAN	1580		2226		2232	
HIGHEST ANNUAL MEAN					566	
LOWEST ANNUAL MEAN					1973	
HIGHEST DAILY MEAN	24900	Apr 17	27300	Feb 10	145000	Nov 5 1985
LOWEST DAILY MEAN	77	Aug 29	129	Oct 11	52	(a)
ANNUAL SEVEN-DAY MINIMUM	88	Aug 24	144	Oct 7	54	Sep 7 1966
INSTANTANEOUS PEAK FLOW			38500	Feb 10	(b)240000	Nov 5 1985
INSTANTANEOUS PEAK STAGE			19.19	Feb 10	(c)44.22	Nov 5 1985
INSTANTANEOUS LOW FLOW			125	Oct 11	29	(d)
ANNUAL RUNOFF (CFSM)	1.07		1.51		.90	
ANNUAL RUNOFF (INCHES)	14.58		20.55		12.22	
10 PERCENT EXCEEDS	4060		5470		3000	
50 PERCENT EXCEEDS	625		1050		638	
90 PERCENT EXCEEDS	111		196		152	

a Sept. 11, 12, 1966.

b From rating curve extended above 145,000 ft³/s on basis of slope-area measurement of peak flow.

c From floodmarks.

d Jan. 28, 1956 (result of freezeup), July 30, 1966 (result of temporary dam).



POTOMAC RIVER BASIN

01608500 SOUTH BRANCH POTOMAC RIVER NEAR SPRINGFIELD, WV--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1960-61, 1963, 1965, 1969, 1976-80, 1993 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH WATER WHOLE FIELD (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	TEMPER-ATURE AIR (DEG C)	BARO-METRIC PRES-SURE (MM OF HG)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	HARD-NESS TOTAL (MG/L AS CaCO3)	CALCIUM DIS-SOLVED (MG/L AS Ca)	MAGNE-SIUM, DIS-SOLVED (MG/L AS Mg)	
OCT 1993													
06...	1145	177	240	8.0	15.0	7.0	760	8.8	88	110	34	5.7	
NOV													
03...	1330	375	263	8.0	7.0	7.0	751	11.1	93	120	39	6.4	
29...	0945	6150	160	7.7	8.0	4.0	748	10.3	89	72	23	3.5	
DEC													
06...	0945	14300	130	7.4	8.0	5.5	743	9.7	84	56	18	2.8	
JAN 1994													
11...	1015	1740	162	7.5	0.0	-6.0	740	14.1	99	75	24	3.6	
FEB													
01...	1045	3490	154	7.3	3.0	-3.0	753	12.4	93	66	21	3.2	
MAR													
07...	1515	7410	146	7.3	7.0	18.0	747	11.6	97	64	20	3.4	
APR													
13...	1245	2290	176	7.6	13.0	20.5	740	9.9	97	75	24	3.7	
MAY													
02...	1100	1760	196	7.4	16.5	12.0	753	8.5	88	88	28	4.5	
09...	1215	15200	129	7.1	11.5	24.0	745	9.6	90	57	19	2.4	
JUN													
06...	1315	429	258	8.0	25.5	33.5	743	8.0	100	220	60	16	
JUL													
05...	1015	313	229	8.2	26.5	26.5	751	7.9	100	110	34	6.0	
AUG													
04...	1345	1130	202	8.1	26.5	30.5	748	8.5	108	89	29	4.1	
SEP													
21...	1700	188	239	8.3	22.5	22.5	750	10.0	118	110	35	6.0	
DATE		SODIUM, DIS-SOLVED (MG/L AS Na)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY WAT DIS TOT IT FIELD (MG/L AS CaCO3)	BICAR-BONATE WATER DIS IT FIELD (MG/L AS HCO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS NO3)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)
OCT 1993													
06...	4.2	1.9	81	99	26	5.4	0.10	2.2	145	--	<0.010	0.290	
NOV													
03...	4.8	1.7	93	113	33	6.6	0.10	2.3	151	--	<0.010	0.540	
29...	2.4	2.2	49	60	20	2.6	0.10	5.5	102	3.8	0.010	0.870	
DEC													
06...	1.9	1.6	39	48	16	1.9	<0.10	5.6	83	--	<0.010	0.890	
JAN 1994													
11...	2.8	1.1	51	62	19	3.7	<0.10	5.0	107	--	<0.010	0.960	
FEB													
01...	2.3	1.1	44	54	18	3.4	<0.10	5.6	85	4.7	0.030	1.10	
MAR													
07...	2.5	1.5	41	50	18	2.9	<0.10	5.7	91	--	<0.010	0.920	
APR													
13...	2.3	1.3	56	68	20	2.9	<0.10	2.6	97	3.1	0.010	0.700	
MAY													
02...	2.6	1.8	61	74	26	2.9	<0.10	5.7	118	2.6	0.010	0.600	
09...	1.4	1.3	43	52	13	1.4	<0.10	6.4	77	--	<0.010	0.490	
JUN													
06...	21	3.4	92	112	170	24	0.10	4.4	339	1.9	0.020	0.460	
JUL													
05...	4.1	1.9	78	95	27	5.4	0.10	3.0	140	--	<0.010	0.300	
AUG													
04...	2.7	1.6	76	93	15	2.7	<0.10	3.8	116	--	<0.010	0.320	
SEP													
21...	4.1	1.8	83	101	26	5.9	<0.10	2.2	144	--	<0.010	0.630	

POTOMAC RIVER BASIN

01608500 SOUTH BRANCH POTOMAC RIVER NEAR SPRINGFIELD, WV--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N)	PHOS- PHORUS TOTAL (MG/L AS P)	PHOS- PHORUS DIS- SOLVED (MG/L AS P)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P)	IRON, DIS- SOLVED (UG/L AS FE)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	CARBON, ORGANIC SUS- PENDE TOTAL (MG/L AS C)	DIMETH- OATE WATER FLTRD 0.7 U GG, REC (UG/L)
OCT 1993												
06...	0.290	0.020	<0.20	<0.20	0.020	<0.010	0.010	7	3	1.6	0.2	--
NOV												
03...	0.540	0.020	<0.20	<0.20	0.020	<0.010	<0.010	12	3	1.5	0.1	--
29...	0.870	0.020	0.40	<0.20	0.130	<0.010	<0.010	54	1	4.4	3.6	--
DEC												
06...	0.890	0.020	0.80	<0.20	0.150	<0.010	0.020	23	2	4.5	3.1	--
JAN 1994												
11...	0.960	0.020	<0.20	<0.20	0.030	0.020	<0.010	15	5	1.7	0.1	--
FEB												
01...	1.10	0.030	<0.20	<0.20	<0.010	<0.010	<0.010	22	4	1.8	0.3	--
MAR												
07...	0.920	0.020	0.20	<0.20	0.020	0.020	<0.010	29	6	2.7	0.5	--
APR												
13...	0.700	0.050	<0.20	<0.20	0.010	0.010	<0.010	19	11	1.9	0.4	--
MAY												
02...	0.600	0.050	0.30	<0.20	<0.010	<0.010	<0.010	93	6	3.6	0.5	--
09...	0.490	0.030	0.50	0.20	0.110	0.020	0.020	140	7	3.0	1.2	--
JUN												
06...	0.460	0.020	<0.20	<0.20	<0.010	<0.010	<0.010	65	200	6.6	0.3	<0.02
JUL												
05...	0.300	0.020	0.30	0.20	0.030	0.010	<0.010	11	3	1.7	0.2	--
AUG												
04...	0.320	0.020	<0.20	<0.20	0.020	0.010	<0.010	32	5	1.9	0.2	--
SEP												
21...	0.630	0.020	<0.20	<0.20	<0.010	<0.010	<0.010	7	3	1.6	0.1	--
DATE	ETHAL- FLUR- ALIN WAT FLT 0.7 U GF, REC (UG/L)	PHORATE WATER FLTRD 0.7 U GF, REC (UG/L)	TER- BACIL WATER FLTRD 0.7 U GF, REC (UG/L)	TRI- FLUR- ALIN WAT FLT 0.7 U GF, REC (UG/L)	2,6-DI- ETHYL ANILINE WAT FLT 0.7 U GF, REC (UG/L)	ALA- CHLOR, WATER, DISS, REC, (UG/L)	ALPHA BHC DIS- SOLVED (UG/L)	ATRA- ZINE, WATER, DISS, REC (UG/L)	BEN- FLUR- ALIN WAT FLD 0.7 U GF, REC (UG/L)	BUTYL- ATE, WATER, DISS, REC (UG/L)	CAR- BARYL WATER FLTRD 0.7 U GF, REC (UG/L)	CARBO- FURAN WATER FLTRD 0.7 U GF, REC (UG/L)
JUN 1994												
06...	<0.01	<0.01	<0.03	<0.01	<0.01	<0.01	<0.01	0.01	<0.01	<0.01	<0.05	<0.01
DATE	CHLOR- PYRIFOS DIS- SOLVED (UG/L)	CYANA- ZINE, WATER, DISS, REC (UG/L)	DCPA WATER FLTRD 0.7 U GF, REC (UG/L)	P,P' DDE DISSOLV (UG/L)	DEETHYL ATRA- ZINE, WATER, DISS, REC (UG/L)	DI- AZINON, DIS- SOLVED (UG/L)	DI- ELDRIN DIS- SOLVED (UG/L)	DISUL- FOTON WATER FLTRD 0.7 U GF, REC (UG/L)	EPTC WATER FLTRD 0.7 U GF, REC (UG/L)	ETHO- PROP WATER FLTRD 0.7 U GF, REC (UG/L)	FONOFOS WATER DISS REC (UG/L)	LINDANE DIS- SOLVED (UG/L)
JUN 1994												
06...	<0.01	<0.01	<0.004	<0.01	<0.005	<0.01	<0.01	<0.06	<0.005	<0.01	<0.01	<0.01
DATE	LIN- URON WATER FLTRD 0.7 U GF, REC (UG/L)	MALA- THION, DIS- SOLVED (UG/L)	METHYL AZIN- PHOS WAT FLT 0.7 U GF, REC (UG/L)	METHYL PARA- THION WAT FLT 0.7 U GF, REC (UG/L)	METO- LACHLOR WATER DISSOLV (UG/L)	METRI- BUZIN WATER DISSOLV (UG/L)	MOL- INATE WATER FLTRD 0.7 U GF, REC (UG/L)	NAPROP- AMIDE WATER FLTRD 0.7 U GF, REC (UG/L)	PEB- ULATE WATER FLTRD 0.7 U GF, REC (UG/L)	PARA- THION, DIS- SOLVED (UG/L)	PENDI- METH- ALIN WAT FLT 0.7 U GF, REC (UG/L)	
JUN 1994												
06...	<0.04	<0.01	<0.05	<0.03	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02	
DATE	PER- METHRIN CIS WAT FLT 0.7 U GF, REC (UG/L)	PRO- METON, WATER, DISS, REC (UG/L)	FRON- AMIDE WATER FLTRD 0.7 U GF, REC (UG/L)	PROP- CHLOR, WATER, DISS, REC (UG/L)	PRO- PARGITE WATER FLTRD 0.7 U GF, REC (UG/L)	PRO- PANIL WATER FLTRD 0.7 U GF, REC (UG/L)	SI- MAZINE, WATER, DISS, REC (UG/L)	TEBU- THIURON WATER FLTRD 0.7 U GF, REC (UG/L)	TER- BUFOS WATER FLTRD 0.7 U GF, REC (UG/L)	THIO- BENCARB WATER FLTRD 0.7 U GF, REC (UG/L)	TRIAL- LATE WATER FLTRD 0.7 U GF, REC (UG/L)	
JUN 1994												
06...	<0.02	<0.01	<0.01	<0.02	<0.01	<0.02	0.02	<0.02	<0.01	<0.01	<0.01	

POTOMAC RIVER BASIN

01608500 SOUTH BRANCH POTOMAC RIVER NEAR SPRINGFIELD, WV--Continued

SUSPENDED SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY)
OCT 1993				
06...	1145	177	4	1.9
NOV				
03...	1330	375	3	3.0
29...	0945	6150	88	1460
DEC				
06...	0945	14300	186	7180
JAN 1994				
11...	1015	1740	4	19
FEB				
01...	1045	3490	12	113
MAR				
07...	1515	7410	27	540
APR				
13...	1245	2290	19	117
MAY				
02...	1100	1760	12	57
09...	1215	15200	115	4720
JUN				
06...	1315	429	2	2.3
JUL				
05...	1015	313	7	5.9
AUG				
04...	1345	1130	3	9.2

POTOMAC RIVER BASIN

249

01610000 POTOMAC RIVER AT PAW PAW, WV

LOCATION.--Lat 39°32'13", long 78°27'28", Allegany County, Md., Hydrologic Unit 02070003, on left bank 250 ft 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.--3,109 mi².

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

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 ft³/s, from rating curve extended above 85,000 ft³/s on basis of slope-area measurement of peak flow at site 5.0 mi upstream at Okonoko, W. Va.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 20,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 28	1430	27,500	18.18	Mar. 11	0215	32,200	19.75
Dec. 6	0615	26,100	17.74	Mar. 25	1300	22,000	16.30
Jan. 29	1745	22,000	16.29	Mar. 29	2015	36,900	21.25
Feb. 10	1000	*46,200	*24.03	Apr. 14	0100	22,000	16.28
Feb. 21	2330	23,400	16.79	May 9	0100	42,600	22.97
Feb. 24	1345	32,400	19.79				

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	937	1690	5590	2030	9080	7720	14400	5400	1620	867	2120	1360
2	791	1390	4440	2050	7430	6740	12900	5650	1520	762	1930	1450
3	690	1250	3820	2080	6180	6380	11100	4590	1290	734	1710	1330
4	626	1140	3490	1970	5300	6540	9650	4340	1240	718	1510	1260
5	585	1070	11400	2120	4740	11100	7550	7830	1210	804	1460	1180
6	543	1100	21800	2130	4370	14800	6530	8870	1180	760	1620	1130
7	515	1120	11600	2250	4310	13600	6030	8080	1150	946	2060	1080
8	508	1080	7670	2600	4330	23300	5640	27600	1100	921	1850	930
9	498	1060	5740	5420	11800	25600	5140	32400	1080	879	1220	881
10	498	982	4880	5140	39800	27000	5340	16200	1070	858	1080	857
11	494	963	4930	4700	19500	29500	6950	11400	1020	801	1010	824
12	526	923	4370	4600	13100	20200	5900	9300	1160	734	1050	792
13	624	893	3960	5280	10400	16400	11200	7280	1230	767	988	787
14	623	934	3630	6620	9020	15000	20100	5420	1040	773	1030	788
15	592	1070	3400	5470	8140	16200	13900	4570	970	864	1060	770
16	594	1740	3510	4290	7400	18200	11900	4280	919	758	961	757
17	594	1530	3750	3640	7800	13800	10900	4460	1070	693	1070	747
18	590	1480	3800	3510	7830	11200	7880	4200	1110	725	6500	764
19	598	1660	3940	3310	9330	10400	6450	3490	1020	718	7840	741
20	593	2090	3880	2580	13300	9810	5680	3010	931	676	4670	724
21	763	1940	3900	2340	20400	9850	4980	2760	955	877	3470	706
22	830	1720	3990	2670	22300	14200	4400	2760	967	2140	2830	715
23	748	1540	3750	2830	19200	18200	3960	2580	964	2690	3600	775
24	1180	1430	3450	3100	30100	18800	3830	2200	1000	2000	2770	747
25	1670	1340	3140	8440	26000	20900	3520	2080	1210	1570	2220	1260
26	741	1260	2880	14200	17500	17600	3170	2150	1230	1340	1900	1580
27	635	1330	2580	14000	12900	19300	3010	2270	1010	1420	1700	810
28	615	20900	2320	11200	9960	32000	2940	2120	967	2240	1600	745
29	585	14800	2190	17900	---	34800	2850	1880	949	3240	1480	710
30	613	8070	2130	16400	---	31400	2770	1760	917	3070	1360	690
31	1120	---	1920	11300	---	20200	---	1660	---	2540	1280	---
TOTAL	21519	79495	151850	176170	361520	540740	220570	202590	33099	38885	66949	27890
MEAN	694	2650	4898	5683	12910	17440	7352	6535	1103	1254	2160	930
MAX	1670	20900	21800	17900	39800	34800	20100	32400	1620	3240	7840	1580
MIN	494	893	1920	1970	4310	6380	2770	1660	917	676	961	690
CFSM	.22	.85	1.58	1.83	4.15	5.61	2.36	2.10	.35	.40	.69	.30
IN.	.26	.95	1.82	2.11	4.33	6.47	2.64	2.42	.40	.47	.80	.33

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1939 - 1994, BY WATER YEAR (WY)

	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950
MEAN	1555	1979	3317	3833	5314	7521	6130	4432	2524	1330	1183	983
MAX	9709	17180	12300	9099	12910	17440	15620	10450	7612	5071	6458	5012
(WY)	1977	1986	1973	1991	1994	1994	1993	1988	1972	1949	1955	1945
MIN	261	327	388	679	1116	2043	2258	1074	544	303	278	252
(WY)	1952	1966	1966	1981	1954	1990	1968	1941	1965	1966	1944	1959

POTOMAC RIVER BASIN

01610000 POTOMAC RIVER AT PAW PAW, WV--Continued

SUMMARY STATISTICS	FOR 1993 CALENDAR YEAR		FOR 1994 WATER YEAR		WATER YEARS 1939 - 1994	
ANNUAL TOTAL	1570838		1921277		3332	
ANNUAL MEAN	4304		5264		5264	1994
HIGHEST ANNUAL MEAN					1499	1969
LOWEST ANNUAL MEAN					125000	Nov 6 1985
HIGHEST DAILY MEAN	62700	Apr 17	39800	Feb 10	172	(b)
LOWEST DAILY MEAN	395	(a)	494	Oct 11	179	Sep 7 1966
ANNUAL SEVEN-DAY MINIMUM	405	Aug 26	512	Oct 6	53.58	Nov 5 1985
INSTANTANEOUS PEAK FLOW			46200	Feb 10	164	(f)
INSTANTANEOUS PEAK STAGE			24.03	Feb 10	1.07	
INSTANTANEOUS LOW FLOW			492	(d)	14.56	
ANNUAL RUNOFF (CFSM)	1.38		1.69			
ANNUAL RUNOFF (INCHES)	18.80		22.99			
10 PERCENT EXCEEDS	11300		14600		7570	
50 PERCENT EXCEEDS	1670		2200		1770	
90 PERCENT EXCEEDS	492		743		434	

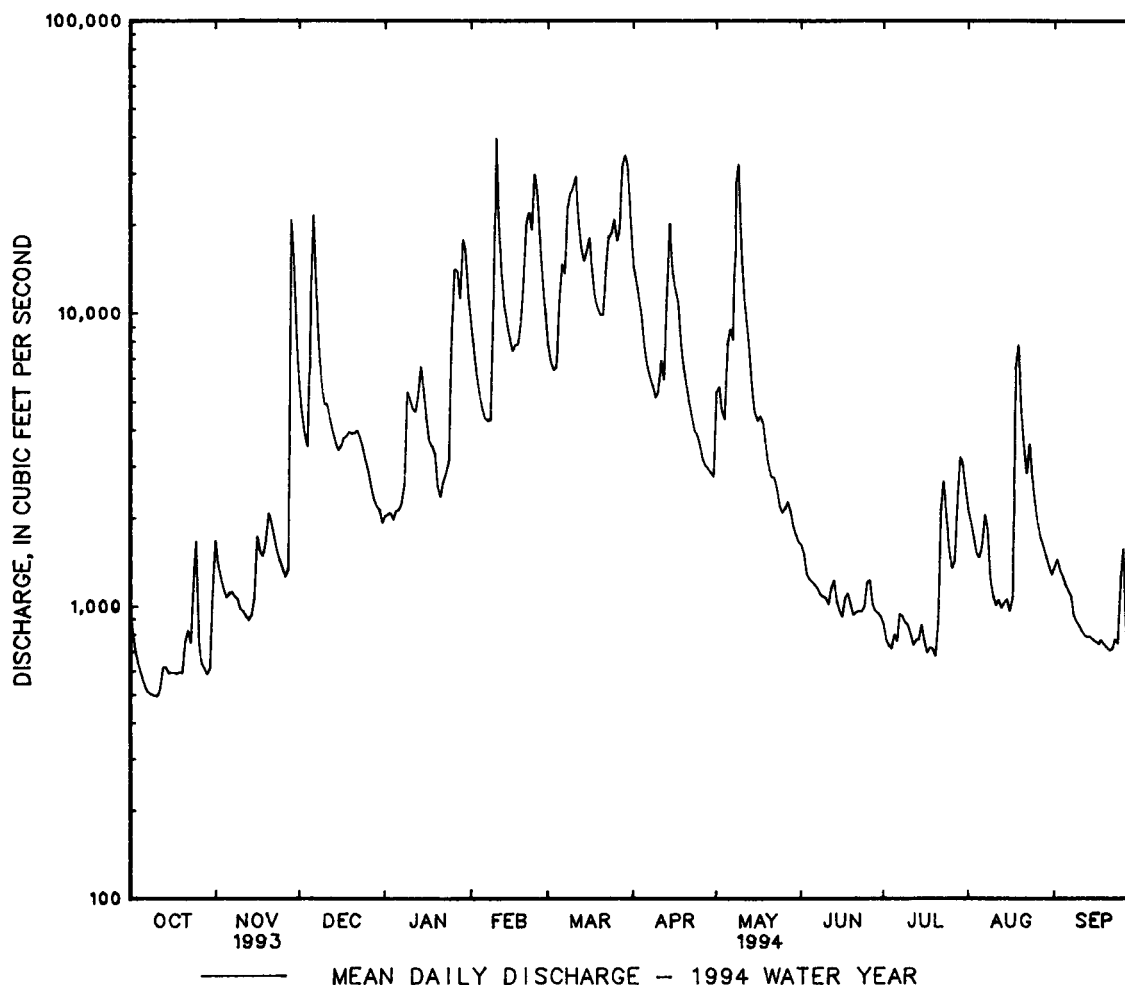
a Aug. 30, 31.

b Sept. 10, 12, 13, 1966.

c From rating curve extended above 85,000 ft³/s on basis of slope-area measurement of peak flow at site 5.0 mi upstream at Okonoko, WV.

d Oct. 11, 12.

f Sept. 10, 11, 1966.



POTOMAC RIVER BASIN

251

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.--677 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--December 1922 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.

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. National Weather Service gage-height telemeter at the station.

REMARKS.--Water-discharge records good except those for estimated daily discharges (ice effect), which are fair. EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in May 1889 reached a stage of about 24.7 ft, from floodmarks, discharge 57,500 ft³/s.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 3,900 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage Height (ft)	Date	Time	Discharge (ft ³ /s)	Gage Height (ft)
Nov. 28	2000	*14,400	*12.79	Mar. 8	1645	9,130	10.29
Dec. 6	0100	13,000	12.17	Mar. 11	0600	6,700	8.80
Jan. 27	1045	4,520	7.31	Mar. 16	0815	5,620	8.08
Jan. 29	1430	13,600	12.43	Mar. 29	2030	9,540	10.51
Feb. 10	0545	9,510	10.49	May 8	1945	10,300	10.91
Feb. 22	0330	5,520	8.01	Aug. 18	1530	4,110	7.00
Feb. 25	0600	6,700	8.80				

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	138	e110	1100	311	1590	1600	2660	685	198	130	355	168
2	113	e135	761	329	1240	1450	2130	943	183	119	235	176
3	100	e145	595	296	964	1350	1760	831	170	110	197	152
4	90	e130	507	281	910	1250	1520	744	160	107	176	145
5	84	e115	3870	349	849	2150	1330	1320	155	182	158	131
6	78	e110	8360	412	795	3100	1190	1580	151	177	157	122
7	74	e112	2920	366	796	2930	1160	1330	158	207	234	116
8	73	e112	1750	381	834	6700	1340	5480	154	369	266	110
9	71	e105	1230	1090	1390	7160	1090	5040	147	249	200	106
10	70	e99	957	1170	6740	5280	1020	2470	144	179	157	101
11	68	e94	842	913	2790	5960	1080	1760	137	149	136	98
12	78	e90	738	887	1920	3840	1020	1370	141	139	125	95
13	88	e87	595	1110	1530	3090	1090	1150	161	125	137	91
14	e84	e84	503	1500	1260	3220	2000	942	152	124	233	90
15	e80	e85	459	1290	1090	4470	1780	801	150	162	207	89
16	e77	e88	563	1010	1030	5020	1620	729	133	131	157	87
17	e76	e95	1010	868	1160	3300	1570	689	122	109	217	87
18	e74	e103	909	908	1360	2430	1360	600	118	128	1790	90
19	e75	e120	812	1090	2000	2220	1190	535	123	148	1700	116
20	e79	e155	758	1110	3160	2030	1050	491	128	129	938	99
21	e84	e150	691	1030	4680	1990	929	450	127	121	608	91
22	e83	e120	715	955	4640	2960	824	411	162	149	620	93
23	e80	e105	642	941	3240	3180	744	367	179	143	547	117
24	e79	e95	560	834	4240	2660	682	329	154	220	425	123
25	e78	e84	507	e1100	5210	2410	633	302	145	245	323	129
26	e77	e76	455	e3500	3480	2200	593	301	142	228	253	126
27	e77	e90	380	4250	2520	2290	571	302	158	180	213	114
28	e77	6520	343	2760	1900	6300	564	283	154	159	192	106
29	e78	4890	372	5710	---	8830	548	259	146	151	194	97
30	e84	1820	346	3410	---	7300	488	232	149	155	166	91
31	e95	---	320	2070	---	3850	---	213	---	468	149	---
TOTAL	2562	16124	34570	42231	63318	112520	35536	32939	4501	5392	11465	3356
MEAN	82.6	537	1115	1362	2261	3630	1185	1063	150	174	370	112
MAX	138	6520	8360	5710	6740	8830	2660	5480	198	468	1790	176
MIN	68	76	320	281	795	1250	488	213	118	107	125	87
CFSM	.12	.79	1.65	2.01	3.34	5.36	1.75	1.57	.22	.26	.55	.17
IN.	.14	.89	1.90	2.32	3.48	6.18	1.95	1.81	.25	.30	.63	.18

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1923 - 1994, BY WATER YEAR (WY)

	332	356	515	634	884	1296	1140	875	432	195	236	179
MEAN	332	356	515	634	884	1296	1140	875	432	195	236	179
MAX	2976	2577	2121	1683	2261	5708	2976	3565	3525	936	2791	1636
(WY)	1943	1986	1973	1991	1994	1936	1987	1924	1972	1972	1955	1975
MIN	44.8	51.1	56.5	69.6	89.1	247	242	157	77.0	56.4	39.8	39.4
(WY)	1931	1966	1966	1956	1934	1990	1947	1969	1969	1930	1966	1932

POTOMAC RIVER BASIN

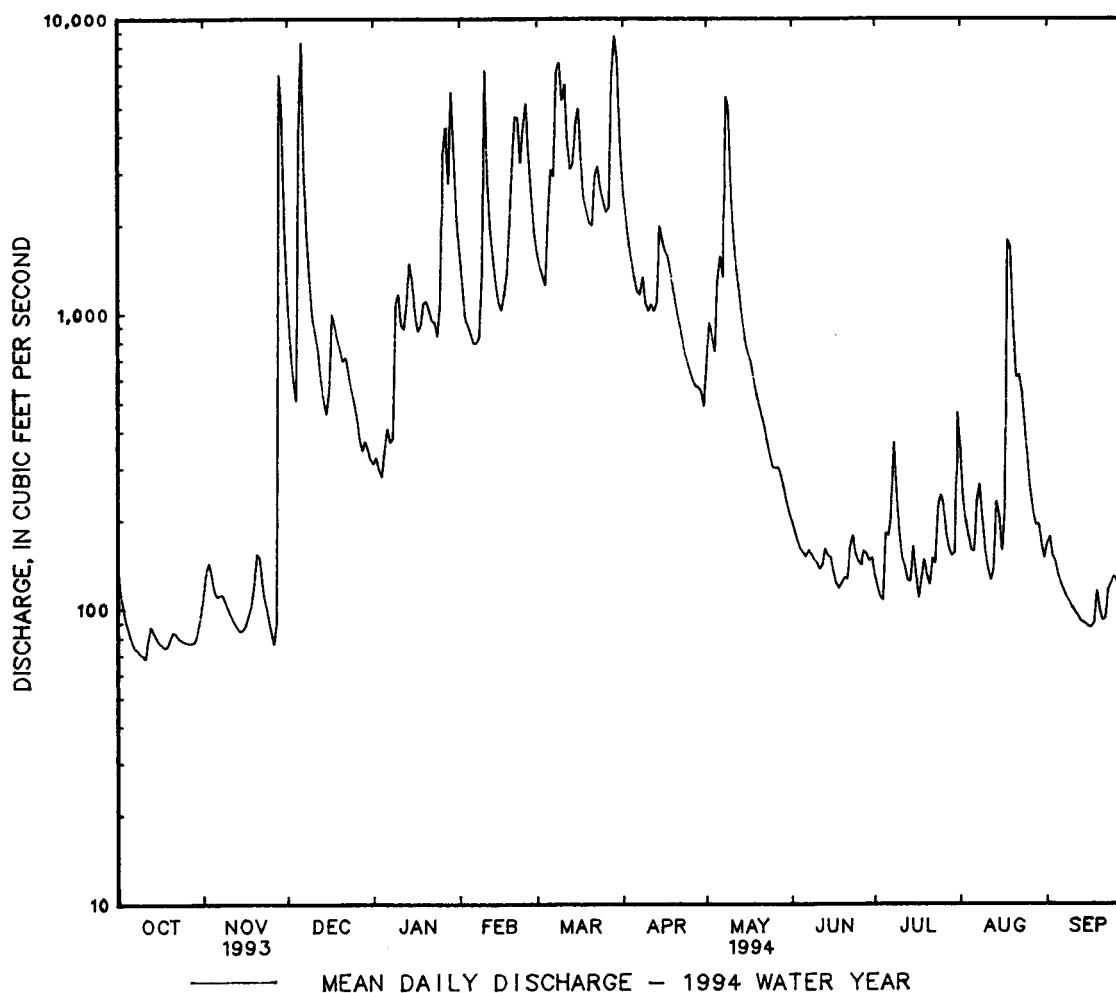
01611500 CACAPON RIVER NEAR GREAT CACAPON, WV--Continued

SUMMARY STATISTICS	FOR 1993 CALENDAR YEAR		FOR 1994 WATER YEAR		WATER YEARS 1923 - 1994	
ANNUAL TOTAL	331780		364514		592	
ANNUAL MEAN	909		999		1135	
HIGHEST ANNUAL MEAN					180	
LOWEST ANNUAL MEAN					180	
HIGHEST DAILY MEAN	19000	Mar 5	8830	Mar 29	67900	Mar 18 1936
LOWEST DAILY MEAN	57	Aug 29	68	Oct 11	26	Sep 12 1966
ANNUAL SEVEN-DAY MINIMUM	60	Aug 25	73	Oct 6	28	Sep 7 1966
INSTANTANEOUS PEAK FLOW			13600	Jan 29	(a)87600	Mar 18 1936
INSTANTANEOUS PEAK STAGE			12.43	Jan 29	30.10	Mar 18 1936
INSTANTANEOUS LOW FLOW			68	(b)	26	(c)
ANNUAL RUNOFF (CFSM)	1.34		1.48		.87	
ANNUAL RUNOFF (INCHES)	18.23		20.03		11.87	
10 PERCENT EXCEEDS	2680		2920		1340	
50 PERCENT EXCEEDS	251		329		240	
90 PERCENT EXCEEDS	78		90		67	

a From rating curve extended above 52,000 ft³/s.

b Oct. 11, 12.

c Sept. 11-13, 1966.



01611500 CACAPON RIVER NEAR GREAT CACAPON, WV--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1960-61, 1969-83, 1992, October 1993 to September 1994.

WATER QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH WATER WHOLE FIELD (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	TEMPER-ATURE AIR (DEG C)	BARO-METRIC PRES-SURE (MM OF HG)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	ALKA-LINITY WAT DIS TOT IT FIELD MG/L AS CaCO3	BICAR-BONATE WATER DIS IT FIELD MG/L AS HCO3	
JUN 1994 07...	0830	165	180	7.7	24.0	26.0	745	7.7	94	75	91	
DATE		NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC DIS. (MG/L AS N)	PHOS-PHORUS TOTAL (MG/L AS P)	PHOS-PHORUS DIS-SOLVED (MG/L AS P)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P)	DIMETH-OATE WATER FLTRD 0.7 U GG, REC (UG/L)	ETHAL-FLUR-ALIN WAT FLT 0.7 U GF, REC (UG/L)	PHORATE WATER FLTRD 0.7 U GF, REC (UG/L)
JUN 1994 07...	<0.010	<0.050	0.030	0.30	<0.20	0.010	<0.010	<0.010	<0.010	<0.02	<0.01	<0.01
DATE		TER-BACIL WATER FLTRD 0.7 U GF, REC (UG/L)	TRI-FLUR-ALIN WAT FLT 0.7 U GF, REC (UG/L)	2,6-DI-ETHYL ANILINE WAT FLT 0.7 U GF, REC (UG/L)	ALA-CHLOR, WATER, DISS, REC, (UG/L)	ALPHA BHC DIS-SOLVED (UG/L)	ATRA-ZINE, WATER, DISS, REC (UG/L)	BEN-FLUR-ALIN WAT FLD 0.7 U GF, REC (UG/L)	BUTYL-ATE, WATER, DISS, REC (UG/L)	CAR-BARYL WATER FLTRD 0.7 U GF, REC (UG/L)	CARBO-FURAN WATER FLTRD 0.7 U GF, REC (UG/L)	CHLOR-PYRIFOS DIS-SOLVED (UG/L)
JUN 1994 07...	<0.03	<0.01	<0.01	<0.01	<0.01	0.01	<0.01	<0.01	<0.01	<0.05	<0.01	<0.005
DATE		CYANA-ZINE, WATER, DISS, REC (UG/L)	DCPA WATER FLTRD 0.7 U GF, REC (UG/L)	P,P' DDE DISSOLV (UG/L)	DEETHYL ATRA-ZINE, WATER, DISS, REC (UG/L)	DI-AZINON, DIS-SOLVED (UG/L)	DI-ELDRIN DIS-SOLVED (UG/L)	DISUL-FOTON WATER FLTRD 0.7 U GF, REC (UG/L)	EPTC WATER FLTRD 0.7 U GF, REC (UG/L)	ETHO-PROP WATER FLTRD 0.7 U GF, REC (UG/L)	FONOFOS WATER DISS REC (UG/L)	LINDANE DIS-SOLVED (UG/L)
JUN 1994 07...	<0.01	<0.004	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.005	<0.01	<0.01	<0.01
DATE		LIN-URON WATER FLTRD 0.7 U GF, REC (UG/L)	MALA-THION, DIS-SOLVED (UG/L)	METHYL AZIN-PHOS WAT FLT 0.7 U GF, REC (UG/L)	METHYL PARA-THION WAT FLT 0.7 U GF, REC (UG/L)	METO-LACHLOR WATER DISSOLV (UG/L)	METRI-BUZIN SENCOR WATER DISSOLV (UG/L)	MOL-INATE WATER FLTRD 0.7 U GF, REC (UG/L)	NAPROP-AMIDE WATER FLTRD 0.7 U GF, REC (UG/L)	PEB-ULATE WATER FILTRD 0.7 U GF, REC (UG/L)	PARA-THION, DIS-SOLVED (UG/L)	PENDI-METH-ALIN WAT FLT 0.7 U GF, REC (UG/L)
JUN 1994 07...	<0.04	<0.01	<0.04	<0.03	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02
DATE		PER-METHRIN CIS WAT FLT 0.7 U GF, REC (UG/L)	PRO-METON, WATER, DISS, REC (UG/L)	PRON-AMIDE WATER FLTRD 0.7 U GF, REC (UG/L)	PROP-CHLOR, WATER, DISS, REC (UG/L)	PRO-PARGITE WATER FLTRD 0.7 U GF, REC (UG/L)	PRO-PANIL WATER FLTRD 0.7 U GF, REC (UG/L)	SI-MAZINE, WATER, DISS, REC (UG/L)	TEBU-THIURON WATER FLTRD 0.7 U GF, REC (UG/L)	TER-BUFOS WATER FLTRD 0.7 U GF, REC (UG/L)	THIO-BENCARB WATER FLTRD 0.7 U GF, REC (UG/L)	TRIAL-LATE WATER FLTRD 0.7 U GF, REC (UG/L)
JUN 1994 07...	<0.02	<0.01	<0.01	<0.02	<0.01	<0.02	0.09	<0.02	<0.01	<0.01	<0.01	

SUSPENDED SEDIMENT DISCHARGE

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)
JUN 1994 07...	0830	165	2	0.89

POTOMAC RIVER BASIN

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.--4,073 mi².

PERIOD OF RECORD.--October 1932 to current year. Gage-height records collected at same site since June 1925 are contained in reports of National Weather Service.

REVISED RECORDS.--WSP 781: 1933(M). WSP 801: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 383.68 ft 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.--Records good except those for estimated daily discharges (ice effect), which are fair. 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 ft³/s.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 23,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 28	2200	41,600	18.15	Mar. 16	0915	25,600	13.92
Dec. 6	1015	33,700	16.16	Mar. 25	1930	24,500	13.57
Jan. 26	0630	41,600	18.15	Mar. 30	0215	45,300	19.03
Feb. 24	2215	36,300	16.84	Apr. 14	0815	25,400	13.87
Mar. 11	0700	38,900	17.50	May 9	0545	*46,800	*19.37

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1370	1670	7700	2310	11100	10100	18500	5270	1750	989	2650	1380
2	1220	2040	5690	2440	9080	8530	15000	8010	1690	925	2240	1520
3	1050	1770	4680	2420	7610	7940	13800	6930	1530	820	2020	1490
4	938	1580	4150	2480	6340	7600	11400	5610	1360	791	1740	1410
5	868	1460	8850	2460	5780	11000	9440	6430	1320	809	1620	1320
6	811	1370	30100	2730	5190	18000	7980	10400	1300	949	1540	1230
7	762	1370	17400	2570	5050	16800	7260	9880	1260	977	1720	1170
8	730	1390	10600	2670	5100	25500	6930	22100	1220	1230	2400	1100
9	718	1340	7730	4600	5760	35000	6380	41300	1180	1170	1740	963
10	703	1300	6160	6270	37600	31600	6040	21400	1150	1010	1310	917
11	691	1240	5800	5820	26000	37300	7080	14200	1140	946	1150	886
12	712	1210	5420	5580	15800	26700	7450	11100	1100	886	1080	860
13	738	1180	4800	5600	12100	20900	9350	9260	1230	808	1110	834
14	844	1160	4310	7540	10200	19200	23900	7320	1260	851	1130	816
15	866	1180	4000	6800	9100	22000	17800	5600	1110	890	1240	809
16	850	1350	3880	e5900	8000	25000	14100	5070	1020	956	1190	796
17	836	1890	4490	e4500	8320	19700	13200	4670	963	817	1580	786
18	844	1820	4570	e4000	8770	14900	10600	5140	1100	778	3500	790
19	829	1790	4560	e3600	10400	13100	8500	4470	1120	859	11300	792
20	843	2010	4620	e3200	15200	12600	7460	3630	1050	813	6680	794
21	852	2340	4490	e2800	24000	12300	6510	3250	997	757	4650	753
22	957	2180	4650	e3000	28800	16600	5730	3030	1000	1260	3840	752
23	1070	1960	4490	e3200	24100	22700	5070	3010	1080	2500	3810	868
24	1000	1800	4170	e3600	29700	22900	4600	2750	1050	2640	3710	836
25	1440	1680	3820	e5000	33100	23900	4340	2400	1100	2010	2870	832
26	1710	1580	3460	e12000	23100	21000	4030	2340	1290	1680	2350	1450
27	1000	1550	3150	e18000	16900	20800	3680	2420	1260	1460	2020	1460
28	884	25000	2830	e14000	12700	35500	3530	2460	1100	1720	1810	865
29	863	26000	2740	e20000	---	43100	3430	2190	1040	2590	1730	795
30	861	11800	2720	22900	---	40700	3320	1980	1020	3290	1560	764
31	969	---	2390	14600	---	26900	---	1850	---	3220	1440	---
TOTAL	28829	106010	188420	202590	414900	669870	266410	235470	35790	41401	78730	30038
MEAN	930	3534	6078	6535	14820	21610	8880	7596	1193	1336	2540	1001
MAX	1710	26000	30100	22900	37600	43100	23900	41300	1750	3290	11300	1520
MIN	691	1160	2390	2310	5050	7600	3320	1850	963	757	1080	752
CFSM	.23	.87	1.49	1.60	3.64	5.31	2.18	1.86	.29	.33	.62	.25
IN.	.26	.97	1.72	1.85	3.79	6.12	2.43	2.15	.33	.38	.72	.27

• Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1933 - 1994, BY WATER YEAR (WY)

	MEAN	2058	2440	4008	4966	6572	9468	7818	5496	3061	1558	1508	1254
MAX	13270	20090	15160	15450	16720	32280	19170	13260	13390	6677	9479	6756	
(WY)	1977	1986	1973	1937	1971	1936	1993	1988	1972	1949	1955	1945	
MIN	309	399	463	751	1041	2311	2857	1344	622	357	342	329	
(WY)	1942	1966	1966	1956	1934	1990	1968	1941	1969	1966	1944	1946	

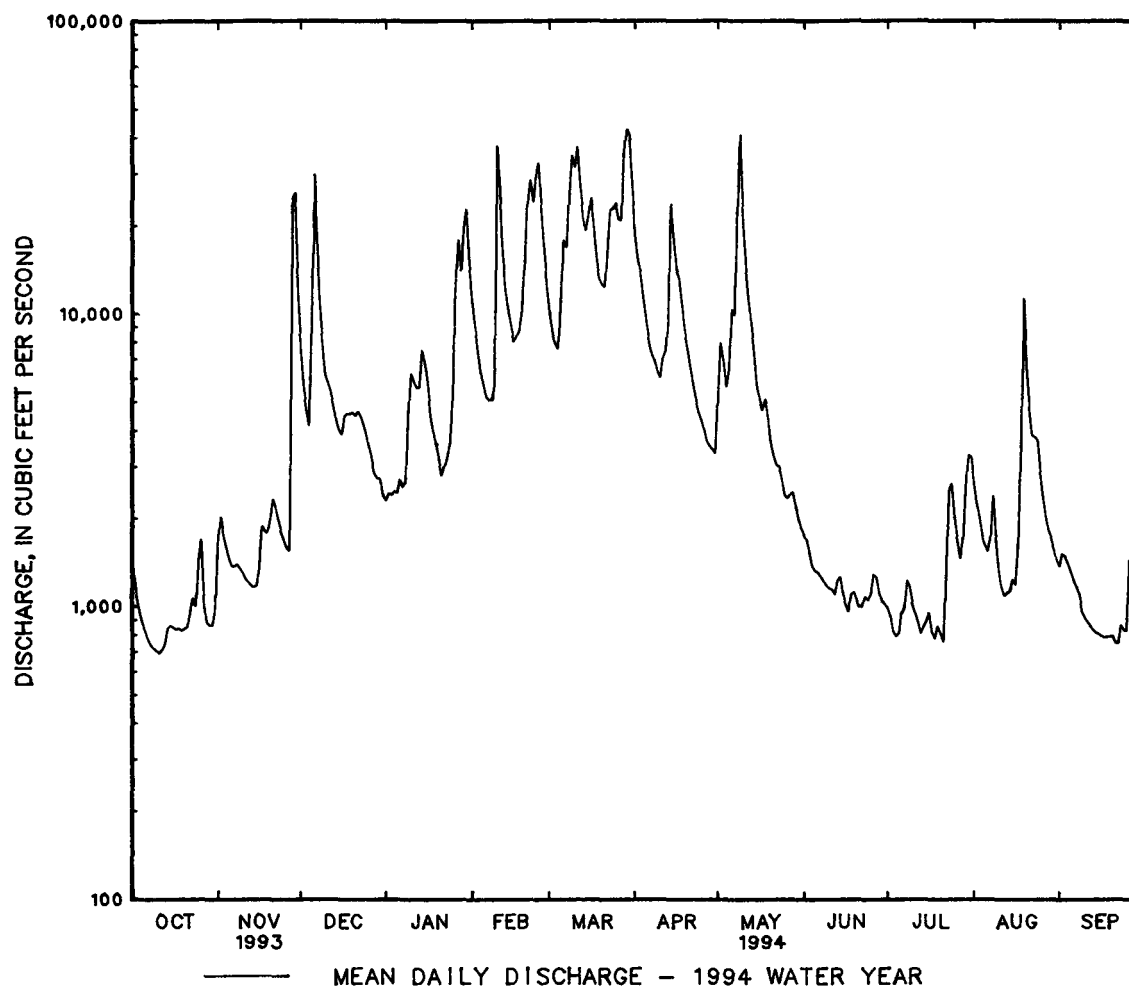
POTOMAC RIVER BASIN

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01613000 POTOMAC RIVER AT HANCOCK, MD--Continued

SUMMARY STATISTICS	FOR 1993 CALENDAR YEAR		FOR 1994 WATER YEAR		WATER YEARS 1933 - 1994	
ANNUAL TOTAL	1971929		2298458			
ANNUAL MEAN	5403		6297		4172	
HIGHEST ANNUAL MEAN					6319	
LOWEST ANNUAL MEAN					1770	
HIGHEST DAILY MEAN	65200	Apr 17	43100	Mar 29	261000	Mar 18 1936
LOWEST DAILY MEAN	527	Aug 30	691	Oct 11	184	Oct 3 1932
ANNUAL SEVEN-DAY MINIMUM	550	Aug 26	722	Oct 7	215	Sep 7 1966
INSTANTANEOUS PEAK FLOW			46800	May 9	(a)340000	Mar 18 1936
INSTANTANEOUS PEAK STAGE			19.37	May 9	47.60	Mar 18 1936
INSTANTANEOUS LOW FLOW			676	(b)	180	Oct 4 1932
ANNUAL RUNOFF (CFSM)	1.33		1.55		1.02	
ANNUAL RUNOFF (INCHES)	18.01		20.99		13.92	
10 PERCENT EXCEEDS	14500		18800		9520	
50 PERCENT EXCEEDS	1970		2640		2140	
90 PERCENT EXCEEDS	688		851		527	

a From rating curve extended above 120,000 ft³/s on basis of slope-area measurement of peak flow.
b Oct. 11, 12.



POTOMAC RIVER BASIN

01614500 CONOCOCHEAGUE CREEK AT FAIRVIEW, MD

LOCATION.--Lat 39°42'57", long 77°49'28", Washington County, Hydrologic Unit 02070004, on right bank 0.7 mi 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 mi².

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. Low flow partly regulated by small powerplants near Mercersburg, Pennsylvania.

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 ft³/s.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 4,300 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 28	1545	*14,600	*14.11	Mar. 28	0945	7,320	9.88
Dec. 5	1800	6,530	9.32	May 1	0715	4,800	7.95
Mar. 11	0100	6,110	9.01	Aug. 18	0645	4,560	7.74
Mar. 16	0400	6,800	9.52	Aug. 22	1730	5,720	8.71
Mar. 23	1130	6,190	9.07				

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	341	694	1590	411	996	1190	2830	3960	351	215	392	395
2	295	549	1260	405	817	1090	2310	2270	331	199	287	360
3	268	417	1070	400	737	1070	1990	1450	317	186	626	331
4	242	350	1010	402	651	1130	1790	1270	307	186	513	312
5	219	321	4840	387	631	1390	1580	1170	298	183	384	294
6	202	322	4860	358	594	1890	1440	1000	296	184	347	277
7	192	281	2550	372	581	1790	1550	912	353	348	282	264
8	186	252	1830	393	600	2510	1440	2320	321	306	244	250
9	180	234	1480	344	535	3150	1210	1770	285	225	221	238
10	170	222	1380	314	570	4490	1140	1350	266	197	204	230
11	165	212	1590	362	478	5210	1210	1140	279	186	190	218
12	202	204	1260	356	482	3580	1130	1040	297	180	183	210
13	331	203	1080	345	491	3190	1340	945	278	168	179	206
14	277	238	989	338	450	3710	3270	835	260	167	177	199
15	227	245	934	268	422	5190	2170	773	242	251	179	217
16	203	236	874	e340	446	6400	1830	757	233	226	179	349
17	192	219	776	e340	478	4050	1630	712	390	186	434	260
18	185	259	708	e345	483	3090	1390	655	326	176	3520	242
19	181	267	715	e400	531	2520	1260	615	260	171	1470	222
20	188	263	671	e410	725	2450	1170	582	242	166	843	206
21	244	239	716	e400	1840	3140	1020	549	243	167	669	196
22	237	225	785	e390	3420	4710	915	513	244	247	3330	199
23	216	214	689	e385	3250	5890	853	484	224	594	2540	453
24	203	207	634	e380	2550	5580	805	459	226	552	1220	395
25	194	200	603	e600	2260	5400	764	450	258	393	887	291
26	187	193	561	e1200	1850	4290	723	462	220	301	883	253
27	179	219	501	e1050	1500	4620	693	548	214	316	728	275
28	173	10300	479	e1100	1310	7040	650	459	282	272	600	286
29	173	8490	437	e1800	---	6680	615	410	276	249	534	259
30	178	2310	428	1610	---	5390	632	385	243	326	472	228
31	462	---	441	1200	---	3660	---	370	---	322	420	---
TOTAL	6892	28585	37741	17405	29678	115490	41350	30615	8362	7845	23137	8115
MEAN	222	953	1217	561	1060	3725	1378	988	279	253	746	270
MAX	462	10300	4860	1800	3420	7040	3270	3960	390	594	3520	453
MIN	165	193	428	268	422	1070	615	370	214	166	177	196
CFSM	.45	1.93	2.46	1.14	2.15	7.54	2.79	2.00	.56	.51	1.51	.55
IN.	.52	2.15	2.84	1.31	2.23	8.70	3.11	2.31	.63	.59	1.74	.61

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1928 - 1994, BY WATER YEAR (WY)

	329	434	615	646	835	1195	1076	744	497	321	231	244
MEAN	329	434	615	646	835	1195	1076	744	497	321	231	244
MAX	2177	1453	1904	1685	2446	3725	2991	1736	3278	1358	921	1828
(WY)	1977	1933	1973	1937	1984	1994	1993	1989	1972	1928	1942	1975
MIN	42.3	45.4	61.2	88.8	151	274	367	218	120	62.2	48.0	54.6
(WY)	1931	1931	1931	1931	1931	1990	1947	1941	1965	1966	1966	1930

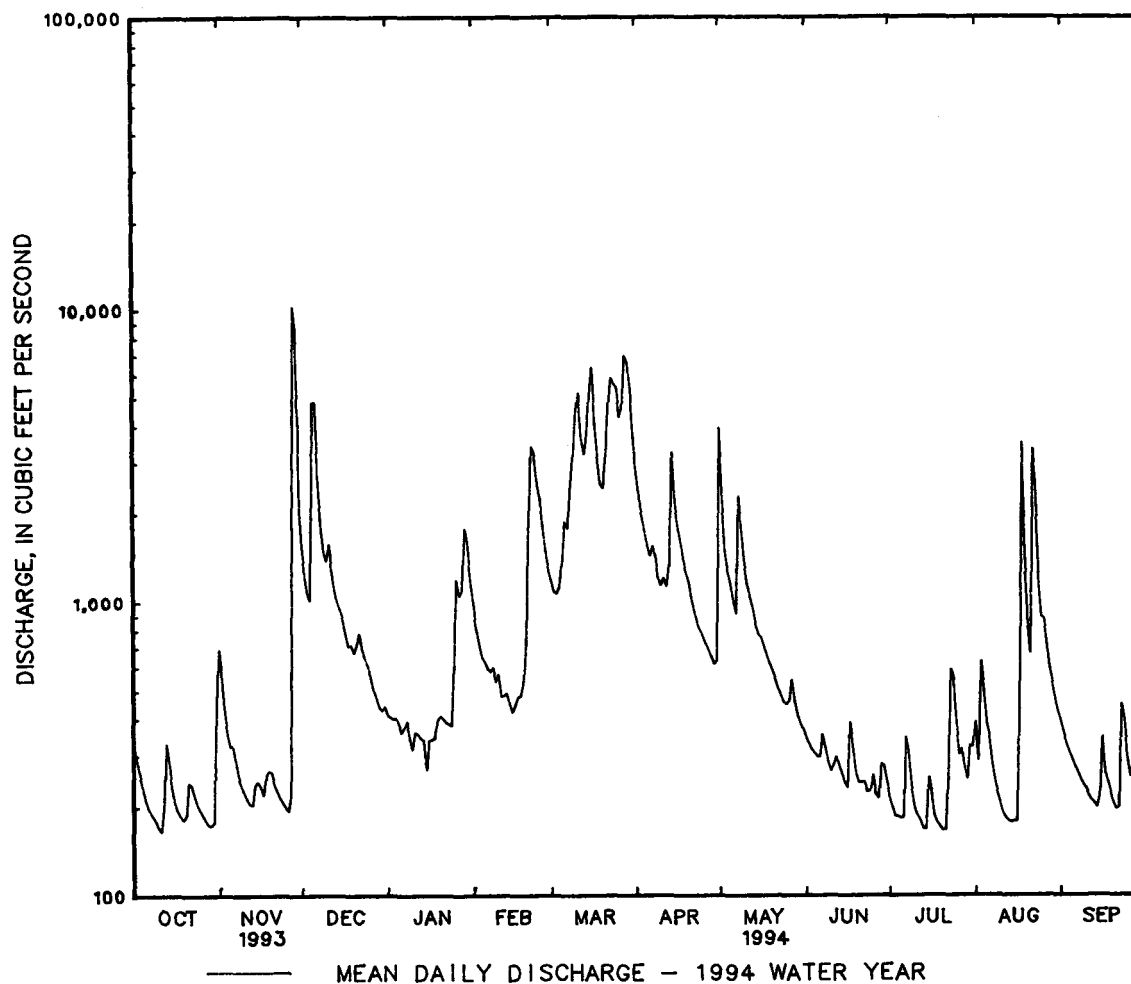
POTOMAC RIVER BASIN

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01614500 CONOCOCHIEGUE CREEK AT FAIRVIEW, MD--Continued

SUMMARY STATISTICS	FOR 1993 CALENDAR YEAR		FOR 1994 WATER YEAR		WATER YEARS 1928 - 1994	
ANNUAL TOTAL	348236		355215		592	
ANNUAL MEAN	954		973		1078	
HIGHEST ANNUAL MEAN					301	
LOWEST ANNUAL MEAN					26700	
HIGHEST DAILY MEAN	10300	Nov 28	10300	Nov 28	25	Jun 23 1972
LOWEST DAILY MEAN	123	Aug 30	165	Oct 11	28	Nov 28 1930
ANNUAL SEVEN-DAY MINIMUM	128	Aug 27	184	Oct 24	28	Sep 7 1966
INSTANTANEOUS PEAK FLOW			14600	Nov 28	(a)32400	Jun 23 1972
INSTANTANEOUS PEAK STAGE			14.11	Nov 28	(b)24.50	Jun 23 1972
INSTANTANEOUS LOW FLOW			159	Jul 21	21	(c)
ANNUAL RUNOFF (CFSM)	1.93		1.97		1.20	
ANNUAL RUNOFF (INCHES)	26.22		26.75		16.29	
10 PERCENT EXCEEDS	2330		2510		1300	
50 PERCENT EXCEEDS	370		411		330	
90 PERCENT EXCEEDS	166		197		102	

- a From rating curve extended above 15,000 ft³/s on basis of contracted-opening and flow-over-road measurement of peak flow.
b From floodmark.
c Aug. 8, Sept. 12, 1966.



POTOMAC RIVER BASIN

01614500 CONOCOCHUEGUE 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 1993 TO SEPTEMBER 1994

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH WATER WHOLE FIELD (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	TEMPER- ATURE AIR (DEG C)	BARO- METRIC PRES- SURE (MM OF HG)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, (PER- CENT SATUR- ATION)	HARD- NESS TOTAL (MG/L AS CaCO3)	CALCIUM DIS- SOLVED (MG/L AS Ca)
OCT 1993											
05...	1145	214	449	7.9	13.5	13.0	759	9.5	92	210	62
NOV											
02...	1000	567	335	7.7	6.5	5.0	765	10.6	86	150	43
30...	1215	2260	251	7.6	7.0	6.0	768	11.2	92	120	34
DEC											
08...	1115	1830	289	7.6	7.5	7.0	757	11.2	94	130	39
FEB 1994											
02...	1115	804	338	7.6	1.0	-4.0	759	13.8	98	150	46
MAR											
08...	1300	2540	277	7.5	5.5	8.0	753	11.3	91	120	37
APR											
14...	0915	3630	262	7.3	11.0	21.0	750	9.9	91	98	29
MAY											
05...	1100	1200	316	7.6	13.0	19.0	751	10.4	100	140	43
JUN											
07...	1630	342	437	8.3	24.5	31.0	745	10.1	124	210	63
JUL											
07...	1100	284	453	8.1	25.5	28.0	754	9.3	115	210	63
AUG											
01...	1545	415	363	7.4	24.0	28.5	755	7.9	95	170	48
SEP											
22...	1145	201	470	8.0	16.5	16.0	755	8.5	88	220	66

DATE	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY WAT DIS TOT IT FIELD MG/L AS CaCO3	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS NO3)
OCT 1993											
05...	13	11	3.6	162	197	25	16	0.10	6.4	268	--
NOV											
02...	9.8	7.8	3.9	115	140	24	13	0.20	8.6	197	18
30...	7.4	4.5	3.0	82	100	18	7.4	<0.10	8.2	157	16
DEC											
08...	7.9	5.1	2.1	95	116	18	7.1	<0.10	8.3	163	--
FEB 1994											
02...	9.1	8.1	2.2	112	137	20	16	<0.10	6.9	189	20
MAR											
08...	7.6	7.2	2.9	90	110	18	13	<0.10	6.2	166	18
APR											
14...	6.1	4.4	2.5	77	94	14	7.8	<0.10	5.7	136	11
MAY											
05...	8.3	5.7	2.0	109	133	16	9.8	<0.10	7.1	182	15
JUN											
07...	12	7.6	2.7	161	196	20	15	0.20	3.8	255	24
JUL											
07...	13	9.0	3.0	169	206	20	16	0.20	4.5	275	22
AUG											
01...	11	8.2	5.0	125	153	19	13	0.10	6.9	234	18
SEP											
22...	14	9.9	2.8	182	222	20	16	0.10	2.8	277	22

POTOMAC RIVER BASIN

01614500 CONOCOCHEAGUE CREEK AT FAIRVIEW, MD--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	ALPHA BHC DIS- SOLVED (UG/L)	ATRA- ZINE, WATER, DISS, REC (UG/L)	BEN- FLUR- ALIN WAT FLD 0.7 U GF, REC (UG/L)	BUTYL- ATE, WATER, DISS, REC (UG/L)	BRO- MACIL, WATER, DISS, REC (UG/L)	CAR- BARYL WATER FLTRD 0.7 U GF, REC (UG/L)	CARBO- FURAN WATER FLTRD 0.7 U GF, REC (UG/L)	CHLOR- PYRIFOS DIS- SOLVED (UG/L)	CYANA- ZINE, WATER, DISS, REC (UG/L)	DCPA WATER FLTRD 0.7 U GF, REC (UG/L)	P,P' DDE DISSOLV (UG/L)
JUN 1994 07...	<0.01	0.73	<0.01	<0.01	<0.05	<0.05	<0.01	<0.005	0.05	<0.004	<0.01
JUL 07...	<0.01	0.59	<0.01	<0.01	--	<0.05	<0.01	<0.005	0.03	<0.004	<0.01
AUG 01...	<0.01	0.39	<0.01	<0.01	--	<0.05	<0.01	<0.01	0.08	<0.004	<0.01
DATE	DEETHYL ATRA- ZINE, WATER, DISS, REC (UG/L)	DI- AZINON, DIS- SOLVED (UG/L)	DI- ELDRIN DIS- SOLVED (UG/L)	DISUL- FOTON WATER FLTRD 0.7 U GF, REC (UG/L)	EPTC WATER FLTRD 0.7 U GF, REC (UG/L)	ETHO- PROP WATER FLTRD 0.7 U GF, REC (UG/L)	FONOFOS WATER DISS REC (UG/L)	LINDANE DIS- SOLVED (UG/L)	LIN- URON WATER FLTRD 0.7 U GF, REC (UG/L)	MALA- THION, DIS- SOLVED (UG/L)	METHYL AZIN- PHOS WAT FLT 0.7 U GF, REC (UG/L)
JUN 1994 07...	0.19	<0.01	<0.01	<0.01	<0.005	<0.01	<0.01	<0.01	<0.04	<0.01	<0.04
JUL 07...	0.19	<0.01	<0.01	<0.01	<0.005	<0.01	<0.01	<0.01	<0.04	<0.01	<0.04
AUG 01...	0.15	<0.01	<0.01	<0.06	<0.005	<0.01	<0.01	<0.01	<0.04	<0.01	<0.05
DATE	METHYL PARA- THION WAT FLT 0.7 U GF, REC (UG/L)	METO- LACHLOR WATER DISSOLV (UG/L)	METRI- BUZIN SENCOR WATER DISSOLV (UG/L)	MOL- INATE WATER FLTRD 0.7 U GF, REC (UG/L)	NAPROP- AMIDE WATER FLTRD 0.7 U GF, REC (UG/L)	PEB- ULATE WATER FILTRD 0.7 U GF, REC (UG/L)	PARA- THION, DIS- SOLVED (UG/L)	PENDI- METH- ALIN WAT FLT 0.7 U GF, REC (UG/L)	PER- METHRIN CIS WAT FLT 0.7 U GF, REC (UG/L)	PRO- METON, WATER, DISS, REC (UG/L)	
JUN 1994 07...	<0.03	0.60	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02	<0.02	0.04	
JUL 07...	<0.03	0.43	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02	<0.02	0.05	
AUG 01...	<0.03	0.41	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02	<0.02	0.04	
DATE	PRON- AMIDE WATER FLTRD 0.7 U GF, REC (UG/L)	PROP- CHLOR, WATER, DISS, REC (UG/L)	PRO- PARGITE WATER FLTRD 0.7 U GF, REC (UG/L)	PRO- PANIL WATER FLTRD 0.7 U GF, REC (UG/L)	SILVEX, DIS- SOLVED (UG/L)	SI- MAZINE, WATER, DISS, REC (UG/L)	TEBU- THIURON WATER FLTRD 0.7 U GF, REC (UG/L)	TER- BUFOS WATER FLTRD 0.7 U GF, REC (UG/L)	THIO- BENCARB WATER FLTRD 0.7 U GF, REC (UG/L)	TRIAL- LATE WATER FLTRD 0.7 U GF, REC (UG/L)	
JUN 07...	<0.01	<0.02	<0.01	<0.02	<0.05	0.09	<0.02	<0.01	<0.01	<0.01	
JUL 07...	<0.01	<0.02	<0.01	<0.02	--	0.07	<0.02	<0.01	<0.01	<0.01	
AUG 01...	<0.01	<0.02	<0.01	<0.02	--	0.06	<0.02	<0.01	<0.01	<0.01	

POTOMAC RIVER BASIN

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01614500 CONOCOCHIEAGUE CREEK AT FAIRVIEW, MD--Continued

SUSPENDED SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY)
OCT 1993				
05...	1145	214	7	4.0
NOV				
02...	1000	567	21	32
30...	1215	2260	44	268
DEC				
08...	1115	1830	27	133
APR 1994				
14...	0915	3630	155	1520
MAY				
05...	1100	1200	20	65
AUG				
01...	1545	415	102	114

POTOMAC RIVER BASIN

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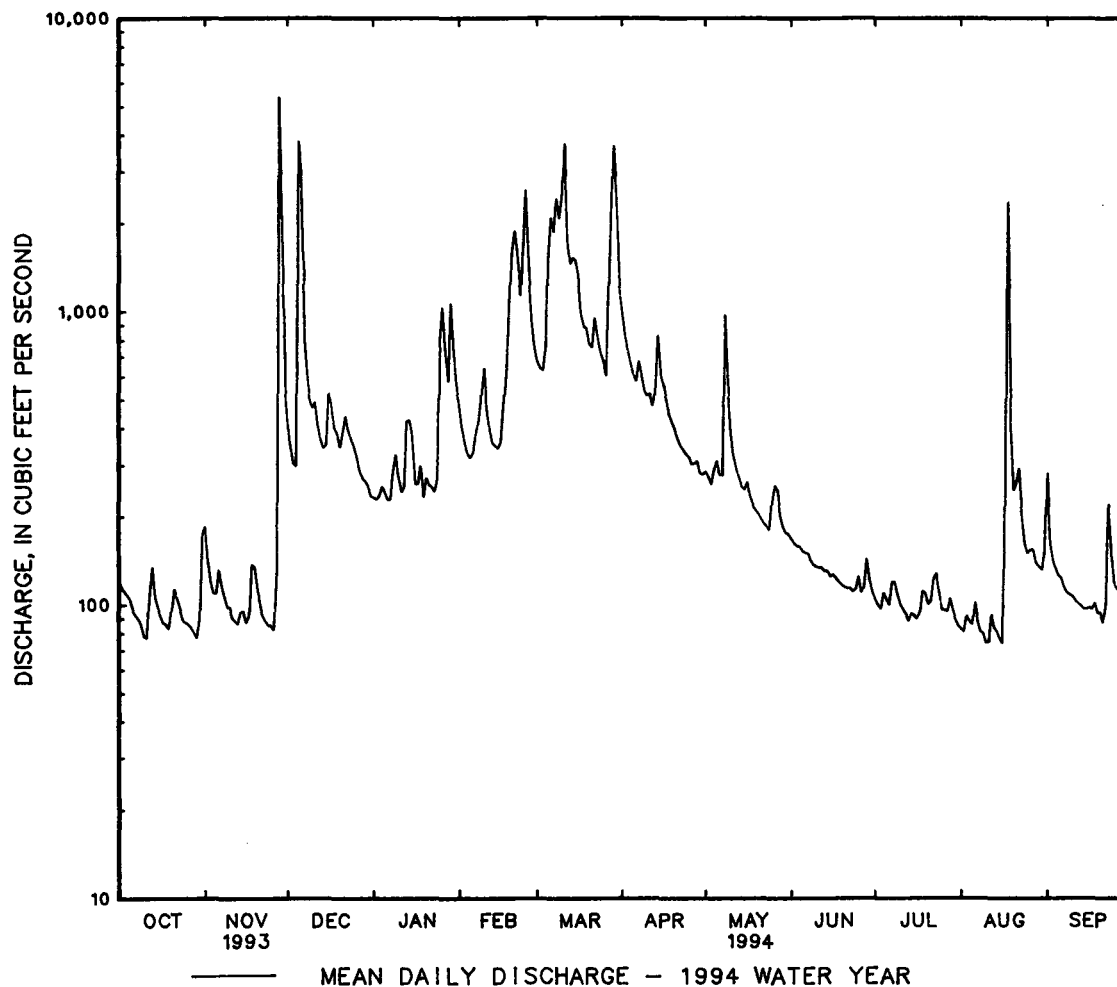
01616500 OPEQUON CREEK NEAR MARTINSBURG, WV--Continued

SUMMARY STATISTICS	FOR 1993 CALENDAR YEAR		FOR 1994 WATER YEAR		WATER YEARS 1947 - 1994	
ANNUAL TOTAL	152587		152572			
ANNUAL MEAN	418		418		236	
HIGHEST ANNUAL MEAN					464	
LOWEST ANNUAL MEAN					85.7	
HIGHEST DAILY MEAN	8730	Mar 5	5410	Nov 28	8890	Jun 22 1972
LOWEST DAILY MEAN	77	Aug 29	74	Aug 10	26	Oct 25 1947
ANNUAL SEVEN-DAY MINIMUM	79	Aug 27	80	Aug 10	27	Sep 7 1966
INSTANTANEOUS PEAK FLOW			7510	Nov 28	(a)19000	Jun 22 1972
INSTANTANEOUS PEAK STAGE			13.26	Nov 28	17.45	Jun 22 1972
INSTANTANEOUS LOW FLOW			72	(b)	(c)25	Oct 25 1947
ANNUAL RUNOFF (CFSM)	1.54		1.54		.87	
ANNUAL RUNOFF (INCHES)	20.87		20.87		11.78	
10 PERCENT EXCEEDS	913		939		458	
50 PERCENT EXCEEDS	180		220		137	
90 PERCENT EXCEEDS	88		90		56	

a From rating curve extended above 7,100 ft³/s.

b Aug. 10, 11, 16, 17.

c Observed.



POTOMAC RIVER BASIN

01616500 OPEQUON CREEK NEAR MARTINSBURG, WV--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1992, October 1993 to September 1994.

WATER QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH WATER WHOLE FIELD (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	TEMPER-ATURE AIR (DEG C)	BARO-METRIC PRES-SURE (MM OF HG)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	ALKA-LINITY WAT DIS TOT IT FIELD MG/L AS CaCO3	BICAR-BONATE WATER DIS IT FIELD MG/L AS HCO3	NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS NO3)	
JUN 1994 07...	1100	153	616	8.0	20.5	32.0	748	8.1	92	241	294	13	
DATE		NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC DIS. (MG/L AS N)	PHOS-PHORUS TOTAL (MG/L AS P)	PHOS-PHORUS DIS-SOLVED (MG/L AS P)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P)	DIMETH-OATE WATER FLTRD 0.7 U GG, REC (UG/L)	ETHAL-FLUR-ALIN WAT FLT 0.7 U GF, REC (UG/L)	PHORATE WATER FLTRD 0.7 U GF, REC (UG/L)	
JUN 1994 07...	0.020	3.00	3.00	0.090	1.0	<0.20	0.110	0.080	0.080	<0.02	<0.01	<0.01	
DATE		TER-BACIL WATER FLTRD 0.7 U GF, REC (UG/L)	TRI-FLUR-ALIN WAT FLT 0.7 U GF, REC (UG/L)	2,4-D, DIS-SOLVED (UG/L)	2,4,5-T DIS-SOLVED (UG/L)	2,6-DI-ETHYL ANILINE WAT FLT 0.7 U GF, REC (UG/L)	ALA-CHLOR, WATER, DISS, REC, (UG/L)	ALPHA BHC DIS-SOLVED (UG/L)	ATRA-ZINE, WATER, DISS, REC (UG/L)	BEN-FLUR-ALIN WAT FLD 0.7 U GF, REC (UG/L)	BUTYL-ATE, WATER, DISS, REC (UG/L)	BRO-MACIL, WATER, DISS, REC (UG/L)	CAR-BARYL WATER FLTRD 0.7 U GF, REC (UG/L)
JUN 1994 07...	<0.03	<0.01	<0.05	<0.05	<0.01	<0.01	<0.01	0.19	<0.01	<0.01	<0.05	<0.05	
DATE		CARBO-FURAN WATER FLTRD 0.7 U GF, REC (UG/L)	CHLOR-PYRIFOS DIS-SOLVED (UG/L)	CYANA-ZINE, WATER, DISS, REC (UG/L)	DCPA WATER FLTRD 0.7 U GF, REC (UG/L)	P,P' DDE DISSOLV (UG/L)	DEETHYL ATRA-ZINE, WATER, DISS, REC (UG/L)	DI-AZINON, DIS-SOLVED (UG/L)	DI-ELDRIN DIS-SOLVED (UG/L)	DISUL-FOTON WATER FLTRD 0.7 U GF, REC (UG/L)	EPTC WATER FLTRD 0.7 U GF, REC (UG/L)	ETHO-PROP WATER FLTRD 0.7 U GF, REC (UG/L)	FONOFOS WATER DISS REC (UG/L)
JUN 1994 07...	<0.01	<0.005	0.01	<0.004	<0.01	0.09	<0.01	<0.01	<0.01	<0.01	<0.005	<0.01	<0.01
DATE		LINDANE DIS-SOLVED (UG/L)	LIN-URON WATER FLTRD 0.7 U GF, REC (UG/L)	MALA-THION, DIS-SOLVED (UG/L)	METHYL AZIN-THION WAT FLT 0.7 U GF, REC (UG/L)	METHYL PARA-THION WAT FLT 0.7 U GF, REC (UG/L)	METO-LACHLOR WATER DISSOLV (UG/L)	METRI-BUZIN SENCOR WATER DISSOLV (UG/L)	MOL-INATE WATER FLTRD 0.7 U GF, REC (UG/L)	NAPROP-AMIDE WATER FLTRD 0.7 U GF, REC (UG/L)	PEB-ULATE WATER FILTRD 0.7 U GF, REC (UG/L)	PARA-THION, DIS-SOLVED (UG/L)	PENDI-METH-ALIN WAT FLT 0.7 U GF, REC (UG/L)
JUN 1994 07...	<0.01	<0.04	<0.01	<0.04	<0.03	0.08	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02
DATE		PER-METHRIN CIS WAT FLT 0.7 U GF, REC (UG/L)	PRO-METON, WATER, DISS, REC (UG/L)	PRON-AMIDE WATER FLTRD 0.7 U GF, REC (UG/L)	PROP-CHLOR, WATER, DISS, REC (UG/L)	PRO-PARGITE WATER FLTRD 0.7 U GF, REC (UG/L)	PRO-PANIL WATER FLTRD 0.7 U GF, REC (UG/L)	SILVEX, DIS-SOLVED (UG/L)	SI-MAZINE, WATER, DISS, REC (UG/L)	TEBU-THIURON WATER FLTRD 0.7 U GF, REC (UG/L)	TER-BUFOS WATER FLTRD 0.7 U GF, REC (UG/L)	THIO-BENCARB WATER FLTRD 0.7 U GF, REC (UG/L)	TRIAL-LATE WATER FLTRD 0.7 U GF, REC (UG/L)
JUN 1994 07...	<0.02	0.03	<0.01	<0.02	<0.01	<0.02	<0.05	0.04	<0.02	<0.01	<0.01	<0.01	

SUSPENDED SEDIMENT DISCHARGE

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SEDI- MENT, DIS- CHARGE, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)
JUN 1994 07...	1100	153	125	52

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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.

GAGE.--Water-stage recorder. Datum of gage is 354.72 ft above sea level.

REMARKS.--Records good except those for estimated daily discharges, 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.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 60 ft³/s and maximum (*):

(a) Backwater from log dam.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.4	5.2	9.4	10	15	25	55	25	13	9.9	9.6	e12
2	6.0	4.4	8.8	10	14	25	51	26	13	9.5	9.9	e12
3	6.0	4.1	8.4	10	13	25	48	25	e12	9.1	9.8	e11
4	5.9	3.9	8.2	11	12	26	45	25	e12	8.8	8.8	e11
5	5.5	3.8	41	e10	12	29	43	25	e11	8.4	8.1	e11
6	5.2	4.6	37	e9.5	12	34	40	23	e11	7.9	7.6	e11
7	4.9	e4.5	25	e9.4	12	36	41	21	e12	8.1	7.6	e11
8	4.8	e4.3	20	e9.8	13	42	38	32	e11	8.3	7.6	e10
9	4.5	e4.1	18	e10	14	43	35	29	e11	7.7	7.5	e10
10	4.1	e4.0	18	e9.8	14	51	34	27	e11	7.5	7.4	e10
11	3.9	e4.0	20	e8.8	13	66	34	25	e11	7.2	7.2	e10
12	4.3	e3.9	17	e8.9	13	58	34	24	e10	6.9	7.0	e9.8
13	5.6	e3.8	16	e9.0	12	56	34	23	e10	6.7	7.0	e9.7
14	e4.5	3.7	15	e9.0	12	62	40	22	e10	7.7	6.7	e9.6
15	e4.2	4.0	15	e8.7	12	69	36	21	10	12	6.7	e9.8
16	e3.9	4.3	15	e8.5	11	67	34	21	10	13	6.4	e10
17	e3.7	3.7	14	e8.4	12	54	33	21	10	10	e20	e11
18	e3.6	3.8	13	e8.8	12	50	31	20	10	9.8	e60	e12
19	e3.5	3.9	13	e9.8	13	49	30	20	9.9	9.4	e25	e11
20	e3.7	3.8	13	e9.0	17	45	29	20	10	8.8	e14	e10
21	e3.7	3.5	14	e8.7	27	43	27	20	9.9	8.4	e15	e9.8
22	e3.6	3.3	15	e8.5	34	48	26	19	9.8	10	e35	e11
23	e3.5	3.2	14	e8.4	34	45	26	16	9.5	22	e25	e13
24	e3.4	3.2	13	e8.4	36	41	25	13	9.1	14	e20	e12
25	e3.2	3.2	13	e9.8	39	39	25	13	9.1	10	e19	e12
26	e3.1	3.0	12	e12	34	36	25	14	9.0	9.9	e17	e11
27	3.0	3.1	11	e15	29	49	25	14	9.0	9.6	e16	e11
28	3.0	21	11	e14	26	77	25	15	9.9	9.5	e15	10
29	3.0	15	11	17	---	86	25	15	9.9	9.1	e14	9.7
30	3.0	11	11	16	---	74	23	14	10	9.1	e13	9.2
31	4.6	---	10	16	---	58	---	13	---	9.1	e13	---
TOTAL	131.3	151.3	479.8	322.2	517	1508	1017	641	313.1	297.4	445.9	320.6
MEAN	4.24	5.04	15.5	10.4	18.5	48.6	33.9	20.7	10.4	9.59	14.4	10.7
MAX	6.4	21	41	17	39	86	55	32	13	22	60	13
MIN	3.0	3.0	8.2	8.4	11	25	23	13	9.0	6.7	6.4	9.2
CFSM	.22	.27	.82	.55	.98	2.57	1.79	1.09	.55	.51	.76	.57
IN.	.26	.30	.94	.63	1.02	2.97	2.00	1.26	.62	.59	.88	.63

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1964 - 1994, BY WATER YEAR (WY)

MEAN	7.90	7.56	10.4	12.0	14.7	19.1	19.8	16.5	13.8	9.96	7.49	6.48
MAX	39.5	27.0	29.7	30.1	32.2	48.6	49.8	36.2	48.2	32.4	18.0	31.8
(WY)	1977	1976	1973	1979	1973	1994	1984	1972	1972	1972	1972	1975
MIN	.83	1.71	1.60	2.24	4.14	5.08	4.45	3.65	2.74	2.13	1.62	1.68
(WY)	1987	1992	1989	1981	1989	1990	1969	1969	1969	1991	1991	1988

POTOMAC RIVER BASIN

01617800 MARSH RUN AT GRIMES, MD--Continued

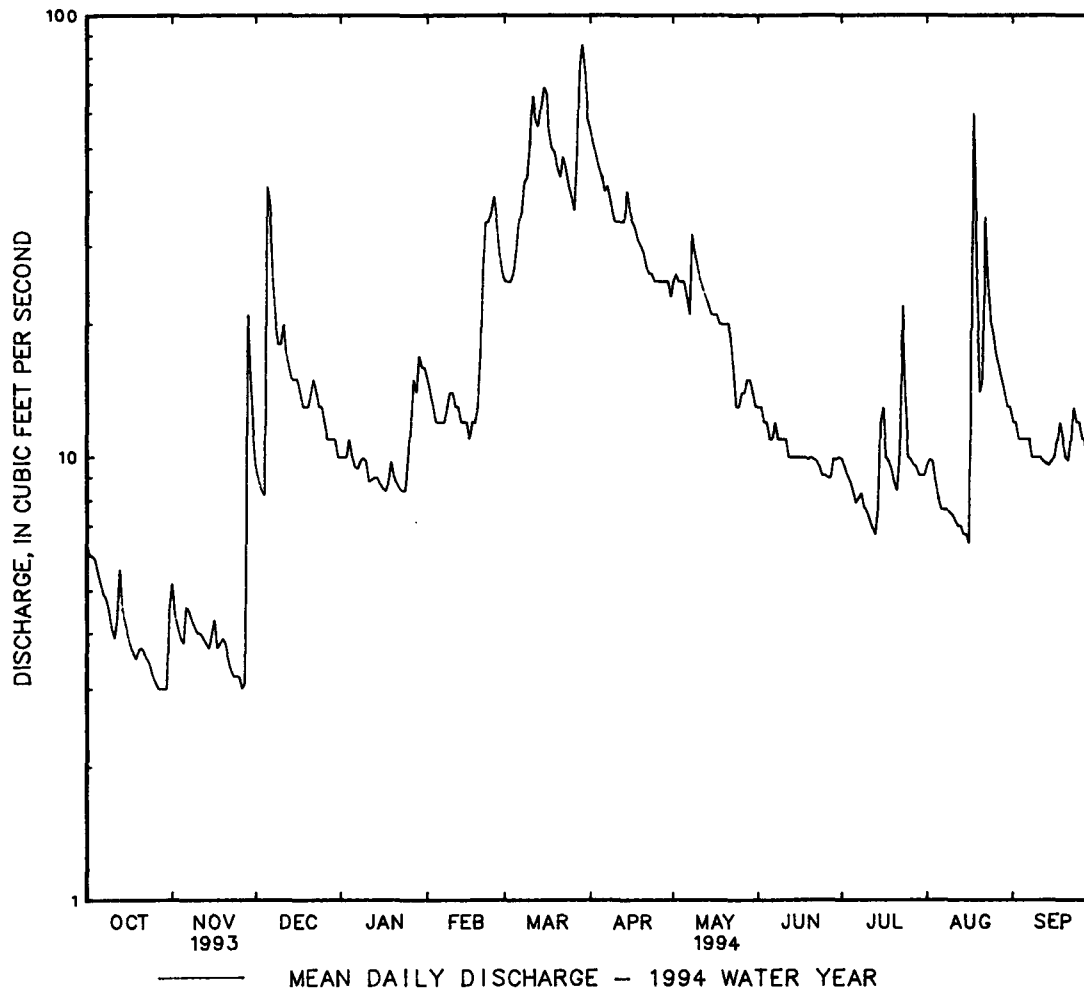
SUMMARY STATISTICS	FOR 1993 CALENDAR YEAR		FOR 1994 WATER YEAR		WATER YEARS 1964 - 1994	
ANNUAL TOTAL	6902.3		6144.6		12.1	
ANNUAL MEAN	18.9		16.8		23.9	
HIGHEST ANNUAL MEAN					4.31	
LOWEST ANNUAL MEAN					223	
HIGHEST DAILY MEAN	67	Mar 25	86	Mar 29		Jun 23 1972
LOWEST DAILY MEAN	3.0	(a)	3.0	(a)		Oct 1 1977
ANNUAL SEVEN-DAY MINIMUM	3.1	Oct 24	3.1	Oct 24		Oct 21 1986
INSTANTANEOUS PEAK FLOW			90	Mar 29	(b)459	Feb 12 1985
INSTANTANEOUS PEAK STAGE			(c)3.32	Aug 18	4.45	Feb 12 1985
INSTANTANEOUS LOW FLOW			3.0	Oct 27	(d).00	Oct 1 1977
ANNUAL RUNOFF (CFSM)	1.00		.89		.64	
ANNUAL RUNOFF (INCHES)	13.59		12.09		8.72	
10 PERCENT EXCEEDS	43		36		24	
50 PERCENT EXCEEDS	15		11		9.0	
90 PERCENT EXCEEDS	3.9		4.1		3.0	

a Oct. 27-30, Nov. 26, 27.

b From rating curve extended above 220 ft³/s.

c Backwater from log jam.

d Result of regulation caused by construction work upstream from station.



POTOMAC RIVER BASIN

267

01619320 ALBERT POWELL FISH HATCHERY SPRING AT BEAVER CREEK, MD

LOCATION.--Lat 39°35'22", long 77°38'19", Washington County, Hydrologic Unit 02070004, on left bank at spring outlet, 0.2 mi upstream from Beaver Creek, and 0.4 mi north of the town of Beaver Creek.

PERIOD OF RECORD.--April 1987 to current year.

GAGE.--Water-stage recorder and steel weir plate. Datum of gage is 505 ft above sea level, from topographic map.

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

PEAK DISCHARGE FOR CURRENT YEAR.--Peak discharge, 17 ft³/s, Dec. 5, gage height, 1.68 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e7.5	7.2	e8.7	9.2	9.6	13	14	11	10	9.2	8.5	8.0
2	e7.5	7.0	e8.5	9.2	9.6	12	14	11	10	9.2	8.4	8.0
3	e7.5	7.0	8.5	9.1	9.6	12	13	11	10	9.2	8.0	8.0
4	e7.5	7.0	8.3	9.0	9.7	12	13	11	10	9.3	8.1	7.7
5	e7.5	7.0	15	9.1	9.7	12	13	11	10	9.3	8.2	7.7
6	e7.5	7.0	13	9.1	9.5	12	13	11	10	9.2	8.2	7.7
7	e7.5	7.0	13	9.0	9.5	13	13	11	10	9.2	8.2	7.7
8	7.5	7.0	12	8.9	9.5	14	13	12	9.7	9.0	8.2	7.7
9	7.5	7.0	12	8.7	9.5	14	12	11	9.7	9.0	8.2	7.7
10	7.5	7.0	12	8.7	9.5	15	12	11	9.5	9.0	8.0	7.5
11	7.5	7.0	11	8.7	9.5	15	12	11	9.5	8.8	8.0	7.5
12	7.6	7.0	11	8.7	9.5	15	12	11	9.5	8.7	8.0	7.5
13	7.7	6.8	11	8.7	9.5	15	12	11	9.6	8.7	7.9	7.5
14	7.7	6.7	11	8.8	9.3	15	12	11	9.7	8.5	7.7	7.6
15	7.7	6.8	11	8.7	9.2	15	12	11	9.7	8.5	7.8	7.7
16	7.5	6.7	11	8.7	9.2	14	12	11	9.5	8.5	8.2	7.4
17	7.5	6.7	10	8.5	9.2	14	12	10	9.5	8.5	8.7	7.3
18	7.7	6.7	9.8	8.6	9.3	15	12	10	9.4	8.5	8.9	7.7
19	7.5	6.7	9.7	8.7	9.7	15	12	10	9.2	8.5	8.7	7.5
20	7.5	6.6	9.7	8.6	12	15	12	9.8	9.4	8.5	8.3	7.5
21	7.5	6.5	9.8	8.5	14	15	11	9.7	9.4	8.5	8.3	7.6
22	7.5	6.6	9.6	8.5	14	15	12	9.7	9.2	8.6	8.5	7.7
23	7.5	6.7	9.4	8.5	13	14	12	9.7	9.2	8.7	8.5	7.7
24	7.5	e6.7	9.5	8.5	14	14	11	9.7	9.2	8.7	8.5	7.7
25	7.5	e6.7	9.6	8.5	14	14	11	9.7	9.2	e8.7	8.4	7.7
26	7.3	e6.7	9.6	9.4	14	14	11	9.8	9.2	e8.7	8.2	7.7
27	7.2	e6.7	9.5	9.5	13	14	11	10	9.3	8.5	8.2	7.6
28	7.2	e10	9.5	9.7	13	15	11	10	9.3	8.5	8.0	7.5
29	7.2	e9.5	9.2	10	---	15	11	10	9.2	8.5	8.0	7.9
30	7.2	e9.0	9.4	9.8	---	15	11	10	9.2	8.5	8.0	7.8
31	7.3	---	9.3	9.6	---	14	---	10	---	8.5	8.0	---
TOTAL	231.8	213.0	320.6	277.2	301.1	436	362	325.1	286.3	271.7	254.8	229.8
MEAN	7.48	7.10	10.3	8.94	10.8	14.1	12.1	10.5	9.54	8.76	8.22	7.66
MAX	7.7	10	15	10	14	15	14	12	10	9.3	8.9	8.0
MIN	7.2	6.5	8.3	8.5	9.2	12	11	9.7	9.2	8.5	7.7	7.3

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1987 - 1994, BY WATER YEAR (WY)

MEAN	6.62	6.26	7.54	7.86	7.94	9.24	9.27	9.28	8.61	7.74	7.09	6.72
MAX	7.48	7.10	11.5	10.8	10.8	14.1	13.4	11.9	10.3	8.76	8.22	7.67
(WY)	1994	1994	1993	1993	1994	1994	1993	1993	1993	1994	1994	1992
MIN	5.64	5.32	5.30	5.63	5.54	6.40	6.14	7.17	7.53	6.83	6.22	6.08
(WY)	1989	1988	1989	1989	1989	1988	1988	1990	1990	1991	1991	1988

POTOMAC RIVER BASIN

01619320 ALBERT POWELL FISH HATCHERY SPRING AT BEAVER CREEK, MD--Continued

SUMMARY STATISTICS

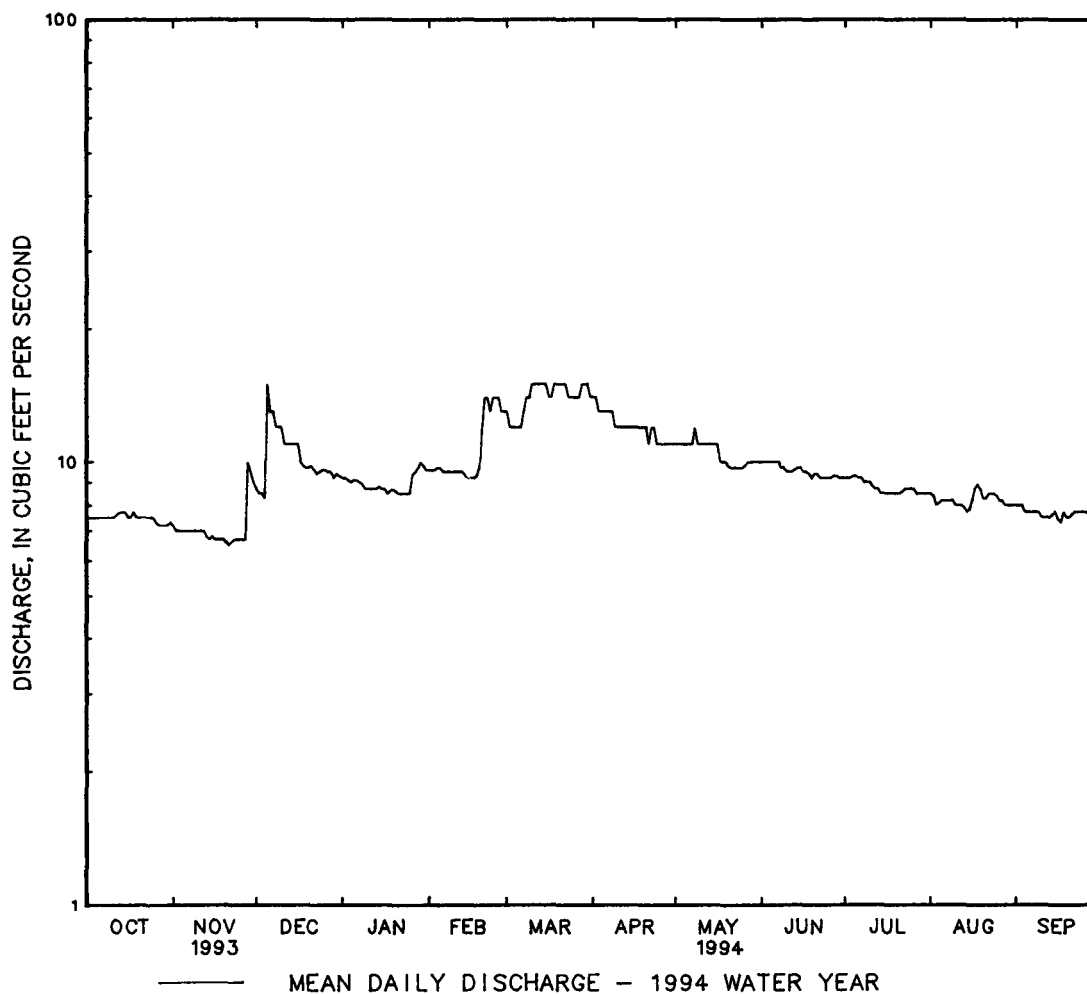
FOR 1994 WATER YEAR

WATER YEARS 1987 - 1994

ANNUAL TOTAL	3509.4		
ANNUAL MEAN	9.61		7.59
HIGHEST ANNUAL MEAN			9.61 1994
LOWEST ANNUAL MEAN			6.51 1988
HIGHEST DAILY MEAN	15	Dec 5	17 Apr 22 1992
LOWEST DAILY MEAN	6.5	Nov 21	5.0 (a)
ANNUAL SEVEN-DAY MINIMUM	6.6	Nov 16	5.1 Dec 13 1988
INSTANTANEOUS PEAK FLOW	17	Dec 5	20 Apr 22 1992
INSTANTANEOUS PEAK STAGE	1.68	Dec 5	1.72 Apr 22 1992
INSTANTANEOUS LOW FLOW	6.5	(b)	4.9 (a)
10 PERCENT EXCEEDS	13		11
50 PERCENT EXCEEDS	9.2		7.2
90 PERCENT EXCEEDS	7.5		5.7

a Dec. 18, 19, 1988.

b Nov. 18, 20-22.



POTOMAC RIVER BASIN

269

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 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--June 1897 to September 1905, August 1928 to current year. Monthly discharge only for some periods, published in WSP 1302.

REVISED RECORDS.--WSP 192: 1897-1905. WSP 726: Drainage area. WSP 1432: 1929-31(M), 1933, 1935(M), 1937(M), 1949(M), 1952(M).

GAGE.--Water-stage recorder. Concrete control since Mar. 29, 1934. Datum of gage is 311.05 ft 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. Water-discharge 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.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,500 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 28	2115	1,530	5.47	Mar. 16	0815	1,820	5.83
Dec. 5	2345	2,470	6.82	Mar. 25	1000	1,580	5.44
Feb. 24	1645	1,520	5.33	Mar. 29	1045	*2,620	*7.03
Mar. 11	0330	1,800	5.80				

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	173	195	383	292	432	731	1410	723	331	301	185	255
2	165	191	341	290	386	710	1240	696	318	244	179	237
3	180	167	323	287	366	709	1120	593	307	223	193	224
4	168	159	308	298	349	696	1060	593	302	217	183	218
5	158	171	1660	286	342	786	994	600	296	212	193	214
6	151	189	1610	269	340	819	942	558	301	210	191	213
7	148	173	908	270	345	833	1050	546	326	297	174	211
8	147	163	738	290	355	971	920	826	291	247	166	202
9	145	157	654	273	368	1020	840	693	277	212	162	199
10	140	157	612	246	335	1380	827	647	268	209	156	196
11	139	155	643	253	326	1600	880	602	262	196	153	188
12	191	150	543	264	305	1290	802	577	265	191	154	184
13	246	147	496	274	309	1230	837	565	258	187	153	183
14	188	150	488	266	297	1370	1000	525	250	195	157	181
15	167	147	473	253	289	1580	874	516	239	228	160	198
16	158	151	460	229	290	1680	856	534	237	251	155	208
17	152	148	425	237	300	1370	828	502	378	207	314	203
18	150	165	399	249	318	1230	775	475	308	199	883	271
19	148	155	398	257	397	1110	745	458	251	197	420	206
20	156	149	382	273	660	1050	715	441	238	189	277	185
21	162	143	442	253	1030	1080	686	428	241	192	300	187
22	161	139	429	256	1220	1270	660	411	231	278	450	193
23	152	139	385	245	1120	1340	637	393	218	324	797	298
24	147	139	369	254	1310	1420	621	383	216	236	443	252
25	143	137	359	298	1160	1540	604	424	217	209	360	205
26	142	134	345	431	988	1340	586	433	207	201	340	196
27	140	156	330	393	858	1500	606	463	259	198	300	212
28	139	1060	329	405	782	2330	612	385	320	211	281	208
29	137	811	320	579	---	2550	558	364	243	197	273	188
30	148	487	308	504	---	2100	557	349	505	191	264	180
31	187	---	296	448	---	1640	---	338	---	185	253	---
TOTAL	4928	6584	16156	9422	15577	40275	24842	16041	8360	6834	8669	6295
MEAN	159	219	521	304	556	1299	828	517	279	220	280	210
MAX	246	1060	1660	579	1310	2550	1410	826	505	324	883	298
MIN	137	134	296	229	289	696	557	338	207	185	153	180
(†)	-14.6	-14.7	-14.2	-16.1	-16.2	-15.8	-16.0	-15.3	-17.4	-16.0	-15.9	-15.5
MEAN*	156	171	236	270	334	446	454	359	270	195	156	148
CFSM*	0.56	0.61	0.84	0.96	1.19	1.59	1.62	1.28	0.96	0.69	0.56	0.53
IN*	0.65	0.68	0.97	1.11	1.24	1.83	1.81	1.48	1.07	0.80	0.65	0.59

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1931 - 1994, BY WATER YEAR (WY)

	1931	1932	1933	1934	1935	1936	1937	1938	1939	1940	1941	1942	1943	1944
MEAN	171	186	250	286	350	462	470	374	287	211	172	164		
MAX	916	589	776	799	938	1299	1201	779	1278	586	474	1090		
(WY)	1977	1976	1951	1949	1984	1994	1993	1952	1972	1949	1984	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.

POTOMAC RIVER BASIN

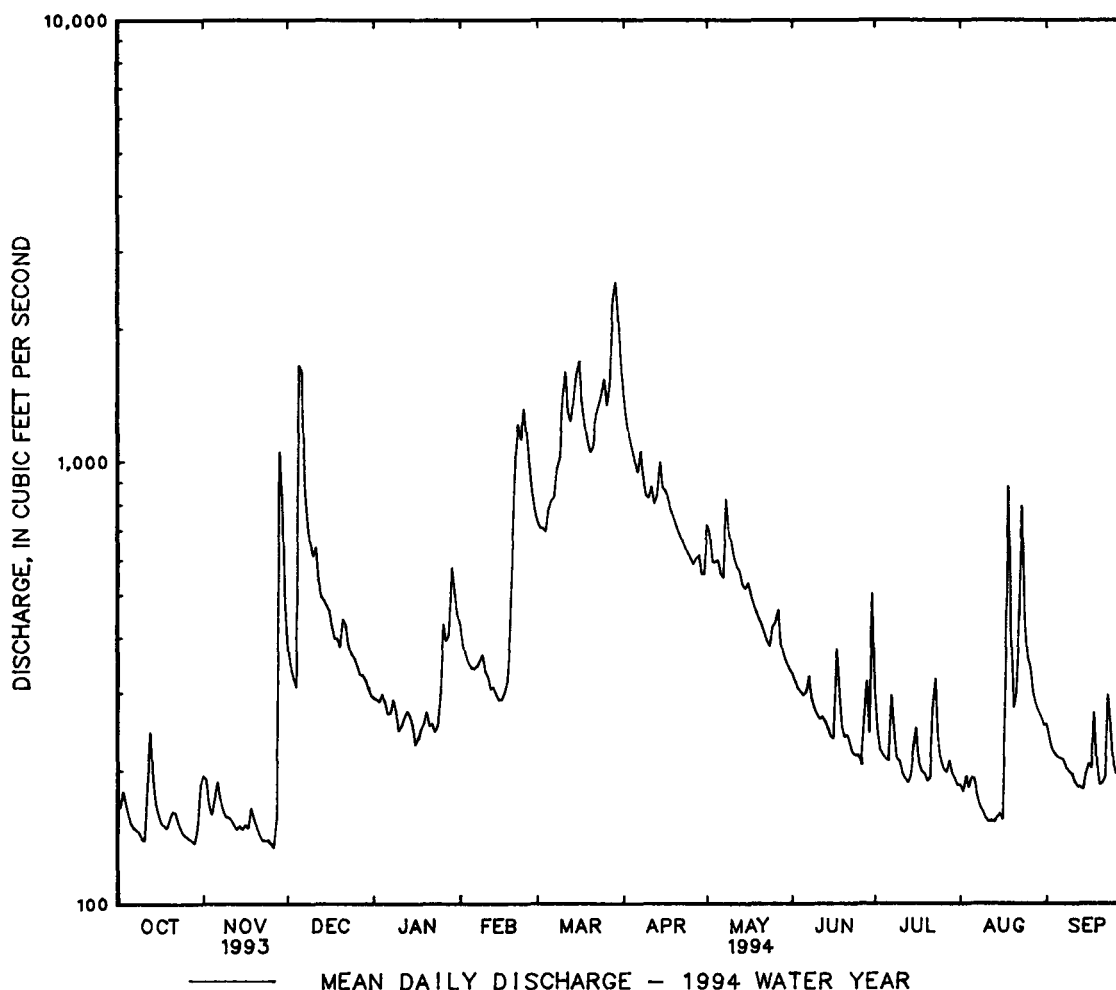
01619500 ANTIETAM CREEK NEAR SHARPSBURG, MD--Continued

SUMMARY STATISTICS	FOR 1993 CALENDAR YEAR		FOR 1994 WATER YEAR		WATER YEARS 1931 - 1994	
ANNUAL TOTAL	165347		163983			
ANNUAL MEAN	453		449		281	
ANNUAL MEAN*	438		433		273	
HIGHEST ANNUAL MEAN					510	1972
LOWEST ANNUAL MEAN					124	1966
HIGHEST DAILY MEAN	2480	Mar 24	2550	Mar 29	8970	Sep 26 1975
LOWEST DAILY MEAN	123	Sep 1	134	Nov 26	37	Jan 30 1966
ANNUAL SEVEN-DAY MINIMUM	125	Aug 27	140	Nov 20	49	Jan 26 1966
INSTANTANEOUS PEAK FLOW			2620	Mar 29	(a)12600	Jul 20 1956
INSTANTANEOUS PEAK STAGE			7.03	Mar 29	16.73	Jul 20 1956
INSTANTANEOUS LOW FLOW			132	Nov 26	(b)9.4	Nov 22 1957
ANNUAL RUNOFF (CFSM)	1.61		1.60		1.00	
ANNUAL RUNOFF (CFSM)*	1.56		1.54		0.97	
ANNUAL RUNOFF (INCHES)	21.89		21.71		13.61	
ANNUAL RUNOFF (INCHES)*	21.16		20.92		13.19	
10 PERCENT EXCEEDS	1010		1010		540	
50 PERCENT EXCEEDS	311		297		204	
90 PERCENT EXCEEDS	148		156		98	

* Adjusted for inflow since January 1930.

a From rating curve extended above 7,300 ft³/s on basis of contracted-opening measurement of peak flow.

b Result of regulation caused by construction work upstream from station.



01619500 ANTIETAM CREEK NEAR SHARPSBURG, MD

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1963-83, 1985-86, October 1993 to September 1994.

WATER QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH WATER WHOLE FIELD (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	TEMPER-ATURE AIR (DEG C)	BARO-METRIC PRES-SURE (MM OF HG)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, (PER-CENT SATUR-ATION)	ALKA-LINITY WAT DIS TOT IT FIELD MG/L AS CACO3	BICAR-BONATE WATER DIS IT FIELD MG/L AS HCO3	NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS NO3)	
JUN 1994	07...	1345	302	552	8.1	21.0	30.0	749	9.1	104	192	234	26
DATE	TIME	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA + ORGANIC DIS. (MG/L AS N)	PHOS-PHORUS TOTAL (MG/L AS P)	PHOS-PHORUS DIS-SOLVED (MG/L AS P)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P)	DIMETH-OATE WATER FLTRD 0.7 U GG, REC (UG/L)	ETHAL-FLUR-ALIN WAT FLT 0.7 U GF, REC (UG/L)	PHORATE WATER FLTRD 0.7 U GF, REC (UG/L)
JUN 1994	07...	0.030	6.00	6.00	0.040	0.40	<0.20	0.110	0.100	0.090	<0.02	<0.01	<0.01
DATE	TIME	TER-BACIL WATER FLTRD 0.7 U GF, REC (UG/L)	TRI-FLUR-ALIN WAT FLT 0.7 U GF, REC (UG/L)	2,6-DI-ETHYL ANILINE WAT FLT 0.7 U GF, REC (UG/L)	ALA-CHLOR, WATER, DISS, REC, (UG/L)	ALPHA BHC DIS-SOLVED (UG/L)	ATRA-ZINE, WATER, DISS, REC (UG/L)	BEN-FLUR-ALIN WAT FLD 0.7 U GF, REC (UG/L)	BUTYL-ATE, WATER, DISS, REC (UG/L)	CAR-BARYL WATER FLTRD 0.7 U GF, REC (UG/L)	CARBO-FURAN WATER FLTRD 0.7 U GF, REC (UG/L)	CHLOR-PYRIFOS DIS-SOLVED (UG/L)	
JUN 1994	07...	<0.03	<0.01	<0.01	<0.01	<0.01	0.30	<0.01	<0.01	<0.05	<0.01	<0.005	
DATE	TIME	CYANA-ZINE, WATER, DISS, REC (UG/L)	DCPA WATER FLTRD 0.7 U GF, REC (UG/L)	P, P' DDE DISSOLV (UG/L)	DEETHYL ATRA-ZINE, WATER, DISS, REC (UG/L)	DI-AZINON, DIS-SOLVED (UG/L)	DI-ELDRIN DIS-SOLVED (UG/L)	DISUL-FOTON WATER FLTRD 0.7 U GF, REC (UG/L)	EPTC WATER FLTRD 0.7 U GF, REC (UG/L)	ETHO-PROP WATER FLTRD 0.7 U GF, REC (UG/L)	FONOFOS WATER DISS REC (UG/L)	LINDANE DIS-SOLVED (UG/L)	
JUN 1994	07...	0.02	<0.004	<0.01	0.18	<0.01	<0.01	<0.01	<0.005	<0.01	<0.01	<0.01	
DATE	TIME	LIN-URON WATER FLTRD 0.7 U GF, REC (UG/L)	MALA-THION, DIS-SOLVED (UG/L)	METHYL AZIN-PHOS WAT FLT 0.7 U GF, REC (UG/L)	METHYL PARA-THION WAT FLT 0.7 U GF, REC (UG/L)	METO-LACHLOR WATER DISSOLV (UG/L)	METRI-BUZIN SENCOR WATER DISSOLV (UG/L)	MOL-INATE WATER FLTRD 0.7 U GF, REC (UG/L)	NAPROP-AMIDE WATER FLTRD 0.7 U GF, REC (UG/L)	PEB-ULATE WATER FILTRD 0.7 U GF, REC (UG/L)	PARA-THION, DIS-SOLVED (UG/L)	PENDI-METH-ALIN WAT FLT 0.7 U GF, REC (UG/L)	
JUN 1994	07...	<0.04	<0.01	<0.04	<0.03	0.09	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02	
DATE	TIME	PER-METHRIN CIS WAT FLT 0.7 U GF, REC (UG/L)	PRO-METON, WATER, DISS, REC (UG/L)	PRON-AMIDE WATER FLTRD 0.7 U GF, REC (UG/L)	PROP-CHLOR, WATER, DISS, REC (UG/L)	PRO-PARGITE WATER FLTRD 0.7 U GF, REC (UG/L)	PRO-PANIL WATER FLTRD 0.7 U GF, REC (UG/L)	SI-MAZINE, WATER, DISS, REC (UG/L)	TEBU-THIURON WATER FLTRD 0.7 U GF, REC (UG/L)	TER-BUFOS WATER FLTRD 0.7 U GF, REC (UG/L)	THIO-BENCARB WATER FLTRD 0.7 U GF, REC (UG/L)	TRIAL-LATE WATER FLTRD 0.7 U GF, REC (UG/L)	
JUN 1994	07...	<0.02	0.06	<0.01	<0.02	<0.01	<0.02	0.08	<0.02	<0.01	<0.01	<0.01	

SUSPENDED SEDIMENT DISCHARGE

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)
JUN 1994	07...	1345	302	44 36

POTOMAC RIVER BASIN

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 5.0.
DRAINAGE AREA.--3,040 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1895 to March 1909, August 1928 to current year.

REVISED RECORDS.--WSP 951: 1936(M). WSP 1432: Drainage area at former site, 1895-99, 1901-02, 1905, 1907-08, 1932(M), 1935(M).

GAGE.--Water-stage recorder. Datum of gage is 293.00 ft 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.--No estimated daily discharges. Water-discharge records good. Regulation by hydroelectric plants, particularly 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.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of 1870 reached practically same stage as flood of Mar. 18, 1936, 26.36 ft, discharge, 151,000 ft³/s.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 15,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 29	1130	19,300	9.31	Mar. 9	0700	35,100	12.56
Dec. 6	1700	19,700	9.41	Mar. 11	0930	35,200	12.58
Jan. 30	0315	25,800	10.77	Mar. 30	1215	*38,600	*13.18
Feb. 25	0130	33,300	12.24	May 9	0815	17,000	8.74
Mar. 7	0915	17,000	8.74	Aug. 19	0800	22,100	9.97

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1020	868	5250	1580	8950	8410	16400	3330	1770	1360	1970	1500
2	995	880	3910	1770	6990	7450	12600	3380	1710	1260	2300	1440
3	889	864	3080	1800	5720	7160	10200	3100	1630	1190	2080	1300
4	805	917	2580	1770	4900	6680	8580	3020	1550	1160	1800	1270
5	773	904	5840	1700	4410	7940	7470	3220	1530	1130	1740	1200
6	722	845	17100	1850	4020	13100	6660	4010	1500	1100	1930	1150
7	706	814	14000	1760	3810	16400	6550	4900	1440	1240	1840	1110
8	688	805	8260	2000	3610	24000	7210	8940	1500	1130	1590	1080
9	704	791	6000	3240	3670	33500	6550	15900	1500	1050	1410	1050
10	684	770	4620	4150	5740	29600	5900	11800	1490	1070	1370	1030
11	662	778	3930	3840	9160	34000	5650	8160	1450	1150	1240	1010
12	778	717	3350	3130	7800	25200	5310	6280	1420	1030	1200	976
13	797	747	2910	3930	6380	17300	5130	5220	1410	1010	1340	958
14	792	712	2600	6480	5330	14100	6380	4500	1410	1030	2000	975
15	793	790	2420	6610	4770	12700	5880	4010	1400	1060	1690	974
16	739	796	2680	5320	4520	11400	5850	3760	1320	929	1470	939
17	771	801	3310	4240	4660	9910	6580	3440	1340	973	1660	917
18	729	871	3080	3580	5590	8560	6100	3160	1380	1070	9520	909
19	707	898	2930	5410	7710	7730	5420	2910	1510	1130	18500	862
20	733	892	2700	5270	11100	6990	4950	2750	1430	1130	9850	858
21	758	916	2590	4160	11800	6360	4560	2620	1930	1300	6560	835
22	775	947	2580	3550	11500	6220	4260	2500	1830	1500	5180	907
23	831	890	2490	3840	10600	6440	4050	2400	1450	1400	4020	1230
24	768	834	2360	4020	19800	6230	3990	2290	1380	1620	3360	1220
25	766	832	2220	5690	29400	5930	3800	2190	1310	2180	2690	1040
26	743	757	2110	7530	20700	5810	3580	2200	1240	1950	2290	1030
27	729	927	2000	7300	14100	6000	3440	2150	1300	1720	1990	1060
28	688	5640	1900	6270	10400	10400	3390	2030	1430	1790	1780	1030
29	680	16200	1840	13300	---	25100	3340	1910	1290	1880	1730	1020
30	729	8740	1740	21300	---	37100	3250	1880	1300	1810	1590	946
31	803	---	1700	12500	---	25700	---	1820	---	1890	1550	---
TOTAL	23757	53143	124080	158890	247140	443420	183030	129780	44150	41242	99240	31826
MEAN	766	1771	4003	5125	8826	14300	6101	4186	1472	1330	3201	1061
MAX	1020	16200	17100	21300	29400	37100	16400	15900	1930	2180	18500	1500
MIN	662	712	1700	1580	3610	5810	3250	1820	1240	929	1200	835
CFM	.25	.58	1.32	1.69	2.90	4.71	2.01	1.38	.48	.44	1.05	.35
IN.	.29	.65	1.52	1.94	3.02	5.43	2.24	1.59	.54	.50	1.21	.39

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1895 - 1994, BY WATER YEAR (WY)

	1950	1823	2468	3057	3825	5033	4434	3365	2361	1426	1633	1317
MEAN	16250	13350	8164	7925	13100	17540	12840	8700	10380	4809	10390	6701
(WY)	1943	1986	1973	1991	1897	1936	1901	1901	1972	1972	1955	1945
MIN	343	388	410	503	542	929	992	1001	660	402	388	411
(WY)	1931	1932	1966	1966	1931	1931	1981	1969	1977	1966	1930	1963

01636500 SHENANDOAH RIVER AT MILLVILLE, WV--Continued

SUMMARY STATISTICS

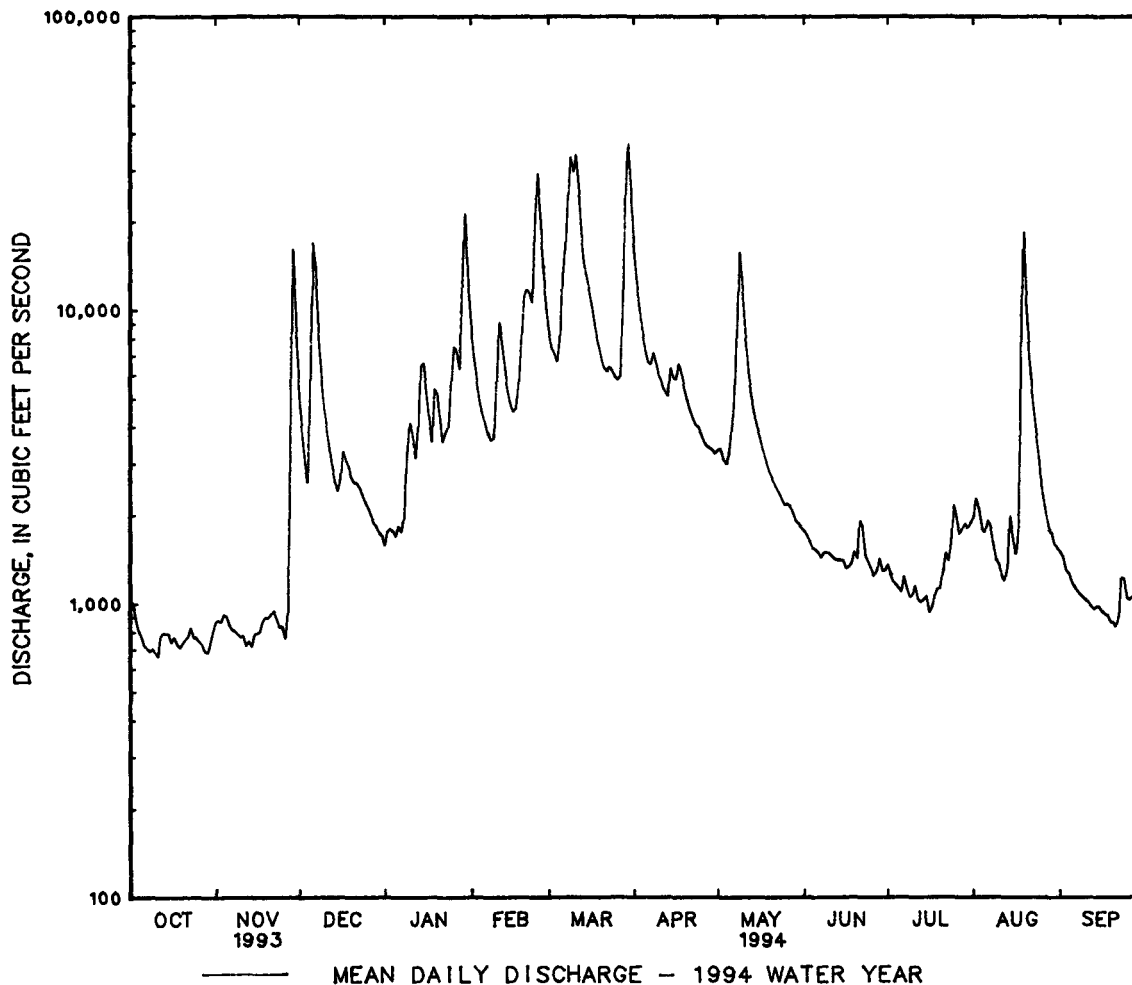
FOR 1993 CALENDAR YEAR

FOR 1994 WATER YEAR

WATER YEARS 1895 - 1994

ANNUAL TOTAL	1423876		1579698		2718	
ANNUAL MEAN	3901		4328		4838	1973
HIGHEST ANNUAL MEAN					1111	1981
LOWEST ANNUAL MEAN					192000	Oct 16 1942
HIGHEST DAILY MEAN	46800	Mar 6	37100	Mar 30	194	Jul 24 1930
LOWEST DAILY MEAN	662	Oct 11	662	Oct 11	240	Sep 7 1966
ANNUAL SEVEN-DAY MINIMUM	706	Oct 5	706	Oct 5	230000	Oct 16 1942
INSTANTANEOUS PEAK FLOW			38600	Mar 30	(a)32.40	Oct 16 1942
INSTANTANEOUS PEAK STAGE			13.18	Mar 30	59	Oct 4 1930
INSTANTANEOUS LOW FLOW			587	Oct 29	.89	
ANNUAL RUNOFF (CFSM)	1.28		1.42		12.15	
ANNUAL RUNOFF (INCHES)	17.42		19.33			
10 PERCENT EXCEEDS	9750		10000			
50 PERCENT EXCEEDS	1890		2000			
90 PERCENT EXCEEDS	763		804			

a From floodmarks.



POTOMAC RIVER BASIN

01636500 SHENANDOAH RIVER AT MILLVILLE, WV--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1960-63, 1965, 1969-71, 1979 to current year.

INSTRUMENTATION.--Water-quality monitor October 1980 to September 1983.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1980 to September 1983.

WATER TEMPERATURES: October 1980 to September 1983.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE (water years 1981-82): Maximum, 778 microsiemens, Dec. 29, 1980; minimum, 212 microsiemens, Jan. 17, 1982.

WATER TEMPERATURE: Maximum, 30.0°C, July 20, 21, 1981; minimum, 0.0°C on many days during winter periods.

WATER QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH WATER WHOLE FIELD (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	TEMPER- ATURE AIR (DEG C)	BARO- METRIC PRES- SURE (MM OF HG)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	HARD- NESS TOTAL (MG/L AS CaCO3)	CALCIUM DIS- SOLVED (MG/L AS Ca)
OCT 1993											
06...	1100	705	366	8.7	17.0	18.0	767	9.9	102	160	40
NOV											
03...	1145	852	365	8.2	8.0	9.0	756	12.2	104	180	47
30...	1200	8320	230	6.9	11.0	10.5	769	10.9	98	87	24
DEC											
09...	1200	E5780	177	7.5	7.0	11.5	760	10.6	88	86	25
JAN 1994											
06...	1200	1870	302	7.5	0.5	1.0	754	13.0	91	150	43
FEB											
15...	1130	4880	188	7.8	2.0	7.0	755	13.4	98	90	26
MAR											
10...	1530	29000	93	7.5	5.0	6.5	751	--	--	68	20
APR											
07...	1130	6440	252	7.7	13.5	8.0	755	9.7	94	120	35
MAY											
03...	1100	2790	308	7.9	17.5	15.0	764	8.5	89	150	40
JUN											
05...	1000	1590	343	8.2	23.5	28.5	755	10.0	119	160	42
08...	1800	1530	337	8.2	26.0	21.5	752	9.4	118	160	41
13...	1000	1410	350	8.0	25.0	30.0	757	8.4	103	160	42
JUL											
07...	1000	1240	293	8.2	29.0	30.5	755	9.0	118	140	31
AUG											
01...	1045	1710	319	7.6	26.5	27.5	757	8.1	102	140	38
SEP											
14...	1100	963	324	8.2	22.5	29.5	756	8.8	103	150	35

POTOMAC RIVER BASIN

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01636500 SHENANDOAH RIVER AT MILLVILLE, WV--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINIT WAT DIS TOT IT FIELD MG/L AS CACO3	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3	CAR- BONATE WATER DIS IT FIELD MG/L AS CO3	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)
OCT 1993											
06...	15	14	3.3	148	168	6	20	16	0.20	0.62	207
NOV											
03...	16	13	3.5	166	195	4	19	15	0.20	1.6	218
30...	6.5	5.3	3.5	71	87	--	14	6.7	0.10	5.1	122
DEC											
09...	5.7	3.3	2.3	66	81	--	14	4.9	<0.10	6.6	119
JAN 1994											
06...	11	6.9	1.8	130	154	2	16	12	0.10	4.5	199
FEB											
15...	6.2	4.3	1.6	71	87	--	12	7.0	<0.10	6.0	121
MAR											
10...	4.5	3.3	2.1	55	67	--	12	5.8	<0.10	5.7	95
APR											
07...	8.4	4.0	1.8	104	127	--	13	6.9	<0.10	5.9	145
MAY											
03...	11	5.3	1.8	127	154	4	14	9.2	<0.10	1.9	173
JUN											
05...	13	7.3	2.4	144	161	7	14	11	0.10	2.6	200
08...	14	7.2	2.5	140	159	6	14	11	0.10	3.0	198
13...	14	8.7	2.5	146	166	6	16	12	0.10	3.9	214
JUL											
07...	14	8.6	2.6	122	137	6	14	13	0.20	7.4	165
AUG											
01...	12	7.7	3.2	112	137	--	15	11	0.10	7.6	184
SEP											
14...	14	9.8	2.3	108	132	--	18	12	0.10	0.74	182

DATE	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS NO3)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N)	PHOS- PHORUS TOTAL (MG/L AS P)	PHOS- PHORUS DIS- SOLVED (MG/L AS P)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P)	IRON, DIS- SOLVED (UG/L AS FE)
OCT 1993											
06...	--	<0.010	0.910	0.910	0.030	<0.20	<0.20	0.010	0.020	0.030	8
NOV											
03...	--	<0.010	1.00	1.00	0.020	0.30	<0.20	0.040	0.030	0.020	10
30...	5.7	0.010	1.30	1.30	0.060	0.60	0.30	0.240	0.060	0.090	60
DEC											
09...	--	<0.010	1.40	1.40	0.080	0.40	0.30	0.120	0.060	0.060	17
JAN 1994											
06...	10	0.020	2.30	2.30	0.040	<0.20	<0.20	0.090	0.050	0.030	10
FEB											
15...	7.4	0.020	1.70	1.70	0.080	<0.20	0.20	0.070	0.060	0.040	26
MAR											
10...	--	<0.010	1.30	1.30	0.040	0.60	0.20	0.150	0.060	0.040	37
APR											
07...	7.9	0.010	1.80	1.80	0.020	0.20	<0.20	0.050	0.020	0.020	23
MAY											
03...	6.6	0.020	1.50	1.50	0.030	0.20	<0.20	<0.010	0.020	0.020	19
JUN											
05...	6.1	0.020	1.40	1.40	0.030	0.40	0.20	0.020	0.020	<0.010	11
08...	5.7	0.020	1.30	1.30	<0.010	0.40	0.20	0.020	0.010	<0.010	10
13...	6.2	0.010	1.40	1.40	<0.010	0.60	0.30	0.040	0.010	<0.010	6
JUL											
07...	2.0	0.010	0.470	0.470	0.040	0.50	0.30	0.040	0.020	<0.010	10
AUG											
01...	6.6	0.020	1.50	1.50	0.050	0.50	0.20	0.110	0.090	0.080	13
SEP											
14...	4.4	0.010	1.00	1.00	0.040	<0.20	0.30	0.030	0.020	0.020	15

WATER QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE _____DATE _____

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WATER QUALITY DATA. WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

[illegible][illegible]

POTOMAC RIVER BASIN

01636500 SHENANDOAH RIVER AT MILLVILLE, WV--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	PRON- AMIDE WATER FLTRD 0.7 U GF, REC (UG/L)	PROP- CHLOR, WATER, DISS, REC (UG/L)	PRO- PARGITE WATER FLTRD 0.7 U GF, REC (UG/L)	PRO- PANIL WATER FLTRD 0.7 U GF, REC (UG/L)	SILVEX, DIS- SOLVED (UG/L)	SI- MAZINE, WATER, DISS, REC (UG/L)	TEBU- THIURON WATER FLTRD 0.7 U GF, REC (UG/L)	TER- BUFOS WATER FLTRD 0.7 U GF, REC (UG/L)	THIO- BENCARB WATER FLTRD 0.7 U GF, REC (UG/L)	TRIAL- LATE WATER FLTRD 0.7 U GF, REC (UG/L)
OCT 1993										
06...	--	--	--	--	--	--	--	--	--	--
NOV										
03...	--	--	--	--	--	--	--	--	--	--
30...	<0.01	<0.02	<0.01	<0.02	<0.05	0.03	<0.02	<0.01	<0.01	<0.01
DEC										
09...	--	--	--	--	--	--	--	--	--	--
JAN 1994										
06...	--	--	--	--	--	--	--	--	--	--
FEB										
15...	<0.01	<0.02	<0.01	<0.02	<0.05	<0.01	<0.02	<0.01	<0.01	<0.00
MAR										
10...	--	--	--	--	--	--	--	--	--	--
APR										
07...	<0.01	<0.02	<0.01	<0.02	<0.05	0.01	<0.02	<0.01	<0.01	<0.01
MAY										
03...	<0.01	<0.02	<0.01	<0.02	<0.05	0.05	<0.02	<0.01	<0.01	<0.01
JUN										
05...	<0.01	<0.02	<0.01	<0.02	<0.05	0.06	<0.02	<0.01	<0.01	<0.01
08...	<0.01	<0.02	<0.01	<0.02	--	0.11	<0.02	<0.01	<0.01	<0.01
13...	<0.01	<0.02	<0.01	<0.02	--	0.08	<0.02	<0.01	<0.01	<0.01
JUL										
07...	<0.01	<0.02	<0.01	<0.02	--	0.24	<0.02	<0.01	<0.01	<0.01
AUG										
01...	--	--	--	--	--	--	--	--	--	--
SEP										
14...	--	--	--	--	--	--	--	--	--	--

SUSPENDED SEDIMENT DISCHARGE

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)
OCT 1993				
06...	1100	705	4	7.6
NOV				
03...	1145	852	4	9.2
30...	1200	8320	154	3460
DEC				
09...	1200	E5780	39	E609
JAN 1994				
06...	1200	1870	4	20
FEB				
15...	1130	4880	13	171
MAR				
10...	1530	29000	104	8140
APR				
07...	1130	6440	23	400
MAY				
03...	1100	2790	5	38
JUN				
05...	1000	1590	13	56
13...	1000	1410	7	27
JUL				
07...	1000	1240	5	17
AUG				
01...	1045	1710	21	97

POTOMAC RIVER BASIN

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01637500 CATOCTIN CREEK NEAR MIDDLETOWN, MD

LOCATION.--Lat 39°25'35", long 77°33'25", Frederick County, Hydrologic Unit 02070008, on right bank 300 ft 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 mi².

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 (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.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,200 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 28	0430	2,860	6.68	Feb. 24	1530	1,210	4.52
Dec. 5	0700	*4,590	*8.48				

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18	43	126	66	121	203	361	98	33	19	8.3	19
2	17	30	106	65	110	188	291	78	30	16	7.7	13
3	20	23	92	59	109	184	248	67	28	14	7.5	11
4	18	21	142	60	99	194	218	74	27	13	10	10
5	13	21	2200	57	95	353	188	76	25	12	12	9.6
6	12	46	552	52	103	310	174	65	25	16	12	9.1
7	11	32	351	53	116	333	275	74	26	20	9.8	8.3
8	11	25	258	76	104	449	174	212	24	16	7.1	7.3
9	11	22	204	53	130	371	157	110	22	12	5.9	6.8
10	9.9	21	204	e70	105	761	168	93	20	11	5.1	8.0
11	9.9	20	203	e60	77	500	174	85	20	9.2	4.7	6.3
12	27	19	145	68	91	412	149	85	22	8.1	5.1	5.7
13	36	19	130	68	89	390	277	76	24	7.1	5.1	5.2
14	20	23	124	61	86	462	298	68	19	9.0	5.3	4.9
15	17	22	118	39	76	455	236	67	17	19	4.7	5.2
16	15	19	117	e55	77	419	245	87	42	20	6.5	6.1
17	14	20	96	91	83	328	197	64	46	14	136	9.2
18	13	37	89	115	115	291	172	58	27	14	134	20
19	13	30	94	133	209	254	157	55	27	12	40	14
20	19	25	85	136	368	244	140	52	22	9.5	24	8.1
21	28	22	123	117	625	286	126	49	18	9.2	60	6.6
22	28	20	110	95	511	433	116	45	18	14	59	9.2
23	23	20	99	99	523	406	107	42	16	14	43	29
24	19	19	92	108	824	428	100	39	16	14	25	20
25	17	18	87	142	508	394	94	53	17	14	19	13
26	16	17	79	e540	386	297	89	90	14	12	25	13
27	15	91	73	315	285	650	96	84	35	14	22	16
28	15	1330	74	e560	234	734	92	50	48	19	16	12
29	14	269	62	e480	---	852	79	43	24	14	15	10
30	16	168	64	165	---	581	74	39	25	11	14	8.6
31	38	---	62	136	---	447	---	36	---	9.2	15	---
TOTAL	553.8	2492	6361	4194	6259	12609	5272	2214	757	415.3	763.8	324.2
MEAN	17.9	83.1	205	135	224	407	176	71.4	25.2	13.4	24.6	10.8
MAX	38	1330	2200	560	824	852	361	212	48	20	136	29
MIN	9.9	17	62	39	76	184	74	36	14	7.1	4.7	4.9
CFSM	.27	1.24	3.07	2.02	3.34	6.08	2.63	1.07	.38	.20	.37	.16
IN.	.31	1.39	3.54	2.33	3.48	7.01	2.93	1.23	.42	.23	.42	.18

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1947 - 1994, BY WATER YEAR (WY)

	1947	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957	1958
MEAN	34.8	48.0	84.9	97.1	123	154	143	101	57.1	32.1	20.7	23.8
MAX	399	162	318	278	357	407	360	391	439	214	208	284
(WY)	1977	1986	1993	1979	1984	1994	1993	1988	1972	1949	1955	1975
MIN	2.62	3.61	3.80	4.25	28.7	46.3	44.5	29.2	13.5	4.86	2.04	1.68
(WY)	1964	1966	1966	1966	1954	1969	1963	1963	1954	1966	1966	1965

POTOMAC RIVER BASIN

01637500 CATOCTIN CREEK NEAR MIDDLETOWN, MD--Continued

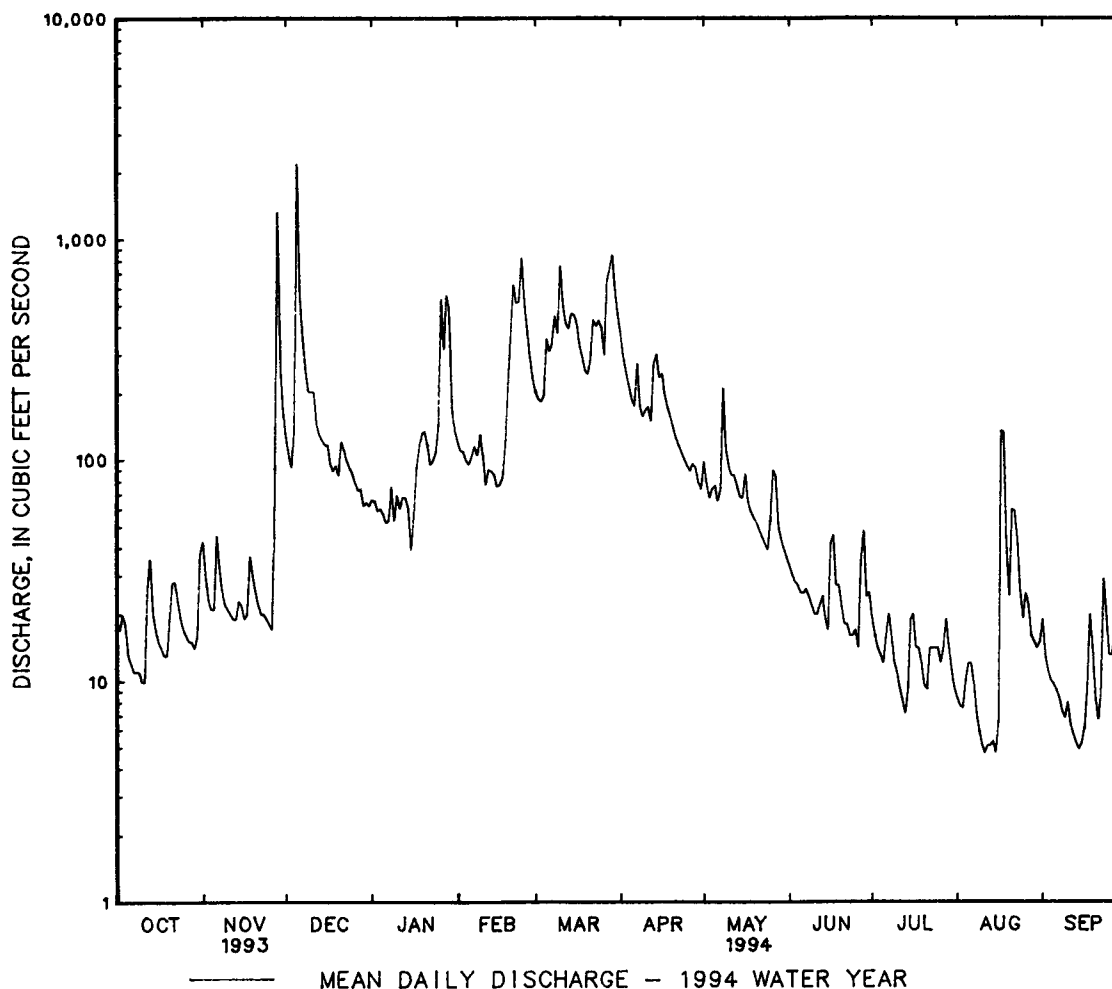
SUMMARY STATISTICS	FOR 1993 CALENDAR YEAR	FOR 1994 WATER YEAR	WATER YEARS 1947 - 1994
ANNUAL TOTAL	43139.6	42215.1	
ANNUAL MEAN	118	116	76.4
HIGHEST ANNUAL MEAN			154
LOWEST ANNUAL MEAN			29.7
HIGHEST DAILY MEAN	2200 Dec 5	2200 Dec 5	4880 Oct 9 1976
LOWEST DAILY MEAN	1.7 Aug 30	4.7 (a)	.00 (b)
ANNUAL SEVEN-DAY MINIMUM	1.9 Aug 27	5.1 Aug 9	.00 Aug 27 1966
INSTANTANEOUS PEAK FLOW		4590 Dec 5	(c)12000 Oct 9 1976
INSTANTANEOUS PEAK STAGE		8.48 Dec 5	14.13 Oct 9 1976
INSTANTANEOUS LOW FLOW		4.3 (d)	.00 (b)
ANNUAL RUNOFF (CFSM)	1.77	1.73	1.14
ANNUAL RUNOFF (INCHES)	23.99	23.47	15.51
10 PERCENT EXCEEDS	346	320	174
50 PERCENT EXCEEDS	47	49	38
90 PERCENT EXCEEDS	7.0	9.7	5.8

a Aug. 11, 15.

b Aug. 27 to Sept. 12, 1966.

c From rating curve extended above 2,600 ft³/s on basis of slope-area measurement of peak flow.

d Aug. 11, 15, 16.



POTOMAC RIVER BASIN

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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 mi².

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 from grass, ice effect, missing record), 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 ft³/s from rating curve extended as explained in footnotes.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 35,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 29	1300	*115,000	*19.25	Mar. 11	1700	102,000	17.78
Dec. 6	2100	85,600	15.70	Mar. 16	2100	60,200	12.34
Jan. 30	1300	57,000	11.89	Mar. 23	2300	47,500	10.50
Feb. 11	0830	61,800	12.56	Mar. 30	1230	113,000	19.00
Feb. 22	1800	66,000	13.15	Apr. 15	0030	44,100	9.98
Feb. 25	1100	88,200	16.03	May 9	1930	71,200	13.84

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e3800	e2300	26300	6620	32300	27900	55200	9420	4840	3360	5960	4370
2	e3400	e4500	18300	5760	23900	23800	41300	17700	4570	3020	6350	4190
3	e3200	e4200	14100	6200	19600	21800	34600	15800	4420	2880	5310	3950
4	e2900	e4000	11700	6440	16500	20600	30000	13500	4350	2780	5000	3890
5	e2800	e3600	24500	6110	14300	23300	26000	12100	4020	2600	4670	3630
6	e2500	e3400	66500	5810	13100	36500	22400	14800	3890	2550	4380	3430
7	e2200	e3200	63600	5860	12300	46700	20800	18700	3870	2840	4310	3410
8	e1800	e3100	36100	6560	12000	52700	20400	22500	3850	3010	3930	3080
9	e1700	e3000	24700	e7000	12500	84100	18800	58800	3890	2940	4080	3100
10	e1900	e2900	19100	e7000	19900	84900	17100	55400	3660	3000	4070	2990
11	e1900	e2800	16400	e9000	e58000	97800	16700	33400	3540	2840	3320	2820
12	e1800	e2700	14900	e10500	e38000	84000	17700	24700	3510	2640	3000	2680
13	e1700	e2600	13100	e11000	e26000	58800	17500	20200	3390	2500	3000	2630
14	e2600	e2500	11700	e12000	e21000	50400	29400	16800	3360	2460	3610	2530
15	e2500	e2400	10700	e12000	e18000	52200	40300	14100	3510	2610	3430	2620
16	e2400	e2400	10500	e11000	17100	57500	31100	12100	3410	2600	3190	2620
17	e2300	e2500	10900	e10000	16200	54300	27800	10800	3300	2710	4330	2700
18	e2200	e2800	11200	e9000	18300	40600	25300	9990	3510	2650	14200	2800
19	e2100	e3100	11000	e5500	22000	33500	21100	9920	3530	2610	31500	2750
20	e2100	e3400	10600	e7000	30500	30000	17800	9040	3370	2600	25000	2410
21	e2200	e3300	10900	e8500	44500	29200	15900	8010	3400	2660	15900	2570
22	e2400	e3300	10800	e8000	62400	32000	14200	7400	3900	3030	13000	2680
23	e2300	e3400	10900	e7800	59800	43100	12900	7020	3160	3430	14200	2810
24	e2300	e3500	10300	e8500	59500	47200	12000	6800	3100	5300	12100	3370
25	e2300	e3300	9570	11800	84800	46600	11300	6590	3090	5810	9200	3450
26	e2200	e3100	8870	18300	68000	45000	10600	6430	3090	5180	7440	3280
27	e2300	e3300	8150	35000	47000	40000	10100	6270	3190	4450	6890	2960
28	e2400	20700	7470	37700	34900	58800	9680	6100	3710	4300	6050	3670
29	e2600	97800	6910	37800	---	93500	9220	5830	3250	4020	5270	3320
30	e2500	50900	e6200	55400	---	110000	8920	5530	3320	4490	4780	2920
31	e2400	---	e5900	47500	---	85100	---	5150	---	5800	4450	---
TOTAL	73700	254000	521870	436660	902400	1611900	646120	470900	109000	103670	241920	93630
MEAN	2377	8467	16830	14090	32230	52000	21540	15190	3633	3344	7804	3121
MAX	3800	97800	66500	55400	84800	110000	55200	58800	4840	5810	31500	4370
MIN	1700	2300	5900	5500	12000	20600	8920	5150	3090	2460	3000	2410
CFSM	.25	.88	1.74	1.46	3.34	5.39	2.23	1.57	.38	.35	.81	.32
IN.	.28	.98	2.01	1.68	3.48	6.21	2.49	1.82	.42	.40	.93	.36

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1895 - 1994, BY WATER YEAR (WY)

MEAN	5037	5517	8497	11140	14320	19770	16690	12320	7937	4490	4209	3484
MAX	37030	39000	32610	31350	42640	68360	43840	41970	40400	16000	23580	17820
(WY)	1943	1986	1973	1937	1897	1936	1993	1924	1972	1949	1955	1975
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

POTOMAC RIVER BASIN

01638500 POTOMAC RIVER AT POINT OF ROCKS, MD--Continued

SUMMARY STATISTICS	FOR 1993 CALENDAR YEAR		FOR 1994 WATER YEAR		WATER YEARS 1895 - 1994	
ANNUAL TOTAL	4932270		5465770		9436	
ANNUAL MEAN	13510		14970		15840	
HIGHEST ANNUAL MEAN					4366	
LOWEST ANNUAL MEAN					434000	
HIGHEST DAILY MEAN	141000	Mar 6	110000	Mar 30	540	Mar 19 1936
LOWEST DAILY MEAN	(e)1500	(a)	1700	(b)	593	Sep 10 1914
ANNUAL SEVEN-DAY MINIMUM	1540	Aug 29	1860	Oct 7	540000	Sep 6 1966
INSTANTANEOUS PEAK FLOW			115000	Nov 29	(c)480000	Mar 19 1936
INSTANTANEOUS PEAK STAGE			19.25	Nov 29	41.03	Mar 19 1936
INSTANTANEOUS LOW FLOW			UNKNOWN		530	(d)
ANNUAL RUNOFF (CFSM)	1.40		1.55		.98	
ANNUAL RUNOFF (INCHES)	19.01		21.07		13.28	
10 PERCENT EXCEEDS	35300		42000		20400	
50 PERCENT EXCEEDS	5430		6350		5380	
90 PERCENT EXCEEDS	2200		2600		1660	

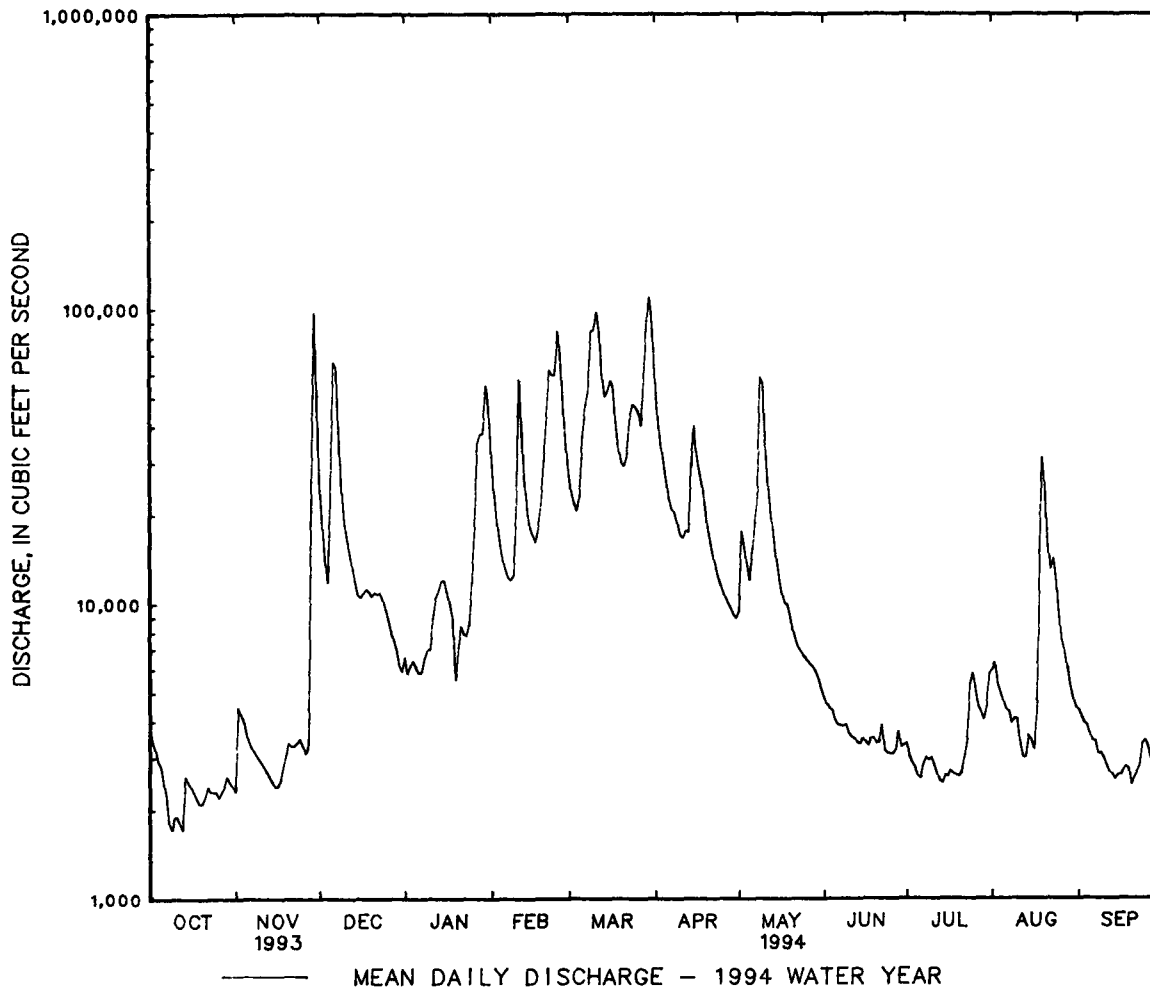
e Estimated

a Sept. 1-4.

b Oct. 9, 13.

c From rating curve extended above 300,000 ft³/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.

d September 11, 12, 1966.



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.

WATER-DISCHARGE RECORDS

REVISÉD 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.--No estimated daily discharges. Water-discharge records good. Occasional regulation at low flow from unknown source upstream from station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Aug. 24, 1933, reached a stage of about 25 ft, present site and datum, from floodmarks, discharge, about 23,000 ft³/s. Stage exceeded that of June 1889, from information by local residents.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 4,800 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 28	1230	*15,000	*18.38	Mar. 23	2230	5,290	10.62
Dec. 5	1400	13,400	17.27	Mar. 27	1715	7,540	12.74
Mar. 22	2200	6,340	13.76				

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	56	457	309	67	413	286	497	279	34	62	16	24
2	47	201	255	70	282	227	388	181	30	31	16	22
3	65	139	222	74	209	219	325	111	27	23	14	19
4	65	102	321	73	155	289	290	100	26	19	12	17
5	42	93	9220	75	133	484	242	115	25	16	12	16
6	34	187	1380	62	126	829	218	94	24	15	12	15
7	26	126	575	69	132	652	553	88	27	38	12	13
8	24	89	402	79	148	1290	284	904	31	54	12	12
9	23	73	314	76	133	1260	206	272	22	26	10	11
10	20	66	325	61	116	2910	212	163	20	18	9.4	10
11	20	61	663	55	101	2180	342	126	19	14	7.7	9.9
12	111	56	304	58	109	1170	212	114	19	12	7.1	9.5
13	349	53	228	63	112	1160	811	108	34	10	6.9	9.5
14	110	64	181	66	110	1920	984	90	27	9.6	8.0	8.9
15	80	81	183	55	104	2460	349	83	19	8.9	16	26
16	58	101	201	40	102	2260	352	89	33	15	15	65
17	50	93	148	40	115	998	262	83	129	16	38	27
18	46	115	128	39	129	774	187	72	53	13	675	47
19	41	121	149	46	178	620	159	68	31	17	141	45
20	40	102	136	64	446	1440	143	64	23	15	66	25
21	155	93	583	65	2310	1910	121	62	20	13	47	18
22	165	86	436	65	3110	4030	109	56	21	228	119	16
23	96	68	216	64	1870	3390	101	53	26	214	172	158
24	69	41	166	63	2470	2540	94	46	56	108	69	96
25	57	40	140	208	2060	1840	91	61	238	48	46	49
26	50	38	107	645	826	937	84	121	79	28	238	40
27	45	42	94	695	490	3770	80	124	39	23	97	189
28	42	9130	81	721	386	2980	102	67	66	27	53	86
29	40	986	68	1790	---	3180	77	50	47	32	41	53
30	46	452	72	1180	---	1140	82	44	67	24	35	40
31	581	---	68	702	---	649	---	39	---	18	30	---
TOTAL	2653	13356	17675	7430	16875	49794	7957	3927	1312	1195.5	2053.1	1176.8
MEAN	85.6	445	570	240	603	1606	265	127	43.7	38.6	66.2	39.2
MAX	581	9130	9220	1790	3110	4030	984	904	238	228	675	189
MIN	20	38	68	39	101	219	77	39	19	8.9	6.9	8.9
CFSM	.49	2.57	3.30	1.39	3.48	9.28	1.53	.73	.25	.22	.38	.23
IN.	.57	2.87	3.80	1.60	3.63	10.71	1.71	.84	.28	.26	.44	.25

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1942 - 1994, BY WATER YEAR (WY)

MEAN	91.8	174	268	276	382	462	306	214	122	79.1	59.4	79.4
MAX	906	513	697	784	1029	1606	1029	964	1065	598	613	1027
(WY)	1977	1986	1984	1979	1961	1994	1983	1989	1972	1949	1942	1975
MIN	3.24	10.4	13.7	13.8	51.0	94.7	58.7	41.2	10.5	2.68	2.40	2.34
(WY)	1964	1954	1966	1981	1980	1949	1946	1969	1966	1966	1944	1943

POTOMAC RIVER BASIN

01639000 MONOCACY RIVER AT BRIDGEPORT, MD--Continued

SUMMARY STATISTICS

FOR 1993 CALENDAR YEAR

FOR 1994 WATER YEAR

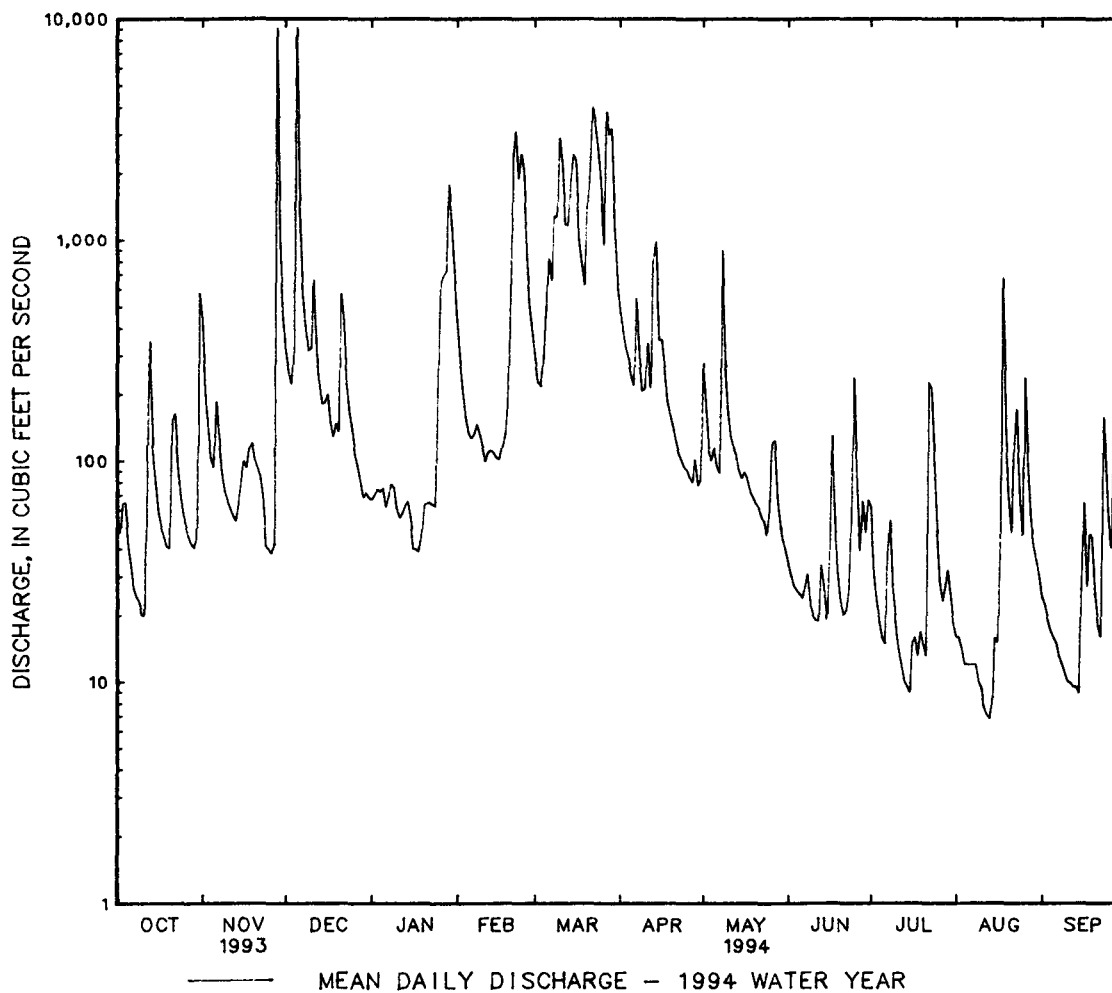
WATER YEARS 1942 - 1994

ANNUAL TOTAL	122899.9		125404.4			
ANNUAL MEAN	337		344		208	
HIGHEST ANNUAL MEAN					372	1972
LOWEST ANNUAL MEAN					76.8	1954
HIGHEST DAILY MEAN	9220	Dec 5	9220	Dec 5	16700	Jun 22 1972
LOWEST DAILY MEAN	4.9	Aug 5	6.9	Aug 13	.00	(a)
ANNUAL SEVEN-DAY MINIMUM	7.3	Jul 24	8.7	Aug 8	.04	Jul 22 1966
INSTANTANEOUS PEAK FLOW			15000	Nov 28	(b)21300	Jun 22 1972
INSTANTANEOUS PEAK STAGE			18.38	Nov 28	24.05	Jun 22 1972
INSTANTANEOUS LOW FLOW			6.3	Aug 14	.00	(c)
ANNUAL RUNOFF (CFSM)	1.95		1.99		1.20	
ANNUAL RUNOFF (INCHES)	26.43		26.97		16.32	
10 PERCENT EXCEEDS	697		817		441	
50 PERCENT EXCEEDS	97		80		64	
90 PERCENT EXCEEDS	13		16		8.1	

a July 25-28, 1966.

b From rating curve extended above 7,000 ft³/s on basis of slope-conveyance study.

c July 24-29, 1966.



01639000 MONOCACY RIVER AT BRIDGEPORT, MD--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1948-51, 1969-72, 1974-79, 1982-83, 1990 to current year.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: October 1989 to September 1993.

SUSPENDED-SEDIMENT DISCHARGE: October 1989 to September 1993.

INSTRUMENTATION.--Pumping sampler for nutrients and sediment since Nov. 29, 1989.

REMARKS.--Prior to October 1993, water temperatures were measured daily in field by local observer at time of sampling.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SEDIMENT CONCENTRATION: Maximum daily mean, 565 mg/L, Oct. 20, 1989, July 25, 1992; minimum daily mean, 1 mg/L, on many days.

SEDIMENT LOAD: Maximum daily, 7,230 tons, Jan. 30, 1990; minimum daily, 0.03 ton, July 28, 29, 1993.

EXTREMES FOR CURRENT YEAR.--

SEDIMENT CONCENTRATION: Maximum daily mean, 440 mg/L, Nov. 3; minimum daily mean, 1 mg/L, Nov. 8, Jan. 20.

SEDIMENT LOAD: Maximum daily, 6,290 tons, Nov. 23; minimum daily, 0.03 ton, July 28, 29.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH WATER WHOLE FIELD (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	TEMPER- ATURE AIR (DEG C)	BARO- METRIC PRES- SURE (MM OF HG)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	HARD- NESS TOTAL (MG/L AS CaCO3)	CALCIUM DIS- SOLVED (MG/L AS Ca)
OCT 1993											
04...	0940	65	304	7.3	15.0	15.0	755	8.1	81	120	31
NOV											
03...	1130	139	250	7.1	7.0	8.0	761	11.0	91	88	23
28...	0400	5940	--	--	--	--	--	--	--	--	--
28...	0510	7760	--	--	--	--	--	--	--	--	--
28...	0605	9320	--	--	--	--	--	--	--	--	--
28...	0700	10600	--	--	--	--	--	--	--	--	--
28...	0745	11400	--	--	--	--	--	--	--	--	--
28...	0830	12100	--	--	--	--	--	--	--	--	--
28...	0915	12800	--	--	--	--	--	--	--	--	--
28...	0955	13200	--	--	--	--	--	--	--	--	--
28...	1045	13800	--	--	--	--	--	--	--	--	--
28...	1125	14000	--	--	--	--	--	--	--	--	--
28...	1215	14200	--	--	--	--	--	--	--	--	--
28...	1255	14200	--	--	--	--	--	--	--	--	--
DEC											
04...	2340	1200	--	--	--	--	--	--	--	--	--
05...	0310	3360	--	--	--	--	--	--	--	--	--
05...	0450	5400	--	--	--	--	--	--	--	--	--
05...	0605	6840	--	--	--	--	--	--	--	--	--
05...	0710	8380	--	--	--	--	--	--	--	--	--
05...	0835	10000	--	--	--	--	--	--	--	--	--
05...	0925	10700	--	--	--	--	--	--	--	--	--
05...	1010	11200	--	--	--	--	--	--	--	--	--
05...	1045	11600	84	6.5	8.5	7.5	--	--	--	--	--
05...	1100	11600	--	--	--	--	--	--	--	--	--
05...	1145	11900	--	--	--	--	--	--	--	--	--
05...	1230	12200	--	--	--	--	--	--	--	--	--
05...	1315	12300	--	--	--	--	--	--	--	--	--
05...	1400	12400	--	--	--	--	--	--	--	--	--
05...	1445	12400	--	--	--	--	--	--	--	--	--
05...	1515	12300	74	6.6	8.5	8.0	740	--	--	28	7.4
05...	1530	12300	--	--	--	--	--	--	--	--	--
05...	1615	11900	--	--	--	--	--	--	--	--	--
05...	1700	11500	--	--	--	--	--	--	--	--	--
05...	1740	11000	--	--	--	--	--	--	--	--	--
05...	1830	10200	--	--	--	--	--	--	--	--	--
05...	1925	9380	--	--	--	--	--	--	--	--	--
05...	2020	8390	--	--	--	--	--	--	--	--	--
05...	2125	7080	--	--	--	--	--	--	--	--	--
05...	2240	5270	--	--	--	--	--	--	--	--	--
06...	0030	3310	--	--	--	--	--	--	--	--	--
06...	0955	1060	--	--	--	--	--	--	--	--	--
JAN 1994											
12...	1045	57	452	6.4	0.0	0.5	758	--	--	130	35

POTOMAC RIVER BASIN

01639000 MONOCACY RIVER AT BRIDGEPORT, MD--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH WATER WHOLE FIELD (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	TEMPER- ATURE AIR (DEG C)	BARO- METRIC PRES- SURE (MM OF HG)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	HARD- NESS TOTAL (MG/L AS CaCO3)	CALCIUM DIS- SOLVED (MG/L AS Ca)
MAR 1994											
21...	1600	1080	--	--	--	--	--	--	--	--	--
21...	1710	1150	--	--	--	--	--	--	--	--	--
21...	1800	1270	--	--	--	--	--	--	--	--	--
21...	1850	1450	--	--	--	--	--	--	--	--	--
21...	1935	1660	--	--	--	--	--	--	--	--	--
21...	2015	1860	--	--	--	--	--	--	--	--	--
21...	2050	2060	--	--	--	--	--	--	--	--	--
21...	2120	2240	--	--	--	--	--	--	--	--	--
22...	1230	2380	114	7.1	3.0	13.5	751	13.2	100	45	12
APR											
04...	1200	295	155	7.5	11.0	15.0	755	11.1	102	56	15
11...	1000	360	187	7.6	11.0	13.0	765	11.4	103	69	18
19...	1030	158	180	8.6	15.0	25.0	752	11.4	115	71	19
25...	0930	92	200	8.6	15.5	25.5	751	10.6	108	70	19
MAY											
02...	1145	163	201	7.2	17.0	16.5	759	8.6	89	70	19
09...	1115	261	155	7.2	13.0	20.0	752	9.7	93	59	16
16...	0930	86	196	7.2	18.5	21.0	748	7.6	83	71	19
23...	1030	55	225	7.2	19.0	29.0	749	7.0	77	79	22
26...	1030	1.2	216	7.0	19.5	22.0	744	6.4	71	75	21
31...	1015	39	223	7.0	20.5	25.0	757	6.0	67	80	22
JUN											
08...	1100	31	269	7.4	25.0	25.5	750	5.5	68	94	26
14...	1045	27	300	7.3	26.0	33.0	756	6.5	81	100	28
17...	1000	160	242	6.9	25.0	27.5	757	4.9	60	80	22
20...	0900	23	307	7.0	26.5	24.5	756	4.6	58	100	28
28...	1130	88	268	6.9	24.0	--	752	5.3	64	84	23
JUL											
05...	0930	17	278	7.9	26.0	32.5	758	8.0	99	95	26
11...	1030	14	320	7.7	26.0	24.0	757	5.5	68	100	29
18...	0915	14	328	7.2	25.5	29.0	755	5.1	63	110	29
22...	1930	196	252	7.2	26.0	--	751	6.5	81	84	24
26...	1100	27	224	7.1	25.0	23.5	750	5.3	65	73	20
AUG											
02...	0845	16	334	8.6	26.0	28.0	755	7.7	96	110	31
16...	0900	15	419	7.2	22.0	24.0	758	6.5	75	140	38
18...	1045	1290	185	7.2	20.5	23.5	751	8.7	98	63	18
26...	1115	595	163	6.9	21.0	29.0	756	8.6	97	52	15
31...	1130	46	271	7.2	21.5	27.0	746	7.0	81	99	28
SEP											
13...	0845	9.1	340	7.4	18.0	18.5	757	7.9	84	120	32

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WATER QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY WAT DIS TOT IT FIELD MG/L AS CACO3	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3	CAR- BONATE WATER DIS IT FIELD MG/L AS CO3	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)
OCT 1993											
04...	9.2	14	4.0	75	--	--	35	18	0.10	11	190
NOV											
03...	7.4	10	3.2	58	--	--	29	13	0.20	9.8	151
28...	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--
DEC											
04...	--	--	--	--	--	--	--	--	--	--	--
05...	--	--	--	--	--	--	--	--	--	--	--
05...	--	--	--	--	--	--	--	--	--	--	--
05...	--	--	--	--	--	--	--	--	--	--	--
05...	--	--	--	--	--	--	--	--	--	--	--
05...	--	--	--	--	--	--	--	--	--	--	--
05...	--	--	--	--	--	--	--	--	--	--	--
05...	--	--	--	--	--	--	--	--	--	--	--
05...	--	--	--	--	--	--	--	--	--	--	--
05...	--	--	--	--	--	--	--	--	--	--	--
05...	--	--	--	--	--	--	--	--	--	--	--
05...	--	--	--	--	--	--	--	--	--	--	--
05...	--	--	--	--	--	--	--	--	--	--	--
05...	--	--	--	--	--	--	--	--	--	--	--
05...	2.3	2.1	2.5	18	--	--	7.8	3.1	0.20	4.3	60
05...	--	--	--	--	--	--	--	--	--	--	--
05...	--	--	--	--	--	--	--	--	--	--	--
05...	--	--	--	--	--	--	--	--	--	--	--
05...	--	--	--	--	--	--	--	--	--	--	--
05...	--	--	--	--	--	--	--	--	--	--	--
05...	--	--	--	--	--	--	--	--	--	--	--
05...	--	--	--	--	--	--	--	--	--	--	--
05...	--	--	--	--	--	--	--	--	--	--	--
05...	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--
JAN 1994											
12...	9.7	36	3.0	63	--	--	33	68	<0.10	12	252

POTOMAC RIVER BASIN

01639000 MONOCACY RIVER AT BRIDGEPORT, MD--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY WAT DIS TOT IT FIELD MG/L AS CACO3	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3	CAR- BONATE WATER DIS IT FIELD MG/L AS CO3	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)
MAR 1994											
21...	--	--	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--	--	--	--
22...	3.7	4.1	2.0	30	37	--	12	5.7	<0.10	6.4	74
APR											
04...	4.5	6.9	1.8	37	45	--	17	9.5	<0.10	8.7	95
11...	5.8	8.5	2.4	52	63	--	19	13	0.10	7.4	123
19...	5.6	8.2	2.1	51	62	2	19	11	0.10	5.4	105
25...	5.5	9.3	1.9	53	62	1	20	14	<0.10	2.7	110
MAY											
02...	5.5	9.7	2.9	54	66	--	18	13	0.10	8.5	128
09...	4.7	6.4	2.3	42	51	--	16	8.6	<0.10	10	109
16...	5.6	9.2	2.1	53	65	--	19	13	0.10	6.6	114
23...	5.9	11	2.4	59	72	--	20	16	<0.10	5.4	138
26...	5.5	10	4.2	51	62	--	19	16	0.10	5.3	132
31...	6.2	11	2.9	59	72	--	20	15	<0.10	6.9	129
JUN											
08...	7.0	12	3.4	72	88	--	23	19	<0.10	5.5	158
14...	7.7	17	3.5	77	94	--	29	25	<0.10	7.9	182
17...	6.2	14	6.2	52	63	--	25	19	0.10	8.7	152
20...	7.7	19	4.6	66	80	--	29	29	0.10	11	191
28...	6.4	15	5.2	58	71	--	23	24	0.20	11	168
JUL											
05...	7.2	16	5.2	71	87	--	23	24	0.20	9.8	173
11...	7.9	18	5.5	80	98	--	26	28	0.20	10	178
18...	8.1	18	5.3	81	99	--	24	30	0.10	6.8	191
22...	5.9	13	4.4	60	73	--	24	19	0.10	9.9	160
26...	5.6	10	4.8	55	67	--	19	15	0.10	11	150
AUG											
02...	8.5	20	5.4	75	92	5	30	31	0.20	6.4	193
16...	9.9	26	5.8	102	124	--	33	39	<0.10	4.0	232
18...	4.4	9.9	3.9	45	55	--	17	14	<0.10	10	118
26...	3.6	6.0	4.7	33	40	--	15	9.5	0.20	6.3	96
31...	7.1	13	4.6	69	84	--	25	20	<0.10	9.3	162
SEP											
13...	8.8	18	4.3	95	116	--	29	27	0.10	4.2	187

POTOMAC RIVER BASIN

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01639000 MONOCACY RIVER AT BRIDGEPORT, MD--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS NO3)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN, AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, AM- MONIA + ORGANIC DIS. (MG/L AS N)	PHOS- PHORUS TOTAL (MG/L AS P)	PHOS- PHORUS DIS- SOLVED (MG/L AS P)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P)	IRON, DIS- SOLVED (UG/L AS FE)
OCT 1993											
04...	9.3	0.010	2.10	2.10	0.070	0.50	0.50	0.100	0.090	0.090	52
NOV											
03...	8.4	0.010	1.90	1.90	0.030	0.60	0.40	0.140	0.060	0.060	79
28...	6.1	0.020	1.40	1.40	0.100	4.2	1.2	1.70	0.110	0.120	--
28...	6.2	0.010	1.40	1.40	0.070	1.3	1.1	0.610	0.140	0.120	--
28...	5.7	0.020	1.30	1.30	0.050	1.5	1.1	0.760	0.140	0.130	--
28...	5.7	0.020	1.30	1.30	0.050	1.7	0.80	0.650	0.130	0.130	--
28...	5.7	0.020	1.30	1.30	0.040	1.1	0.60	0.380	0.140	0.140	--
28...	5.3	0.010	1.20	1.20	0.050	1.6	0.80	0.490	0.130	0.130	--
28...	5.3	0.010	1.20	1.20	0.040	1.5	0.60	0.520	0.130	0.130	--
28...	4.8	0.010	1.10	1.10	0.030	0.90	0.60	0.340	0.130	0.130	--
28...	4.8	0.010	1.10	1.10	0.030	0.90	0.50	0.260	0.130	0.130	--
28...	4.8	0.010	1.10	1.10	0.020	1.1	0.50	0.470	0.120	0.120	--
28...	4.8	0.010	1.10	1.10	0.030	0.80	0.70	0.290	0.130	0.120	--
28...	4.8	0.010	1.10	1.10	0.030	0.80	0.60	0.360	0.120	0.130	--
DEC											
04...	--	<0.010	1.70	1.70	0.200	1.1	1.5	0.260	0.100	0.100	--
05...	--	<0.010	1.70	1.70	0.200	0.90	0.50	0.350	0.120	0.090	--
05...	--	<0.010	1.00	1.00	0.090	0.90	0.80	0.260	0.150	0.140	--
05...	--	<0.010	1.50	1.50	0.080	0.70	0.50	0.310	0.140	0.110	--
05...	--	<0.010	0.840	0.840	0.080	0.70	0.60	0.280	0.140	0.130	--
05...	--	<0.010	0.870	0.870	0.070	0.70	0.80	0.300	0.150	0.150	--
05...	--	<0.010	0.880	0.880	0.060	0.70	0.60	0.310	0.150	0.140	--
05...	--	<0.010	0.910	0.910	0.050	1.4	1.5	0.320	0.160	0.150	--
05...	--	<0.010	0.850	0.850	0.090	0.70	0.80	0.250	0.170	0.150	--
05...	--	<0.010	0.830	0.830	0.040	0.60	0.40	0.250	0.170	0.140	--
05...	--	<0.010	0.810	0.810	0.050	0.60	0.50	0.260	0.140	0.140	--
05...	--	<0.010	0.770	0.770	0.060	0.50	0.40	0.220	0.140	0.130	--
05...	--	<0.010	0.760	0.760	0.050	0.50	0.50	0.220	0.130	0.130	--
05...	--	<0.010	0.750	0.750	0.040	0.50	0.50	0.270	0.130	0.130	--
05...	--	<0.010	0.750	0.750	0.040	0.60	0.40	0.240	0.130	0.120	--
05...	--	<0.010	0.750	0.750	0.040	0.50	0.50	0.220	0.130	0.130	120
05...	3.2	0.050	0.770	0.770	0.110	0.80	1.1	0.240	0.170	0.120	--
05...	--	<0.010	0.810	0.810	0.040	0.60	0.50	0.260	0.130	0.130	--
05...	--	<0.010	0.790	0.790	0.060	0.60	0.60	0.240	0.130	0.130	--
05...	--	<0.010	0.810	0.810	0.110	0.80	1.0	0.260	0.130	0.110	--
05...	--	<0.010	0.840	0.840	0.060	0.60	0.50	0.250	0.110	0.110	--
05...	--	<0.010	0.860	0.860	0.080	0.60	1.1	0.210	0.120	0.110	--
05...	--	<0.010	0.920	0.920	0.060	0.70	0.50	0.220	0.100	0.110	--
05...	--	<0.010	0.920	0.920	0.100	0.60	1.4	0.190	0.100	0.100	--
05...	--	<0.010	1.00	1.00	0.060	0.80	0.90	0.200	0.100	0.110	--
06...	--	<0.010	1.10	1.10	0.060	0.60	0.90	0.190	0.090	0.090	--
06...	--	<0.010	1.60	1.60	0.060	0.80	0.60	0.190	0.080	0.090	--
JAN 1994											
12...	--	<0.010	2.40	2.40	0.060	0.30	0.30	0.040	0.050	0.030	23

POTOMAC RIVER BASIN

01639000 MONOCACY RIVER AT BRIDGEPORT, MD--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS NO3)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N)	PHOS- PHORUS TOTAL (MG/L AS P)	PHOS- PHORUS DIS- SOLVED (MG/L AS P)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P)	IRON, DIS- SOLVED (UG/L AS FE)
MAR 1994											
21...	5.2	0.020	1.20	1.20	0.080	0.40	1.1	0.060	0.060	0.050	--
21...	4.7	0.030	1.10	1.10	0.080	0.40	0.80	0.050	0.040	0.050	--
21...	--	--	--	--	--	--	--	--	--	--	--
21...	5.2	0.030	1.20	1.20	0.090	0.40	0.80	0.050	0.040	0.040	--
21...	--	--	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--	160
APR											
04...	5.2	0.030	1.20	1.20	0.010	<0.20	<0.20	0.030	0.030	0.030	63
11...	4.1	0.030	0.960	0.960	0.040	0.40	0.20	0.040	0.030	0.030	100
19...	--	<0.010	0.610	0.610	<0.010	0.30	0.20	0.040	0.020	0.020	97
25...	1.5	0.020	0.350	0.350	0.020	0.30	0.20	0.040	0.020	0.020	85
MAY											
02...	3.5	0.040	0.840	0.840	0.080	0.70	0.60	0.090	0.050	0.040	180
09...	3.8	0.020	0.870	0.870	0.080	0.70	0.60	0.110	0.070	0.060	310
16...	2.5	0.010	0.570	0.570	0.050	0.40	0.20	0.050	0.030	0.030	100
23...	2.5	0.010	0.580	0.580	0.020	0.40	0.20	0.050	0.030	0.030	80
26...	6.3	0.070	1.50	1.50	0.600	1.8	1.4	0.450	0.290	0.300	220
31...	3.0	0.020	0.690	0.690	0.050	0.60	0.30	0.100	0.070	0.070	87
JUN											
08...	--	<0.010	0.110	0.110	0.020	0.50	0.40	0.080	0.040	0.040	52
14...	0.62	0.010	0.150	0.150	0.040	0.60	0.30	0.080	0.050	0.050	37
17...	9.9	0.070	2.30	2.30	0.510	1.3	1.1	0.300	0.240	0.220	170
20...	4.1	0.050	0.980	0.980	0.100	0.70	0.70	0.170	0.120	0.120	59
28...	6.8	0.060	1.60	1.60	0.110	0.80	0.50	0.230	0.180	0.150	180
JUL											
05...	--	<0.010	0.320	0.320	0.030	0.90	0.40	0.150	0.050	0.050	42
11...	--	<0.010	--	<0.050	0.020	0.90	0.50	0.180	0.090	0.070	44
18...	--	<0.010	--	<0.050	0.010	0.70	0.40	0.160	0.100	0.080	41
22...	3.4	0.030	0.800	0.800	0.100	0.90	0.50	0.250	0.170	0.150	180
26...	4.2	0.020	0.960	0.960	0.050	0.80	<0.20	0.230	0.150	0.150	180
AUG											
02...	--	<0.010	--	<0.050	0.020	1.1	0.40	0.160	0.020	0.010	28
16...	--	<0.010	0.330	0.330	0.030	0.50	0.30	0.140	0.080	0.070	52
18...	3.6	0.020	0.840	0.840	0.070	1.2	0.50	0.330	0.110	0.120	140
26...	5.7	0.020	1.30	1.30	0.060	1.7	0.50	0.710	0.240	0.210	200
31...	--	<0.010	0.870	0.870	<0.010	0.60	0.30	0.170	0.120	0.090	79
SEP											
13...	--	<0.010	--	<0.050	0.020	0.50	0.40	0.100	0.070	0.020	26

WATER QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

[illegible]

POTOMAC RIVER BASIN

01639000 MONOCACY RIVER AT BRIDGEPORT, MD--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	CARBON, ORGANIC SUS- PENDE TOTAL (MG/L AS C)	DIMETH- OATE WATER FLTRD 0.7 U GG, REC (UG/L)	ETHAL- FLUR- ALIN WAT FLT 0.7 U GF, REC (UG/L)	PHORATE WATER FLTRD 0.7 U GF, REC (UG/L)	TER- BACIL WATER FLTRD 0.7 U GF, REC (UG/L)	TRI- FLUR- ALIN WAT FLT 0.7 U GF, REC (UG/L)	2,4-D, DIS- SOLVED (UG/L)	2,4,5-T DIS- SOLVED (UG/L)
MAR 1994											
21...	--	--	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--	--	--	--
22...	19	--	4.4	0.8	<0.02	<0.01	<0.02	--	<0.01	<0.05	<0.05
APR											
04...	10	--	2.8	0.2	<0.02	<0.01	<0.02	<0.03	<0.01	<0.05	<0.05
11...	15	--	4.2	0.3	<0.02	<0.01	<0.02	<0.03	<0.01	<0.05	<0.05
19...	18	--	3.8	0.5	<0.02	<0.01	<0.02	<0.03	<0.01	<0.05	<0.05
25...	17	--	3.4	0.4	<0.02	<0.01	<0.01	<0.03	<0.01	<0.05	<0.05
MAY											
02...	21	--	7.3	0.7	<0.02	<0.01	<0.01	0.13	<0.01	<0.05	<0.05
09...	20	--	7.4	0.6	<0.02	<0.01	<0.01	<0.03	<0.01	0.58	<0.05
16...	23	--	3.4	0.3	<0.02	<0.01	<0.01	<0.03	<0.01	<0.05	<0.05
23...	20	--	2.7	0.3	<0.02	<0.01	<0.01	<0.03	<0.01	<0.05	<0.05
26...	21	--	6.1	1.0	<0.02	<0.01	<0.01	<0.03	<0.01	E2.8	<0.05
31...	41	--	3.7	0.6	<0.02	<0.01	<0.01	--	<0.01	0.49	<0.05
JUN											
08...	55	--	3.8	0.6	<0.02	<0.01	<0.01	<0.03	<0.01	<0.05	<0.05
14...	26	--	3.8	0.6	<0.02	<0.01	<0.01	<0.03	<0.01	<0.05	<0.05
17...	35	--	8.4	6.8	<0.02	<0.01	<0.01	<0.03	<0.01	0.07	<0.05
20...	61	--	5.3	0.4	<0.02	<0.01	<0.01	<0.03	<0.01	<0.05	<0.05
28...	51	--	5.5	--	<0.02	<0.01	<0.01	<0.03	<0.01	--	--
JUL											
05...	16	--	4.9	1.3	<0.02	<0.01	<0.01	<0.03	<0.01	<0.05	<0.05
11...	34	--	5.6	1.4	<0.02	<0.01	<0.01	<0.03	<0.01	0.64	<0.05
18...	39	--	5.6	1.1	<0.02	<0.01	<0.01	<0.03	<0.01	<0.05	<0.05
22...	13	--	5.4	0.9	<0.02	<0.01	<0.01	<0.03	<0.01	<0.05	<0.05
26...	41	--	7.1	1.0	<0.02	<0.01	<0.01	<0.03	<0.01	<0.05	<0.05
AUG											
02...	6	--	6.0	3.9	<0.02	<0.01	<0.01	<0.03	<0.01	<0.05	<0.05
16...	13	--	--	--	<0.02	<0.01	<0.01	<0.03	<0.01	<0.05	<0.05
18...	11	--	8.1	2.5	<0.02	<0.01	<0.01	<0.03	<0.01	0.10	<0.05
26...	45	--	11	6.6	<0.02	<0.01	<0.01	<0.03	<0.01	<0.05	<0.05
31...	35	--	5.5	1.3	<0.02	<0.01	<0.01	<0.03	<0.01	--	--
SEP											
13...	31	--	4.1	1.6	--	<0.01	<0.01	<0.03	<0.01	--	--

POTOMAC RIVER BASIN

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01639000 MONOCACY RIVER AT BRIDGEPORT, MD--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	2,6-DI-ETHYL ANILINE WAT FLT 0.7 U GF, REC (UG/L)	ALA-CHLOR, WATER, DISS, REC, (UG/L)	ALPHA BHC DIS- SOLVED (UG/L)	ATRA-ZINE, WATER, DISS, REC (UG/L)	BEN-FLUR-ALIN WAT FLD 0.7 U GF, REC (UG/L)	BUTYL-ATE, WATER, DISS, REC (UG/L)	BRO-MACIL, WATER, DISS, REC (UG/L)	CAR-BARYL WATER FLTRD 0.7 U GF, REC (UG/L)	CARBO-FURAN WATER FLTRD 0.7 U GF, REC (UG/L)	CHLOR-PYRIFOS DIS- SOLVED (UG/L)	CYANA-ZINE, WATER, DISS, REC (UG/L)
MAR 1994											
22...	<0.01	<0.01	<0.01	0.03	<0.01	<0.01	<0.05	<0.05	<0.01	<0.005	<0.01
APR											
04...	<0.01	<0.01	<0.01	0.02	<0.01	<0.01	<0.05	<0.05	<0.01	<0.005	<0.01
11...	<0.01	<0.01	<0.01	0.03	<0.01	<0.01	<0.05	<0.05	<0.01	<0.01	<0.01
19...	<0.01	<0.01	<0.01	0.04	<0.01	<0.01	<0.05	<0.05	<0.01	<0.01	<0.01
25...	<0.01	<0.01	<0.01	0.03	<0.01	<0.01	<0.05	<0.05	<0.01	<0.01	<0.01
MAY											
02...	<0.01	<0.01	<0.01	0.16	<0.01	<0.01	<0.05	<0.05	0.03	<0.01	0.02
09...	<0.01	<0.01	<0.01	0.96	<0.01	<0.01	<0.05	<0.05	<0.01	<0.01	0.19
16...	<0.01	<0.01	<0.01	<0.02	<0.01	<0.01	<0.05	<0.05	<0.01	<0.01	<0.01
23...	<0.01	<0.01	<0.01	0.11	<0.01	<0.01	<0.05	<0.05	<0.01	<0.01	0.11
26...	<0.01	<0.01	<0.01	20	<0.01	<0.01	<0.05	<0.05	<0.01	<0.005	3.0
31...	<0.01	<0.01	<0.01	5.6	<0.01	<0.01	<0.05	<0.05	<0.01	<0.01	0.40
JUN											
08...	<0.01	<0.01	<0.01	0.57	<0.01	<0.01	<0.05	<0.05	<0.01	<0.005	0.07
14...	<0.01	<0.01	<0.01	0.42	<0.01	<0.01	<0.05	<0.05	<0.01	<0.01	0.04
17...	<0.01	<0.01	<0.01	6.9	<0.01	<0.01	<0.05	<0.05	<0.01	<0.01	<0.01
20...	<0.01	<0.01	<0.01	2.0	<0.01	<0.01	<0.05	<0.05	<0.01	<0.01	<0.01
28...	<0.01	<0.01	<0.01	0.58	<0.01	<0.01	--	<0.05	<0.01	0.03	0.10
JUL											
05...	<0.01	<0.01	<0.01	1.4	<0.01	<0.01	<0.05	<0.05	<0.01	<0.005	0.20
11...	<0.01	<0.01	<0.01	1.0	<0.01	<0.01	<0.05	<0.05	<0.01	<0.01	0.12
18...	<0.01	<0.01	<0.01	0.68	<0.01	<0.01	<0.05	<0.05	<0.01	<0.01	<0.01
22...	<0.01	<0.01	<0.01	0.29	<0.01	<0.01	<0.05	<0.05	<0.01	<0.01	0.05
26...	<0.01	<0.01	<0.01	0.74	<0.01	<0.01	<0.05	<0.05	<0.01	<0.01	0.31
AUG											
02...	<0.01	<0.01	<0.01	0.30	<0.01	<0.01	<0.05	<0.05	<0.01	<0.01	0.05
16...	<0.01	<0.01	<0.01	0.20	<0.01	<0.01	<0.05	<0.05	<0.01	<0.01	0.03
18...	<0.01	<0.01	<0.01	0.09	<0.01	<0.01	<0.05	<0.05	<0.01	<0.01	0.02
26...	<0.01	<0.01	<0.01	0.37	<0.01	<0.01	<0.05	0.10	<0.01	<0.01	<0.01
31...	<0.01	<0.01	<0.01	0.21	<0.01	<0.01	--	<0.05	<0.01	<0.01	0.02
SEP											
13...	<0.01	<0.01	<0.01	0.12	<0.01	<0.01	--	<0.05	<0.01	<0.005	0.02
DATE	DCPA WATER FLTRD 0.7 U GF, REC (UG/L)	P,P' DDE DISSOLV (UG/L)	DEETHYL ATRA-ZINE, WATER, DISS, REC (UG/L)	DI-AZINON, DIS- SOLVED (UG/L)	DI-ELDRIN DIS- SOLVED (UG/L)	DISUL-FOTON WATER FLTRD 0.7 U GF, REC (UG/L)	EPTC WATER FLTRD 0.7 U GF, REC (UG/L)	ETHO-PROP WATER FLTRD 0.7 U GF, REC (UG/L)	FONOFOS WATER DISS REC (UG/L)	LINDANE DIS- SOLVED (UG/L)	LIN-URON WATER FLTRD 0.7 U GF, REC (UG/L)
MAR 1994											
22...	<0.004	<0.01	<0.02	<0.01	<0.02	<0.02	<0.005	<0.01	<0.01	<0.01	<0.04
APR											
04...	<0.004	<0.01	<0.02	<0.01	<0.02	<0.02	<0.005	<0.01	<0.01	<0.01	<0.04
11...	<0.004	<0.01	0.02	<0.01	<0.02	<0.02	<0.005	<0.01	<0.01	<0.01	<0.04
19...	<0.004	<0.01	0.02	<0.01	<0.02	<0.02	<0.005	<0.01	<0.01	<0.01	<0.04
25...	<0.004	<0.01	0.03	<0.01	<0.01	<0.06	<0.005	<0.01	<0.01	<0.01	<0.04
MAY											
02...	<0.004	<0.01	0.02	0.01	<0.01	<0.06	<0.005	<0.01	<0.01	<0.01	<0.04
09...	<0.004	<0.01	0.03	<0.01	<0.01	<0.06	<0.005	<0.01	<0.01	<0.01	<0.04
16...	<0.004	<0.01	<0.005	<0.01	<0.01	<0.06	<0.005	<0.01	<0.01	<0.01	<0.04
23...	<0.004	<0.01	0.03	<0.01	<0.01	<0.06	<0.005	<0.01	<0.01	<0.01	<0.04
26...	<0.004	<0.01	0.32	0.02	<0.01	<0.01	<0.005	<0.01	<0.01	<0.01	0.68
31...	<0.004	<0.01	0.14	<0.01	<0.01	<0.06	<0.005	<0.01	<0.01	<0.01	<0.04
JUN											
08...	<0.004	<0.01	0.04	<0.01	<0.01	<0.01	<0.005	<0.01	<0.01	<0.01	0.02
14...	<0.004	<0.01	0.03	<0.01	<0.01	<0.06	<0.005	<0.01	<0.01	<0.01	0.01
17...	<0.004	<0.01	0.29	<0.01	<0.01	<0.06	<0.005	<0.01	<0.01	<0.01	1.4
20...	<0.004	<0.01	0.14	<0.01	<0.01	<0.06	<0.005	<0.01	<0.01	<0.01	0.56
28...	<0.004	<0.01	0.26	<0.01	<0.01	<0.01	<0.005	<0.01	<0.01	<0.01	0.32
JUL											
05...	<0.004	<0.01	0.10	0.01	<0.01	<0.01	<0.005	<0.01	<0.01	<0.01	0.15
11...	<0.004	<0.01	0.08	0.01	<0.01	<0.06	<0.005	<0.01	<0.01	<0.01	0.08
18...	<0.004	<0.01	0.12	<0.01	<0.01	<0.06	<0.005	<0.01	<0.01	<0.01	0.03
22...	<0.004	<0.01	0.05	<0.01	<0.01	<0.06	<0.005	<0.01	<0.01	<0.01	0.10
26...	<0.004	<0.01	0.14	0.02	<0.01	<0.06	<0.005	<0.01	<0.01	<0.01	0.35
AUG											
02...	<0.004	<0.01	0.08	<0.01	<0.01	<0.06	<0.005	<0.01	<0.01	<0.01	<0.04
16...	<0.004	<0.01	0.05	<0.01	<0.01	<0.06	<0.005	<0.01	<0.01	<0.01	<0.04
18...	<0.004	<0.01	0.02	0.02	<0.01	<0.06	<0.005	<0.01	<0.01	<0.01	<0.04
26...	<0.004	<0.01	0.06	0.10	<0.01	<0.06	<0.005	<0.01	<0.01	<0.01	0.06
31...	<0.004	<0.01	0.03	<0.01	<0.01	<0.06	<0.005	<0.01	<0.01	<0.01	<0.04
SEP											
13...	<0.004	<0.01	0.03	<0.01	<0.01	<0.06	<0.005	<0.01	<0.01	<0.01	<0.04

POTOMAC RIVER BASIN

01639000 MONOCACY RIVER AT BRIDGEPORT, MD--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	MALATHION, DIS- SOLVED (UG/L)	METHYL AZIN- PHOS WAT FLT 0.7 U GF, REC (UG/L)	METHYL PARA- THION WAT FLT 0.7 U GF, REC (UG/L)	METO- LACHLOR WATER DISSOLV (UG/L)	METRI- BUZIN WATER DISSOLV (UG/L)	MOL- INATE WATER FLTRD 0.7 U GF, REC (UG/L)	NAPROP- AMIDE WATER FLTRD 0.7 U GF, REC (UG/L)	PFB- ULATE WATER FLTRD 0.7 U GF, REC (UG/L)	PARA- THION, DIS- SOLVED (UG/L)	PENDI- METH- ALIN WAT FLT 0.7 U GF, REC (UG/L)	PER- METHRIN CIS WAT FLT 0.7 U GF, REC (UG/L)
MAR 1994											
22...	<0.01	<0.04	<0.03	0.05	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02	<0.02
APR											
04...	<0.01	<0.04	<0.03	0.02	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02	<0.02
11...	<0.01	<0.05	<0.03	0.03	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02	<0.02
19...	<0.01	<0.05	<0.03	0.04	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02	<0.02
25...	<0.01	<0.05	<0.03	0.02	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02	<0.02
MAY											
02...	<0.01	<0.05	<0.03	0.26	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02	<0.02
09...	<0.01	<0.05	<0.03	0.82	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02	<0.02
16...	<0.01	<0.05	<0.03	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02	<0.02
23...	<0.01	<0.05	<0.03	0.12	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02	<0.02
26...	0.27	<0.04	<0.03	20	0.02	<0.01	<0.01	<0.01	<0.02	<0.02	<0.02
31...	<0.01	--	<0.03	9.1	0.01	<0.01	<0.01	<0.01	<0.02	<0.02	<0.02
JUN											
08...	<0.01	<0.04	<0.03	0.70	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02	<0.02
14...	<0.01	<0.05	<0.03	0.32	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02	<0.02
17...	<0.01	<0.05	<0.03	20	0.01	<0.01	<0.01	<0.01	<0.02	<0.02	<0.02
20...	<0.01	<0.05	<0.03	6.1	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02	<0.02
28...	<0.01	<0.04	<0.03	<0.01	0.03	<0.01	<0.01	<0.01	<0.02	<0.02	<0.02
JUL											
05...	<0.01	<0.04	<0.03	1.7	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02	<0.02
11...	<0.01	<0.05	<0.03	1.5	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02	<0.02
18...	<0.01	<0.05	<0.03	1.1	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02	<0.02
22...	<0.01	<0.05	<0.03	0.99	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02	<0.02
26...	<0.01	<0.05	<0.03	2.0	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02	<0.02
AUG											
02...	<0.01	<0.05	<0.03	0.45	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02	<0.02
16...	<0.01	<0.05	<0.03	0.30	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02	<0.02
18...	0.03	<0.04	<0.03	0.12	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02	<0.02
26...	<0.01	<0.05	<0.03	0.71	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02	<0.02
31...	<0.01	<0.05	<0.03	0.48	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02	<0.02
SEP											
13...	<0.01	<0.04	<0.03	0.25	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02	<0.02
DATE	PRO- METON, WATER, DISS, REC (UG/L)	PRON- AMIDE WATER FLTRD 0.7 U GF, REC (UG/L)	PROP- CHLOR, WATER, DISS, REC (UG/L)	PRO- PARGITE WATER FLTRD 0.7 U GF, REC (UG/L)	PRO- PANIL WATER FLTRD 0.7 U GF, REC (UG/L)	SILVEX, DIS- SOLVED (UG/L)	SI- MAZINE, WATER, DISS, REC (UG/L)	TEBU- THIURON WATER FLTRD 0.7 U GF, REC (UG/L)	TER- BUFOS WATER FLTRD 0.7 U GF, REC (UG/L)	THIO- BENCARB WATER FLTRD 0.7 U GF, REC (UG/L)	TRIAL- LATE WATER FLTRD 0.7 U GF, REC (UG/L)
MAR 1994											
22...	<0.01	<0.01	<0.02	<0.01	<0.02	<0.05	0.01	<0.02	<0.01	<0.01	<0.01
APR											
04...	0.01	<0.01	<0.02	<0.01	<0.02	<0.05	0.02	<0.02	<0.01	<0.01	<0.01
11...	0.04	<0.01	<0.02	<0.01	<0.02	<0.05	0.03	<0.02	<0.01	<0.01	<0.01
19...	0.01	<0.01	<0.02	<0.01	<0.02	<0.05	0.03	<0.02	<0.01	<0.01	<0.01
25...	0.01	<0.01	<0.02	<0.01	<0.02	<0.05	0.03	<0.02	<0.01	<0.01	<0.01
MAY											
02...	0.03	<0.01	<0.02	<0.01	<0.02	<0.05	0.04	<0.02	<0.01	<0.01	<0.01
09...	0.02	<0.01	<0.02	<0.01	<0.02	<0.05	0.98	<0.02	<0.01	<0.01	<0.01
16...	<0.01	<0.01	<0.02	<0.01	<0.02	<0.05	<0.01	<0.02	<0.01	<0.01	<0.01
23...	0.01	<0.01	<0.02	<0.01	<0.02	<0.05	0.06	<0.02	<0.01	<0.01	<0.01
26...	0.08	<0.01	<0.02	<0.01	<0.02	<0.05	3.4	<0.02	<0.01	<0.01	<0.01
31...	0.06	<0.01	<0.02	<0.01	<0.02	<0.05	0.54	<0.02	<0.01	<0.01	<0.01
JUN											
08...	0.02	<0.01	<0.02	<0.01	<0.02	<0.05	0.13	<0.02	<0.01	<0.01	<0.01
14...	0.01	<0.01	<0.02	<0.01	<0.02	<0.05	0.86	<0.02	<0.01	<0.01	<0.01
17...	0.04	<0.01	<0.02	<0.01	<0.02	<0.05	0.27	<0.02	<0.01	<0.01	<0.01
20...	0.02	<0.01	<0.02	<0.01	<0.02	<0.05	0.60	<0.02	<0.01	<0.01	<0.01
28...	0.05	<0.01	<0.02	<0.01	<0.02	--	0.83	<0.02	<0.01	<0.01	<0.01
JUL											
05...	0.04	<0.01	<0.02	<0.01	<0.02	<0.05	0.22	<0.02	<0.01	<0.01	<0.01
11...	0.03	<0.01	<0.02	<0.01	<0.02	<0.05	0.21	<0.02	<0.01	<0.01	<0.01
18...	0.02	<0.01	<0.02	<0.01	<0.02	<0.05	0.14	<0.02	<0.01	<0.01	<0.01
22...	0.07	<0.01	<0.02	<0.01	<0.02	<0.05	0.51	<0.02	<0.01	<0.01	<0.01
26...	0.08	<0.01	<0.02	<0.01	<0.02	<0.05	0.44	0.05	<0.01	<0.01	<0.01
AUG											
02...	<0.01	<0.01	<0.02	<0.01	<0.02	<0.05	0.23	<0.02	<0.01	<0.01	<0.01
16...	0.04	<0.01	<0.02	<0.01	<0.02	<0.05	0.08	<0.02	<0.01	<0.01	<0.01
18...	0.02	<0.01	<0.02	<0.01	<0.02	<0.05	0.09	<0.02	<0.01	<0.01	<0.01
26...	0.03	<0.01	<0.02	<0.01	<0.02	<0.05	0.03	<0.02	<0.01	<0.01	<0.01
31...	0.03	<0.01	<0.02	<0.01	<0.02	--	0.09	<0.02	<0.01	<0.01	<0.01
SEP											
13...	0.02	<0.01	<0.02	<0.01	<0.02	--	0.04	<0.02	<0.01	<0.01	<0.01

POTOMAC RIVER BASIN

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01639000 MONOCACY RIVER AT BRIDGEPORT, MD--Continued

SUSPENDED SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)
OCT 1993				
04...	0940	67	11	2.0
NOV				
03...	1130	139	7	2.6
28...	0315	4280	1250	14400
28...	0435	6530	1130	19900
28...	0540	8870	891	21300
28...	0630	10200	799	22000
28...	0720	11200	799	24200
28...	0805	12100	734	24000
28...	0850	12900	637	22200
28...	0935	13500	599	21800
28...	1020	14100	568	21600
28...	1100	14500	561	22000
28...	1150	14800	505	20200
28...	1235	15000	446	18100
DEC				
05...	1045	12500	1650	55700
05...	1515	13300	1070	38400
JAN 1994				
12...	1045	59	296	47
MAR				
22...	1230	2380	38	244
APR				
04...	1200	295	7	5.6
11...	1000	360	12	12
19...	1030	158	8	3.4
25...	0930	92	6	1.5
MAY				
02...	1145	163	23	10
09...	1115	261	24	17
16...	0930	86	9	2.1
23...	1030	55	6	0.89
26...	1030	1.2	85	0.28
31...	1015	39	26	2.8
JUN				
08...	1100	31	13	1.1
14...	1045	27	10	0.74
17...	1000	160	93	40
20...	0900	23	336	21
28...	1130	88	230	55
JUL				
05...	0930	17	277	13
11...	1030	14	301	11
22...	1930	196	73	39
26...	1100	27	33	2.4
AUG				
02...	0845	16	31	1.4
16...	0900	15	25	1.0
18...	1045	1290	135	470
26...	1115	595	365	586
31...	1130	46	31	3.9

POTOMAC RIVER BASIN

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 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1990 to current year.

GAGE.--Water-stage recorder. Datum of gage is 383.22 ft above sea level.

REMARKS.--Water-discharge records good except those for estimated daily discharges (ice effect), which are poor.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 500 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 28	0715	2,200	7.26	Mar. 15	1930	752	4.30
Dec. 5	0845	*2,940	*8.20	Mar. 20	1830	540	3.67
Jan. 29	UNKNOWN	UNKNOWN	UNKNOWN	Mar. 21	2245	693	4.13
Feb. 21	1730	960	4.87	Mar. 22	1730	540	3.67
Feb. 24	1600	608	3.88	Mar. 27	1200	1,400	5.96
Mar. 10	1545	802	4.44	Mar. 29	0945	686	4.11
Mar. 14	1915	853	4.58	Apr. 13	1815	511	3.58

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.0	55	81	e25	e45	58	95	20	5.3	1.9	2.2	8.1
2	5.5	24	70	23	e20	55	75	14	4.6	1.9	2.2	6.6
3	7.0	16	60	22	e9.0	65	64	11	4.3	1.4	2.0	5.6
4	6.7	12	113	24	7.1	58	61	12	4.1	1.5	1.9	4.9
5	4.9	12	1730	23	6.1	94	51	14	3.9	1.4	2.5	4.4
6	4.3	21	195	20	6.1	139	47	11	4.0	1.3	2.5	4.2
7	4.0	12	113	20	12	134	109	15	3.8	4.1	2.5	3.9
8	3.9	9.1	84	25	23	254	51	88	3.7	2.8	2.1	3.3
9	4.2	8.0	67	e23	e21	178	43	28	3.2	2.3	1.7	2.9
10	5.6	7.3	73	e21	e19	575	52	19	3.0	1.8	1.4	2.9
11	5.0	7.3	90	e18	e18	284	60	13	2.9	1.5	1.5	2.7
12	23	7.0	49	e16	e20	201	42	14	2.9	1.4	1.6	2.6
13	21	7.0	42	e15	23	247	218	15	3.0	1.2	1.4	2.4
14	7.5	8.4	42	e18	24	447	136	9.9	2.8	1.3	1.7	2.3
15	6.1	9.0	43	e16	24	405	73	9.4	2.6	2.6	5.1	12
16	6.0	7.4	55	e15	21	260	73	12	2.3	2.9	3.6	6.3
17	6.1	6.6	37	e13	15	168	52	9.0	2.1	2.6	32	3.9
18	7.0	13	33	e12	20	130	42	8.6	2.3	3.5	41	10
19	7.3	9.8	42	e11	39	147	38	7.7	2.0	2.9	9.6	6.6
20	8.1	7.9	34	e13	169	258	33	7.6	1.8	2.2	5.6	3.5
21	14	7.1	162	e16	556	279	29	7.3	1.4	5.8	13	3.0
22	23	6.0	76	e15	299	391	25	6.5	1.6	27	94	6.3
23	16	5.6	57	e15	249	211	23	5.9	1.5	23	28	36
24	10	5.3	47	e19	432	157	21	5.5	1.8	7.6	12	12
25	9.7	5.6	42	e30	221	130	20	12	2.2	3.5	9.5	7.3
26	9.0	5.2	40	e100	128	89	17	38	2.2	2.5	168	13
27	8.7	18	e37	e270	97	524	17	28	2.5	3.0	31	21
28	9.0	1120	e34	e260	80	381	24	10	2.6	8.1	18	9.4
29	9.0	136	e31	e330	---	469	15	7.9	3.1	4.6	15	6.9
30	26	97	e29	e200	---	179	14	6.5	2.4	2.9	14	5.3
31	72	---	e27	e90	---	119	---	5.9	---	2.4	9.2	---
TOTAL	355.6	1665.6	3635	1718	2603.3	7086	1620	471.7	85.9	132.9	535.8	219.3
MEAN	11.5	55.5	117	55.4	93.0	229	54.0	15.2	2.86	4.29	17.3	7.31
MAX	72	1120	1730	330	556	575	218	88	5.3	27	168	36
MIN	3.9	5.2	27	11	6.1	55	14	5.5	1.4	1.2	1.4	2.3
CFSM	.37	1.77	3.75	1.77	2.97	7.30	1.73	.49	.09	.14	.55	.23
IN.	.42	1.98	4.32	2.04	3.09	8.42	1.93	.56	.10	.16	.64	.26

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1990 - 1994, BY WATER YEAR (WY)

	1990	1991	1992	1993	1994
MEAN	20.8	40.6	79.9	54.3	44.6
MAX	57.8	63.3	117	91.1	93.0
(WY)	1991	1992	1993	1994	1995
MIN	3.27	7.84	45.9	18.8	27.1
(WY)	1992	1993	1994	1995	1996

POTOMAC RIVER BASIN

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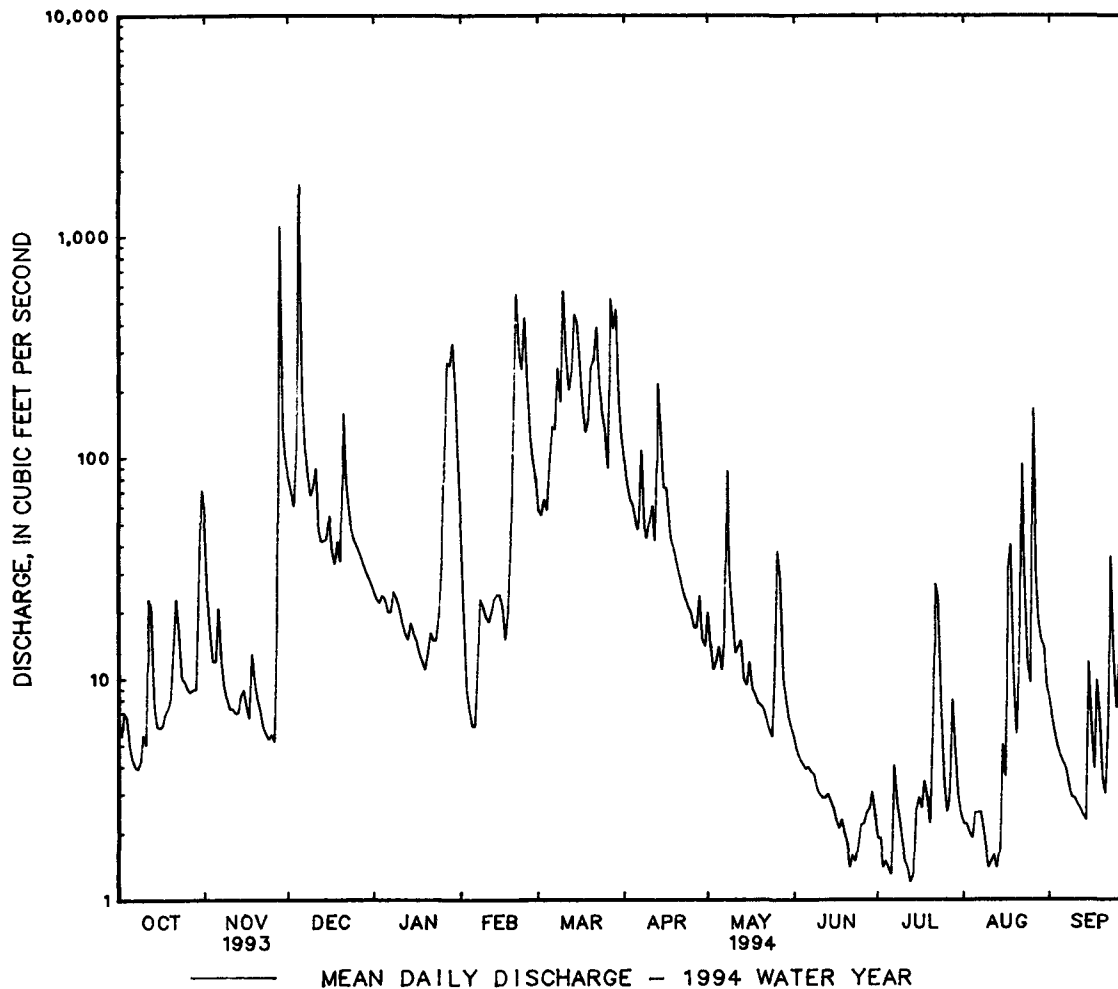
01639140 PINEY CREEK NEAR TANEYTOWN, MD--Continued

SUMMARY STATISTICS	FOR 1993 CALENDAR YEAR		FOR 1994 WATER YEAR		WATER YEARS 1990 - 1994	
ANNUAL TOTAL	22771.3		20129.1		42.7	
ANNUAL MEAN	62.4		55.1		59.2	
HIGHEST ANNUAL MEAN					24.3	
LOWEST ANNUAL MEAN					1730	
HIGHEST DAILY MEAN	1730	Dec 5	1730	Dec 5	1730	Dec 5 1993
LOWEST DAILY MEAN	1.6	Aug 5	1.2	Jul 13	.00	(a)
ANNUAL SEVEN-DAY MINIMUM	2.1	Aug 27	1.6	Aug 8	.03	Aug 2 1991
INSTANTANEOUS PEAK FLOW			2940	Dec 5	2940	Dec 5 1993
INSTANTANEOUS PEAK STAGE			8.20	Dec 5	8.20	Dec 5 1993
INSTANTANEOUS LOW FLOW			.93	(b)	.00	(c)
ANNUAL RUNOFF (CFSM)	1.99		1.76		1.37	
ANNUAL RUNOFF (INCHES)	27.06		23.92		18.56	
10 PERCENT EXCEEDS	116		142		83	
50 PERCENT EXCEEDS	15		13		13	
90 PERCENT EXCEEDS	3.8		2.4		2.0	

a Aug. 4, 5, Sept. 2, 3, 1991.

b July 13, 14.

c Aug. 3-9, 17, Sept. 1-4, 1991



POTOMAC RIVER BASIN

01639140 PINEY CREEK NEAR TANEYTOWN, MD--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1991, October 1993 to September 1994.

WATER QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH WATER WHOLE FIELD (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	TEMPER- ATURE AIR (DEG C)	HARD- NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LITY WAT DIS TOT IT FIELD MG/L AS CACO3
OCT 1993 14...	0815	17	284	7.1	10.0	8.0	100	29	7.1	11	6.3	72
AUG 1994 31...	0945	9.0	312	7.6	19.0	20.0	110	31	7.6	15	4.6	75

DATE	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS NO3)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	IRON, DIS- SOLVED (UG/L AS FE)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)
OCT 1993 14...	21	20	--	7.7	--	9.3	0.010	2.10	2.10	110	16
AUG 1994 31...	21	24	0.10	10	175	15	0.010	3.40	3.40	55	19

POTOMAC RIVER BASIN

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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 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1947 to current year. Prior to December 1947, monthly discharge only, published in WSP 1302.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 336.88 ft above sea level.

REMARKS.--Water-discharge records good, except those for estimated daily discharges (ice effect), which are fair. Occasional diversion for irrigation upstream from station.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,600 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 28	0800	4,290	9.82	Mar. 10	1800	2,340	6.59
Dec. 5	0930	*4,970	*10.49	Mar. 14	1830	1,800	5.51
Feb. 20	2230	1,790	5.48	Mar. 27	1230	2,450	6.80
Feb. 21	1730	2,130	6.16	Mar. 29	1030	1,640	5.20
Feb. 24	1730	1,660	5.23				

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	57	125	159	e94	257	206	371	124	70	39	36	49
2	54	79	140	92	216	202	313	111	65	37	34	43
3	62	68	127	89	203	219	280	106	64	35	33	41
4	53	63	165	e94	184	206	266	117	63	34	30	38
5	48	61	3360	e100	e180	331	236	120	60	33	30	37
6	45	67	657	e95	182	396	225	106	62	33	36	36
7	45	60	304	83	207	423	334	112	62	50	31	35
8	43	57	247	e96	225	782	217	305	59	37	28	34
9	42	55	212	e110	187	480	195	137	57	32	26	32
10	40	55	199	e100	152	1600	221	115	55	31	25	32
11	38	54	215	e90	131	900	238	106	54	29	25	30
12	68	52	159	e85	e175	620	194	111	59	26	27	30
13	80	52	146	e90	e190	743	496	112	55	26	29	30
14	53	57	141	e95	e180	1150	411	96	51	26	27	29
15	49	59	140	e85	173	972	254	95	48	35	30	51
16	47	55	153	e75	169	691	261	133	50	34	26	41
17	46	54	124	e70	171	432	215	98	53	53	93	36
18	47	62	118	e70	178	363	191	93	50	96	112	69
19	44	59	130	e75	e220	365	181	91	47	43	49	41
20	52	55	121	e85	e700	455	168	90	45	36	39	34
21	70	49	339	e100	1550	532	156	85	43	37	58	32
22	76	47	198	e130	911	807	149	81	44	65	326	36
23	57	47	149	150	870	484	143	79	40	62	116	117
24	51	46	130	166	1260	424	140	74	41	49	59	58
25	49	45	124	258	639	383	137	86	44	38	47	46
26	48	45	114	993	390	301	130	141	40	36	746	68
27	48	46	112	481	275	1170	129	179	37	42	113	73
28	47	2690	e110	602	228	1030	129	90	47	99	74	52
29	45	331	e105	1100	---	1280	119	81	42	50	64	47
30	59	209	e100	466	---	615	120	76	45	40	64	41
31	152	---	e97	311	---	444	---	73	---	36	51	---
TOTAL	1715	4804	8595	6530	10403	19006	6619	3423	1552	1319	2484	1338
MEAN	55.3	160	277	211	372	613	221	110	51.7	42.5	80.1	44.6
MAX	152	2690	3360	1100	1550	1600	496	305	70	99	746	117
MIN	38	45	97	70	131	202	119	73	37	26	25	29
CFSM	.54	1.57	2.72	2.07	3.64	6.01	2.16	1.08	.51	.42	.79	.44
IN.	.63	1.75	3.13	2.38	3.79	6.93	2.41	1.25	.57	.48	.91	.49

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1948 - 1994, BY WATER YEAR (WY)

	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959
MEAN	59.4	83.9	122	142	177	197	167	121	99.6	69.9	54.4	63.7
MAX	390	289	356	401	387	613	514	383	891	295	212	729
(WY)	1980	1948	1973	1979	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

POTOMAC RIVER BASIN

01639500 BIG PIPE CREEK AT BRUCEVILLE, MD--Continued

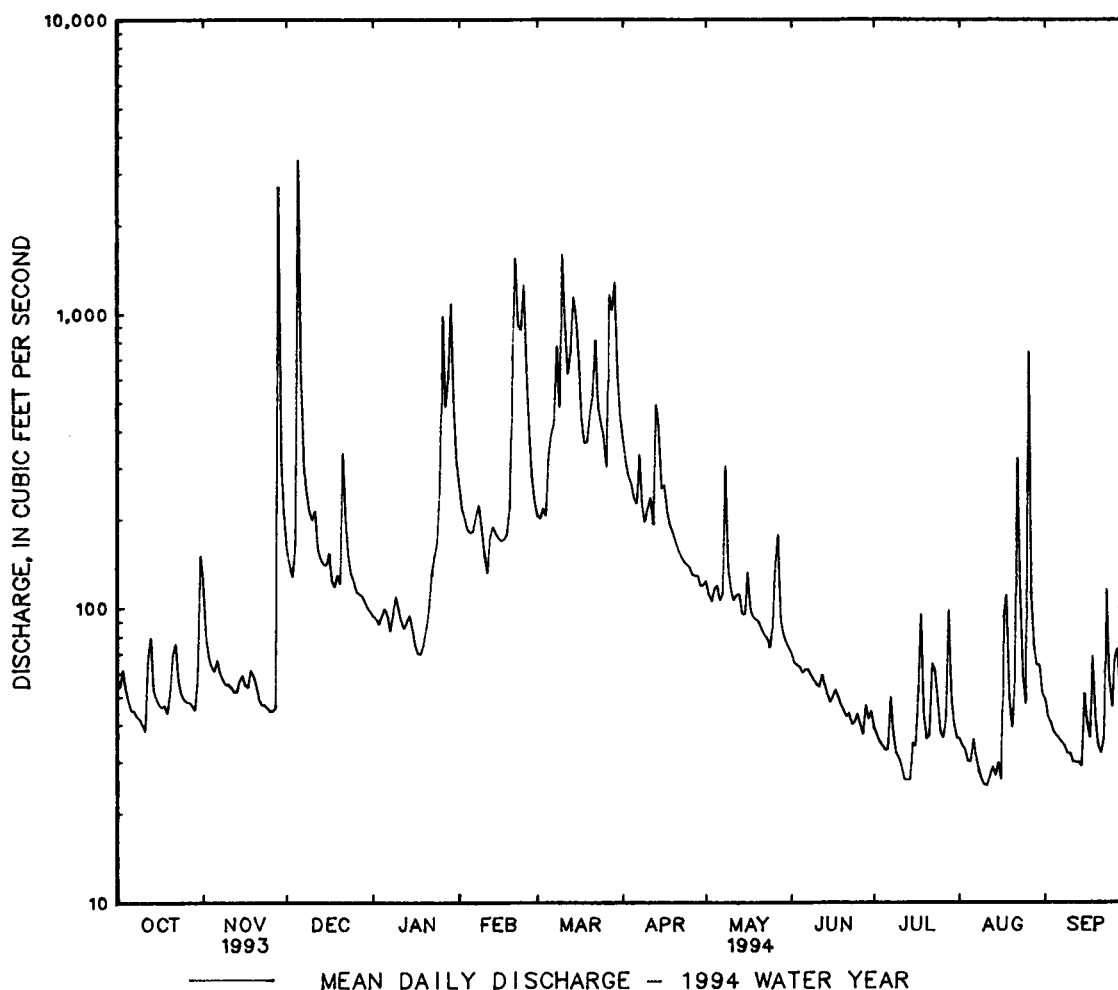
SUMMARY STATISTICS	FOR 1993 CALENDAR YEAR		FOR 1994 WATER YEAR		WATER YEARS 1948 - 1994	
ANNUAL TOTAL	71200		67788		113	
ANNUAL MEAN	195		186		227	
HIGHEST ANNUAL MEAN					50.8	
LOWEST ANNUAL MEAN					14400	
HIGHEST DAILY MEAN	3360	Dec 5	3360	Dec 5		Jun 22 1972
LOWEST DAILY MEAN	31	(a)	25	(b)	1.0	Sep 12 1966
ANNUAL SEVEN-DAY MINIMUM	33	Aug 27	27	Aug 8	1.4	Sep 7 1966
INSTANTANEOUS PEAK FLOW			4970	Dec 5	(c)28000	Sep 26 1975
INSTANTANEOUS PEAK STAGE			10.49	Dec 5	18.98	Sep 26 1975
INSTANTANEOUS LOW FLOW			17	(d)	1.0	Sep 12 1966
ANNUAL RUNOFF (CFSM)	1.91		1.82		1.11	
ANNUAL RUNOFF (INCHES)	25.97		24.72		15.02	
10 PERCENT EXCEEDS	387		423		212	
50 PERCENT EXCEEDS	97		85		65	
90 PERCENT EXCEEDS	45		36		24	

a Sept. 1, 2.

b Aug. 10, 11.

c From rating curve extended above 3,900 ft³/s on the basis of contracted-opening measurement at gage height of 17.86 ft.

d Aug. 11, 14.



POTOMAC RIVER BASIN

301

01639500 BIG PIPE CREEK AT BRUCEVILLE, MD--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1961, 1982-83, October 1993 to September 1994.

WATER QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH WATER WHOLE FIELD (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	TEMPER- ATURE AIR (DEG C)	HARD- NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
OCT 1993 14...	0900	52	232	6.8	8.0	10.0	89	27	5.3	5.4	3.7
AUG 1994 31...	1030	50	232	7.5	20.0	21.0	89	27	5.3	6.8	2.5

DATE	ALKA- LITY WAT DIS TOT IT FIELD MG/L AS CACO3	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	IRON, DIS- SOLVED (UG/L AS FE)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)
OCT 1993 14...	61	11	16	--	6.4	--	<0.010	2.90	2.90	48	17
AUG 1994 31...	61	10	16	<0.10	7.7	133	<0.010	3.10	3.10	39	18

POTOMAC RIVER BASIN

01640000 LITTLE PIPE CREEK AT AVONDALE, MD

LOCATION.--Lat 39°33'40", long 77°02'38", Carroll County, Hydrologic Unit 02070009, at private bridge, 0.1 mi downstream from Copps Branch, 0.5 mi northwest of Avondale, and 3 mi southwest of Westminster.

DRAINAGE AREA.--8.10 mi².

PERIOD OF RECORD.--October 1993 to September 1994.

WATER QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH WATER WHOLE FIELD (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	TEMPER-ATURE AIR (DEG C)	BARO-METRIC PRES-SURE (MM OF HG)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	HARD-NESS TOTAL (MG/L AS CaCO3)	CALCIUM DIS-SOLVED (MG/L AS Ca)
AUG 1994 25...	1330	9.7	496	7.5	21.0	28.0	754	8.7	99	170	55
DATE	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY WAT DIS TOT IT FIELD (MG/L AS CaCO3)	BICAR-BONATE WATER DIS IT FIELD (MG/L AS HCO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)
AUG 1994 25...	7.3	28	5.2	121	148	20	51	0.30	10	292	<0.010
DATE	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC DIS. (MG/L AS N)	PHOS-PHORUS DIS-SOLVED (MG/L AS P)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P)	IRON, DIS-SOLVED (UG/L AS FE)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	DIMETH-OATE WATER FLTRD 0.7 U GG, REC (UG/L)	ETHAL-FLUR-ALIN WAT FLT 0.7 U GF, REC (UG/L)	PHORATE WATER FLTRD 0.7 U GF, REC (UG/L)
AUG 1994 25...	6.30	6.30	0.020	0.40	0.280	0.250	19	13	<0.02	<0.01	<0.01
DATE	TER-BACIL WATER FLTRD 0.7 U GF, REC (UG/L)	TRI-FLUR-ALIN WAT FLT 0.7 U GF, REC (UG/L)	2,6-DI-ETHYL ANILINE WAT FLT 0.7 U GF, REC (UG/L)	ALA-CHLOR, WATER, DISS, REC, (UG/L)	ALPHA BCB DIS-SOLVED (UG/L)	ATRA-ZINE, WATER, DISS, REC (UG/L)	BEN-FLUR-ALIN WAT FLD 0.7 U GF, REC (UG/L)	BUTYL-ATE, WATER, DISS, REC (UG/L)	CAR-BARYL WATER FLTRD 0.7 U GF, REC (UG/L)	CARBO-FURAN WATER FLTRD 0.7 U GF, REC (UG/L)	CHLOR-PYRIFOS DIS-SOLVED (UG/L)
AUG 1994 25...	<0.03	<0.01	<0.01	<0.01	<0.01	0.11	<0.01	<0.01	<0.05	<0.01	<0.01

POTOMAC RIVER BASIN

01640000 LITTLE PIPE CREEK AT AVONDALE, MD--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	CYANA- ZINE, WATER, DISS, REC (UG/L)	DCPA WATER FLTRD 0.7 U GF, REC (UG/L)	P,P' DDE DISSOLV (UG/L)	DEETHYL ATRA- ZINE, WATER, DISS, REC (UG/L)	DI- AZINON, DIS- SOLVED (UG/L)	DI- ELDRIN DIS- SOLVED (UG/L)	DISUL- FOTON WATER FLTRD 0.7 U GF, REC (UG/L)	EPTC WATER FLTRD 0.7 U GF, REC (UG/L)	ETHO- PROP WATER FLTRD 0.7 U GF, REC (UG/L)	FONOPOS WATER DISS REC (UG/L)	LINDANE DIS- SOLVED (UG/L)
AUG 1994 25...	<0.01	<0.004	<0.01	0.08	<0.01	<0.01	<0.06	<0.005	<0.01	<0.01	<0.01
DATE	LIN- URON WATER FLTRD 0.7 U GF, REC (UG/L)	MALA- THION, DIS- SOLVED (UG/L)	METHYL AZIN- PHOS WAT FLT 0.7 U GF, REC (UG/L)	METHYL PARA- THION WAT FLT 0.7 U GF, REC (UG/L)	METO- LACHLOR WATER DISSOLV (UG/L)	METRI- BUZIN SENCOR WATER DISSOLV (UG/L)	MOL- INATE WATER FLTRD 0.7 U GF, REC (UG/L)	NAPROP- AMIDE WATER FLTRD 0.7 U GF, REC (UG/L)	FEB- ULATE WATER FLTRD 0.7 U GF, REC (UG/L)	PARA- THION, DIS- SOLVED (UG/L)	PENDI- METH- ALIN WAT FLT 0.7 U GF, REC (UG/L)
AUG 1994 25...	<0.04	<0.01	<0.05	<0.03	0.03	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02
DATE	PER- METHRIN CIS WAT FLT 0.7 U GF, REC (UG/L)	PRO- METON, WATER, DISS, REC (UG/L)	PRON- AMIDE WATER FLTRD 0.7 U GF, REC (UG/L)	PROP- CHLOR, WATER, DISS, REC (UG/L)	PRO- PARGITE WATER FLTRD 0.7 U GF, REC (UG/L)	PRO- PANIL WATER FLTRD 0.7 U GF, REC (UG/L)	SI- MAZINE, WATER, DISS, REC (UG/L)	TEBU- THIURON WATER FLTRD 0.7 U GF, REC (UG/L)	TER- BUFOS WATER FLTRD 0.7 U GF, REC (UG/L)	THIO- BENCARB WATER FLTRD 0.7 U GF, REC (UG/L)	TRIAL- LATE WATER FLTRD 0.7 U GF, REC (UG/L)
AUG 1994 25...	<0.02	0.03	<0.01	<0.02	<0.01	<0.02	0.07	<0.02	<0.01	<0.01	<0.01

SUSPENDED SEDIMENT DISCHARGE

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)
AUG 1994 25...	1330	9.7	9	0.24

POTOMAC RIVER BASIN

01640965 HUNTING CREEK NEAR FOXVILLE, MD

LOCATION.--Lat 39°37'10", long 77°28'00", Frederick County, Hydrologic Unit 02070009, on left downstream wingwall of culvert on park road in Cunningham Falls State Park, 0.25 mi upstream from Hunting Creek Lake, and 2.9 mi west of Thurmont.

DRAINAGE AREA.--2.14 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1981 to September 1994 (Discontinued).

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 1,030 ft above sea level, from topographic map.

REMARKS.--Water-discharge records good except those for discharges below 1.0 ft³/s, which are fair, estimated daily discharges (recorder malfunction; ice effect), and discharges above 25 ft³/s, which are poor.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 40 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 28	0245	*236	*3.35	Mar. 27	Unknown	Unknown	Unknown
Dec. 5	Unknown	Unknown	Unknown	Mar. 29	Unknown	Unknown	Unknown
Feb. 21	1300	60	2.62	Apr. 13	1630	57	2.61
Mar. 10	1345	47	2.56	Aug. 17	2030	86	2.74
Mar. 22	1600	42	2.54				

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.43	3.5	6.2	1.5	5.2	6.4	11	3.2	.91	.28	.21	.20
2	.38	1.9	5.3	1.6	4.4	6.2	9.6	2.3	.82	.21	.15	.19
3	.55	1.7	4.7	1.6	4.1	6.7	8.4	1.9	.77	.20	.16	.18
4	.35	1.7	11	1.7	3.6	6.1	7.3	2.8	.71	.18	.12	.17
5	.28	2.5	e65	1.5	3.6	7.2	6.4	2.4	.67	.18	.17	.15
6	.24	3.5	e19	1.3	3.5	6.5	5.8	1.9	.77	.18	.17	.13
7	.23	2.3	12	1.4	e3.4	7.7	11	3.8	.74	.29	.13	.13
8	.23	1.9	9.0	1.7	e3.3	12	6.7	11	.62	.17	.10	.13
9	.24	1.8	6.9	1.5	e3.1	11	5.9	5.1	.57	.15	.10	.13
10	.26	1.7	8.9	1.3	2.9	27	7.8	4.1	.49	.13	.10	.13
11	.28	1.6	7.9	1.4	2.7	14	6.9	3.5	.49	.11	.08	.11
12	2.4	1.4	5.4	1.4	2.6	12	6.4	3.6	.55	.11	.08	.10
13	.98	1.3	4.8	1.4	2.7	13	22	2.9	.49	.11	.08	.10
14	.63	1.4	4.5	e1.4	2.6	17	16	2.5	.45	.13	.08	.10
15	.59	1.2	4.5	e1.3	2.5	19	10	2.4	.34	.13	.08	.10
16	.54	1.1	4.2	e1.3	2.5	16	12	2.8	.30	.13	.09	.13
17	.58	1.4	3.5	e1.3	2.5	12	8.8	2.1	.40	.13	15	.13
18	.63	2.1	3.3	e1.2	3.3	10	7.6	1.8	.35	.14	4.2	.11
19	.66	1.4	3.6	e1.2	5.5	9.0	6.8	1.7	.29	.15	.71	.15
20	1.0	1.4	3.0	1.2	14	9.3	6.0	1.6	.29	.15	.42	.11
21	1.3	1.2	3.2	1.1	36	14	5.3	1.3	.29	.22	.81	.10
22	1.3	1.1	2.8	1.1	19	25	4.7	1.2	.28	.25	1.7	.49
23	1.0	1.2	2.6	1.1	15	e19	4.3	1.1	.22	.24	.75	.82
24	.95	1.2	2.3	1.7	22	e13	4.0	1.0	.23	e.17	.40	.29
25	.97	1.2	2.2	2.7	14	e10	3.6	3.1	.27	e.14	.32	.22
26	.90	1.1	1.9	5.6	11	e8.5	3.3	3.9	.20	e.13	.68	.41
27	.97	39	1.7	3.3	8.5	e40	3.2	2.7	.69	e.19	.36	.64
28	.97	86	1.7	11	7.1	e23	2.8	1.6	.48	.22	.28	.29
29	1.0	15	1.6	11	---	e30	2.5	1.3	.46	.15	.27	.26
30	3.6	8.4	1.6	7.3	---	e16	2.3	1.2	.48	.15	.24	.22
31	5.1	---	1.5	6.0	---	14	---	1.0	---	.15	.20	---
TOTAL	29.54	192.2	215.8	80.1	210.6	440.6	218.4	82.8	14.62	5.27	28.24	6.42
MEAN	.95	6.41	6.96	2.58	7.52	14.2	7.28	2.67	.49	.17	.91	.21
MAX	5.1	86	65	11	36	40	22	11	.91	.29	15	.82
MIN	.23	1.1	1.5	1.1	2.5	6.1	2.3	1.0	.20	.11	.08	.10
CFSM	.45	2.99	3.25	1.21	3.51	6.64	3.40	1.25	.23	.08	.43	.10
IN.	.51	3.34	3.75	1.39	3.66	7.66	3.80	1.44	.25	.09	.49	.11

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1982 - 1994, BY WATER YEAR (WY)

	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994
MEAN	.92	3.13	4.10	3.17	5.36	7.54	7.11	5.33	1.85	.80	.87	.39	
MAX	4.12	10.6	10.4	7.18	12.6	17.9	14.0	15.2	5.43	2.69	6.33	1.58	
(WY)	1991	1986	1993	1991	1984	1993	1993	1989	1982	1989	1984	1992	
MIN	.093	.49	.68	1.25	2.22	2.62	2.56	1.90	.48	.17	.052	.063	
(WY)	1987	1982	1989	1983	1993	1988	1985	1991	1991	1991	1987	1986	

01640965 HUNTING CREEK NEAR FOXVILLE, MD--Continued

SUMMARY STATISTICS	FOR 1993 CALENDAR YEAR	FOR 1994 WATER YEAR	WATER YEARS 1982 - 1994
ANNUAL TOTAL	1782.32	1524.59	
ANNUAL MEAN	4.88	4.18	3.37
HIGHEST ANNUAL MEAN			5.22
LOWEST ANNUAL MEAN			1.82
HIGHEST DAILY MEAN	86 Nov 28	86 Nov 28	101 Feb 14 1984
LOWEST DAILY MEAN	.05 (a)	.08 (b)	.02 (c)
ANNUAL SEVEN-DAY MINIMUM	.05 Aug 27	.08 Aug 10	.03 Aug 28 1991
INSTANTANEOUS PEAK FLOW		236 Nov 28	(d)814 May 19 1988
INSTANTANEOUS PEAK STAGE		3.35 Nov 28	4.71 May 19 1988
INSTANTANEOUS LOW FLOW		.08 (f)	.01 Sep 3 1991
ANNUAL RUNOFF (CFSM)	2.28	1.95	1.57
ANNUAL RUNOFF (INCHES)	30.98	26.50	21.39
10 PERCENT EXCEEDS	12	11	7.9
50 PERCENT EXCEEDS	1.7	1.4	1.7
90 PERCENT EXCEEDS	.10	.14	.13

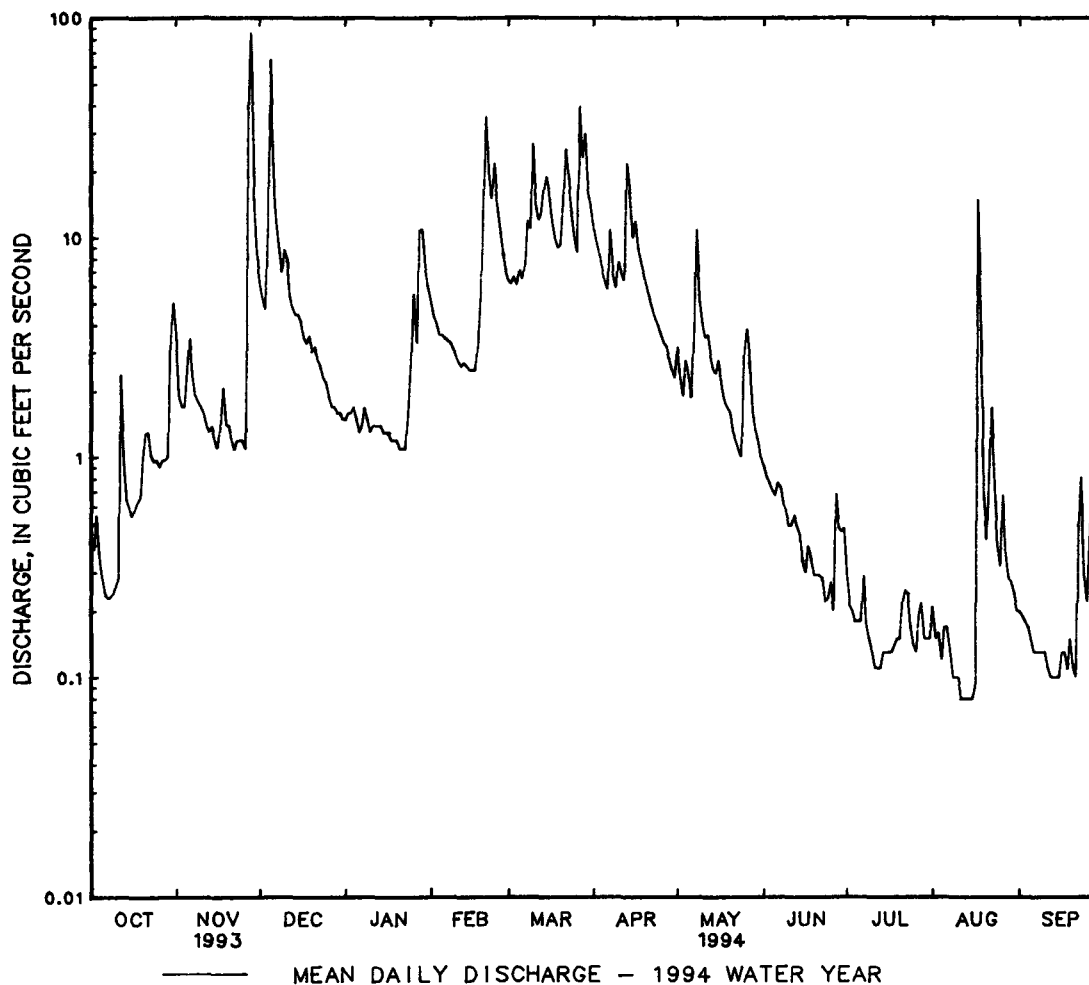
a Aug. 29-31, Sept. 1, 2.

b Aug. 11-15.

c Aug. 18, Sept. 1-3, 1991.

d From rating curve extended above 40 ft³/s on basis of computation of peak flow through culvert.

f Aug. 10-16.



POTOMAC RIVER BASIN

01640965 HUNTING CREEK NEAR FOXVILLE, MD--Continued

WATER-QUALITY RECORDS

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

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1987 to July 1991.

WATER TEMPERATURE: October 1987 to July 1991.

INSTRUMENTATION.--Water-quality monitor October 1987 to July 1991.

REMARKS.--Periods of missing record were due to instrument malfunction.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE (water year 1990): Maximum, 121 microsiemens, Dec. 31, 1989; minimum, 64 microsiemens, May 10, 11, 30, 31, June 16 and July 5, 1990.

WATER TEMPERATURE (water years 1989-90): Maximum daily, 21.5°C, July 25, 1989; minimum daily, 0.0°C, on many days during winter periods.

WATER QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH WATER WHOLE FIELD (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	TEMPER- ATURE AIR (DEG C)	HARD- NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)
OCT 1993									
06...	0830	0.23	99	6.9	12.0	12.0	35	7.8	3.8
13...	0930	0.97	94	6.9	11.0	11.0	--	6.9	--
20...	0900	0.76	103	7.1	14.0	11.0	--	7.1	--
NOV									
09...	1050	1.7	88	7.3	5.0	10.0	--	7.3	--
16...	0952	1.1	92	7.2	9.0	10.5	35	7.7	3.8
19...	1125	1.4	89	6.5	8.5	--	32	7.0	3.5
30...	1008	8.5	69	6.9	4.5	1.5	--	6.9	--
DEC									
07...	1350	11	66	7.0	7.0	5.0	--	7.0	--
13...	0918	4.8	71	6.9	2.0	-0.5	23	5.0	2.5
22...	1420	2.7	74	6.6	2.0	2.0	--	6.6	--
30...	1030	1.6	--	6.6	0.0	--	--	6.6	--
JAN 1994									
05...	1215	1.4	76	7.0	0.0	-3.0	--	7.0	--
11...	1210	1.3	84	7.0	0.0	-1.0	--	7.0	--
27...	0945	3.4	91	5.2	0.0	--	27	6.0	3.0
FEB									
01...	1424	5.0	82	7.0	1.0	-1.0	--	7.0	--
08...	0945	3.4	--	6.7	0.0	8.0	--	6.7	--
15...	1322	2.4	75	6.8	1.0	6.0	26	5.6	2.9
MAR									
01...	1155	6.4	76	7.2	1.0	-1.0	--	7.2	--
09...	1240	11	76	7.3	1.0	-1.0	--	7.3	--
15...	1210	16	73	7.2	5.0	7.0	23	5.1	2.5
17...	0950	11	62	6.5	1.0	2.0	23	5.1	2.4
23...	1050	17	71	7.1	5.0	17.0	--	7.1	--
29...	1251	39	63	7.0	6.0	6.0	--	7.0	--
APR									
05...	0925	6.4	75	6.8	6.5	6.0	--	6.8	--
13...	0931	24	76	7.0	9.0	10.0	24	5.7	2.5
19...	1156	6.7	76	7.1	13.0	26.0	--	7.1	--
26...	1010	3.2	83	7.3	13.0	22.0	--	7.3	--
MAY									
05...	1015	2.4	86	6.8	11.0	--	30	6.9	3.1
10...	1135	4.3	80	7.4	12.0	17.0	--	7.4	--
16...	1045	2.9	82	7.5	19.0	13.5	--	7.5	--
19...	1345	1.7	80	7.3	10.5	--	29	6.7	3.1
31...	1105	1.1	85	7.6	14.0	21.5	--	7.6	--
JUN									
07...	1500	0.70	94	7.4	18.0	29.5	--	7.4	--
14...	0925	0.45	95	7.2	17.0	25.0	--	7.2	--
21...	0950	0.29	95	7.3	18.0	22.0	--	7.3	--
23...	1140	0.23	97	7.5	--	27.0	35	8.5	3.4
28...	1305	0.40	47	7.5	18.0	22.0	--	7.5	--
JUL									
06...	1146	0.18	95	0.2	20.0	26.0	--	--	--
12...	1020	0.11	92	7.1	16.5	22.0	--	7.1	--
20...	1015	0.15	97	7.2	19.0	26.0	--	7.2	--
AUG									
02...	0945	0.15	96	7.3	18.0	22.5	--	7.3	--
04...	0845	0.13	96	6.7	18.0	--	36	8.9	3.4
04...	0945	--	--	--	--	--	--	--	--
09...	1030	0.10	86	7.2	16.0	22.5	34	8.1	3.4
16...	1040	0.10	92	7.3	17.0	17.0	--	7.3	--
23...	1240	0.70	95	7.2	17.0	19.0	--	7.2	--
30...	1005	0.26	100	7.4	16.0	16.0	--	7.4	--
SEP									
07...	0850	0.13	95	7.3	14.0	18.0	--	7.3	--
15...	0907	0.10	93	7.1	16.0	19.5	--	7.1	--
20...	0852	0.13	89	7.3	13.0	13.0	--	7.3	--
27...	0850	0.54	91	7.6	16.0	17.0	--	7.6	--

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WATER QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

[illegible]

POTOMAC RIVER BASIN

01640980 BEAR BRANCH NEAR THURMONT, MD

LOCATION.--Lat 39°37'15", long 77°26'24", Frederick County, Hydrologic Unit 02070009, on right bank 250 ft upstream from culvert under Maryland Route 77, 350 ft upstream from Hunting Creek, and 1.5 mi west of Thurmont.
DRAINAGE AREA.--0.38 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--June 1990 to current year.

GAGE.--Water-stage recorder. Datum of gage is 763.85 ft above sea level.

REMARKS.--Water-discharge records fair.

PEAK DISCHARGES FOR CURRENT PERIOD.--Peak discharges greater than base discharge of 5 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 28	0330	*39	*4.40	Mar. 24	1530	7.5	4.11
Dec. 5	0600	9.2	4.15				

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.08	.20	1.2	.42	.82	1.5	4.0	.67	.29	.18	.13	.11
2	.08	.16	.92	.42	.82	1.4	3.1	.63	.29	.17	.12	.11
3	.08	.14	.85	.42	.82	1.4	2.6	.55	.29	.17	.11	.11
4	.08	.12	.93	.42	.78	1.3	2.3	.50	.29	.16	.10	.11
5	.08	.14	6.3	.39	.65	1.3	1.8	.50	.29	.15	.10	.11
6	.08	.14	4.1	.35	.65	1.2	1.6	.50	.29	.19	.10	.11
7	.08	.14	2.4	.35	.65	1.1	1.6	.57	.28	.20	.10	.11
8	.07	.13	1.8	.35	.60	1.2	1.4	.65	.27	.15	.10	.11
9	.07	.12	1.5	.35	.60	1.4	1.4	.60	.28	.15	e.10	.11
10	.07	.12	1.3	.35	.53	1.9	1.4	.56	.26	.14	e.10	.11
11	.07	.12	1.2	.34	.50	2.2	1.4	.50	.26	.13	.10	.11
12	.09	.12	1.2	.29	.50	2.2	1.2	.57	.26	.12	.10	.11
13	.08	.12	1.0	.29	.49	2.2	1.5	.60	.26	.12	.10	.11
14	.08	.12	.89	.29	.44	2.3	2.2	.61	.25	.13	.10	.11
15	.08	.10	.89	.29	.44	2.5	2.4	.60	.24	.15	.11	.10
16	.08	.09	.85	.29	.46	2.5	2.2	.60	.24	.13	.10	.10
17	.08	.09	.79	.29	.46	2.5	1.9	.60	.24	.12	.56	.10
18	.08	.10	.76	.30	.46	2.4	1.6	.60	.26	.12	.27	.10
19	.08	.10	.76	.31	.55	2.0	1.5	.60	.26	.12	.18	.10
20	.10	.08	.65	.31	.99	1.9	1.4	.55	.26	.11	.15	.10
21	.11	.08	.65	.31	2.4	1.8	1.3	.50	.25	.14	.17	.10
22	.10	.08	.62	.30	3.0	2.0	1.2	.48	.24	.14	.20	.13
23	.10	.09	.60	.29	2.7	3.4	1.0	.46	.22	.14	.15	.13
24	.10	.08	.52	.30	2.6	6.2	.95	.40	.22	.13	.14	.11
25	.10	.08	.50	.32	2.4	6.9	.85	.54	.22	.12	.15	.12
26	.09	.09	.50	.41	2.3	5.4	.82	.53	.21	.12	.16	.13
27	.08	.64	.50	.35	1.9	5.3	.82	.47	.21	.13	.13	.14
28	.08	13	.50	.55	1.7	5.7	.78	.44	.20	.12	.12	.12
29	.09	3.1	.50	.76	---	5.7	.72	.38	.21	.12	.12	.12
30	.21	1.7	.50	.80	---	5.2	.65	.35	.19	.12	.12	.12
31	.26	---	.48	.82	---	4.9	---	.31	---	.16	.11	---
TOTAL	2.91	21.39	36.16	12.03	31.21	88.9	47.59	16.42	7.53	4.35	4.40	3.36
MEAN	.094	.71	1.17	.39	1.11	2.87	1.59	.53	.25	.14	.14	.11
MAX	.26	.13	6.3	.82	3.0	6.9	4.0	.67	.29	.20	.56	.14
MIN	.07	.08	.48	.29	.44	1.1	.65	.31	.19	.11	.10	.10
CFSM	.25	1.88	3.07	1.02	2.93	7.55	4.17	1.39	.66	.37	.37	.29
IN.	.28	2.09	3.54	1.18	3.06	8.70	4.66	1.61	.74	.43	.43	.33

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1990 - 1994, BY WATER YEAR (WY)

	1990	1991	1992	1993	1994	1990	1991	1992	1993	1994	1990	1991	1992	1993	1994
MEAN	.30	.64	.98	.74	.63	2.15	1.53	.61	.37	.20	.15	.14			
MAX	.86	1.26	1.74	1.65	1.11	3.40	2.14	.70	.65	.34	.24	.22			
(WY)	1991	1993	1993	1991	1994	1993	1993	1992	1992	1992	1992	1990			
MIN	.043	.066	.14	.15	.24	1.11	.84	.51	.18	.096	.052	.057			
(WY)	1992	1992	1992	1992	1992	1991	1991	1991	1991	1991	1991	1991			

POTOMAC RIVER BASIN

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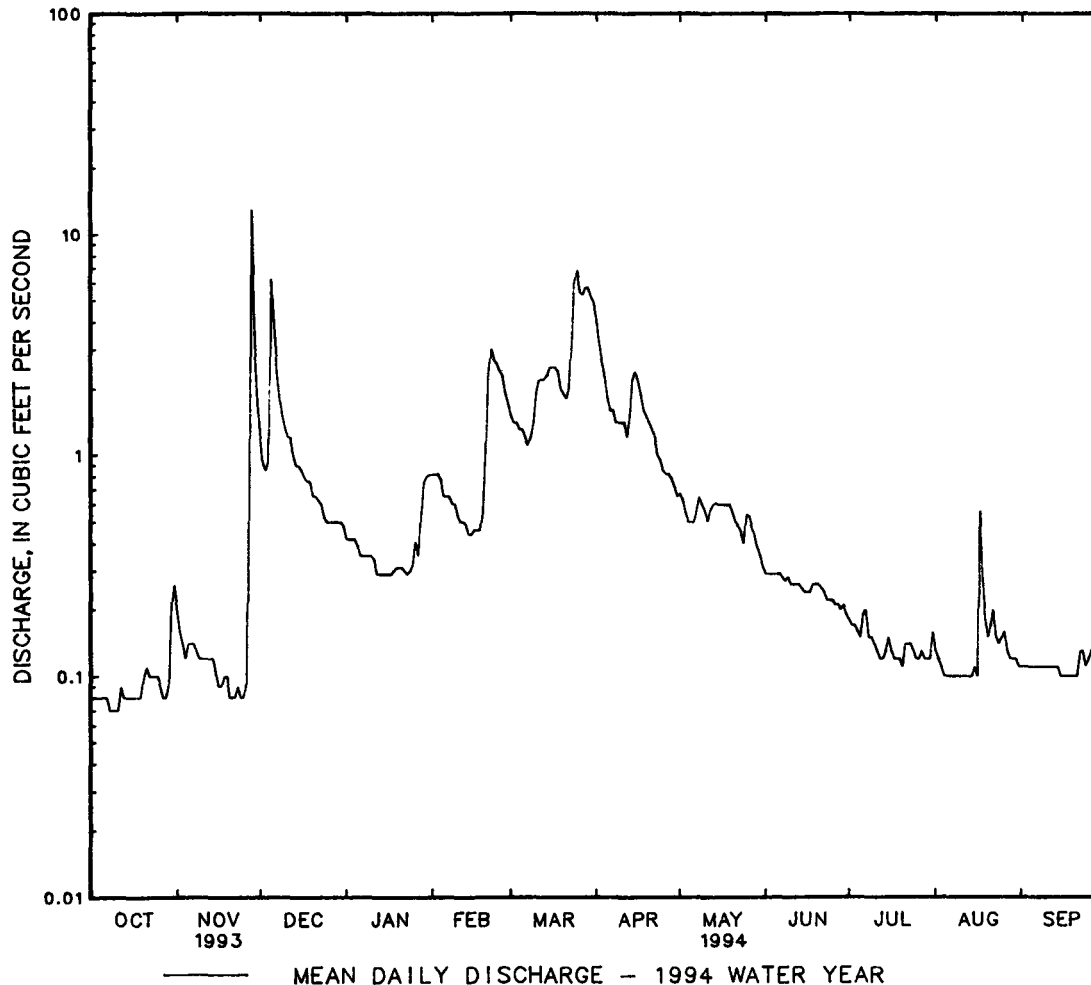
01640980 BEAR BRANCH NEAR THURMONT, MD--Continued

SUMMARY STATISTICS	FOR 1993 CALENDAR YEAR	FOR 1994 WATER YEAR	WATER YEARS 1990 - 1994
ANNUAL TOTAL	309.62	276.25	
ANNUAL MEAN	.85	.76	.70
HIGHEST ANNUAL MEAN			.95
LOWEST ANNUAL MEAN			.46
HIGHEST DAILY MEAN	18 Mar 28	13 Nov 28	18 Mar 28 1993
LOWEST DAILY MEAN	.05 (a)	.07 (b)	.04 many dats
ANNUAL SEVEN-DAY MINIMUM	.05 Aug 25	.07 Oct 5	.04 Aug 23 1991
INSTANTANEOUS PEAK FLOW		39 Nov 28	39 Nov 28 1993
INSTANTANEOUS PEAK STAGE		4.40 Nov 28	4.40 Nov 28 1993
INSTANTANEOUS LOW FLOW		.04 (c)	.04 many days
ANNUAL RUNOFF (CFSM)	2.23	1.99	1.83
ANNUAL RUNOFF (INCHES)	30.31	27.04	24.93
10 PERCENT EXCEEDS	1.9	2.0	1.5
50 PERCENT EXCEEDS	.44	.29	.34
90 PERCENT EXCEEDS	.08	.10	.08

a Aug. 25 to Sept. 2.

b Oct. 8-11.

c Oct. 7-12.



POTOMAC RIVER BASIN

01640980 BEAR BRANCH NEAR THURMONT, MD--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.-Water years 1990 to current year.

WATER QUALITY DATA, OCTOBER 1993 TO JULY 1994

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH WATER WHOLE FIELD (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	TEMPER- ATURE AIR (DEG C)	HARD- NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)
OCT 1993								
05...	0957	0.08	16	4.7	12.0	10.5	3	0.51
12...	1050	0.10	20	4.8	10.0	8.0	--	--
19...	1000	0.08	15	4.6	11.0	10.5	3	0.46
26...	1340	0.08	15	4.8	11.0	13.0	--	--
NOV								
02...	1730	0.14	16	5.1	7.0	4.0	3	0.51
09...	1322	0.12	17	5.1	6.5	8.5	--	--
16...	1200	0.08	17	5.5	10.0	11.5	3	0.50
23...	1147	0.08	17	5.8	6.0	9.5	--	--
30...	1300	1.6	29	5.1	7.0	4.0	6	1.2
DEC								
07...	1302	2.2	30	5.0	8.0	6.0	--	--
14...	1155	0.89	27	4.5	6.0	6.5	6	1.0
21...	1426	0.65	25	4.6	5.0	1.5	--	--
29...	1415	0.50	25	5.3	0.5	-5.0	5	0.90
JAN 1994								
11...	1430	0.35	24	5.3	0.0	-2.0	5	0.84
25...	1510	0.31	24	5.3	2.0	3.0	5	0.87
FEB								
08...	1410	0.60	25	5.7	1.0	--	6	0.95
22...	1335	3.0	33	5.2	6.0	3.0	7	1.3
MAR								
07...	1020	1.1	27	5.4	4.5	4.5	6	0.98
22...	1050	1.8	28	5.3	7.0	9.0	6	1.1
APR								
05...	1050	2.7	24	5.6	8.5	13.0	5	0.93
19...	1110	1.5	24	5.5	12.0	26.0	5	0.89
MAY								
03...	1230	0.50	22	6.0	10.0	13.0	5	0.88
17...	1045	0.60	22	5.4	10.0	12.5	5	0.86
31...	1300	0.29	21	5.5	13.0	24.0	4	0.80
JUN								
14...	1100	0.24	19	5.5	16.0	27.0	4	0.72
28...	0950	0.20	19	5.3	17.0	20.0	4	0.69
JUL								
12...	1330	0.12	17	5.2	18.0	26.0	4	0.60
26...	1245	0.12	18	5.2	19.0	21.0	3	0.60

POTOMAC RIVER BASIN

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01640980 BEAR BRANCH NEAR THURMONT, MD--Continued

WATER QUALITY DATA, OCTOBER 1993 TO JULY 1994

DATE	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	SILICA, DIS- SOLVED (MG/L AS SIO2)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS NO3)	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	IRON, DIS- SOLVED (UG/L AS FE)
OCT 1993								
05...	0.40	0.70	0.40	3.1	6.0	6.1	40	--
12...	--	--	--	--	--	--	--	--
19...	0.40	0.70	0.30	3.1	6.0	2.0	40	--
26...	--	--	--	--	--	--	--	--
NOV								
02...	0.40	0.70	0.70	3.7	6.0	0.60	40	--
09...	--	--	--	--	--	--	--	--
16...	0.40	0.70	0.70	3.4	6.0	--	30	--
23...	--	--	--	--	--	--	--	--
30...	0.80	0.60	1.0	6.3	5.0	23	100	--
DEC								
07...	--	--	--	--	--	--	--	--
14...	0.80	0.60	0.90	6.2	5.0	19	80	--
21...	--	--	--	--	--	--	--	--
29...	0.70	0.70	0.90	5.4	5.0	18	60	--
JAN 1994								
11...	0.70	0.70	0.90	5.0	5.0	17	50	--
25...	0.70	0.80	0.90	4.6	5.0	18	40	--
FEB								
08...	0.80	0.70	0.90	6.2	5.0	19	120	--
22...	0.90	0.70	1.1	6.9	4.0	30	30	--
MAR								
07...	0.80	0.70	1.0	5.8	5.0	18	0	--
22...	0.80	0.60	1.0	6.3	4.0	19	80	--
APR								
05...	0.70	0.60	1.0	5.7	4.0	14	70	--
19...	0.70	0.60	1.0	5.8	4.0	15	40	--
MAY								
03...	0.70	0.60	0.80	5.2	4.0	10	320	--
17...	0.70	0.60	0.80	5.3	5.0	12	10	--
31...	0.60	0.60	0.70	4.7	5.0	4.9	20	--
JUN								
14...	0.60	0.70	0.60	4.3	5.0	4.8	30	--
28...	0.50	0.70	0.50	3.6	5.0	8.0	50	--
JUL								
12...	0.50	0.70	0.40	3.6	6.0	6.5	50	--
26...	0.40	0.70	0.50	--	6.0	3.6	50	15

POTOMAC RIVER BASIN

01641510 FISHING CREEK TRIBUTARY NEAR LEWISTOWN, MD

LOCATION.--Lat 39°32'09", long 77°26'48", Frederick County, Hydrologic Unit 02070009, on right bank 800 ft upstream from entrance to Lewistown State Fish Hatchery, 1.2 mi west of U.S. Route 15, 1.7 mi west of Lewistown, and 0.6 mi upstream from Fishing Creek.

DRAINAGE AREA.--0.40 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1987 to current year.

GAGE.--Water-stage recorder. Datum of gage is 542.30 ft above sea level.

REMARKS.--Records good except those for estimated daily discharges (missing record), which are fair, and those below 0.30 ft³/s, which are poor.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 10 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 5	0645	*10	*3.06	No other peaks greater than base discharge.			

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.10	.14	.41	.39	.49	1.7	3.8	.85	.30	.14	.09	.08
2	.10	.13	.40	.39	.49	1.6	3.5	.81	.30	.13	.09	.08
3	.11	.13	.36	.39	.49	1.6	3.2	.77	.29	.12	.09	.08
4	.10	.13	.48	.39	.49	1.5	2.9	.77	.28	.13	.09	.08
5	.10	.16	5.3	.36	.46	1.4	2.6	.72	.28	.12	.12	.07
6	.10	.20	2.2	.34	.46	1.3	2.3	.68	.27	.12	.10	.07
7	.10	.19	1.4	.34	.47	1.3	2.3	.70	.26	.15	.09	.07
8	.10	.18	1.3	.36	.45	1.4	1.9	e.85	.25	.11	.09	.07
9	.10	.16	1.2	.34	.44	1.4	1.7	e.70	.25	.10	.08	.07
10	.09	.13	1.1	.33	.44	2.4	1.5	.61	.24	.11	.08	.07
11	.09	.12	1.0	.31	.44	2.4	1.4	.58	.24	.10	.08	.06
12	.17	.12	.88	.30	.46	2.4	1.3	.58	.24	.10	.08	.06
13	.12	.12	.79	.30	.47	2.4	1.6	.57	.23	.10	.08	.06
14	.11	.13	.69	.30	.46	2.8	1.3	.57	.21	.12	.08	.06
15	.11	.12	.63	.30	.45	3.1	1.3	.58	.20	.14	.08	.07
16	.11	.12	.59	.29	.44	3.3	1.4	.55	.25	.12	.07	.08
17	.11	.14	.55	.28	.44	3.3	1.4	.52	.23	.13	.53	.09
18	.11	.14	.52	.28	.46	3.2	1.4	.52	.20	.12	.15	.08
19	.11	.13	.53	.28	.51	2.9	1.3	.52	.19	.10	.10	.06
20	.15	.13	.49	.28	.70	2.7	1.3	.50	.18	.09	.08	.06
21	.15	.13	.64	.28	1.4	2.7	1.3	.48	.17	.23	.21	.06
22	.12	.13	.55	.28	1.7	2.8	1.3	.45	.17	.13	.12	.14
23	.12	.13	.52	.28	1.9	2.7	1.2	.42	.16	.11	.09	.10
24	.12	.13	.49	.35	2.8	2.8	1.1	.40	.16	.10	.08	.07
25	.11	.13	.49	.37	2.6	2.8	1.1	.47	.16	.10	.10	.07
26	.11	.13	.48	.48	2.5	2.8	1.0	.54	.15	.25	.11	.09
27	.13	.60	.46	.38	2.2	3.9	1.0	.45	.28	.22	.08	.08
28	.13	3.8	.46	.49	1.9	4.0	.94	.40	.19	.14	.08	.07
29	.13	.59	.42	.53	---	4.2	.89	.38	.16	.11	.09	.07
30	.19	.44	.41	.50	---	4.3	.85	.35	.15	.10	.08	.07
31	.17	---	.39	.49	---	4.1	---	.32	---	.09	.08	---
TOTAL	3.67	9.03	26.13	10.98	26.51	81.2	50.08	17.61	6.64	3.93	3.37	2.24
MEAN	.12	.30	.84	.35	.95	2.62	1.67	.57	.22	.13	.11	.075
MAX	.19	3.8	5.3	.53	2.8	4.3	3.8	.85	.30	.25	.53	.14
MIN	.09	.12	.36	.28	.44	1.3	.85	.32	.15	.09	.07	.06
CFSM	.30	.75	2.11	.89	2.37	6.55	4.17	1.42	.55	.32	.27	.19
IN.	.34	.84	2.43	1.02	2.47	7.55	4.66	1.64	.62	.37	.31	.21

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1988 - 1994, BY WATER YEAR (WY)

	1988	1989	1990	1991	1992	1993	1994
MEAN	.17	.34	.65	.57	.59	1.27	1.24
MAX	.29	.95	2.06	1.39	.95	3.05	3.00
(WY)	1991	1993	1993	1991	1994	1993	1993
MIN	.093	.13	.12	.21	.26	.53	.58
(WY)	1989	1992	1989	1992	1992	1989	1988

01641510 FISHING CREEK TRIBUTARY NEAR LEWISTOWN, MD--Continued

SUMMARY STATISTICS	FOR 1993 CALENDAR YEAR	FOR 1994 WATER YEAR	WATER YEARS 1988 - 1994
ANNUAL TOTAL	317.60	241.39	
ANNUAL MEAN	.87	.66	.60
HIGHEST ANNUAL MEAN			1.04
LOWEST ANNUAL MEAN			.45
HIGHEST DAILY MEAN	5.6 Mar 24	5.3 Dec 5	11 May 19 1988
LOWEST DAILY MEAN	.07 (a)	.06 (b)	.05 (c)
ANNUAL SEVEN-DAY MINIMUM	.08 Aug 27	.06 Sep 8	.06 Sep 10 1991
INSTANTANEOUS PEAK FLOW		10 Dec 5	33 May 18 1988
INSTANTANEOUS PEAK STAGE		3.06 Dec 5	3.25 Jul 25 1992
INSTANTANEOUS LOW FLOW		.05 (d)	.03 (f)
ANNUAL RUNOFF (CFSM)	2.18	1.65	1.51
ANNUAL RUNOFF (INCHES)	29.54	22.45	20.50
10 PERCENT EXCEEDS	2.7	2.0	1.2
50 PERCENT EXCEEDS	.41	.29	.36
90 PERCENT EXCEEDS	.11	.08	.10

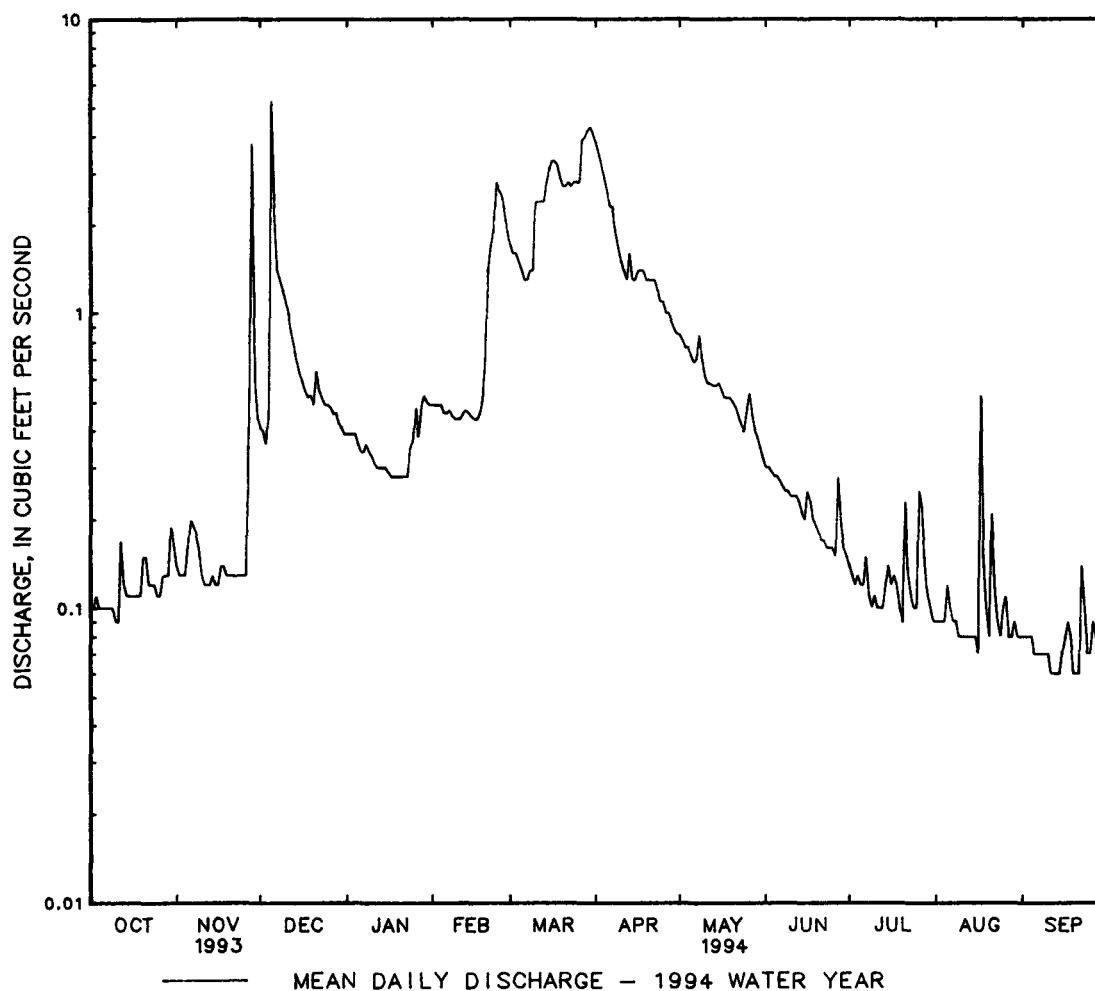
a Sept. 1, 2.

b Sept. 11-14, 19-21.

c Oct. 1, 2, 1991.

d Sept. 20, 21.

f Aug. 15, 1988, Aug. 29-31, Sept. 1-3, 14, 15, 1993.



POTOMAC RIVER BASIN

01641510 FISHING CREEK TRIBUTARY NEAR LEWISTOWN, MD--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1988 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1987 to September 1990.

WATER TEMPERATURE: October 1987 to September 1990.

INSTRUMENTATION.--Water-quality monitor October 1987 to September 1990.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 90 microsiemens, Oct. 29, 1988; minimum, 13 microsiemens, Sept. 6, 7, 1989.

WATER TEMPERATURE: Maximum daily, 23.0°C, Aug. 15, 1988; minimum daily, 1.0°C, Jan. 6, 7, 8, 15, 16, 1988, Mar. 6, 1989.

WATER QUALITY DATA, OCTOBER 1993 TO JULY 1994

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH WATER WHOLE FIELD (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	TEMPER- ATURE AIR (DEG C)	HARD- NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)
OCT 1993								
05...	1147	0.10	15	5.3	13.0	14.0	3	0.49
12...	1300	0.16	23	6.0	12.0	12.0	--	--
19...	1233	0.11	16	5.6	17.0	12.5	3	0.51
26...	0937	0.11	17	5.7	11.0	10.5	--	--
NOV								
02...	1115	0.13	21	5.8	8.0	7.0	5	0.71
09...	1550	0.13	18	6.3	7.5	9.0	--	--
16...	1515	0.11	19	6.2	11.0	14.0	4	0.56
23...	1328	0.13	18	6.4	8.0	13.5	--	--
30...	1620	0.41	18	5.9	7.0	3.5	3	0.54
DEC								
07...	1449	1.3	18	5.5	9.0	6.0	--	--
14...	0938	0.69	17	6.0	6.0	2.0	3	0.44
21...	1140	0.72	19	6.0	6.0	2.0	--	--
29...	1230	0.41	19	6.0	3.0	-5.0	3	0.48
FEB 1994								
01...	1315	0.49	10	6.2	3.0	-2.0	3	0.54
15...	1130	0.44	19	6.5	3.5	2.0	4	0.57
MAR								
15...	1000	2.9	20	6.6	7.0	9.0	4	0.60
APR								
13...	1035	2.0	21	6.1	10.0	10.5	5	0.72
MAY								
03...	1350	0.75	17	6.8	11.0	14.0	3	0.56
JUN								
21...	1315	0.17	16	6.6	17.5	22.0	3	0.54
JUL								
26...	1430	0.12	--	--	--	--	4	0.64

DATE	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	SILICA, DIS- SOLVED (MG/L AS SiO2)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS NO3)	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	IRON, DIS- SOLVED (UG/L AS FE)
OCT 1993								
05...	0.50	1.0	0.60	1.7	8.0	0.46	20	--
12...	--	--	--	--	--	--	--	--
19...	0.50	1.1	0.80	1.7	8.0	<0.03	20	--
26...	--	--	--	--	--	--	--	--
NOV								
02...	0.70	0.90	1.0	3.5	8.0	0.60	30	--
09...	--	--	--	--	--	--	--	--
16...	0.60	1.0	0.90	2.6	8.0	--	30	--
23...	--	--	--	--	--	--	--	--
30...	0.50	1.0	1.0	2.9	7.0	1.6	40	--
DEC								
07...	--	--	--	--	--	--	--	--
14...	0.40	1.0	0.90	2.1	7.0	14	30	--
21...	--	--	--	--	--	--	--	--
29...	0.50	1.0	0.90	2.0	7.0	17	20	--
FEB 1994								
01...	0.50	1.0	0.90	2.2	6.0	16	20	--
15...	0.60	1.0	0.90	1.9	6.0	13	100	--
MAR								
15...	0.60	0.90	0.90	2.8	6.0	18	--	--
APR								
13...	0.70	0.90	1.1	2.5	5.0	11	100	--
MAY								
03...	0.50	0.90	1.0	1.7	6.0	13	--	--
JUN								
21...	0.50	1.0	0.70	1.5	7.0	8.2	20	22
JUL								
26...	0.50	1.0	0.60	2.0	7.0	4.9	30	27

POTOMAC RIVER BASIN

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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 mi².

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. 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 ft³/s.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 8,800 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 29	0330	27,500	20.13	Mar. 15	0530	8,810	10.82
Dec. 6	0500	*28,800	*20.64	Mar. 16	0800	8,840	10.84
Feb. 22	0500	10,100	11.67	Mar. 23	0900	9,200	11.09
Feb. 24	2400	10,600	12.05	Mar. 28	0600	14,000	14.09
Mar. 11	0200	13,700	13.92				

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	342	1260	1640	593	1460	1820	3170	809	406	321	284	307
2	308	893	1280	632	1160	1660	2610	1090	382	297	236	275
3	285	573	1120	607	981	1630	2240	790	359	245	217	248
4	297	483	1170	623	889	1710	2040	763	353	250	203	233
5	285	427	15300	623	844	2330	1810	810	350	219	209	220
6	237	450	20600	543	883	3820	1650	750	351	216	205	212
7	215	549	3440	559	1080	3340	2220	728	353	317	196	204
8	205	431	2270	660	1210	4970	2020	2160	347	286	183	194
9	202	371	1800	569	944	4970	1490	1710	335	275	170	184
10	193	337	1580	495	772	7560	1430	1060	314	225	165	180
11	183	324	2140	490	642	10300	1810	876	307	197	159	176
12	243	311	1570	589	659	5110	1510	809	315	181	165	164
13	624	300	1220	650	770	4660	2210	806	339	171	193	163
14	563	308	1140	660	738	6230	4850	720	309	166	203	159
15	362	325	1090	e510	686	7610	2370	675	303	173	171	165
16	308	332	1160	e740	699	7510	2120	763	324	188	169	225
17	274	342	1020	827	746	4260	1960	703	432	371	423	307
18	252	375	876	785	844	3390	1560	622	481	520	1850	331
19	244	421	891	827	1320	2740	1400	594	357	331	1100	316
20	274	389	897	787	2930	3210	1290	579	305	231	498	260
21	331	344	1450	700	6610	4800	1170	555	272	260	495	208
22	458	320	2260	649	8390	7270	1090	529	257	322	981	225
23	467	302	1310	593	6160	7360	1010	501	250	511	1800	377
24	358	288	1070	597	7950	6370	966	479	254	519	684	598
25	305	253	951	942	7660	5310	922	516	301	393	459	383
26	278	246	846	2090	4010	3760	871	747	434	284	1030	329
27	267	323	687	2250	2580	6330	853	993	314	290	1060	360
28	259	15400	672	1670	2020	12000	885	675	315	520	490	481
29	248	16800	617	3410	---	11700	803	519	341	428	395	354
30	270	2380	569	2740	---	7500	763	465	302	288	359	283
31	850	---	544	1850	---	3990	---	435	---	250	335	---
TOTAL	9987	45857	73180	30260	65637	165220	51093	24231	10062	9245	15087	8121
MEAN	322	1529	2361	976	2344	5330	1703	782	335	298	487	271
MAX	850	16800	20600	3410	8390	12000	4850	2160	481	520	1850	598
MIN	183	246	544	490	642	1630	763	435	250	166	159	159
CFSM	.39	1.87	2.89	1.19	2.87	6.52	2.08	.96	.41	.37	.60	.33
IN.	.45	2.09	3.33	1.38	2.99	7.52	2.33	1.10	.46	.42	.69	.37

• Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1930 - 1994, BY WATER YEAR (WY)

	507	710	1026	1157	1465	1831	1554	1025	701	443	410	476
MEAN	507	710	1026	1157	1465	1831	1554	1025	701	443	410	476
MAX	3943	2504	3007	3664	4062	5851	4533	3773	6826	2571	3233	5165
(WY)	1977	1933	1973	1979	1984	1993	1983	1989	1972	1949	1933	1975
MIN	46.8	65.1	108	123	175	589	453	296	158	64.5	36.4	59.9
(WY)	1931	1931	1966	1981	1931	1981	1947	1963	1966	1966	1966	1963

POTOMAC RIVER BASIN

01643000 MONOCACY RIVER AT JUG BRIDGE NEAR FREDERICK, MD--Continued

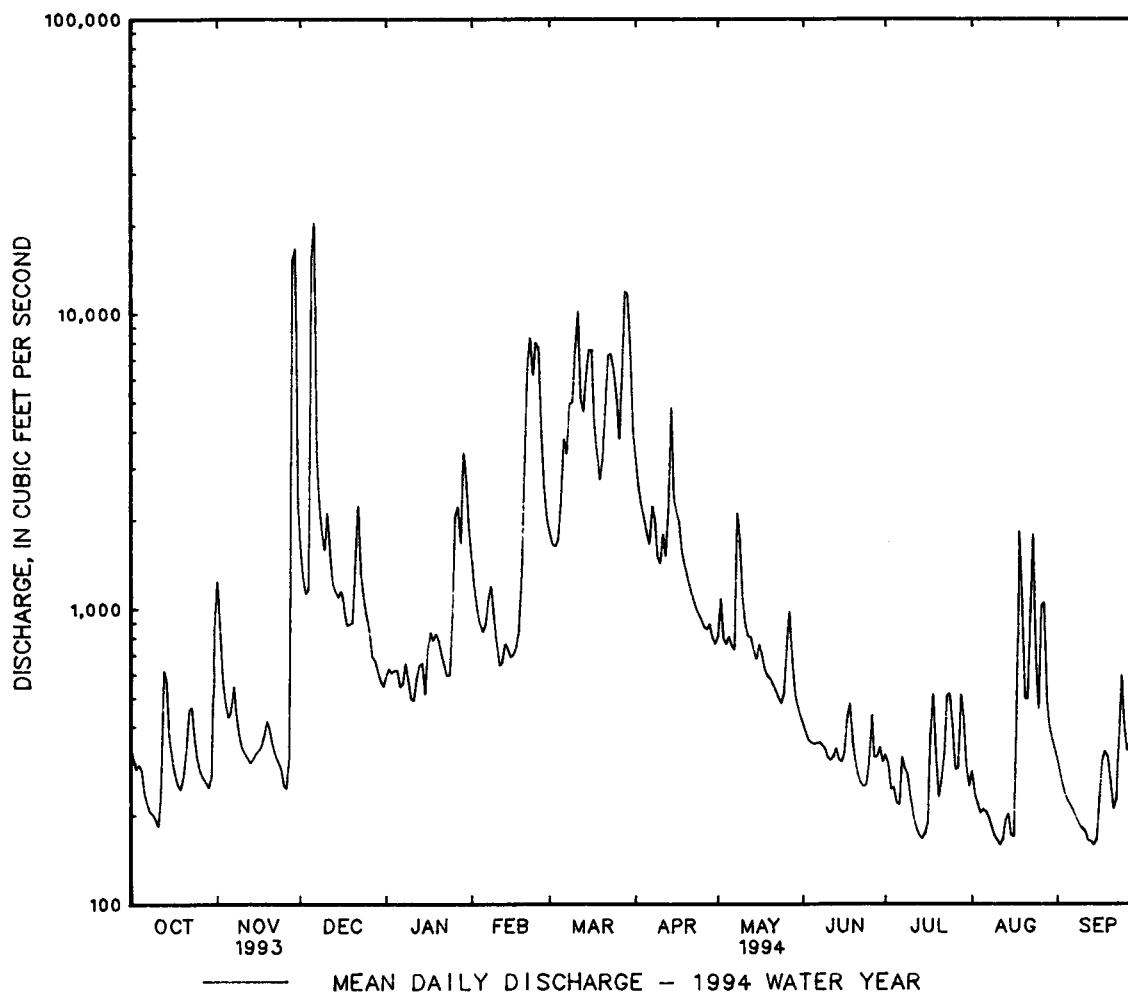
SUMMARY STATISTICS	FOR 1993 CALENDAR YEAR		FOR 1994 WATER YEAR		WATER YEARS 1930 - 1994	
ANNUAL TOTAL	583887		507980		939	
ANNUAL MEAN	1600		1392		1834	
HIGHEST ANNUAL MEAN					1931	
LOWEST ANNUAL MEAN					345	
HIGHEST DAILY MEAN	21100	Mar 5	20600	Dec 6	74000	Jun 23 1972
LOWEST DAILY MEAN	126	Sep 3	159	(a)	19	(b)
ANNUAL SEVEN-DAY MINIMUM	132	Aug 28	170	Sep 9	19	Sep 7 1966
INSTANTANEOUS PEAK FLOW			28800	Dec 6	81600	Jun 23 1972
INSTANTANEOUS PEAK STAGE			20.64	Dec 6	(c)35.90	Jun 23 1972
INSTANTANEOUS LOW FLOW			156	(a)	17	(d)
ANNUAL RUNOFF (CFSM)	1.96		1.70		1.15	
ANNUAL RUNOFF (INCHES)	26.59		23.13		15.62	
10 PERCENT EXCEEDS	3470		3360		1980	
50 PERCENT EXCEEDS	633		569		470	
90 PERCENT EXCEEDS	202		217		123	

a Aug. 11, Sept. 14.

b Sept. 7-13, 1966.

c From floodmark.

d Sept. 11 and 13, 1966.



01643020 MONOCACY RIVER AT REICH'S FORD BRIDGE NEAR FREDERICK, MD

LOCATION.--Lat 39°23'16", long 77°22'40", Frederick County, Hydrologic Unit 02070009, at Reich's Ford Bridge, 1.1 mi downstream from U.S. Highway 40, 1.2 mi downstream from gaging station, 2 mi southeast of Frederick, and 15.0 mi upstream from mouth.

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

PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: October 1960 to March 1993.

SUSPENDED-SEDIMENT DISCHARGE: October 1960 to March 1993.

REMARKS.--Water temperatures are measured daily in field by local observer at time of sampling. Water-discharge records for Monocacy River at Jug bridge near Frederick (station 01643000) are used for computation of sediment loads. Prior to 1970, published as Monocacy River at Jug Bridge near Frederick (station 01643000).

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURE (water years 1961-72, 1975, 1977, 1980-87, 1989): Maximum daily, 32.0°C, July 21, 1980;

minimum daily, 0.0°C on many days during winter periods.

SEDIMENT CONCENTRATION (water years 1961-1992): Maximum daily mean, 2,000 mg/L, July 10, 1970; minimum daily mean, 1 mg/L on many days in water years 1961-67, 1970, 1972, 1982, 1985, 1989.

SEDIMENT LOAD (water years 1961-1992): Maximum daily, 134,000 tons, June 22, 1972; minimum daily, 0.25 ton, Oct. 14, 1988.

EXTREMES FOR CURRENT PERIOD.--

SEDIMENT CONCENTRATION: Maximum daily mean, 504 mg/L, Nov. 23; minimum daily mean, 1 mg/L, Oct. 21-23, Feb. 7-11.

SEDIMENT LOAD: Maximum daily, 16,500 tons, Nov. 23; minimum daily, 0.58 ton, Oct. 23.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH WATER WHOLE FIELD (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	TEMPER-ATURE AIR (DEG C)	BARO-METRIC PRES-SURE (MM OF HG)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, (PER-CENT SATUR-ATION)	HARD-NESS TOTAL (MG/L AS CaCO3)	CALCIUM DIS-SOLVED (MG/L AS Ca)	MAGNE-SIUM, DIS-SOLVED (MG/L AS Mg)	
OCT 1993													
05...	0945	286	341	7.7	14.5	14.5	763	9.2	90	130	40	8.1	
NOV													
02...	1020	899	245	7.2	8.0	9.0	768	10.6	89	110	30	7.4	
29...	1330	15900	115	6.8	10.5	10.0	758	8.8	79	46	13	3.4	
JAN 1994													
11...	1100	420	315	7.6	0.5	-1.5	769	14.0	96	130	39	7.7	
FEB													
08...	1215	1260	240	7.3	1.0	-4.0	760	12.7	90	93	27	6.2	
MAR													
15...	1230	7680	148	7.0	4.5	12.0	745	11.9	94	54	15	3.9	
31...	1200	3940	162	7.3	8.0	15.0	762	11.2	95	66	19	4.6	
MAY													
04...	1100	749	253	7.4	14.0	11.0	762	9.1	88	100	31	6.3	
JUN													
08...	1415	350	316	8.7	24.5	23.5	754	11.2	136	120	38	6.8	
JUL													
06...	1045	210	334	8.9	27.0	33.5	758	14.8	187	130	39	7.2	
AUG													
11...	0900	159	366	8.2	23.0	22.0	762	9.3	109	140	45	7.8	
SEP													
21...	1100	210	364	7.8	19.0	24.0	762	9.4	101	130	41	7.5	
DATE		SODIUM, DIS-SOLVED (MG/L AS Na)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY WAT DIS TOT IT FIELD (MG/L AS CaCO3)	BICAR-BONATE WATER DIS IT FIELD (MG/L AS HCO3)	CAR-BONATE WATER DIS IT FIELD (MG/L AS CO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS NO3)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)
OCT 1993													
05...	13	3.9	93	--	--	23	22	0.10	8.0	208	18	0.020	
NOV													
02...	8.5	5.2	72	--	--	23	17	0.20	9.4	163	9.2	0.020	
29...	3.3	4.9	25	--	--	12	6.5	0.10	6.2	92	7.0	0.020	
JAN 1994													
11...	25	2.9	75	--	--	21	53	<0.10	7.9	231	19	0.010	
FEB													
08...	12	4.1	60	73	--	17	26	<0.10	6.6	167	14	0.040	
MAR													
15...	5.4	2.3	36	44	--	12	9.1	<0.10	6.1	87	--	--	
31...	6.6	2.2	41	50	--	15	11	<0.10	7.6	103	9.2	0.030	
MAY													
04...	9.9	2.2	72	88	--	15	18	<0.10	5.8	156	12	0.020	
JUN													
08...	12	2.6	92	98	7	17	25	<0.10	3.2	198	13	0.030	
JUL													
06...	16	3.6	97	84	17	19	28	0.10	1.7	217	10	0.020	
AUG													
11...	18	3.9	93	114	3	19	34	0.10	2.7	220	15	0.020	
SEP													
21...	17	4.6	97	113	2	21	29	0.10	4.5	211	13	0.010	

POTOMAC RIVER BASIN

01643020 MONOCACY RIVER AT REICH'S FORD BRIDGE NEAR FREDERICK, MD--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N)	PHOS- PHORUS TOTAL (MG/L AS P)	PHOS- PHORUS DIS- SOLVED (MG/L AS P)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P)	IRON, DIS- SOLVED (UG/L AS FE)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	CARBON, ORGANIC SUS- PENDED TOTAL (MG/L AS C)
OCT 1993												
05...	4.00	4.00	0.060	0.30	0.30	0.200	0.210	0.200	33	12	3.3	0.3
NOV												
02...	2.10	2.10	0.070	0.80	0.60	0.190	0.110	0.110	110	32	7.6	0.8
29...	1.60	1.60	0.040	0.70	0.60	0.290	0.130	0.130	210	29	8.0	2.3
JAN 1994												
11...	4.40	4.40	0.060	0.30	0.30	0.130	0.090	0.100	7	19	1.8	0.2
FEB												
08...	3.10	3.10	0.750	1.7	1.4	0.360	0.270	0.280	24	29	--	--
MAR												
15...	--	--	--	--	--	--	--	--	130	18	3.3	1.4
31...	2.10	2.10	0.050	0.30	0.30	0.090	0.040	0.050	95	19	2.6	0.7
MAY												
04...	2.70	2.70	0.030	0.40	0.30	0.070	0.050	0.050	56	13	3.3	0.5
JUN												
08...	2.90	2.90	0.020	0.30	0.40	0.100	0.200	0.140	25	3	3.0	1.8
JUL												
06...	2.30	2.30	0.020	1.6	0.30	0.280	0.080	0.060	20	4	2.9	>4.6
AUG												
11...	3.30	3.30	0.020	0.90	0.30	0.360	0.200	0.190	25	7	3.4	1.9
SEP												
21...	2.90	2.90	0.030	0.60	0.30	0.240	0.180	0.170	28	12	3.6	1.5
DATE	DIMETH- OATE WATER FLTRD 0.7 U GF, REC (UG/L)	ETHAL- FLUR- ALIN WAT FLT 0.7 U GF, REC (UG/L)	PHORATE WATER FLTRD 0.7 U GF, REC (UG/L)	TER- BACIL WATER FLTRD 0.7 U GF, REC (UG/L)	TRI- FLUR- ALIN WAT FLT 0.7 U GF, REC (UG/L)	2,6-DI- ETHYL ANILINE WAT FLT 0.7 U GF, REC (UG/L)	ALA- CHLOR, WATER, DISS, REC, (UG/L)	ALPHA BHC DIS- SOLVED (UG/L)	ATRA- ZINE, WATER, DISS, REC (UG/L)	BEN- FLUR- ALIN WAT FLD 0.7 U GF, REC (UG/L)	BUTYL- ATE, WATER, DISS, REC (UG/L)	CAR- BARYL WATER FLTRD 0.7 U GF, REC (UG/L)
JUN 1994												
08...	<0.02	<0.01	<0.01	<0.03	<0.01	<0.01	0.02	<0.01	0.51	<0.01	<0.01	<0.05
JUL												
06...	<0.02	<0.01	<0.01	<0.03	<0.01	<0.01	0.01	<0.01	0.50	<0.01	<0.01	<0.05
DATE	CARBO- FURAN WATER FLTRD 0.7 U GF, REC (UG/L)	CHLOR- PYRIFOS DIS- SOLVED (UG/L)	CYANA- ZINE, WATER, DISS, REC (UG/L)	DCPA WATER FLTRD 0.7 U GF, REC (UG/L)	P, P' DDE DISSOLV (UG/L)	DEETHYL ATRA- ZINE, WATER, DISS, REC (UG/L)	DI- AZINON, DIS- SOLVED (UG/L)	DI- ELDRIN DIS- SOLVED (UG/L)	DISUL- FOTON WATER FLTRD 0.7 U GF, REC (UG/L)	EPTC WATER FLTRD 0.7 U GF, REC (UG/L)	ETHO- PROP WATER FLTRD 0.7 U GF, REC (UG/L)	FONOFOS WATER DISS REC (UG/L)
JUN 1994												
08...	<0.01	<0.005	0.03	<0.004	<0.01	0.10	<0.01	<0.01	<0.01	<0.005	<0.01	<0.01
JUL												
06...	<0.01	<0.005	0.05	<0.004	<0.01	0.10	0.01	<0.01	<0.01	<0.005	<0.01	<0.01
DATE	LINDANE DIS- SOLVED (UG/L)	LIN- URON WATER FLTRD 0.7 U GF, REC (UG/L)	MALA- THION, DIS- SOLVED (UG/L)	METHYL AZIN- PHOS WAT FLT 0.7 U GF, REC (UG/L)	METHYL PARA- THION WAT FLT 0.7 U GF, REC (UG/L)	METO- LACHLOR WATER DISSOLV (UG/L)	METRI- BUZIN WATER DISSOLV (UG/L)	MOL- INATE WATER FLTRD 0.7 U GF, REC (UG/L)	NAPROP- AMIDE WATER FLTRD 0.7 U GF, REC (UG/L)	PEB- ULATE WATER FILTRD 0.7 U GF, REC (UG/L)	PARA- THION, DIS- SOLVED (UG/L)	PENDI- METH- ALIN WAT FLT 0.7 U GF, REC (UG/L)
JUN 1994												
08...	<0.01	0.01	<0.01	<0.04	<0.03	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02
JUL												
06...	<0.01	<0.04	<0.01	<0.04	<0.03	0.46	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02
DATE	PER- METHRIN CIS WAT FLT 0.7 U GF, REC (UG/L)	PRO- METON, WATER, DISS, REC (UG/L)	PRON- AMIDE WATER FLTRD 0.7 U GF, REC (UG/L)	PROP- CHLOR, WATER, DISS, REC (UG/L)	PRO- PARGITE WATER FLTRD 0.7 U GF, REC (UG/L)	PRO- PANIL WATER FLTRD 0.7 U GF, REC (UG/L)	SI- MAZINE, WATER, DISS, REC (UG/L)	TEBU- THIURON WATER FLTRD 0.7 U GF, REC (UG/L)	TER- BUFOS WATER FLTRD 0.7 U GF, REC (UG/L)	THIO- BENCARB WATER FLTRD 0.7 U GF, REC (UG/L)	TRIAL- LATE WATER FLTRD 0.7 U GF, REC (UG/L)	
JUN 1994												
08...	<0.02	0.02	<0.01	<0.02	<0.01	<0.02	0.14	<0.02	<0.01	<0.01	<0.01	
JUL												
06...	<0.02	0.03	<0.01	<0.02	<0.01	<0.02	0.09	0.01	<0.01	<0.01	<0.01	

POTOMAC RIVER BASIN

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01643020 MONOCACY RIVER AT REICH'S FORD BRIDGE NEAR FREDERICK, MD--Continued

SUSPENDED SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SEDI- MENT, DIS- CHARGE, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)
OCT 1993				
05...	0945	286	14	11
NOV				
02...	1020	899	23	56
29...	1330	15900	96	4120
JAN 1994				
11...	1100	420	4	4.5
FEB				
08...	1215	1260	35	119
MAR				
15...	1230	7680	119	2470
31...	1200	3940	32	340
MAY				
04...	1100	749	9	18
JUN				
08...	1415	350	12	11
JUL				
06...	1045	210	31	18
AUG				
11...	0900	159	27	12

POTOMAC RIVER BASIN

01643495 BENNETT CREEK TRIBUTARY AT PARK MILLS, MD--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--November 1991 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH WATER WHOLE FIELD (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	TEMPER- ATURE AIR (DEG C)	HARD- NESS TOTAL (MG/L AS CaCO3)	CALCIUM DIS- SOLVED (MG/L AS Ca)	MAGNE- SIUM, DIS- SOLVED (MG/L AS Mg)
OCT 1993									
06...	1100	0.02	82	6.9	12.0	14.0	--	--	--
13...	1245	0.02	78	7.1	12.0	13.0	32	9.7	2.0
20...	1030	0.10	144	7.2	14.0	17.0	--	--	--
NOV									
16...	1655	0.02	84	7.0	10.5	10.5	33	9.7	2.1
DEC									
02...	1620	0.15	66	6.9	7.0	6.5	--	--	--
13...	1350	0.15	52	6.8	5.0	9.0	18	4.6	1.6
22...	1542	0.10	54	7.0	4.0	2.0	--	--	--
30...	1524	0.05	53	7.1	0.5	-5.0	--	--	--
JAN 1994									
05...	0952	0.05	50	7.0	1.5	-2.0	--	--	--
11...	1400	0.05	53	7.0	0.5	-1.0	--	--	--
27...	1120	<0.02	58	6.4	0.5	--	17	4.3	1.6
FEB									
01...	1202	<0.02	51	6.9	1.0	-2.0	--	--	--
08...	1223	<0.02	44	6.6	1.0	-5.0	--	--	--
15...	1032	<0.02	52	6.7	2.0	2.5	15	3.4	1.5
22...	1228	0.20	62	6.9	4.0	7.0	--	--	--
MAR									
01...	0920	0.10	36	6.7	2.0	0.0	--	--	--
09...	1008	0.15	42	6.9	2.0	-1.0	--	--	--
15...	0930	0.20	36	7.0	5.5	9.5	11	2.0	1.4
22...	1330	0.10	35	6.1	0.0	0.0	--	--	--
29...	1028	1.4	43	7.1	6.0	3.0	--	--	--
APR									
05...	1348	0.20	32	6.7	11.5	20.5	--	--	--
13...	1225	0.47	37	6.6	10.0	14.0	12	2.6	1.4
19...	0940	0.05	35	6.6	12.0	22.5	--	--	--
26...	1450	0.02	35	6.9	15.0	29.0	--	--	--
MAY									
03...	1510	<0.02	36	7.2	12.0	14.0	12	2.5	1.5
10...	0845	0.02	38	6.8	13.0	16.0	--	--	--
17...	1500	<0.02	39	6.4	11.5	14.0	--	--	--
19...	0658	<0.02	39	6.4	11.0	8.5	13	2.9	1.5
24...	1637	<0.02	44	7.0	15.0	24.0	--	--	--
31...	1705	<0.02	45	7.2	16.0	25.0	--	--	--
JUN									
07...	0840	<0.02	42	7.1	16.5	22.0	--	--	--
14...	1400	<0.02	51	7.3	19.0	--	--	--	--
21...	1515	<0.02	54	7.3	21.0	28.0	17	5.2	1.0
28...	1445	<0.02	56	7.2	20.0	--	--	--	--
JUL									
06...	1545	<0.02	64	7.2	23.0	28.0	--	--	--
12...	1705	<0.02	66	7.3	21.0	--	--	--	--
20...	1545	<0.02	69	7.2	23.0	--	--	--	--
27...	1430	<0.02	--	6.6	20.5	23.0	--	--	--
AUG									
02...	1430	<0.02	66	7.1	21.0	25.0	--	--	--
09...	1657	<0.02	77	7.2	20.0	24.5	34	9.6	2.4
16...	1644	<0.02	69	7.5	18.0	--	--	--	--
23...	1730	<0.02	81	7.4	18.0	--	--	--	--
30...	1505	<0.02	79	7.4	18.5	--	--	--	--
SEP									
07...	1158	<0.02	76	7.4	17.0	--	--	--	--
15...	1305	<0.02	81	7.5	19.0	--	--	--	--
20...	1350	<0.02	86	7.4	17.0	--	--	--	--
27...	1340	<0.02	72	7.4	18.0	--	--	--	--

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WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

POTOMAC RIVER BASIN

01643500 BENNETT CREEK AT PARK MILLS, MD

LOCATION.--Lat 39°17'40", long 77°24'30", Frederick County, Hydrologic Unit 02070009, on left bank 75 ft 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 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1948 to September 1958. Annual maximum, water years 1960-66. August 1966 to current year.

GAGE.--Water-stage recorder and concrete control. Elevation of gage is 240 ft above sea level, from topographic maps.

REMARKS.--Water-discharge records good except those for estimated daily discharges (ice effect, missing record), which are poor.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,200 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 28	0700	*5,810	*10.12	Feb. 19	1845	1,350	5.39
Dec. 5	0730	2,220	6.84	Feb. 20	1645	1,380	5.44

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	19	30	74	40	55	120	e205	e83	44	30	35	42
2	19	24	64	44	46	124	e180	e75	40	27	30	37
3	18	23	58	45	e38	269	e170	e70	40	50	29	35
4	17	22	84	e42	e34	170	e160	e90	39	85	27	34
5	16	23	1230	e40	35	355	e150	85	40	34	29	33
6	15	23	237	e37	46	302	e150	73	40	30	27	33
7	16	21	139	e35	52	313	e320	94	39	35	24	32
8	16	20	108	e40	48	321	e180	238	38	28	23	29
9	16	19	88	e35	48	246	e145	103	36	26	22	30
10	15	19	80	e43	e35	679	e140	85	34	25	21	30
11	14	19	77	e38	e34	328	e170	77	37	24	21	29
12	36	19	61	e45	e45	239	e140	77	38	22	45	28
13	23	20	57	e45	e38	216	e130	71	34	22	168	27
14	19	23	54	e43	e36	214	e200	65	33	21	108	26
15	19	21	59	e38	34	195	e350	67	32	22	85	27
16	19	19	75	e35	36	172	e250	99	31	22	40	29
17	18	20	54	e32	49	145	e170	68	33	30	286	28
18	17	33	48	e55	92	e150	e140	64	32	35	200	32
19	17	24	53	55	395	e145	e130	63	29	24	85	26
20	21	22	46	53	540	e130	e120	62	30	22	63	24
21	32	20	132	49	401	e160	e115	60	28	23	187	24
22	40	19	86	47	242	e180	e105	57	28	36	140	40
23	24	19	70	45	399	e145	e102	53	26	28	79	61
24	21	19	60	e60	590	e135	e100	50	35	26	61	33
25	20	19	57	e95	284	e135	e95	66	31	61	54	29
26	19	18	53	e850	201	e125	e90	116	26	43	94	46
27	19	83	47	514	150	e500	e80	89	38	113	56	39
28	19	2000	e40	e500	132	e560	e90	59	51	133	47	33
29	18	156	e39	158	---	e600	80	54	31	42	50	31
30	26	98	40	81	---	e310	e80	48	30	34	45	28
31	42	---	45	64	---	e245	---	46	---	47	40	---
TOTAL	650	2895	3415	3303	4135	7928	4537	2407	1043	1200	2221	975
MEAN	21.0	96.5	110	107	148	256	151	77.6	34.8	38.7	71.6	32.5
MAX	42	2000	1230	850	590	679	350	238	51	133	286	61
MIN	14	18	39	32	34	120	80	46	26	21	21	24
CFM	.33	1.54	1.75	1.70	2.35	4.07	2.41	1.24	.55	.62	1.14	.52
IN.	.39	1.71	2.02	1.96	2.45	4.70	2.69	1.43	.62	.71	1.32	.58

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1948 - 1994, BY WATER YEAR (WY)

	37.7	47.0	76.7	84.2	99.8	116	108	87.2	65.5	42.5	35.4	38.8
MEAN	37.7	47.0	76.7	84.2	99.8	116	108	87.2	65.5	42.5	35.4	38.8
MAX	245	119	228	237	229	369	286	302	498	178	148	211
(WY)	1980	1972	1993	1978	1979	1993	1993	1988	1972	1987	1955	1971
MIN	8.21	12.5	17.3	15.5	38.9	37.6	44.6	25.8	15.3	9.59	5.70	7.38
(WY)	1987	1982	1981	1981	1954	1981	1985	1969	1986	1986	1966	1986

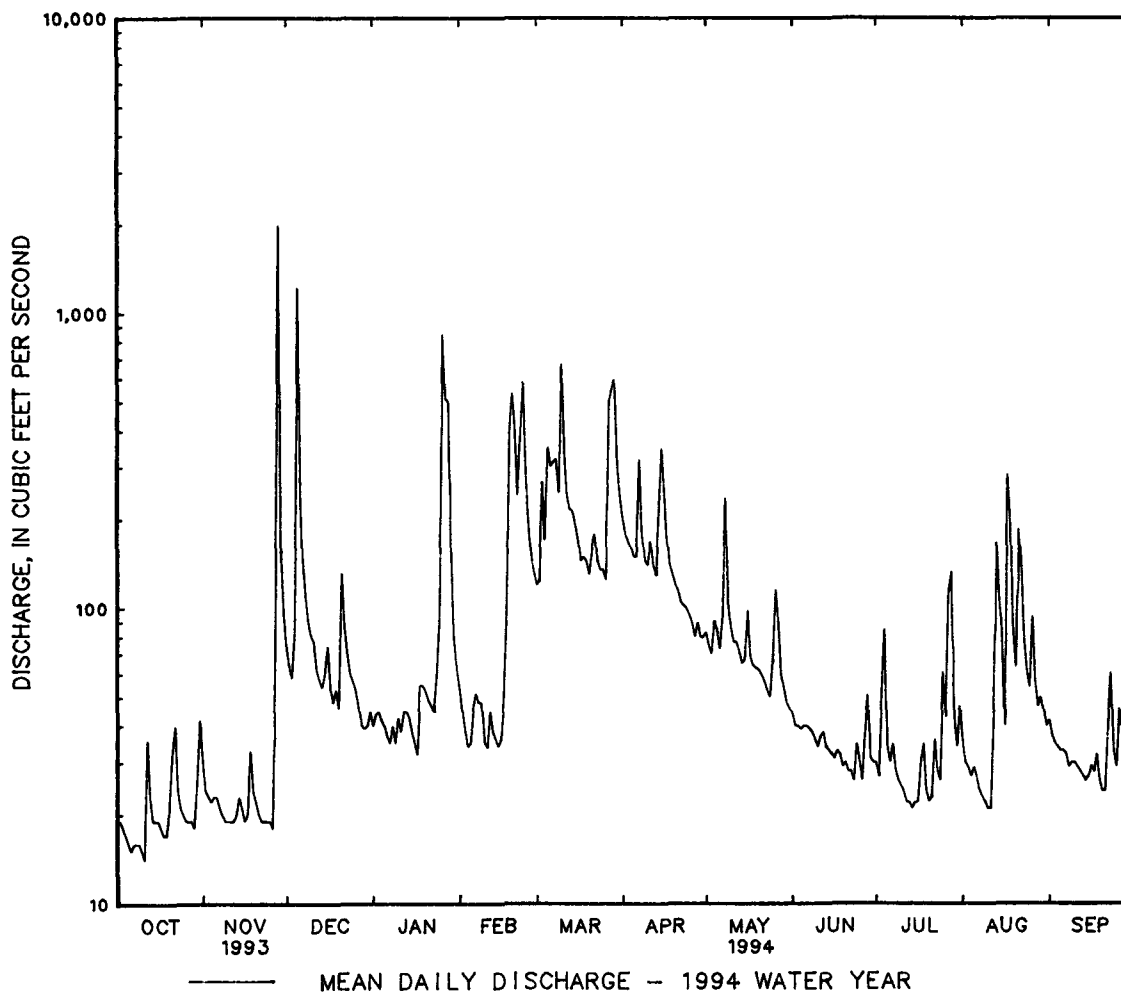
01643500 BENNETT CREEK AT PARK MILLS, MD--Continued

SUMMARY STATISTICS	FOR 1993 CALENDAR YEAR		FOR 1994 WATER YEAR		WATER YEARS 1948 - 1994	
ANNUAL TOTAL	38774.5		34709		69.7	
ANNUAL MEAN	106		95.1		141	
HIGHEST ANNUAL MEAN					32.0	
LOWEST ANNUAL MEAN					5500	
HIGHEST DAILY MEAN	2000	Nov 28	2000	Nov 28		Jun 22 1972
LOWEST DAILY MEAN	9.5	Sep 14	14	Oct 11	.40	Sep 8 1966
ANNUAL SEVEN-DAY MINIMUM	12	Aug 28	15	Oct 5	.91	Sep 3 1966
INSTANTANEOUS PEAK FLOW			5810	Nov 28	(a)32200	Jun 21 1972
INSTANTANEOUS PEAK STAGE			10.12	Nov 28	(b)22.10	Jun 21 1972
INSTANTANEOUS LOW FLOW			14	(c)	.30	Sep 8 1966
ANNUAL RUNOFF (CFSM)	1.69		1.51		1.11	
ANNUAL RUNOFF (INCHES)	22.97		20.56		15.08	
10 PERCENT EXCEEDS	234		200		131	
50 PERCENT EXCEEDS	55		45		42	
90 PERCENT EXCEEDS	17		21		14	

a From rating curve extended above 2,700 ft³/s on basis of contracted-opening measurements at gage heights of 11.15, 14.33, and 22.1 ft.

b From floodmark.

c Oct. 6, 10-12.



POTOMAC RIVER BASIN

01643500 BENNETT CREEK AT PARK MILLS, MD--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1968-72, 1982-83, October 1993 to September 1994.

WATER QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH WATER WHOLE FIELD (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	TEMPER- ATURE AIR (DEG C)	HARD- NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
OCT 1993 14...	1115	20	172	6.8	11.0	10.5	61	18	4.0	5.6	3.1
AUG 1994 31...	1230	39	173	7.6	20.0	23.0	64	18	4.6	7.4	2.0

DATE	ALKA- LINITY WAT DIS TOT IT FIELD MG/L AS CACO3	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	IRON, DIS- SOLVED (UG/L AS FE)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)
OCT 1993 14...	46	6.9	13	--	7.7	--	<0.010	1.90	1.90	45	16
AUG 1994 31...	41	6.5	16	<0.10	8.4	100	<0.010	2.50	2.50	44	15

POTOMAC RIVER BASIN

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01643615 BROAD RUN AT ELMER, MD

LOCATION.--Lat 39°07'22", long 77°28'52", Montgomery County, Hydrologic Unit 02070009, on right bank 550 at National Institute of Health Farm, 0.3 mi upstream from bridge on River road, and 0.85 mi upstream from mouth.

DRAINAGE AREA.--14 mi².

PERIOD OF RECORD.--October 1993 to September 1994.

WATER QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH WATER WHOLE FIELD (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	TEMPER-ATURE AIR (DEG C)	BARO-METRIC PRES-SURE (MM OF HG)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	HARD-NESS TOTAL (MG/L AS CaCO3)	CALCIUM DIS-SOLVED (MG/L AS Ca)
AUG 1994 24...	1530	9.2	173	7.6	20.0	23.5	765	8.7	95	63	17
DATE	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY WAT DIS TOT IT FIELD (MG/L AS CaCO3)	BICAR-BONATE WATER DIS IT FIELD (MG/L AS HCO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)
AUG 1994 24...	4.9	6.0	2.6	38	46	15	11	0.20	13	124	<0.010
DATE	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC DIS. (MG/L AS N)	PHOS-PHORUS DIS-SOLVED (MG/L AS P)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P)	IRON, DIS-SOLVED (UG/L AS FE)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	DIMETH-OATE WATER FLTRD 0.7 U GF, REC (UG/L)	ETHAL-FLUR-ALIN WAT FLT 0.7 U GF, REC (UG/L)	PHORATE WATER FLTRD 0.7 U GF, REC (UG/L)
AUG 1994 24...	2.80	2.80	0.020	0.30	0.270	0.240	190	38	<0.02	<0.01	<0.01
DATE	TER-BACIL WATER FLTRD 0.7 U GF, REC (UG/L)	TRI-FLUR-ALIN WAT FLT 0.7 U GF, REC (UG/L)	2,6-DI-ETHYL ANILINE WAT FLT 0.7 U GF, REC (UG/L)	ALA-CHLOR, WATER, DISS, REC, (UG/L)	ALPHA BHC DIS-SOLVED (UG/L)	ATRA-ZINE, WATER, DISS, REC (UG/L)	BEN-FLUR-ALIN WAT FLD 0.7 U GF, REC (UG/L)	BUTYL-ATE, WATER, DISS, REC (UG/L)	CAR-BARYL WATER FLTRD 0.7 U GF, REC (UG/L)	CARBO-FURAN WATER FLTRD 0.7 U GF, REC (UG/L)	CHLOR-PYRIFOS DIS-SOLVED (UG/L)
AUG 1994 24...	<0.03	<0.01	<0.01	<0.01	<0.01	0.08	<0.01	<0.01	0.01	<0.01	<0.005

POTOMAC RIVER BASIN

01643615 BROAD RUN AT ELMER, MD

WATER QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	CYANA- ZINE, WATER, DISS, REC (UG/L)	DCPA WATER FLTRD 0.7 U GF, REC (UG/L)	P,P' DDE DISSOLV (UG/L)	DEETHYL ATRA- ZINE, WATER, DISS, REC (UG/L)	DI- AZINON, DIS- SOLVED (UG/L)	DI- ELDRIN DIS- SOLVED (UG/L)	DISUL- FOTON WATER FLTRD 0.7 U GF, REC (UG/L)	EPTC WATER FLTRD 0.7 U GF, REC (UG/L)	ETHO- PROP WATER FLTRD 0.7 U GF, REC (UG/L)	FONOFOS WATER DISS REC (UG/L)	LINDANE DIS- SOLVED (UG/L)
AUG 1994 24...	<0.01	<0.004	<0.01	0.10	0.01	<0.01	<0.01	<0.005	<0.01	<0.01	<0.01
DATE	LIN- URON WATER FLTRD 0.7 U GF, REC (UG/L)	MALA- THION, DIS- SOLVED (UG/L)	METHYL AZIN- PHOS WAT FLT 0.7 U GF, REC (UG/L)	METHYL PARA- THION WAT FLT 0.7 U GF, REC (UG/L)	METO- LACHLOR WATER DISSOLV (UG/L)	METRI- BUZIN WATER DISSOLV (UG/L)	MOL- INATE WATER FLTRD 0.7 U GF, REC (UG/L)	NAPROP- AMIDE WATER FLTRD 0.7 U GF, REC (UG/L)	PEB- ULATE WATER FLTRD 0.7 U GF, REC (UG/L)	PARA- THION, DIS- SOLVED (UG/L)	PENDI- METH- ALIN WAT FLT 0.7 U GF, REC (UG/L)
AUG 1994 24...	<0.04	<0.01	<0.04	<0.03	0.05	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02
DATE	PER- METHRIN CIS WAT FLT 0.7 U GF, REC (UG/L)	PRO- METON, WATER, DISS, REC (UG/L)	PRON- AMIDE WATER FLTRD 0.7 U GF, REC (UG/L)	PROP- CHLOR, WATER, DISS, REC (UG/L)	PRO- PARGITE WATER FLTRD 0.7 U GF, REC (UG/L)	PRO- PANIL WATER FLTRD 0.7 U GF, REC (UG/L)	SI- MAZINE, WATER, DISS, REC (UG/L)	TEBU- THIURON WATER FLTRD 0.7 U GF, REC (UG/L)	TER- BUFOS WATER FLTRD 0.7 U GF, REC (UG/L)	THIO- BENCARB WATER FLTRD 0.7 U GF, REC (UG/L)	TRIAL- LATE WATER FLTRD 0.7 U GF, REC (UG/L)
AUG 1994 24...	<0.02	0.01	<0.01	<0.02	<0.01	<0.02	0.13	<0.02	<0.01	<0.01	<0.01

SUSPENDED SEDIMENT DISCHARGE

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)
AUG 1994 24...	1530	9.2	7	0.17

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 mi².

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.--Water-discharge records good except those for estimated daily discharges (missing record, ice effect), which are fair. Small diversion at times for irrigation upstream from station.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,300 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 28	1030	*9,160	*10.37	Mar. 27	1330	1,570	6.22
Dec. 5	Unknown	Unknown	Unknown	Mar. 29	1000	1,410	5.84
Feb. 19	2015	1,590	6.27	July 3	1900	1,880	6.74
Feb. 20	2030	1,470	5.98	July 27	2200	2,440	7.41
Feb. 23	1815	1,460	5.95	Aug. 17	1345	1,880	6.75
Feb. 24	1515	1,500	6.06	Aug. 21	2400	1,610	6.31
Mar. 10	1415	1,440	5.91				

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	88	67	e120	84	144	159	303	151	71	62	111	95
2	54	53	e100	88	121	178	252	123	68	54	74	79
3	44	47	e92	89	109	320	226	109	67	212	78	62
4	42	47	e260	163	102	406	213	140	67	131	64	59
5	41	51	e4000	132	100	698	193	148	67	85	63	57
6	40	55	e500	101	103	541	198	127	68	76	60	57
7	39	49	e220	145	110	407	427	168	66	72	54	55
8	39	45	e180	358	108	400	260	501	120	61	52	53
9	42	45	e155	163	194	333	212	210	84	50	50	55
10	41	44	e150	124	143	1010	209	167	78	49	48	56
11	39	45	e145	111	117	499	199	145	66	46	66	51
12	101	44	e120	241	122	317	178	132	67	40	224	50
13	63	45	e110	e190	108	262	272	119	64	39	92	50
14	48	56	e110	e150	106	241	338	109	60	107	97	49
15	46	50	e130	e120	101	219	222	102	66	120	118	49
16	44	47	e150	e110	104	199	320	143	112	58	91	50
17	43	51	e110	116	138	170	220	119	89	84	716	49
18	42	130	105	e220	287	169	187	117	80	92	428	54
19	42	66	116	e150	783	170	174	106	68	59	187	48
20	45	58	101	e130	978	155	165	103	73	51	137	45
21	79	52	253	e120	659	169	153	99	71	51	571	45
22	105	50	160	e110	399	263	137	96	67	57	446	81
23	55	49	131	103	799	176	130	90	56	53	139	133
24	49	48	112	318	1120	164	128	82	60	50	90	82
25	46	48	104	339	509	181	132	89	62	113	80	72
26	51	47	100	481	303	155	137	96	55	106	268	191
27	68	222	92	172	211	846	152	96	56	432	92	152
28	59	6230	90	545	169	921	158	81	75	1010	75	85
29	56	e600	90	491	---	1130	146	79	66	180	70	61
30	56	e250	89	248	---	524	145	76	65	137	76	54
31	88	---	83	163	---	362	---	73	---	119	83	---
TOTAL	1695	8691	8278	6075	8247	11744	6186	3996	2134	3856	4800	2079
MEAN	54.7	290	267	196	295	379	206	129	71.1	124	155	69.3
MAX	105	6230	4000	545	1120	1130	427	501	120	1010	716	191
MIN	39	44	83	84	100	155	128	73	55	39	48	45
CFSM	.54	2.87	2.64	1.94	2.92	3.75	2.04	1.28	.70	1.23	1.53	.69
IN.	.62	3.20	3.05	2.24	3.04	4.33	2.28	1.47	.79	1.42	1.77	.77

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1930 - 1994, BY WATER YEAR (WY)

MEAN	66.1	82.0	107	123	147	159	149	126	101	75.9	66.8	74.7
MAX	479	290	287	402	484	511	457	510	747	273	248	566
(WY)	1980	1994	1973	1979	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	2.40
(WY)	1931	1932	1932	1966	1931	1931	1969	1931	1986	1955	1932	1930

POTOMAC RIVER BASIN

01645000 SENECA CREEK AT DAWSONVILLE, MD--Continued

SUMMARY STATISTICS	FOR 1993 CALENDAR YEAR		FOR 1994 WATER YEAR		WATER YEARS 1930 - 1994	
ANNUAL TOTAL	69564		67781		106	
ANNUAL MEAN	191		186		251	
HIGHEST ANNUAL MEAN					2.40	
LOWEST ANNUAL MEAN					1972	
HIGHEST DAILY MEAN	6230	Nov 28	6230	Nov 28	9900	Jun 22 1972
LOWEST DAILY MEAN	28	(a)	39	(b)	1.8	(c)
ANNUAL SEVEN-DAY MINIMUM	30	Sep 1	40	Oct 5	2.2	Sep 27 1930
INSTANTANEOUS PEAK FLOW			9160	Nov 28	(d)26100	Jun 22 1972
INSTANTANEOUS PEAK STAGE			10.37	Nov 28	(f)16.40	Jun 22 1972
INSTANTANEOUS LOW FLOW			21	Nov 10	1.7	(g)
ANNUAL RUNOFF (CFSM)	1.89		1.84		1.05	
ANNUAL RUNOFF (INCHES)	25.62		24.96		14.29	
10 PERCENT EXCEEDS	312		338		186	
50 PERCENT EXCEEDS	99		104		67	
90 PERCENT EXCEEDS	41		49		26	

a Sept. 3, 7, 14.

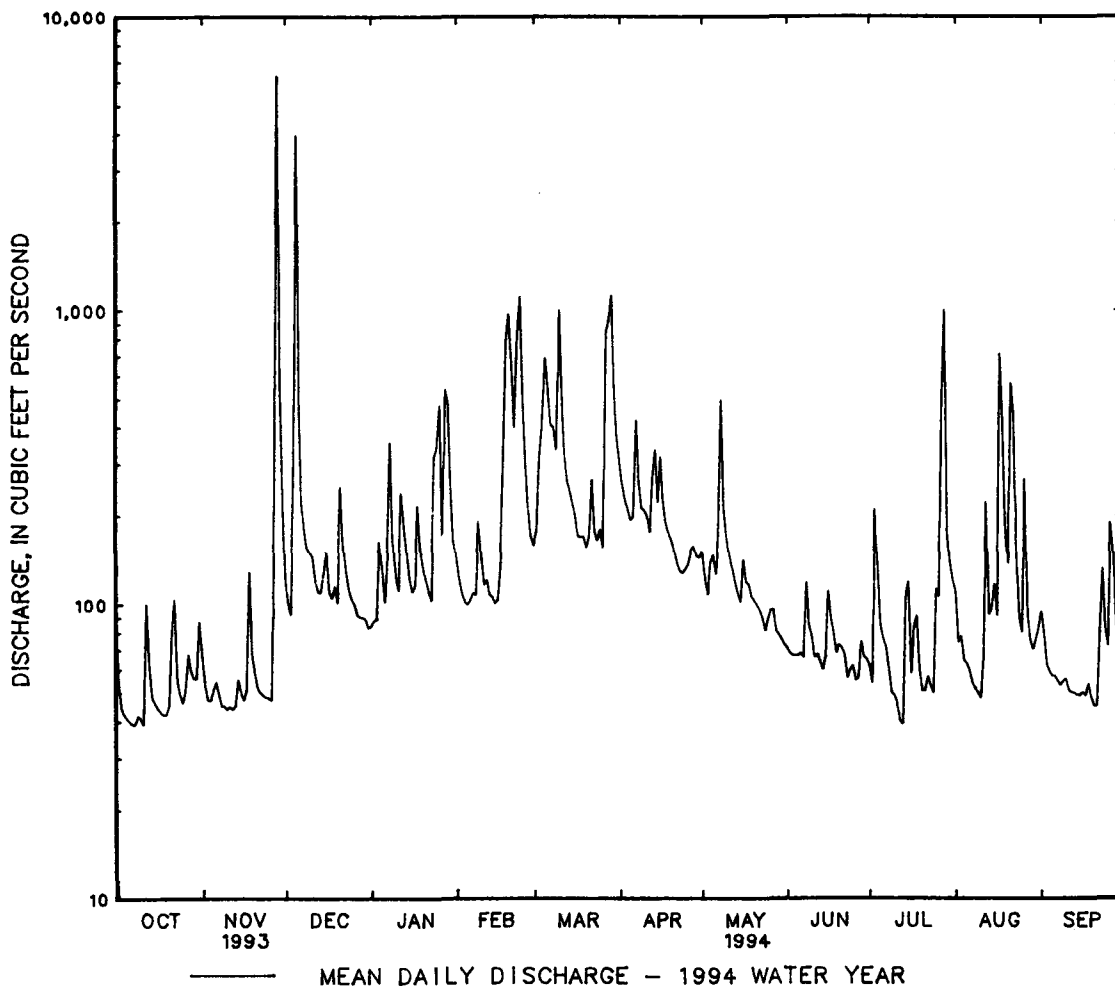
b Oct. 7, 8, 11, 14.

c Sept. 29, 1930, Sept. 12, 1966.

d From rating curve extended above 3,000 ft³/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.

f From high-water mark in gage house.

g Sept. 28, 29, 1930.



POTOMAC RIVER BASIN

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01645000 SENECA CREEK AT DAWSONVILLE, MD--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1961, 1964-83, October 1993 to September 1994.

WATER QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH WATER WHOLE FIELD (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	TEMPER- ATURE AIR (DEG C)	HARD- NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
OCT 1993 14...	1210	44	249	6.8	12.0	13.0	70	19	5.5	16	3.9
AUG 1994 31...	1345	79	231	7.4	20.0	25.0	66	18	5.2	15	3.4

DATE	ALKA- LINITY WAT DIS TOT IT FIELD MG/L AS CACO3	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	IRON, DIS- SOLVED (UG/L AS FE)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)
OCT 1993 14...	42	15	28	--	7.7	--	<0.010	3.20	3.20	73	29
AUG 1994 31...	39	10	28	0.10	9.1	129	<0.010	3.10	3.10	71	190

POTOMAC RIVER BASIN

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 mi².

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.--Water-discharge records good except those for estimated daily discharges (ice effect), which are poor. 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. Gage-height 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.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 45,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 29	2000	136,000	10.09	Mar. 17	0100	76,400	7.93
Dec. 7	0130	105,000	9.05	Mar. 24	2030	62,000	7.29
Jan. 31	0030	67,300	7.53	Mar. 30	1515	*142,000	*10.37
Feb. 11	1615	67,500	7.54	Apr. 2	1345	54,200	6.91
Feb. 25	1715	110,000	9.20	Apr. 15	1015	55,000	6.95
Mar. 11	2345	131,000	9.90	May 10	0400	83,900	8.24

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4030	2080	34600	5780	42800	36300	77600	10800	5480	3220	5810	4570
2	3560	3140	22500	6430	29800	31100	55900	15200	4970	3190	5990	4380
3	3180	3950	16500	5930	23700	29500	44600	21600	4830	3160	5900	4080
4	2830	4300	13400	6860	19800	27800	39300	17700	4510	3760	4920	3810
5	2750	3960	34600	6850	16700	30300	33300	15400	4280	2940	4820	3740
6	2590	3440	76900	6090	14900	42800	29400	14900	4010	2440	4510	3410
7	2240	3250	87000	6270	14100	58800	27800	20800	3890	2320	4150	3230
8	1830	3120	48800	8660	13700	64700	27000	27700	3830	2490	3970	3130
9	1490	3040	31500	7300	14100	93200	24800	52900	3790	2620	3610	2760
10	1670	2830	23500	7560	14200	115000	22300	75000	3810	2770	3670	2750
11	1750	2710	19000	10300	50600	124000	21000	45900	3550	2700	3650	2610
12	1710	2680	17300	12700	47600	116000	21500	32100	3480	2480	3700	2490
13	1380	2570	15100	13200	31900	81000	22400	25500	3330	2230	2960	2310
14	2020	2550	13100	13300	25700	66700	29100	21500	3170	2100	2960	2220
15	2530	2410	12000	e14500	21900	66600	51800	17500	3120	2310	3670	2150
16	2200	2200	12200	e12300	19500	72200	42900	15100	4540	2220	3400	2250
17	2070	2540	11700	e11700	18400	72200	35800	13000	3590	2600	4940	2270
18	1970	3000	11700	e11400	20200	55900	32600	11600	3220	2810	12800	2480
19	1920	3070	11600	5740	26600	44800	27900	11000	3450	2700	31800	2640
20	1870	3450	11200	7870	38400	38900	23200	10500	3350	2530	33500	2530
21	1990	3360	12100	9000	54200	38000	20300	9630	3170	2280	22300	2270
22	2260	3260	13400	8830	75800	42000	18100	8690	3610	2480	18200	2440
23	2150	3510	12800	8390	83100	52300	16200	7940	3540	2870	14700	3050
24	2250	3550	11700	9320	79200	60800	14800	7620	3530	3530	16400	2960
25	2170	3300	10600	13000	103000	60000	13700	7740	3700	5340	11300	3570
26	2050	2950	9810	17800	92200	58100	13000	7300	2940	6130	8870	4460
27	2110	3620	8920	28700	64200	55900	12400	7410	2930	5600	7940	4500
28	2440	37400	8040	39800	46700	76500	12100	7360	3110	10900	7370	3200
29	2580	104000	7290	44800	---	118000	11500	6890	3580	6050	5910	3710
30	2460	81300	6130	59100	---	140000	11100	6370	3250	4590	5190	3280
31	2340	---	5840	60500	---	119000	---	5870	---	4710	4700	---
TOTAL	70390	306540	630830	479980	1103000	2088400	833400	558520	111560	108070	273610	93250
MEAN	2271	10220	20350	15480	39390	67370	27780	18020	3719	3486	8826	3108
MAX	4030	104000	87000	60500	103000	140000	77600	75000	5480	10900	33500	4570
MIN	1380	2080	5840	5740	13700	27800	11100	5870	2930	2100	2960	2150
(†)	555	537	507	608	540	520	575	612	733	688	637	630
MEAN#	2825	10770	20860	16100	39940	67860	28350	18630	4451	4175	9460	3737
CFM#	.24	.93	1.80	1.39	3.45	5.87	2.45	1.61	.39	.36	.82	.32
IN#	.28	1.04	2.08	1.61	3.60	6.77	2.74	1.86	.43	.42	.94	.36

e Estimated

† 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.

POTOMAC RIVER BASIN

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01646500 POTOMAC RIVER NEAR WASHINGTON, DC--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1930 - 1958, BY WATER YEAR (WY) (UNREGULATED)

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 - 1994, BY WATER YEAR (WY) (REGULATED, UNJUSTED)

MEAN	6027	7414	11270	12780	17150	25280	21440	15350	9142	4571	3770	3908
MAX	36790	42030	35690	35700	39460	67370	57850	40410	46630	17160	11350	25310
(WY)	1977	1986	1973	1991	1984	1994	1993	1989	1972	1972	1984	1975
MIN	908	1097	1038	1682	5703	7403	7058	3921	2216	695	538	791
(WY)	1964	1966	1966	1981	1963	1990	1969	1969	1969	1966	1966	1964

SUMMARY STATISTICS

FOR 1993 CALENDAR YEAR

FOR 1994 WATER YEAR

WATER YEARS 1959 - 1994

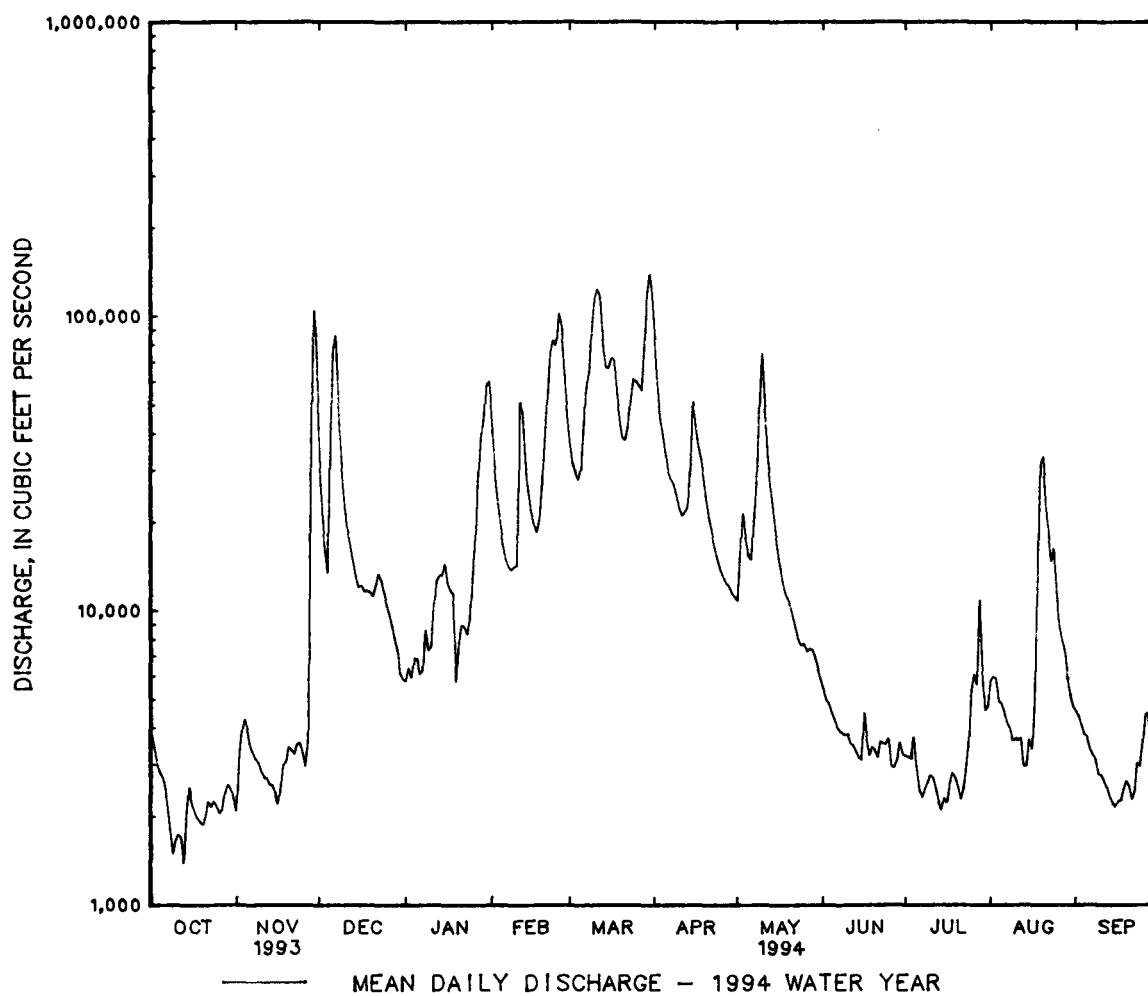
ANNUAL TOTAL	6201353		6657550	
ANNUAL MEAN	16990		18240	
ANNUAL MEAN ^a	17560		18830	
HIGHEST ANNUAL MEAN				11480
HIGHEST ANNUAL MEAN ^a				18580
LOWEST ANNUAL MEAN				19030
LOWEST ANNUAL MEAN ^a				4900
HIGHEST DAILY MEAN	179000	Mar 6	140000	Mar 30
LOWEST DAILY MEAN	889	Sep 3	1380	Oct 13
LOWEST DAILY MEAN ^a	1700	Sep 3	1910	Oct 13
ANNUAL SEVEN-DAY MINIMUM	1020	Aug 29	1690	Oct 8
INSTANTANEOUS PEAK FLOW			142000	Mar 30
INSTANTANEOUS PEAK STAGE			10.37	Mar 30
INSTANTANEOUS LOW FLOW			1290	Oct 13
ANNUAL RUNOFF (CFSM)	1.47		1.58	
ANNUAL RUNOFF (CFSM) ^a	1.52		1.63	
ANNUAL RUNOFF (INCHES)	19.96		21.42	
ANNUAL RUNOFF (INCHES) ^a	20.63		22.13	
10 PERCENT EXCEEDS	48000		53400	26100
50 PERCENT EXCEEDS	6200		7300	6310
90 PERCENT EXCEEDS	1780		2430	1590

a At previous site, 1 mi upstream at same datum.

^a Adjusted for diversion.b Minimum daily discharge observed at gaging station, does not include diversion of 489 ft³/s.c Includes diversion of 449 ft³/s for municipal use.

POTOMAC RIVER BASIN

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. Period of missing temperature record, June 18 to September 30, due to faulty temperature probe or bad temperature card.

EXTREMES FOR PERIOD OF DAILY RECORD--

SPECIFIC CONDUCTANCE: Maximum, 747 microsiemens, Jan. 11, 1991; minimum, 68 microsiemens, Oct. 23, 1990.

WATER TEMPERATURE (water years 1989-93): Maximum, 33.5°C, July 11, 1993; minimum, 0.0°C, on many days during winter periods.

EXTREMES FOR CURRENT PERIOD.--

SPECIFIC CONDUCTANCE: Maximum, 740 microsiemens, Jan. 28; minimum, 96 microsiemens, Nov. 28.

WATER TEMPERATURE: Maximum, unknown; minimum, 0.0°C, Jan. 24, 27, 28.

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CELSIUS, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			DECEMBER			JANUARY			
1	389	382	384	418	393	407	194	179	186	365	344	353
2	400	389	393	432	414	423	205	194	200	365	358	361
3	411	400	406	432	419	428	221	205	214	371	358	365
4	420	411	416	419	394	404	231	221	225	537	354	435
5	421	415	418	407	398	402	224	129	170	479	433	445
6	420	413	417	424	407	414	200	149	171	450	400	427
7	413	407	410	435	424	432	200	170	181	536	385	441
8	407	405	406	438	433	435	188	176	182	527	345	405
9	407	400	403	445	433	441	200	188	195	345	336	341
10	401	393	398	433	396	415	210	200	204	356	332	342
11	393	384	389	397	374	383	221	210	217	359	345	351
12	385	368	380	375	369	371	234	221	228	388	341	358
13	370	348	358	377	368	372	248	234	240	341	315	327
14	364	351	356	385	377	379	251	248	250	330	310	320
15	385	364	375	393	385	391	256	242	251	324	296	307
16	393	385	391	393	387	391	260	232	246	301	182	270
17	393	385	388	388	381	385	265	259	262	240	177	196
18	394	388	391	382	333	351	280	265	273	578	240	471
19	393	383	388	366	348	358	288	279	283	458	392	420
20	389	384	386	374	365	370	293	288	291	439	382	398
21	394	387	390	385	374	382	288	239	266	394	324	351
22	389	362	378	394	385	390	274	267	271	328	309	316
23	392	379	384	402	394	399	274	272	273	366	327	333
24	395	390	392	404	399	402	283	274	278	729	358	490
25	404	394	399	402	399	400	291	283	288	576	338	386
26	408	403	406	406	398	403	292	289	291	410	315	351
27	407	404	406	409	205	396	294	291	292	315	286	295
28	410	401	406	206	96	161	302	293	296	740	301	442
29	415	402	410	284	162	201	335	302	321	393	238	271
30	418	413	416	181	164	174	333	319	325	244	225	233
31	413	373	389	---	---	---	345	324	332	225	207	214
MONTH	421	348	394	445	96	375	345	129	248	740	177	355

POTOMAC RIVER BASIN

01646500 POTOMAC RIVER NEAR WASHINGTON, DC--Continued

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CELSIUS, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY			MARCH			APRIL			MAY			
1	207	193	199	213	196	203	188	175	180	299	292	294
2	201	193	195	302	213	228	199	188	193	303	292	298
3	214	201	207	532	275	341	211	199	207	310	300	306
4	227	214	221	275	250	260	226	211	218	300	252	271
5	239	227	233	250	238	241	240	224	230	260	246	253
6	249	239	243	241	231	236	241	237	239	265	256	259
7	258	249	253	246	226	235	245	240	242	289	265	277
8	261	258	260	226	209	215	250	242	245	283	240	249
9	472	261	365	213	194	206	259	250	255	253	229	246
10	437	312	349	194	170	180	264	259	262	229	165	181
11	312	216	272	180	172	177	266	260	263	177	165	171
12	216	197	204	183	175	177	269	263	265	193	177	186
13	224	209	213	193	183	187	272	269	270	205	191	195
14	260	224	234	202	193	198	271	250	260	213	205	211
15	268	259	263	208	202	206	260	205	242	231	213	224
16	330	259	275	208	199	205	205	194	198	239	222	229
17	325	268	290	199	190	195	216	200	210	247	239	245
18	308	267	281	202	192	196	228	216	223	257	245	249
19	276	243	259	217	202	211	232	223	225	267	257	264
20	243	227	234	231	217	225	237	232	235	273	262	266
21	237	224	231	238	229	231	245	237	242	286	270	274
22	228	188	206	238	226	230	249	244	247	288	273	280
23	260	179	195	234	222	227	257	249	253	290	267	279
24	191	180	184	222	192	206	263	256	259	292	268	278
25	191	185	189	196	191	193	267	263	265	290	250	265
26	191	180	184	193	186	190	273	265	270	283	264	275
27	191	184	187	195	167	184	277	271	274	299	283	290
28	196	191	194	191	173	183	280	276	277	309	296	302
29	---	---	---	194	176	184	290	276	280	321	304	313
30	---	---	---	178	171	175	294	284	287	333	316	323
31	---	---	---	175	168	171	---	---	---	336	318	326
MONTH	472	179	236	532	167	210	294	175	244	336	165	261
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
JUNE			JULY			AUGUST			SEPTEMBER			
1	325	311	316	356	332	341	356	340	350	299	288	294
2	316	297	305	341	322	330	356	327	337	303	287	294
3	310	296	302	333	292	316	342	327	336	295	290	293
4	309	293	299	301	283	291	344	325	332	298	292	295
5	308	295	301	303	274	290	344	314	327	306	298	302
6	312	302	307	299	279	285	331	308	316	313	306	309
7	316	309	313	305	285	292	331	311	317	320	311	316
8	321	316	318	308	285	290	318	309	313	326	313	319
9	330	318	324	321	290	300	318	306	309	323	310	316
10	338	324	330	318	291	298	315	306	310	323	311	315
11	340	331	335	307	290	301	323	311	317	323	309	315
12	342	331	337	308	286	295	313	292	304	332	310	321
13	354	340	345	309	283	296	319	296	309	335	310	323
14	352	342	346	310	285	292	318	301	310	336	310	319
15	404	328	375	321	283	300	308	295	300	339	318	326
16	355	318	337	302	279	288	317	305	313	347	322	334
17	370	290	339	302	280	291	317	244	289	347	322	332
18	391	345	364	300	273	285	270	226	250	350	330	339
19	405	356	379	300	271	279	323	220	279	350	329	345
20	405	383	393	292	270	279	289	222	254	362	327	341
21	385	347	361	292	261	272	233	198	222	362	340	347
22	374	354	363	285	253	263	251	215	243	353	342	346
23	357	352	354	283	251	261	248	235	239	345	306	321
24	356	327	351	283	257	267	260	236	247	343	320	332
25	332	313	320	290	263	275	268	254	262	354	336	345
26	354	332	346	293	264	279	267	250	256	359	302	336
27	356	339	349	295	286	292	270	250	259	310	239	288
28	382	347	361	288	223	239	280	260	269	319	296	312
29	382	352	360	285	237	266	289	272	278	341	315	327
30	358	351	354	308	285	295	293	283	288	352	341	347
31	---	---	---	340	308	325	299	293	297	---	---	---
MONTH	405	290	339	356	223	289	356	198	291	362	239	322

POTOMAC RIVER BASIN

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01646500 POTOMAC RIVER NEAR WASHINGTON, DC--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			DECEMBER			JANUARY			
1	17.7	16.0	16.9	12.3	10.4	11.3	8.4	7.7	7.9	.4	.2	.3
2	18.1	15.7	17.0	10.8	9.6	10.1	7.7	7.2	7.5	.8	.2	.4
3	18.4	17.0	17.7	10.1	8.7	9.1	7.7	7.0	7.3	1.2	.5	.8
4	18.8	16.9	18.0	10.0	8.4	9.1	8.1	7.3	7.5	1.7	1.0	1.3
5	18.1	16.7	17.5	10.2	9.0	9.4	10.1	8.1	9.0	1.6	.9	1.2
6	18.1	16.4	17.4	10.3	9.9	10.0	8.5	7.9	8.3	1.4	.6	1.1
7	18.1	16.8	17.5	10.0	9.1	9.5	8.3	7.9	8.1	2.0	1.2	1.5
8	18.0	17.5	17.7	9.6	8.5	8.9	8.0	7.6	7.8	2.6	1.3	2.1
9	19.2	17.7	18.4	9.3	8.1	8.6	7.7	7.2	7.4	1.3	.1	.6
10	18.9	18.0	18.3	8.9	8.3	8.6	7.3	6.8	7.0	.5	.1	.3
11	18.0	16.8	17.3	9.0	7.9	8.3	7.3	5.8	6.7	.5	.1	.2
12	17.2	15.5	16.1	9.2	8.5	8.8	5.8	4.0	4.7	1.0	.3	.5
13	15.7	14.3	15.1	9.3	8.9	9.1	4.1	3.5	3.8	1.0	.7	.8
14	15.7	14.9	15.1	10.9	9.3	10.0	4.4	3.2	4.0	1.5	1.0	1.2
15	16.2	14.9	15.5	13.0	10.8	11.8	5.2	4.4	4.6	1.1	.2	.4
16	16.3	15.4	15.8	13.5	12.6	13.0	5.5	5.0	5.2	.4	.1	.2
17	16.3	15.9	16.0	13.4	13.1	13.3	5.1	4.5	4.7	.3	.1	.2
18	17.1	16.1	16.5	13.3	12.8	13.1	4.8	4.5	4.7	.4	.1	.2
19	16.9	16.4	16.6	12.9	12.0	12.3	5.4	4.8	5.0	.3	.2	.2
20	17.0	16.7	16.9	12.3	10.8	11.4	5.2	4.8	5.0	.3	.2	.2
21	18.0	17.0	17.4	10.9	9.4	9.8	5.7	4.7	5.3	.3	.1	.2
22	17.5	16.5	17.0	9.6	8.0	8.7	4.9	3.9	4.2	.2	.1	.1
23	16.9	15.8	16.3	9.2	7.8	8.6	4.1	3.7	3.9	.2	.1	.1
24	16.1	14.8	15.3	9.1	7.8	8.3	3.9	3.5	3.6	.4	.0	.1
25	15.4	14.4	14.9	8.8	7.8	8.2	3.6	3.0	3.4	.3	.0	.1
26	15.3	14.8	14.9	8.0	7.3	7.6	3.0	1.7	2.5	.2	.1	.1
27	15.5	14.7	15.1	11.3	7.6	8.0	2.1	1.5	1.8	.3	.0	.2
28	15.4	14.4	14.8	14.1	11.3	12.4	1.5	.7	1.1	.3	.0	.2
29	14.7	13.7	14.3	11.3	9.1	10.1	.7	.4	.5	.2	.1	.2
30	14.4	13.0	13.7	9.6	8.4	9.0	.5	.1	.3	.2	.1	.2
31	13.1	12.2	12.7	---	---	---	.5	.2	.3	.3	.2	.2
MONTH	19.2	12.2	16.2	14.1	7.3	9.9	10.1	.1	4.9	2.6	.0	.5
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY			MARCH			APRIL			MAY			
1	1.1	.3	.6	3.6	3.2	3.3	9.5	8.4	8.9	22.0	20.1	21.0
2	1.5	.8	1.1	3.3	2.1	2.6	10.3	8.7	9.5	20.1	18.9	19.6
3	1.7	.6	1.1	2.1	1.7	1.9	11.3	9.8	10.5	19.5	18.1	18.6
4	1.9	1.1	1.5	3.7	1.8	2.5	11.8	10.5	11.2	18.2	15.7	16.8
5	1.9	1.4	1.6	4.2	2.9	3.4	12.8	10.7	11.7	17.0	15.4	16.1
6	2.4	1.3	1.9	4.6	3.2	3.9	13.1	11.9	12.5	16.8	15.9	16.4
7	3.0	2.0	2.5	5.6	4.0	4.7	13.3	12.6	12.9	16.5	14.9	15.6
8	3.1	1.9	2.5	6.1	5.3	5.7	13.0	11.4	12.3	14.9	14.2	14.5
9	2.2	1.8	2.0	5.9	5.4	5.7	13.4	11.5	12.5	15.2	13.6	14.3
10	1.9	.9	1.2	5.4	4.7	5.0	13.4	12.7	12.9	14.0	13.3	13.5
11	.9	.3	.4	4.8	4.3	4.5	13.2	12.6	12.9	15.2	13.2	14.1
12	1.6	.3	.8	5.0	4.2	4.6	13.6	12.6	13.1	16.0	14.6	15.3
13	1.9	1.6	1.7	6.0	4.8	5.4	14.1	13.1	13.5	16.5	14.7	15.7
14	2.2	1.3	1.7	7.1	5.8	6.5	15.2	13.5	14.3	17.6	15.2	16.3
15	2.3	1.4	1.9	7.2	6.7	6.9	15.1	14.0	14.6	18.3	16.7	17.4
16	3.1	1.8	2.4	7.3	6.6	6.9	16.0	14.6	15.3	19.1	18.2	18.6
17	3.9	2.5	3.2	6.6	5.8	6.1	15.8	14.7	15.2	18.7	17.1	17.8
18	4.4	3.2	3.8	6.0	5.4	5.6	15.9	14.4	15.2	17.1	16.3	16.5
19	5.1	3.2	4.5	6.0	4.8	5.4	16.5	14.8	15.7	16.5	15.8	16.1
20	5.7	4.1	4.9	6.9	5.2	6.0	16.9	15.4	16.2	16.3	15.8	16.1
21	5.4	5.0	5.1	6.7	5.9	6.4	16.9	15.6	16.3	17.9	15.7	16.6
22	5.5	4.6	5.1	7.9	6.4	7.0	16.8	15.6	16.3	20.1	17.1	18.5
23	5.2	4.1	4.6	8.5	7.0	7.7	17.0	15.6	16.4	22.2	18.8	20.5
24	4.9	4.3	4.5	9.2	8.1	8.6	17.4	16.0	16.8	23.6	20.8	22.1
25	4.8	4.2	4.4	9.9	8.9	9.4	18.4	16.6	17.5	23.9	21.2	22.7
26	4.4	4.2	4.3	9.6	8.6	9.1	19.7	18.1	18.8	23.2	22.3	22.7
27	4.2	3.7	3.9	9.3	8.4	8.8	21.0	19.7	20.4	22.3	20.2	21.3
28	4.0	3.2	3.6	8.6	8.2	8.4	21.7	20.7	21.0	21.7	19.5	20.4
29	---	---	---	8.3	8.0	8.2	21.2	20.1	20.9	22.6	19.6	21.0
30	---	---	---	8.8	8.2	8.5	21.3	20.0	20.6	23.9	20.9	22.3
31	---	---	---	8.6	8.4	8.5	---	---	---	24.6	22.0	23.4
MONTH	5.7	.3	2.7	9.9	1.7	6.0	21.7	8.4	14.9	24.6	13.2	18.1

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

[illegible]

POTOMAC RIVER BASIN

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01646580 POTOMAC RIVER AT CHAIN BRIDGE AT WASHINGTON, DC
(National stream-quality accounting network station)

LOCATION.--Lat 38°55'46", long 77°07'02", Arlington County, Va., Hydrologic Unit 02070010, under right downstream side of bridge on Virginia State Highway 123, and at river mile 115.9.

DRAINAGE AREA.--11,570 mi².

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. Trace metals and organics collected and analyzed using ultraclean methodologies on May 3, 1994 were not available at time of publication. Data are available upon request.

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: Maximum 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 1993 TO SEPTEMBER 1994

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH WATER WHOLE FIELD (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	TEMPER- ATURE AIR (DEG C)	BARO- METRIC PRES- SURE (MM OF HG)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)
OCT 1993												
04...	1015	2830	416	8.1	17.5	21.0	767	--	9.8	102	--	--
NOV												
01...	1110	1890	404	7.8	12.0	7.5	759	--	11.1	103	--	--
16...	1400	2210	393	8.5	13.0	16.0	770	0.60	10.9	102	E1	110
DEC												
01...	1400	32400	175	7.6	8.0	9.0	782	--	13.2	109	--	--
07...	1400	82700	169	7.7	8.0	11.0	768	45	12.5	105	--	--
FEB 1994												
07...	1200	14300	221	7.7	2.0	11.0	766	--	14.6	105	--	--
MAR												
01...	1515	35100	200	7.1	3.0	2.0	768	9.0	14.2	105	38	E19
16...	1130	71300	220	7.5	7.0	7.0	754	--	12.5	104	--	--
APR												
05...	1030	33200	214	7.6	11.0	20.0	762	--	11.1	101	--	--
MAY												
03...	1115	22100	315	8.2	16.5	17.0	771	15	10.0	101	58	--
JUN												
09...	1400	3860	291	8.4	26.5	26.0	763	--	7.9	98	--	--
JUL												
08...	0930	2490	308	7.6	30.0	34.0	764	--	7.1	94	--	--
AUG												
04...	0930	4910	303	8.2	28.0	26.5	763	--	7.7	98	--	--
SEP												
13...	1200	2160	324	8.7	23.0	24.0	759	2.0	9.0	106	E15	E50
19...	1000	2600	344	8.0	24.0	19.0	765	--	8.4	100	--	--

E: Estimated value.

POTOMAC RIVER BASIN

01646580 POTOMAC RIVER AT CHAIN BRIDGE AT WASHINGTON, DC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	HARD- NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LITY WAT DIS TOT IT FIELD MG/L AS CACO3	BICAR- BONATE WATER WH FET FIELD MG/L AS HCO3	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3	CAR- BONATE WATER WH FET FIELD MG/L AS CO3	CAR- BONATE WATER DIS IT FIELD MG/L AS CO3	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)
OCT 1993												
04...	170	49	12	16	3.4	123	150	--	1	--	48	20
NOV												
01...	170	49	12	16	3.8	122	140	--	4	--	50	25
16...	160	47	11	15	3.3	120	--	--	--	--	41	19
DEC												
01...	72	21	4.7	5.3	3.1	46	--	--	--	--	21	6.4
07...	68	20	4.3	4.3	2.2	42	--	--	--	--	23	5.5
FEB 1994												
07...	98	29	6.2	6.8	1.7	62	--	76	--	--	28	11
MAR												
01...	81	24	5.1	4.7	1.7	54	--	65	--	--	20	8.4
16...	84	25	5.3	4.7	1.8	54	--	66	--	--	21	7.3
APR												
05...	97	29	5.9	4.3	1.3	65	--	79	--	--	22	7.3
MAY												
03...	140	41	8.7	6.3	2.0	94	--	--	--	--	30	11
JUN												
09...	130	34	11	9.2	2.5	94	--	105	--	5	32	15
JUL												
08...	120	30	10	11	2.9	88	--	107	--	--	33	17
AUG												
04...	130	37	9.1	9.2	3.0	102	--	124	--	--	28	13
SEP												
13...	140	39	11	10	2.8	86	--	105	--	--	34	15
19...	140	36	11	12	3.0	101	--	116	--	4	33	17

DATE	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS NO3)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN, AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, AM- MONIA + ORGANIC DIS. (MG/L AS N)	PHOS- PHORUS TOTAL (MG/L AS P)
OCT 1993											
04...	0.20	3.0	248	--	<0.010	1.60	1.60	0.050	0.30	<0.20	0.040
NOV											
01...	0.20	0.91	248	--	<0.010	1.30	1.30	0.030	0.30	<0.20	0.030
16...	0.20	0.38	223	4.8	0.020	1.10	1.10	0.020	0.20	--	0.020
DEC											
01...	0.20	6.4	112	--	<0.010	1.60	1.60	0.040	0.90	0.30	0.200
07...	0.10	6.7	104	--	<0.010	1.20	1.20	0.040	0.80	--	0.180
FEB 1994											
07...	<0.10	6.7	141	7.9	0.020	1.80	1.80	0.050	<0.20	<0.20	0.040
MAR											
01...	<0.10	6.9	111	6.6	0.020	1.50	1.50	0.050	<0.20	<0.20	0.040
16...	<0.10	6.6	117	5.7	0.020	1.30	1.30	0.080	0.40	<0.20	0.080
APR											
05...	<0.10	6.5	121	7.0	0.020	1.60	1.60	0.040	0.30	<0.20	0.050
MAY											
03...	<0.10	2.0	176	6.2	0.010	1.40	1.40	0.020	0.50	<0.20	0.040
JUN											
09...	0.10	0.94	192	4.4	0.010	1.00	1.00	<0.010	0.60	0.20	0.040
JUL											
08...	0.20	5.2	188	2.2	0.020	0.520	0.520	0.060	0.50	0.30	0.030
AUG											
04...	0.10	4.8	190	4.3	0.010	0.980	0.980	0.020	0.50	0.30	0.060
SEP											
13...	0.10	1.4	187	4.4	0.010	1.00	1.00	0.010	0.30	<0.20	0.010
19...	0.10	0.81	190	4.8	0.010	1.10	1.10	0.040	0.40	<0.20	0.030

POTOMAC RIVER BASIN

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01646580 POTOMAC RIVER AT CHAIN BRIDGE AT WASHINGTON, DC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	PHOS- PHORUS DIS- SOLVED (MG/L AS P)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P)	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	ANTI- MONY, DIS- SOLVED (UG/L AS SB)	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, DIS- SOLVED (UG/L AS BA)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, DIS- SOLVED (UG/L AS CU)
OCT 1993											
04...	0.040	0.040	--	--	--	--	--	--	--	--	--
NOV											
01...	0.010	0.010	--	--	--	--	--	--	--	--	--
16...	0.020	0.010	9	<1	<1	41	<1	<1.0	<1	<1	<2
DEC											
01...	0.030	0.030	--	--	--	--	--	--	--	--	--
07...	0.030	0.040	--	--	--	--	--	--	--	--	--
FEB 1994											
07...	0.020	0.020	--	--	--	--	--	--	--	--	--
MAR											
01...	0.020	0.020	30	<1	--	30	<1	<1.0	2	<1	<1
16...	0.010	0.020	--	--	--	--	--	--	--	--	--
APR											
05...	0.010	<0.010	--	--	--	--	--	--	--	--	--
MAY											
03...	<0.010	<0.010	10	<1	--	44	<1	<1.0	1	<1	3
JUN											
09...	<0.010	<0.010	--	--	--	--	--	--	--	--	--
JUL											
08...	0.010	<0.010	--	--	--	--	--	--	--	--	--
AUG											
04...	0.020	<0.010	--	--	--	--	--	--	--	--	--
SEP											
13...	0.010	<0.010	10	<1	--	42	<1	<1.0	2	<1	2
19...	<0.010	<0.010	--	--	--	--	--	--	--	--	--

DATE	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)	LITHIUM DIS- SOLVED (UG/L AS LI)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY DIS- SOLVED (UG/L AS HG)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO)	NICKEL, DIS- SOLVED (UG/L AS NI)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, DIS- SOLVED (UG/L AS AG)	STRON- TIUM, DIS- SOLVED (UG/L AS SR)	VANA- DIUM, DIS- SOLVED (UG/L AS V)
OCT 1993											
04...	9	--	--	6	--	--	--	--	--	--	--
NOV											
01...	34	--	--	6	--	--	--	--	--	--	--
16...	32	<1	5	6	<0.1	--	1	<1	<1.0	230	<6
DEC											
01...	100	--	--	4	--	--	--	--	--	--	--
07...	--	--	--	--	--	--	--	--	--	--	--
FEB 1994											
07...	7	--	--	19	--	--	--	--	--	--	--
MAR											
01...	41	<1	<4	10	--	<1	<1	<1	<1.0	93	<6
16...	66	--	--	11	--	--	--	--	--	--	--
APR											
05...	41	--	--	8	--	--	--	--	--	--	--
MAY											
03...	9	<1	<4	1	--	<1	2	<1	<1.0	170	<6
JUN											
09...	8	--	--	<1	--	--	--	--	--	--	--
JUL											
08...	25	--	--	5	--	--	--	--	--	--	--
AUG											
04...	17	--	--	<1	--	--	--	--	--	--	--
SEP											
13...	7	<1	<4	1	--	2	<1	<1	<1.0	200	6
19...	13	--	--	3	--	--	--	--	--	--	--

POTOMAC RIVER BASIN

01646580 POTOMAC RIVER AT CHAIN BRIDGE AT WASHINGTON, DC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	ZINC, DIS- SOLVED (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	CARBON, ORGANIC SUS- PENDED TOTAL (MG/L AS C)	DIMETH- OATE WATER FLTRD 0.7 U GG, REC (UG/L)	ETHAL- FLUR- ALIN WAT FLT 0.7 U GF, REC (UG/L)	PHORATE WATER FLTRD 0.7 U GF, REC (UG/L)	TER- BACIL WATER FLTRD 0.7 U GF, REC (UG/L)	TRI- FLUR- ALIN WAT FLT 0.7 U GF, REC (UG/L)	2,4-D, DIS- SOLVED (UG/L)	2,4,5-T DIS- SOLVED (UG/L)
OCT 1993											
04...	--	--	3.3	0.2	--	--	--	--	--	--	--
NOV											
01...	--	--	3.4	0.2	--	--	--	--	--	--	--
16...	<3	3.5	--	--	--	--	--	--	--	--	--
DEC											
01...	--	--	5.8	3.3	--	--	--	--	--	--	--
07...	--	--	4.9	3.1	--	--	--	--	--	--	--
FEB 1994											
07...	--	--	2.0	0.3	--	--	--	--	--	--	--
MAR											
01...	2	15	--	--	--	--	--	--	--	--	--
16...	--	--	2.2	1.2	--	--	--	--	--	--	--
APR											
05...	--	--	1.7	0.7	--	--	--	--	--	--	--
MAY											
03...	2	5.8	--	2.1	--	--	--	--	--	--	--
JUN											
09...	--	--	2.7	1.2	<0.02	<0.01	<0.01	<0.03	<0.01	<0.05	<0.05
JUL											
08...	--	--	3.1	0.9	<0.02	<0.01	<0.01	<0.03	<0.01	--	--
AUG											
04...	--	--	3.4	1.0	--	--	--	--	--	--	--
SEP											
13...	1	3.9	--	--	--	--	--	--	--	--	--
19...	--	--	4.7	0.6	--	--	--	--	--	--	--

DATE	2,6-DI- ETHYL ANILINE WAT FLT 0.7 U GF, REC (UG/L)	ALA- CHLOR, WATER, DISS, REC, (UG/L)	ALPHA BHC DIS- SOLVED (UG/L)	ATRA- ZINE, WATER, DISS, REC (UG/L)	BEN- FLUR- ALIN WAT FLD 0.7 U GF, REC (UG/L)	BUTYL- ATE, WATER, DISS, REC (UG/L)	BRO- MACIL, WATER, DISS, REC (UG/L)	CAR- BARYL WATER FLTRD 0.7 U GF, REC (UG/L)	CARBO- FURAN WATER FLTRD 0.7 U GF, REC (UG/L)	CHLOR- PYRIFOS DIS- SOLVED (UG/L)	CYANA- ZINE, WATER, DISS, REC (UG/L)
JUN 1994											
09...	<0.01	<0.01	<0.01	0.17	<0.01	<0.01	<0.05	<0.05	<0.01	<0.005	0.02
JUL											
08...	<0.01	0.02	<0.01	0.39	<0.01	<0.01	--	<0.05	<0.01	<0.01	<0.01

DATE	DCPA WATER FLTRD 0.7 U GF, REC (UG/L)	P,P' DDE DISSOLV (UG/L)	DEETHYL ATRA- ZINE, WATER, DISS, REC (UG/L)	DI- AZINON, DIS- SOLVED (UG/L)	DI- ELDRIN DIS- SOLVED (UG/L)	DISUL- FOTON WATER FLTRD 0.7 U GF, REC (UG/L)	EPTC WATER FLTRD 0.7 U GF, REC (UG/L)	ETHO- PROP WATER FLTRD 0.7 U GF, REC (UG/L)	FONOFOS WATER DISS REC (UG/L)	LINDANE DIS- SOLVED (UG/L)	LIN- URON WATER FLTRD 0.7 U GF, REC (UG/L)
JUN 1994											
09...	<0.004	<0.01	0.07	0.01	<0.01	<0.01	<0.005	<0.01	<0.01	<0.01	<0.04
JUL											
08...	<0.004	<0.01	0.05	<0.01	<0.01	<0.06	<0.005	<0.01	<0.01	<0.01	0.02

POTOMAC RIVER BASIN

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01646580 POTOMAC RIVER AT CHAIN BRIDGE AT WASHINGTON, DC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	MALA- THION, DIS- SOLVED (UG/L)	METHYL AZIN- PHOS WAT FLT 0.7 U GF, REC (UG/L)	METHYL PARA- THION WAT FLT 0.7 U GF, REC (UG/L)	METO- LACHLOR WATER DISSOLV (UG/L)	METRI- BUZIN WATER DISSOLV (UG/L)	MOL- INATE WATER FLTRD 0.7 U GF, REC (UG/L)	NAPROP- AMIDE WATER FLTRD 0.7 U GF, REC (UG/L)	PEB- ULATE WATER FLTRD 0.7 U GF, REC (UG/L)	PARA- THION, DIS- SOLVED (UG/L)	PENDI- METH- ALIN WAT FLT 0.7 U GF, REC (UG/L)	PER- METHRIN CIS WAT FLT 0.7 U GF, REC (UG/L)
JUN 1994											
09...	<0.01	<0.04	<0.03	0.08	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02	<0.02
JUL											
08...	<0.01	<0.05	<0.03	0.28	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02	<0.02

DATE	PRO- METON, WATER, DISS, REC (UG/L)	PRON- AMIDE WATER FLTRD 0.7 U GF, REC (UG/L)	PROP- CHLOR, WATER, DISS, REC (UG/L)	PRO- PARGITE WATER FLTRD 0.7 U GF, REC (UG/L)	PRO- PANIL WATER FLTRD 0.7 U GF, REC (UG/L)	SILVEX, DIS- SOLVED (UG/L)	SI- MAZINE, WATER, DISS, REC (UG/L)	TEBU- THIURON WATER FLTRD 0.7 U GF, REC (UG/L)	TER- BUFOS WATER FLTRD 0.7 U GF, REC (UG/L)	THIO- BENCARB WATER FLTRD 0.7 U GF, REC (UG/L)	TRIAL- LATE WATER FLTRD 0.7 U GF, REC (UG/L)
JUN 1994											
09...	0.02	<0.01	<0.02	<0.01	<0.02	<0.05	0.08	<0.02	<0.01	<0.01	<0.01
JUL											
08...	0.03	<0.01	<0.02	<0.01	<0.02	--	0.12	<0.02	<0.01	<0.01	<0.01

RADIOCHEMICAL ANALYSES

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	RADIUM 226, DIS- SOLVED, RADON METHOD (PCI/L)	RA-226 2 SIGMA WATER, DISS, (PCI/L)	URANIUM NATURAL DIS- SOLVED (UG/L AS U)	URANIUM NATURAL 2 SIGMA WATER, DISS, (UG/L)
MAY 1994						
03...	1115	22100	0.05	0.010	0.21	<1.0
SEP						
13...	1200	2160	0.05	0.010	0.29	<1.0

SUSPENDED SEDIMENT DISCHARGE

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SEDI- MENT, DIS- SOLVED, SUS- PENDED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT 1993					
04...	1015	2830	8	61	--
NOV					
01...	1110	1890	6	31	--
16...	1400	2210	4	24	81
DEC					
01...	1400	32400	110	9620	--
07...	1400	82700	120	26800	93
MAR 1994					
01...	1515	35100	31	2940	95
16...	1130	71300	56	10800	--
APR					
05...	1030	33200	26	2330	--
MAY					
03...	1115	22100	38	2270	95
JUN					
09...	1400	3860	8	83	--
JUL					
08...	0930	2490	10	67	--
AUG					
04...	0930	4910	18	239	--
SEP					
13...	1200	2160	10	58	97

POTOMAC RIVER BASIN

01647720 NORTH BRANCH ROCK CREEK NEAR NORBECK, MD

LOCATION.--Lat 39°06'59", long 77°06'09", Montgomery County, Hydrologic Unit 02070009, on left bank 550 ft downstream from bridge on Muncaster Mill Road (State Highway 115), 0.7 mi upstream from Manor Run, 1.5 mi downstream northwest of Norbeck, and 2 mi upstream from mouth.

DRAINAGE AREA.--1.01 mi².

PERIOD OF RECORD.--Water years 1969, October 1993 to September 1994.

WATER QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH WATER WHOLE FIELD (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	TEMPER-ATURE AIR (DEG C)	BARO-METRIC PRES-SURE (MM OF HG)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED SATUR-ATION	HARD-NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)
AUG 1994 24...	1215	4.1	140	7.2	17.5	23.0	761	9.8	103	51	12
DATE	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY WAT DIS TOT IT FIELD (MG/L AS CACO3)	BICAR-BONATE WATER DIS IT FIELD (MG/L AS HCO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)
AUG 1994 24...	5.0	5.7	2.4	41	50	7.7	12	<0.10	15	92	<0.010
DATE	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC DIS. (MG/L AS N)	PHOS-PHORUS DIS-SOLVED (MG/L AS P)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P)	IRON, DIS-SOLVED (UG/L AS FE)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	DIMETH-OATE WATER FLTRD (UG/L)	ETHAL-FLUR-ALIN WAT FLT (UG/L)	PHORATE WATER FLTRD (UG/L)
AUG 1994 24...	1.50	1.50	0.030	<0.20	0.020	<0.010	280	39	<0.02	<0.01	<0.01
DATE	TER-BACIL WATER FLTRD 0.7 U GF, REC (UG/L)	TRI-FLUR-ALIN WAT FLT 0.7 U GF, REC (UG/L)	2,6-DI-ETHYL ANILINE WAT FLT 0.7 U GF, REC (UG/L)	ALA-CHLOR, WATER, DISS, REC, (UG/L)	ALPHA BHC DIS-SOLVED (UG/L)	ATRA-ZINE, WATER, DISS, REC (UG/L)	BEN-FLUR-ALIN WAT FLT 0.7 U GF, REC (UG/L)	BUTYL-ATE, WATER, DISS, REC (UG/L)	CAR-BARYL WATER FLTRD 0.7 U GF, REC (UG/L)	CARBO-FURAN WAT FLT 0.7 U GF, REC (UG/L)	CHLOR-PYRIFOS DIS-SOLVED (UG/L)
AUG 1994 24...	<0.03	<0.01	<0.01	<0.01	<0.01	0.04	<0.01	<0.01	0.02	<0.01	<0.01
DATE	CYANA-ZINE, WATER, DISS, REC (UG/L)	DCPA WATER FLTRD 0.7 U GF, REC (UG/L)	P,P' DDE DISSOLV (UG/L)	DEETHYL ATRA-ZINE, WATER, DISS, REC (UG/L)	DI-AZINON, DIS-SOLVED (UG/L)	DI-ELDRIN DIS-SOLVED (UG/L)	DISUL-FOTON WATER FLTRD 0.7 U GF, REC (UG/L)	EPTC WATER FLTRD 0.7 U GF, REC (UG/L)	ETHO-PROP WATER FLTRD 0.7 U GF, REC (UG/L)	FONOFOS WATER DISS REC (UG/L)	LINDANE DIS-SOLVED (UG/L)
AUG 1994 24...	<0.01	<0.004	<0.01	0.06	0.03	<0.01	<0.06	<0.005	<0.01	<0.01	<0.01

POTOMAC RIVER BASIN

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01647720 NORTH BRANCH ROCK CREEK NEAR NORBECK, MD--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	LIN- URON WATER FLTRD 0.7 U GF, REC (UG/L)	MALA- THION, DIS- SOLVED (UG/L)	METHYL AZIN- PHOS WAT FLT 0.7 U GF, REC (UG/L)	METHYL PARA- THION WAT FLT 0.7 U GF, REC (UG/L)	METO- LACHLOR WATER DISSOLV (UG/L)	METRI- BUZIN SENCOR WATER DISSOLV (UG/L)	MOL- INATE WATER FLTRD 0.7 U GF, REC (UG/L)	NAPROP- AMIDE WATER FLTRD 0.7 U GF, REC (UG/L)	PEB- ULATE WATER FILTRD 0.7 U GF, REC (UG/L)	PARA- THION, DIS- SOLVED (UG/L)	PENDI- METH- ALIN WAT FLT 0.7 U GF, REC (UG/L)
AUG 1994 24...	<0.04	<0.01	<0.05	<0.03	0.02	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02
DATE	PER- METHRIN CIS WAT FLT 0.7 U GF, REC (UG/L)	PRO- METON, WATER, DISS, REC (UG/L)	PRON- AMIDE WATER FLTRD 0.7 U GF, REC (UG/L)	PROP- CHLOR, WATER, DISS, REC (UG/L)	PRO- PARGITE WATER FLTRD 0.7 U GF, REC (UG/L)	PRO- PANIL WATER FLTRD 0.7 U GF, REC (UG/L)	SI- MAZINE, WATER, DISS, REC (UG/L)	TEBU- THIURON WATER FLTRD 0.7 U GF, REC (UG/L)	TER- BUFOS WATER FLTRD 0.7 U GF, REC (UG/L)	THIO- BENCARB WATER FLTRD 0.7 U GF, REC (UG/L)	TRIAL- LATE WATER FLTRD 0.7 U GF, REC (UG/L)
AUG 1994 24...	<0.02	<0.01	<0.01	<0.02	<0.01	<0.02	0.04	<0.02	<0.01	<0.01	<0.01

SUSPENDED SEDIMENT DISCHARGE

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)
AUG 1994 24...	1215	4.1	9	0.10

POTOMAC RIVER BASIN

01648000 ROCK CREEK AT SHERRILL DRIVE, WASHINGTON, DC

LOCATION.--Lat 38°58'21", long 77°02'25", District of Columbia, Hydrologic Unit 02070010, on left bank 125 ft downstream from Sherrill Drive Bridge in Rock Creek Park in Washington, and 7.5 mi upstream from mouth.

DRAINAGE AREA.--62.2 mi².

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.--Water-discharge records good except those for estimated daily discharges (ice effect), which are fair.

Flow affected by two upstream reservoirs which control flow from about 25 mi², Needwood Lake on Rock Creek since Sept. 1966 and Bernard Frank Lake on North Branch Rock Creek since February 1968.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,200 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 28	0630	*4,050	*10.99	June 16	1700	1,390	6.30
Dec. 5	0300	1,460	6.53	Aug. 11	2400	1,210	5.74
Feb. 23	1345	1,300	6.01	Aug. 21	1900	1,200	5.70
Mar. 27	1245	1,210	5.73				

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16	28	149	35	88	124	166	60	31	26	103	48
2	20	16	123	44	66	138	134	52	28	20	37	24
3	13	15	99	39	53	432	120	47	27	33	29	23
4	11	14	167	137	46	294	107	96	27	58	24	20
5	10	36	856	66	42	229	90	95	26	28	123	20
6	9.8	26	212	47	41	174	92	56	26	22	31	19
7	9.2	15	162	143	42	148	165	106	33	21	20	19
8	9.0	14	131	267	42	167	84	255	49	20	18	19
9	11	13	105	96	127	152	73	105	29	18	17	18
10	14	12	88	69	74	484	101	79	26	16	15	16
11	9.3	12	72	52	49	181	75	64	30	14	130	16
12	113	12	46	175	54	144	68	63	26	13	262	15
13	26	19	37	95	53	125	111	51	25	12	43	15
14	16	42	34	72	56	104	140	45	24	50	88	15
15	14	16	104	60	57	88	101	48	98	42	64	16
16	12	14	116	e54	80	76	149	109	258	17	61	16
17	11	62	52	51	101	67	97	50	67	159	169	22
18	11	102	42	163	155	72	82	43	34	57	151	37
19	10	30	50	78	267	65	72	41	27	25	61	17
20	14	22	37	e70	283	59	66	46	26	19	40	14
21	57	18	192	e60	274	93	62	39	30	90	234	13
22	43	16	71	e58	187	117	58	38	26	43	202	183
23	17	15	53	e62	598	72	56	36	34	31	108	141
24	14	15	43	201	413	66	56	61	170	16	75	37
25	12	14	38	187	248	119	55	330	45	19	50	27
26	11	13	35	240	205	68	55	66	23	77	181	152
27	16	311	33	102	171	472	63	45	22	132	84	247
28	41	2020	32	351	143	557	57	37	26	495	57	78
29	13	228	32	229	---	495	67	34	37	135	70	49
30	85	175	31	139	---	215	66	34	45	93	36	33
31	53	---	30	113	---	173	---	31	---	179	30	---
TOTAL	721.3	3345	3272	3555	4015	5770	2688	2262	1375	1980	2613	1369
MEAN	23.3	111	106	115	143	186	89.6	73.0	45.8	63.9	84.3	45.6
MAX	113	2020	856	351	598	557	166	330	258	495	262	247
MIN	9.0	12	30	35	41	59	55	31	22	12	15	13
CFM	.37	1.79	1.70	1.84	2.31	2.99	1.44	1.17	.74	1.03	1.36	.73
IN.	.43	2.00	1.96	2.13	2.40	3.45	1.61	1.35	.82	1.18	1.56	.82

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1930 - 1994, BY WATER YEAR (WY)

	MEAN	40.4	51.6	61.7	70.8	83.2	90.8	85.6	74.0	59.2	49.2	47.8	44.3
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	

POTOMAC RIVER BASIN

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01648000 ROCK CREEK AT SHERRILL DRIVE, WASHINGTON, DC--Continued

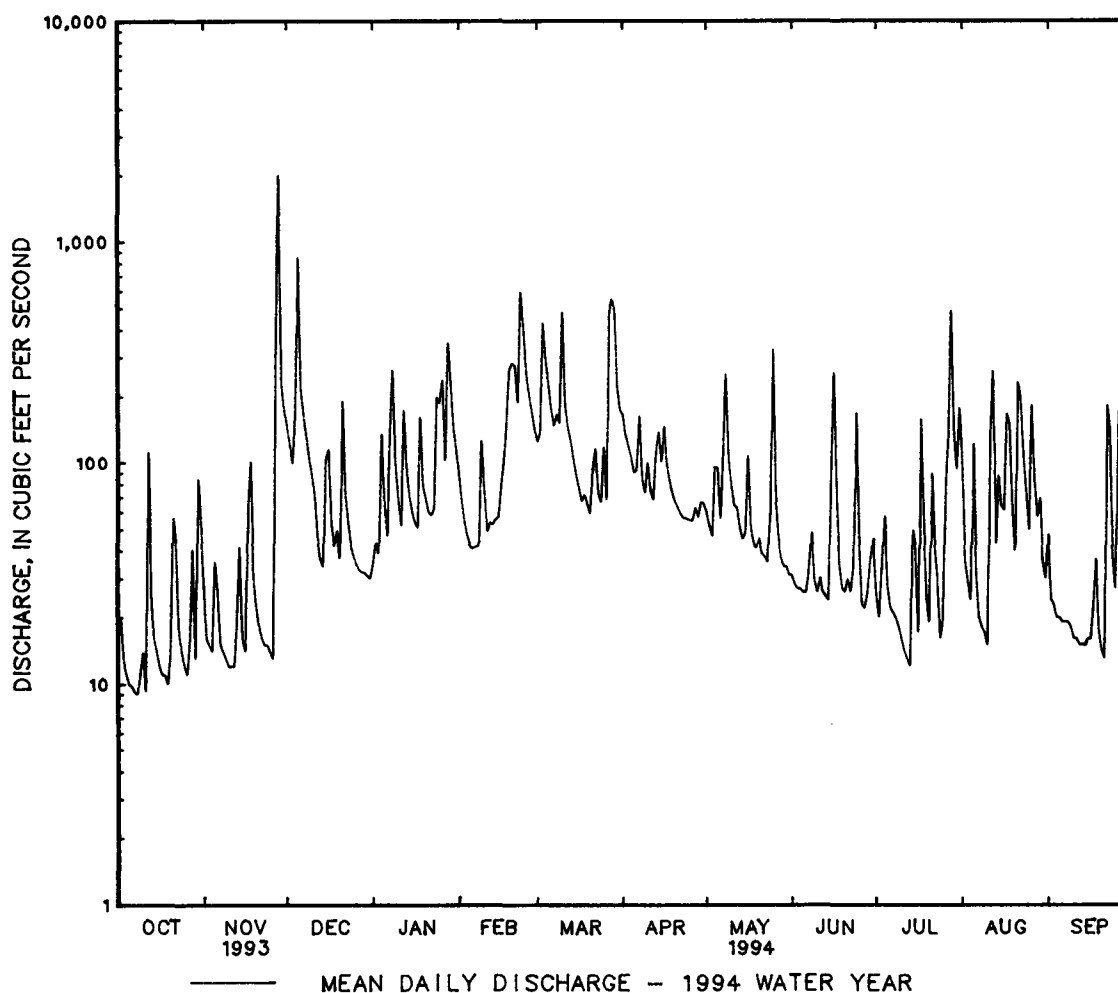
SUMMARY STATISTICS	FOR 1993 CALENDAR YEAR		FOR 1994 WATER YEAR		WATER YEARS 1930 - 1994	
ANNUAL TOTAL	30380.4		32965.3		63.1	
ANNUAL MEAN	83.2		90.3		142	
HIGHEST ANNUAL MEAN					16.1	
LOWEST ANNUAL MEAN					5000	
HIGHEST DAILY MEAN	2020	Nov 28	2020	Nov 28	5000	Jun 22 1972
LOWEST DAILY MEAN	6.9	Sep 12	9.0	Oct 8	.50	(a)
ANNUAL SEVEN-DAY MINIMUM	10	Oct 5	10	Oct 5	.50	Oct 1 1930
INSTANTANEOUS PEAK FLOW			4050	Nov 28	(b)12500	Jun 22 1972
INSTANTANEOUS PEAK STAGE			10.99	Nov 28	(c)16.20	Jun 22 1972
INSTANTANEOUS LOW FLOW			8.6	(d)	.50	(a)
ANNUAL RUNOFF (CFSM)	1.34		1.45		1.01	
ANNUAL RUNOFF (INCHES)	18.17		19.72		13.78	
10 PERCENT EXCEEDS	178		185		121	
50 PERCENT EXCEEDS	43		53		37	
90 PERCENT EXCEEDS	12		15		13	

a Oct. 1-7, 1930.

b From rating curve extended above 5,640 ft³/s on basis of contracted-opening measurements at gage heights of 13.19 ft and 16.2 ft.

c From floodmark.

d Oct. 7, 8, 11, 12.



POTOMAC RIVER BASIN

01648000 ROCK CREEK AT SHERRILL DRIVE, WASHINGTON, DC--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1993 to September 1994.

WATER QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH WATER WHOLE FIELD (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	TEMPER- ATURE AIR (DEG C)	BARO- METRIC PRES- SURE (MM OF HG)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	HARD- NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)
OCT 1993												
14...	1330	15	220	6.7	12.0	14.0	--	--	--	73	20	5.6
AUG 1994												
24...	0930	82	170	7.3	20.0	25.5	166	9.1	502	58	15	4.9
29...	0930	40	218	7.2	23.0	23.0	--	--	--	71	19	5.6
DATE		SODIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY WAT DIS TOT IT FIELD MG/L AS CACO3	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS NO3)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)
OCT 1993												
14...	10	3.4	51	--	14	23	--	6.5	--	--	--	<0.010
AUG 1994												
24...	7.4	2.9	39	48	9.6	17	0.10	7.1	98	3.0	0.020	
29...	9.8	3.1	46	--	12	23	0.10	7.7	125	3.9	0.030	
DATE		NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N)	PHOS- PHORUS DIS- SOLVED (MG/L AS P)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P)	IRON, DIS- SOLVED (UG/L AS FE)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	DIMETH- OATE WATER FLTRD 0.7 U GG, REC (UG/L)	ETHAL- FLUR- ALIN WAT FLT 0.7 U GF, REC (UG/L)	PHORATE WATER FLTRD 0.7 U GF, REC (UG/L)
OCT 1993												
14...	0.630	0.630	--	--	--	--	--	190	36	--	--	--
AUG 1994												
24...	0.690	0.690	0.050	0.40	0.020	<0.010	220	29	<0.02	<0.01	<0.01	
29...	0.900	0.900	--	--	--	--	270	51	--	--	--	
DATE		TER- BACIL WATER FLTRD 0.7 U GF, REC (UG/L)	TRI- FLUR- ALIN WAT FLT 0.7 U GF, REC (UG/L)	2,6-DI- ETHYL ANILINE WAT FLT 0.7 U GF, REC (UG/L)	ALA- CHLOR, WATER, DISS, REC, (UG/L)	ALPHA BHC DIS- SOLVED (UG/L)	ATRA- ZINE, WATER, DISS, REC (UG/L)	BEN- FLUR- ALIN WAT FLD 0.7 U GF, REC (UG/L)	BUTYL- ATE, WATER, DISS, REC (UG/L)	CAR- BARYL WATER FLTRD 0.7 U GF, REC (UG/L)	CARBO- FURAN WATER FLTRD 0.7 U GF, REC (UG/L)	CHLOR- PYRIFOS DIS- SOLVED (UG/L)
AUG 1994												
24...	<0.03	<0.01	<0.01	<0.01	<0.01	<0.01	0.03	<0.01	<0.01	0.07	<0.01	<0.01

POTOMAC RIVER BASIN

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01648000 ROCK CREEK AT SHERRILL DRIVE, WASHINGTON, DC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	CYANA- ZINE, WATER, DISS, REC (UG/L)	DCPA WATER FLTRD 0.7 U GF, REC (UG/L)	P,P' DDE DISSOLV (UG/L)	DEETHYL ATRA- ZINE, WATER, DISS, REC (UG/L)	DI- AZINON, DIS- SOLVED (UG/L)	DI- ELDRIN DIS- SOLVED (UG/L)	DISUL- FOTON WATER FLTRD 0.7 U GF, REC (UG/L)	EPTC WATER FLTRD 0.7 U GF, REC (UG/L)	ETHO- PROP WATER FLTRD 0.7 U GF, REC (UG/L)	FONOFOS WATER DISS REC (UG/L)	LINDANE DIS- SOLVED (UG/L)
AUG 1994 24...	<0.01	<0.004	<0.01	0.03	0.21	<0.01	<0.06	<0.005	<0.01	<0.01	<0.01

DATE	LIN- URON WATER FLTRD 0.7 U GF, REC (UG/L)	MALA- THION, DIS- SOLVED (UG/L)	METHYL AZIN- PHOS WAT FLT 0.7 U GF, REC (UG/L)	METHYL PARA- THION WAT FLT 0.7 U GF, REC (UG/L)	METO- LACHLOR WATER DISSOLV (UG/L)	METRI- BUZIN SENCOR WATER DISSOLV (UG/L)	MOL- INATE WATER FLTRD 0.7 U GF, REC (UG/L)	NAPROP- AMIDE WATER FLTRD 0.7 U GF, REC (UG/L)	PEB- ULATE WATER FILTRD 0.7 U GF, REC (UG/L)	PARA- THION, DIS- SOLVED (UG/L)	PENDI- METH- ALIN WAT FLT 0.7 U GF, REC (UG/L)
AUG 1994 24...	<0.04	<0.01	<0.05	<0.03	0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02

DATE	PER- METHRIN CIS WAT FLT 0.7 U GF, REC (UG/L)	PRO- METON, WATER, DISS, REC (UG/L)	PRON- AMIDE WATER FLTRD 0.7 U GF, REC (UG/L)	PROP- CHLOR, WATER, DISS, REC (UG/L)	PRO- PARGITE WATER FLTRD 0.7 U GF, REC (UG/L)	PRO- PANIL WATER FLTRD 0.7 U GF, REC (UG/L)	SI- MAZINE, WATER, DISS, REC (UG/L)	TEBU- THIURON WATER FLTRD 0.7 U GF, REC (UG/L)	TER- BUFOS WATER FLTRD 0.7 U GF, REC (UG/L)	THIO- BENCARB WATER FLTRD 0.7 U GF, REC (UG/L)	TRIAL- LATE WATER FLTRD 0.7 U GF, REC (UG/L)
AUG 1994 24...	<0.02	0.01	<0.01	<0.02	<0.01	<0.02	0.05	<0.02	<0.01	<0.01	<0.01

SUSPENDED SEDIMENT DISCHARGE

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)
AUG 1994 24...	0930	81	8	1.7

POTOMAC RIVER BASIN

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 mi².

WATER-DISCHARGE RECORDS

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.--Water-discharge records good except those for estimated daily discharge, (ice effect), which are fair. Some regulation at low flow by sand and gravel plants upstream from station.

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 mean sea level, from floodmarks, discharge, 10,500 ft³/s, from rating curve extended above 3,000 ft³/s on basis of velocity-area study.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,000 ft³/s and maximum (*):

Discharge				Gage height				Discharge				Gage height			
Date	Time	(ft ³ /s)	(ft)	Date	Time	(ft ³ /s)	(ft)	Date	Time	(ft ³ /s)	(ft)	Date	Time	(ft ³ /s)	(ft)
Nov. 28	0630	*7,880	*9.45	Mar. 28	0715	3,540	6.55	Mar. 28	0715	3,540	6.55	Mar. 28	0715	3,540	6.55
Dec. 5	0345	7,110	9.06	June 23	1900	2,030	5.07	June 23	1900	2,030	5.07	June 23	1900	2,030	5.07
Feb. 23	1200	2,850	5.91	June 24	1700	2,380	5.44	June 24	1700	2,380	5.44	June 24	1700	2,380	5.44
Mar. 10	0930	2,880	5.93	Aug. 5	1230	3,260	6.29	Aug. 5	1230	3,260	6.29	Aug. 5	1230	3,260	6.29
Mar. 27	1130	2,780	5.84	Sep. 26	2130	3,430	6.45	Sep. 26	2130	3,430	6.45	Sep. 26	2130	3,430	6.45

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

MEAN DAILY VALUES												
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	23	62	63	47	77	81	188	54	29	89	69	26
2	26	43	53	59	62	268	124	44	27	88	54	22
3	20	38	48	55	57	1020	102	42	28	90	33	21
4	18	37	202	234	50	602	95	124	27	90	28	21
5	16	64	3280	108	49	332	84	119	30	37	474	20
6	16	48	327	62	50	172	97	62	27	30	122	19
7	16	38	125	244	51	129	306	115	33	30	39	18
8	15	33	82	592	52	164	118	256	90	25	29	17
9	19	32	65	132	174	190	89	85	34	23	25	17
10	23	32	64	71	85	1200	142	65	27	21	23	17
11	18	32	67	57	59	319	109	54	31	19	286	16
12	232	32	49	271	61	146	86	57	28	17	288	16
13	49	39	44	164	68	115	177	49	25	17	63	15
14	29	54	43	109	89	103	159	44	22	123	163	15
15	26	37	184	66	83	94	95	50	170	64	101	20
16	24	32	220	54	129	85	111	87	183	30	100	19
17	22	103	81	117	176	74	79	50	98	237	165	35
18	21	118	61	218	264	83	68	47	45	102	99	39
19	20	50	68	70	427	80	64	45	36	38	51	20
20	26	38	53	e64	393	69	61	54	34	25	39	17
21	75	32	328	e62	340	139	58	49	30	27	120	17
22	54	30	112	e62	210	173	56	43	29	32	88	277
23	30	29	69	e70	1200	92	54	40	196	25	40	215
24	25	27	55	211	866	75	53	44	305	21	31	46
25	24	27	53	166	252	186	52	243	85	50	26	28
26	27	27	47	246	139	103	49	83	36	232	190	418
27	40	468	41	87	91	1010	83	53	45	268	51	426
28	51	3600	38	511	76	1780	77	38	36	240	35	72
29	31	248	38	308	---	1150	54	34	63	64	52	40
30	167	94	39	142	---	299	54	30	230	39	36	30
31	116	---	42	93	---	165	---	29	---	40	28	---
TOTAL	1299	5544	6041	4752	5630	10498	2944	2189	2079	2233	2948	1979
MEAN	41.9	185	195	153	201	339	98.1	70.6	69.3	72.0	95.1	66.0
MAX	232	3600	3280	592	1200	1780	306	256	305	268	474	426
MIN	15	27	38	47	49	69	49	29	22	17	23	15
CFSM	.58	2.54	2.68	2.11	2.76	4.65	1.35	.97	.95	.99	1.31	.91
IN.	.66	2.83	3.09	2.43	2.88	5.36	1.50	1.12	1.06	1.14	1.51	1.01

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1938 - 1994, BY WATER YEAR (WY)

MEAN	52.7	72.7	93.1	101	114	131	112	94.1	68.1	61.4	65.5	58.3
MAX	234	205	248	325	265	339	322	329	353	335	243	449
(WY)	1943	1973	1984	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	9.14	7.94	8.32
(WY)	1942	1942	1966	1955	1947	1981	1985	1941	1965	1966	1962	1941

POTOMAC RIVER BASIN

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01649500 NORTHEAST BRANCH ANACOSTIA RIVER AT RIVERDALE, MD

SUMMARY STATISTICS

FOR 1993 CALENDAR YEAR

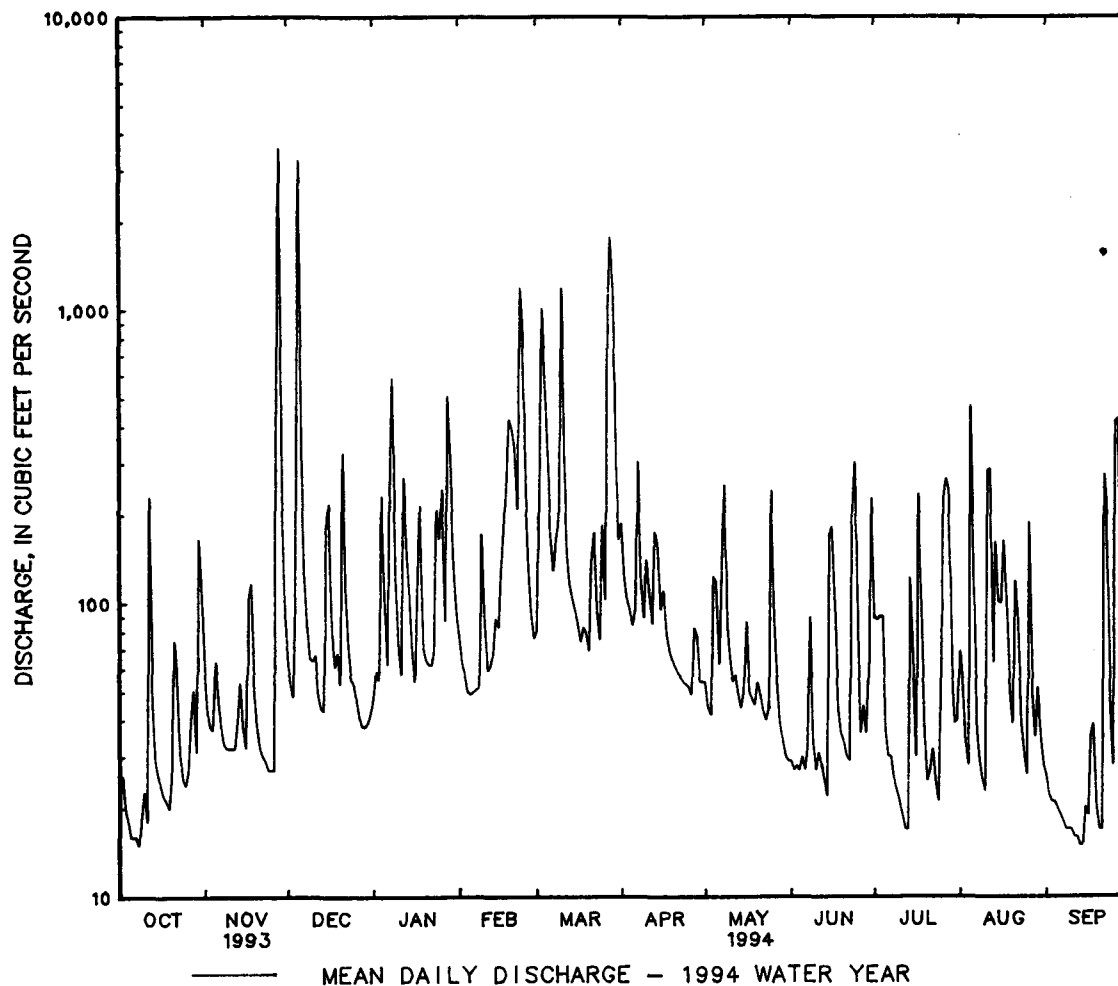
FOR 1994 WATER YEAR

WATER YEARS 1938 - 1994

ANNUAL TOTAL	43096		48136			
ANNUAL MEAN	118		132		85.2	
HIGHEST ANNUAL MEAN					150	1972
LOWEST ANNUAL MEAN					49.3	1981
HIGHEST DAILY MEAN	3600	Nov 28	3600	Nov 28	6830	Sep 26 1975
LOWEST DAILY MEAN	12	Sep 2	15	(a)	1.4	Sep 12 1966
ANNUAL SEVEN-DAY MINIMUM	14	Aug 28	16	Sep 8	1.7	Sep 7 1966
INSTANTANEOUS PEAK FLOW			7880	Nov 28	(b)12000	Jun 22 1972
INSTANTANEOUS PEAK STAGE			9.45	Nov 28	12.93	Oct 16 1942
INSTANTANEOUS LOW FLOW			14	Sep 12	UNKNOWN	
ANNUAL RUNOFF (CFSM)	1.62		1.81		1.17	
ANNUAL RUNOFF (INCHES)	22.02		24.60		15.91	
10 PERCENT EXCEEDS	218		250		165	
50 PERCENT EXCEEDS	50		57		44	
90 PERCENT EXCEEDS	19		23		16	

a Sept. 13, 14, Oct. 8.

b From rating curve extended above 3,800 ft³/s on basis of the average of contracted-opening and slope-area measurements at gage height 9.52 ft.



POTOMAC RIVER BASIN

01649500 NORTHEAST BRANCH ANACOSTIA RIVER AT RIVERDALE, MD--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1963, 1969-74, 1992, October 1993 to September 1994.

WATER QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH WATER WHOLE FIELD (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	TEMPER-ATURE AIR (DEG C)	HARD-NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY WAT DIS TOT IT FIELD MG/L AS CACO3
OCT 1993 15...	0900	24	217	6.4	13.0	14.0	58	16	4.3	14	3.4	37
SEP 1994 02...	0745	23	243	7.1	20.0	19.0	65	18	4.9	17	3.5	39

DATE	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS NO3)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, DIS-SOLVED (MG/L AS N)	IRON, DIS-SOLVED (UG/L AS FE)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)
OCT 1993 15...	16	27	--	6.0	--	3.7	0.010	0.850	0.850	120	46
SEP 1994 02...	16	31	0.10	3.6	127	4.4	0.010	1.00	1.00	210	36

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 mi².

PERIOD OF RECORD.--July 1938 to current year. Monthly discharge only for July 1938 published in WSP 1302.

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.--Water-discharge records good except those for estimated daily discharges (Dec. 5 to Jan. 21, orifice line cut; Apr. 8-14, dead manometer battery; Sept. 1-7, unknown backwater), which are fair. 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.

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 28	0315	*8,340	*7.79	Mar. 28	0715	1,780	3.80
Dec. 5	Unknown	Unknown	Unknown	June 24	1615	1,990	3.98
Mar. 10	0830	1,830	3.84				

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	23	34	e32	45	58	100	48	27	24	54	e20
2	18	13	30	e39	38	157	78	40	24	107	34	e18
3	12	11	29	e38	37	543	71	36	24	44	19	e16
4	10	12	e100	e140	35	286	70	87	24	52	16	e15
5	11	37	e1000	e100	35	196	64	70	24	21	170	e15
6	10	26	e450	e52	34	114	73	41	24	18	34	e14
7	11	14	e110	e140	36	85	169	83	47	18	16	e13
8	12	12	e60	e350	37	113	e90	177	51	16	14	12
9	15	13	e46	e110	115	114	e70	54	26	17	13	10
10	21	13	e46	e60	56	565	e80	45	21	16	13	9.8
11	13	15	e49	e48	49	127	e76	40	27	13	161	9.5
12	152	15	e37	e130	46	81	e62	44	23	12	205	8.7
13	31	29	e32	e80	44	73	e120	37	22	13	32	9.1
14	13	36	e32	e60	59	68	e100	34	20	88	116	9.7
15	11	18	e80	e50	53	64	69	40	29	32	60	12
16	11	16	e120	e41	80	59	91	72	77	16	68	11
17	9.9	81	e66	e66	97	52	62	36	32	205	162	28
18	8.7	82	e46	e130	157	62	55	32	19	57	75	25
19	8.0	24	e45	e54	288	57	52	33	17	19	37	11
20	11	16	e40	e47	241	52	49	38	18	15	28	8.8
21	50	13	e170	e46	192	99	51	31	21	42	167	8.0
22	36	12	e110	49	106	105	55	30	18	54	120	195
23	12	12	e52	55	648	60	52	29	96	28	38	114
24	8.2	12	e40	149	421	56	49	43	200	17	27	24
25	8.5	12	e36	137	121	116	50	203	40	26	24	15
26	12	11	e33	163	77	62	48	66	18	105	148	37
27	20	443	e29	49	57	569	69	35	16	96	36	72
28	29	2670	e27	375	51	702	47	31	16	185	26	20
29	11	92	e27	175	---	519	42	29	41	38	44	14
30	94	48	e27	80	---	138	50	29	72	22	30	11
31	55	---	e28	51	---	96	---	28	---	79	22	---
TOTAL	735.3	3831	3031	3096	3255	5448	2114	1641	1114	1495	2009	785.6
MEAN	23.7	128	97.8	99.9	116	176	70.5	52.9	37.1	48.2	64.8	26.2
MAX	152	2670	1000	375	648	702	169	203	200	205	205	195
MIN	8.0	11	27	32	34	52	42	28	16	12	13	8.0
CFSM	.48	2.59	1.98	2.02	2.35	3.56	1.43	1.07	.75	.98	1.31	.53
IN.	.55	2.88	2.28	2.33	2.45	4.10	1.59	1.24	.84	1.13	1.51	.55

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1938 - 1994. BY WATER YEAR (WY)

MEAN	28.4	40.6	49.3	53.2	63.5	70.7	62.2	54.9	41.9	34.7	38.2	36.8
MAX	129	128	136	173	183	176	167	198	237	159	193	327
(WY)	1980	1994	1984	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

POTOMAC RIVER BASIN

01651000 NORTHWEST BRANCH ANACOSTIA RIVER NEAR HYATTSVILLE, MD--Continued

SUMMARY STATISTICS	FOR 1993 CALENDAR YEAR		FOR 1994 WATER YEAR		WATER YEARS 1938 - 1994	
ANNUAL TOTAL	24257.6		28554.9		(a)47.9	
ANNUAL MEAN	(a)66.5		(a)78.2		96.9	
HIGHEST ANNUAL MEAN					20.8	
LOWEST ANNUAL MEAN					5050	
HIGHEST DAILY MEAN	2670	Nov 28	2670	Nov 28		Sep 26 1975
LOWEST DAILY MEAN	8.0	Oct 19	8.0	(b)	.40	(c)
ANNUAL SEVEN-DAY MINIMUM	10	Oct 14	9.8	Sep 8	.60	Sep 7 1966
INSTANTANEOUS PEAK FLOW			8340	Nov 28	(d)18000	Jun 22 1972
INSTANTANEOUS PEAK STAGE			7.79	Nov 28	14.47	Jun 22 1972
INSTANTANEOUS LOW FLOW			7.6	Oct 18	.20	(f)
ANNUAL RUNOFF (CFSM)	1.35		1.58		.97	
ANNUAL RUNOFF (INCHES)	18.27		21.50		13.17	
10 PERCENT EXCEEDS	131		150		91	
50 PERCENT EXCEEDS	33		41		23	
90 PERCENT EXCEEDS	12		12		6.5	

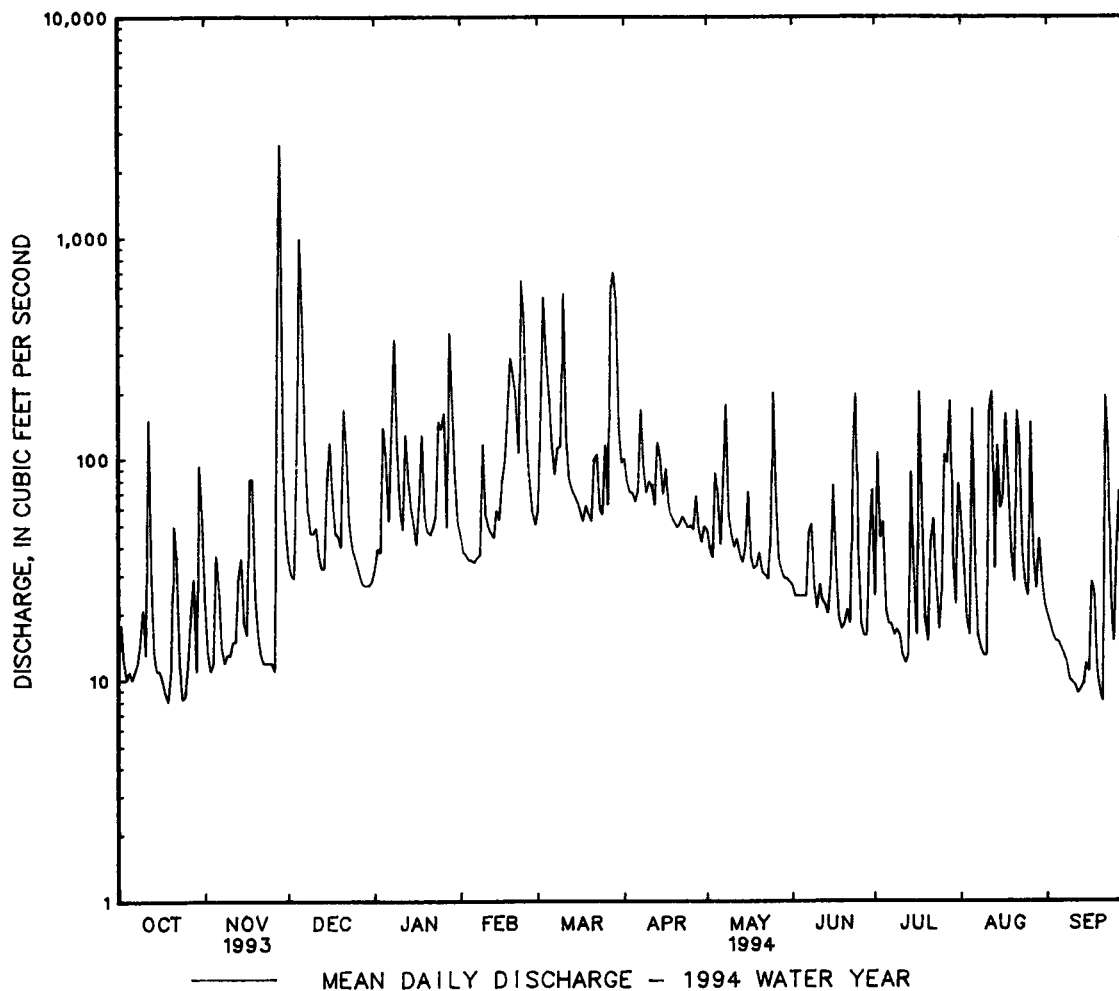
a Unadjusted.

b Oct. 19, Sept. 21.

c Sept. 8, 11, 1966.

d From rating curve extended above 4,000 ft³/s on the basis of the average of slope-area and step-backwater measurements of peak flow.

f Oct. 18, 19, 24, 25, Sept. 21, 22.



POTOMAC RIVER BASIN

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01651000 NORTHWEST BRANCH ANACOSTIA RIVER NEAR HYATTSVILLE, MD--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1963, 1969-74, 1992, October 1993 to September 1994.

WATER QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH WATER WHOLE FIELD (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	TEMPER- ATURE AIR (DEG C)	HARD- NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
OCT 1993 15...	0800	11	254	6.7	12.5	13.0	80	23	5.5	11	3.8
AUG 1994 29...	1100	24	238	7.0	24.0	24.0	78	23	5.0	11	3.1

DATE	ALKA- LITY WAT DIS TOT IT FIELD MG/L AS CACO3	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	IRON, DIS- SOLVED (UG/L AS FE)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)
OCT 1993 15...	57	21	24	--	6.4	--	<0.010	0.860	0.860	210	66
AUG 1994 29...	48	14	25	0.30	7.8	138	<0.010	0.920	0.920	150	57

POTOMAC RIVER BASIN

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 mi².

PERIOD OF RECORD.--June 1992 to current year.

GAGE.--Water-stage recorder and cobblestone control. Datum of gage is 16.52 ft above sea level.

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.

PEAK DISCHARGES FOR CURRENT PERIOD.--Peak discharges greater than base discharge of 350 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 28	0300	745	5.47	Aug. 5	1200	538	4.76
Dec. 5	0300	402	4.22	Aug. 11	2000	848	5.79
Mar. 28	0200	488	4.57	Aug. 26	0130	642	5.13
July 2	1945	351	4.00	Sep. 26	2030	*1,510	*7.36
July 27	1915	543	4.78				

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.2	1.7	1.7	3.0	3.6	5.5	9.3	2.5	1.7	.60	.89	.75
2	1.2	1.3	1.6	6.6	3.0	51	6.1	1.7	1.6	14	1.5	.67
3	.64	1.3	1.5	3.2	2.6	50	5.4	1.7	1.6	1.9	.95	.67
4	.60	1.3	12	14	2.3	14	5.2	18	1.5	1.1	2.9	.65
5	.60	3.0	55	3.3	2.2	9.4	4.6	4.9	1.4	.78	19	.70
6	.60	1.7	4.2	2.5	2.3	7.1	5.8	2.8	1.4	1.1	1.4	.87
7	.60	1.3	2.4	16	2.2	6.5	18	7.1	e1.7	1.6	1.1	.89
8	.60	1.1	2.1	20	2.4	8.6	4.5	12	e2.2	1.2	1.0	.85
9	3.1	1.1	1.7	4.1	12	12	4.0	3.1	e1.5	1.8	.78	.79
10	1.5	1.2	1.9	3.1	e5.8	39	6.4	2.6	e1.4	.95	.76	.75
11	.72	1.2	1.7	2.7	e5.2	8.1	3.8	3.1	e1.5	.73	36	.72
12	14	1.1	2.2	17	e5.0	6.0	3.6	3.2	e1.4	1.0	4.5	.74
13	.99	2.0	1.4	6.9	e5.4	5.4	9.1	2.4	e1.3	.91	1.4	.69
14	.78	1.5	1.4	e5.0	6.1	4.9	3.9	2.2	e1.7	2.8	4.7	.70
15	.80	1.3	12	e3.3	6.6	5.0	3.5	4.1	e3.4	4.1	1.3	1.0
16	.78	1.2	4.3	e3.5	11	4.1	5.9	3.3	e2.8	.96	8.5	.76
17	.81	9.0	1.9	e6.4	10	3.6	3.2	2.5	e1.8	5.8	4.9	4.2
18	.76	2.9	1.7	11	11	5.0	3.0	2.5	e1.5	2.5	1.9	2.4
19	.67	1.6	2.6	e4.5	13	3.7	2.9	2.4	e1.3	.90	1.1	.85
20	4.8	1.2	2.0	e3.2	11	3.3	2.7	3.0	e1.2	1.1	.97	.78
21	5.1	1.1	13	e3.0	10	14	2.6	2.6	e1.1	.77	1.4	.78
22	1.5	1.1	2.5	e5.2	6.3	6.6	2.4	2.4	e2.5	8.7	1.9	35
23	1.1	1.1	2.0	9.4	53	4.3	2.4	2.5	5.1	1.3	.90	5.1
24	1.3	1.2	1.7	15	22	3.7	2.4	2.2	3.7	1.1	.78	1.4
25	1.1	1.3	1.7	12	8.0	10	2.4	3.5	.88	.88	.80	1.1
26	1.4	1.3	1.6	12	5.9	4.1	2.2	2.2	1.6	12	27	74
27	3.1	30	1.5	7.0	4.9	47	15	2.0	3.9	23	1.4	8.3
28	1.9	75	1.4	32	4.6	86	2.8	1.9	.73	7.1	1.1	1.6
29	1.3	3.3	1.5	8.0	---	39	2.0	1.9	.87	3.6	1.4	1.2
30	13	2.0	1.6	4.5	---	10	1.9	1.8	.76	1.3	.91	.99
31	3.7	---	1.8	4.1	---	9.2	---	1.8	---	.96	.78	---
TOTAL	70.25	155.4	145.6	251.5	237.4	486.1	147.0	109.9	55.04	106.54	133.92	149.90
MEAN	2.27	5.18	4.70	8.11	8.48	15.7	4.90	3.55	1.83	3.44	4.32	5.00
MAX	14	75	55	32	53	86	18	18	5.1	23	36	74
MIN	.60	1.1	1.4	2.5	2.2	3.3	1.9	1.7	.73	.60	.76	.65
CFSM	.69	1.58	1.43	2.47	2.58	4.78	1.49	1.08	.56	1.05	1.32	1.52
IN.	.80	1.76	1.65	2.85	2.69	5.51	1.67	1.25	.62	1.21	1.52	1.70

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1992 - 1994, BY WATER YEAR (WY)

	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
MEAN	1.85	4.22	4.49	6.84	6.32	15.3	5.64	3.93	1.98	3.29	2.98	3.24
MAX	2.27	5.18	4.70	8.11	8.48	15.7	6.39	4.31	2.12	4.12	4.32	5.00
(WY)	1994	1994	1994	1994	1994	1994	1993	1993	1993	1992	1994	1994
MIN	1.43	3.26	4.28	5.56	4.17	15.0	4.90	3.55	1.83	2.31	1.96	2.17
(WY)	1993	1993	1993	1993	1993	1993	1994	1994	1994	1993	1992	1993

01651800 WATTS BRANCH AT WASHINGTON, D.C.--Continued

SUMMARY STATISTICS

FOR 1993 CALENDAR YEAR

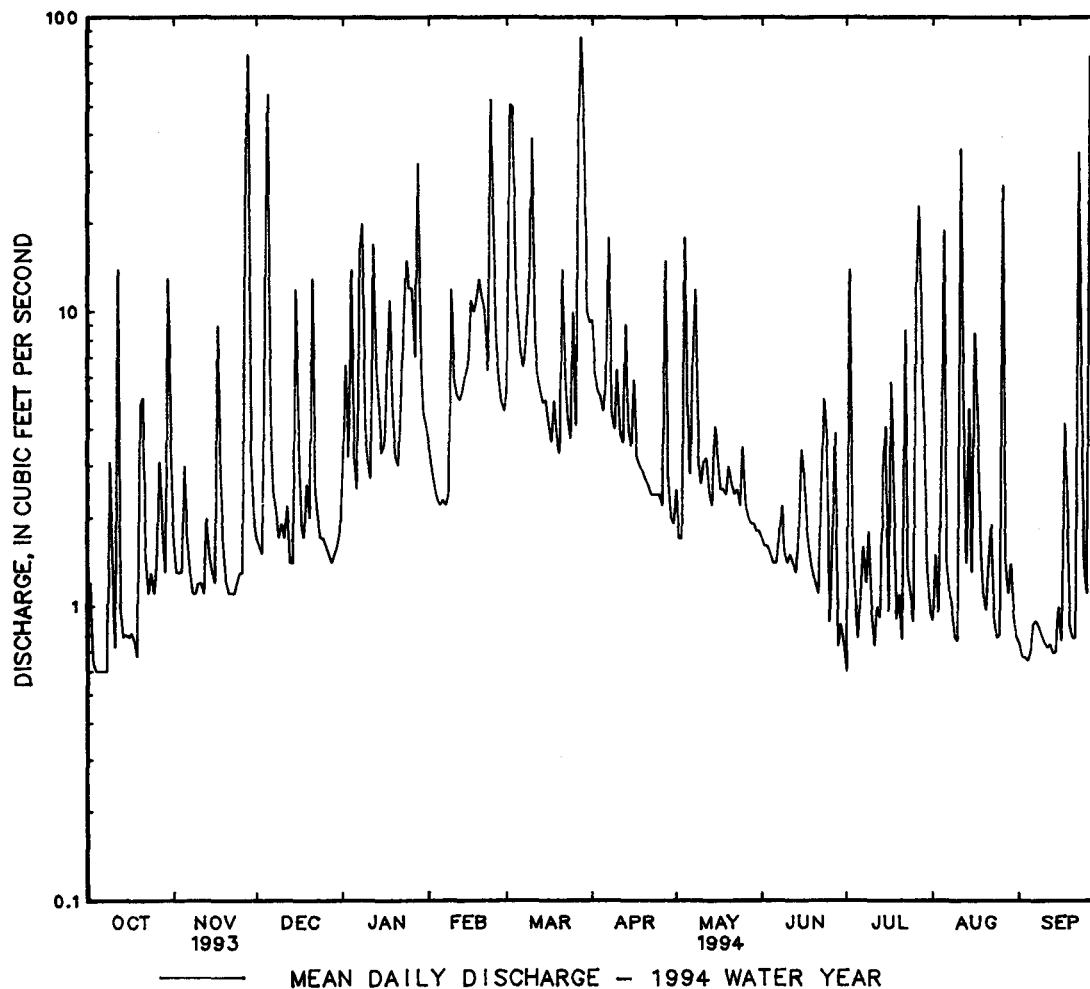
FOR 1994 WATER YEAR

WATER YEARS 1992 - 1994

ANNUAL TOTAL	1733.48	2048.55	5.05	
ANNUAL MEAN	4.75	5.61	5.61	1994
HIGHEST ANNUAL MEAN			4.48	1993
LOWEST ANNUAL MEAN			109	Mar 17 1993
HIGHEST DAILY MEAN	109 Mar 17	86 Mar 28	109	Mar 17 1993
LOWEST DAILY MEAN	.37 Jul 23	.60 (a)	.37	Jul 23 1993
ANNUAL SEVEN-DAY MINIMUM	.45 Jul 30	.69 Oct 2	.45	Jul 30 1993
INSTANTANEOUS PEAK FLOW		1510 Sep 26	1510	Sep 26 1994
INSTANTANEOUS PEAK STAGE		7.36 Sep 26	7.36	Sep 26 1994
INSTANTANEOUS LOW FLOW		.46 Jul 25	.36	(b)
ANNUAL RUNOFF (CFSM)	1.45	1.71	1.54	
ANNUAL RUNOFF (INCHES)	19.66	23.23	20.91	
10 PERCENT EXCEEDS	11	12	11	
50 PERCENT EXCEEDS	2.1	2.4	2.0	
90 PERCENT EXCEEDS	.74	.80	.80	

a Oct. 4-8, 1993, July 1, 1994.

b July 22-26, 28-31, Aug. 1, 2, 1993.



POTOMAC RIVER BASIN

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 mi².

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 (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.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 450 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 28	1100	741	6.63	Mar. 3	1700	1,250	7.75
Dec. 5	1330	507	5.83	Mar. 10	1700	705	6.53
Jan. 29	0330	683	6.46	Mar. 28	1100	*1,970	*8.68
Feb. 24	1030	856	6.94				

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.2	15	26	21	45	78	236	31	7.2	12	8.1	4.4
2	2.1	8.7	20	34	38	206	184	29	6.5	5.4	6.5	5.9
3	1.5	5.9	17	31	34	1030	161	26	5.5	5.1	45	6.9
4	1.4	5.1	21	92	32	493	146	43	5.2	5.4	8.2	9.6
5	1.3	5.7	364	51	32	208	134	91	5.3	4.0	11	10
6	.60	12	115	32	31	149	141	34	4.9	2.7	12	9.2
7	1.7	9.5	43	37	30	126	215	32	4.9	2.5	5.7	6.7
8	4.3	7.4	31	259	33	129	137	100	15	2.8	4.1	3.1
9	5.0	5.4	26	74	108	129	118	38	12	1.0	3.3	1.3
10	8.9	4.9	23	41	84	528	115	29	6.5	.47	2.8	.32
11	8.5	4.5	27	36	44	353	113	25	5.1	.28	2.7	.09
12	35	4.2	20	167	42	153	100	25	5.9	.11	13	.03
13	16	4.1	18	128	41	127	136	22	5.1	.03	6.6	.02
14	5.8	4.3	19	66	51	109	119	20	4.1	.02	3.7	.01
15	3.9	4.5	30	44	59	99	89	19	3.8	1.8	14	.00
16	2.9	4.4	75	45	86	87	100	22	3.5	8.7	7.3	.00
17	2.6	5.4	29	32	119	75	82	17	3.3	4.4	18	.00
18	8.1	29	23	137	147	77	68	16	2.7	30	16	.00
19	16	14	23	101	195	74	61	16	4.4	5.4	7.5	6.5
20	29	8.5	21	e50	203	64	53	17	5.1	2.5	5.0	5.8
21	31	6.5	80	e42	166	73	48	18	2.6	1.2	4.1	1.5
22	37	5.7	36	e38	125	159	44	15	3.5	1.2	8.1	49
23	22	5.2	27	44	443	81	40	13	2.2	1.7	12	299
24	17	5.0	23	81	721	67	39	11	4.7	1.3	5.2	36
25	14	4.5	22	116	222	104	36	12	4.1	.86	3.2	15
26	17	4.6	20	123	134	78	33	15	2.1	30	25	30
27	20	11	18	50	96	308	35	13	1.0	105	11	64
28	22	603	19	217	81	1480	38	10	.79	193	5.4	18
29	21	242	20	307	---	945	31	8.7	5.6	37	4.2	9.7
30	33	41	16	80	---	467	31	8.2	53	23	3.8	6.6
31	45	---	21	55	---	256	---	7.3	---	12	3.1	---
TOTAL	436.80	1091.0	1273	2631	3442	8312	2883	783.2	195.59	500.87	285.6	598.67
MEAN	14.1	36.4	41.1	84.9	123	268	96.1	25.3	6.52	16.2	9.21	20.0
MAX	45	603	364	307	721	1480	236	100	53	193	45	299
MIN	.60	4.1	16	21	30	64	31	7.3	.79	.02	2.7	.00
CFSM	.36	.92	1.04	2.15	3.11	6.79	2.43	.64	.17	.41	.23	.51
IN.	.41	1.03	1.20	2.48	3.24	7.83	2.72	.74	.18	.47	.27	.56

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1966 - 1994, BY WATER YEAR (WY)

	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977
MEAN	28.3	32.6	51.8	62.1	69.3	82.4	68.2	48.9	31.5	18.9	20.7	28.7
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	11.1	1.42	.14	.006	.000
(WY)	1987	1992	1966	1981	1977	1981	1985	1986	1986	1966	1966	1977

01653600 PISCATAWAY CREEK AT PISCATAWAY, MD--Continued

SUMMARY STATISTICS	FOR 1993 CALENDAR YEAR	FOR 1994 WATER YEAR	WATER YEARS 1966 - 1994
ANNUAL TOTAL	19365.53	22432.73	
ANNUAL MEAN	53.1	61.5	45.2
HIGHEST ANNUAL MEAN			85.9
LOWEST ANNUAL MEAN			13.4
HIGHEST DAILY MEAN	1020 Mar 5	1480 Mar 28	4500 Sep 6 1979
LOWEST DAILY MEAN	.00 (a)	.00 (b)	.00 (c)
ANNUAL SEVEN-DAY MINIMUM	.00 Jul 27	.01 Sep 12	.00 many days
INSTANTANEOUS PEAK FLOW		1970 Mar 28	(d)8540 Sep 6 1979
INSTANTANEOUS PEAK STAGE		8.68 Mar 28	11.21 Sep 6 1979
INSTANTANEOUS LOW FLOW		.00 (f)	.00 (g)
ANNUAL RUNOFF (CFSM)	1.34	1.56	1.14
ANNUAL RUNOFF (INCHES)	18.24	21.13	15.54
10 PERCENT EXCEEDS	129	139	89
50 PERCENT EXCEEDS	25	20	24
90 PERCENT EXCEEDS	.53	2.6	1.5

a July 27-31, Aug. 1-5, Sept. 2-17.

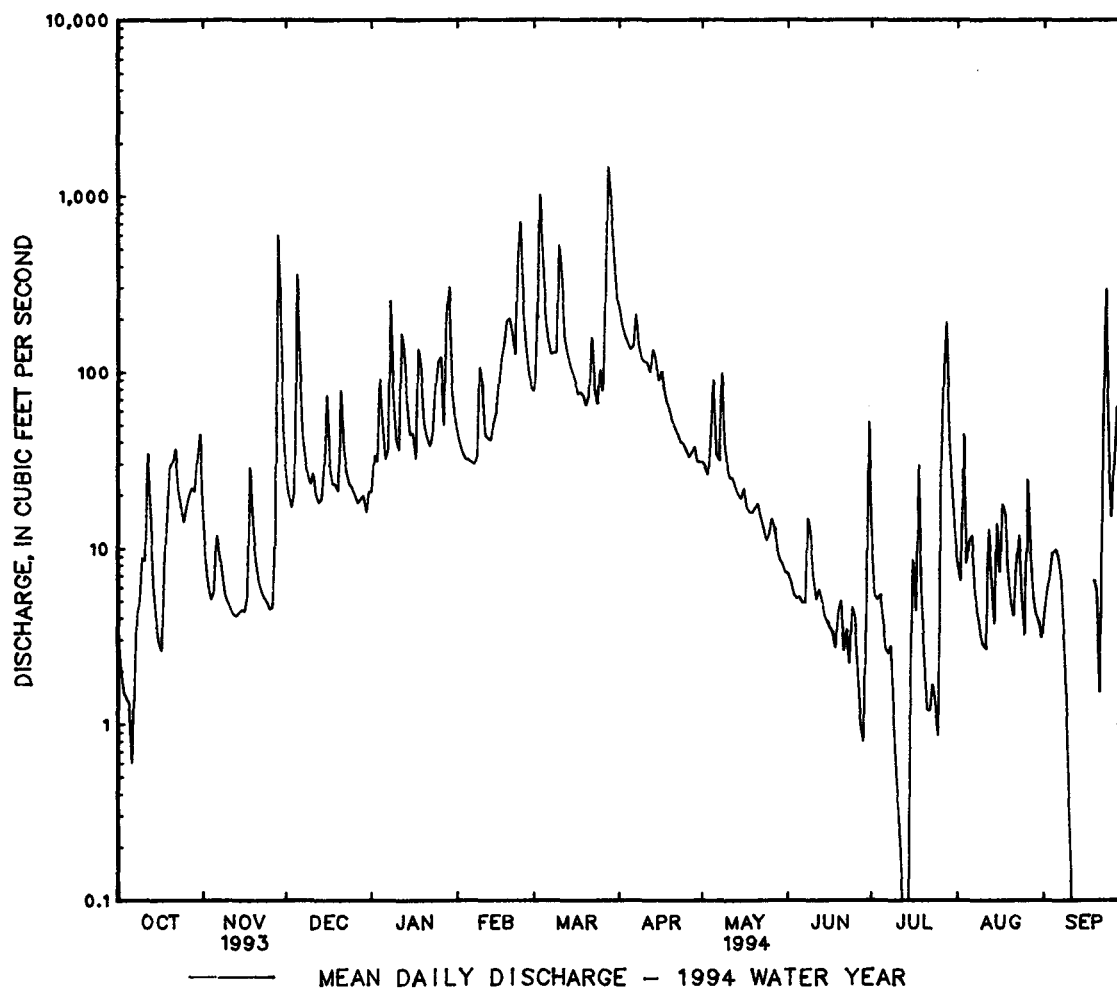
b Sept. 15-18.

c Many days in 1966, 1970, 1977, 1980-83, 1985-89, 1991-1994.

d From rating curve extended above 1,700 ft³/s on basis of contracted-opening measurement of peak flow at bridge 100 ft upstream.

f Sept. 15-19.

g At times in 1966, 1970, 1977, 1980-83, 1985-89, 1991-1994.



POTOMAC RIVER BASIN

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 Maryland Route 6, 1.0 mi southeast of Newtown, and 1.7 mi downstream from Kerrick Swamp.

DRAINAGE AREA.--79.9 mi².

PERIOD OF RECORD.--June 1983 to current year.

GAGE.--Water-stage recorder. Datum of gage is 34.88 ft above sea level.

REMARKS.--Records good except those for estimated daily discharges (backwater from beaver dams, ice effect), 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.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 700 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Feb. 24	1530	1,440	4.36	Mar. 11	1330	867	3.92
Mar. 3	2100	1,990	4.68	Mar. 29	0030	*3,380	*5.26

DISCHARGE IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e4.0	43	96	44	132	163	372	83	12	184	51	20
2	e3.8	33	57	60	107	256	297	76	10	58	34	16
3	e3.6	29	48	90	96	1400	243	59	8.7	28	229	12
4	e3.4	26	47	142	92	1340	212	64	7.1	25	245	11
5	e3.2	25	182	182	88	592	193	103	7.0	31	69	10
6	e3.0	27	341	122	83	335	193	89	6.0	16	71	9.6
7	2.8	30	222	83	83	241	256	75	5.8	8.5	46	8.9
8	2.7	30	96	185	69	212	252	103	6.3	5.0	26	7.8
9	3.5	28	65	256	115	206	193	106	13	3.3	19	6.7
10	5.7	24	54	185	237	444	170	74	13	4.4	14	5.9
11	6.5	e24	60	123	185	809	160	59	9.8	3.4	13	5.4
12	12	e24	58	147	177	515	149	54	9.6	2.2	13	4.8
13	16	e26	49	272	165	277	157	49	9.5	1.3	12	4.0
14	15	e29	43	217	161	219	185	40	7.8	.74	23	3.7
15	12	e28	46	157	160	194	156	36	5.3	.47	117	3.4
16	e12	e35	71	128	172	179	143	45	34	.54	91	3.6
17	e12	50	80	79	230	165	140	39	22	.77	67	5.6
18	e12	83	60	104	242	155	121	33	8.7	2.3	94	24
19	e13	102	50	140	274	157	111	30	5.4	2.0	69	21
20	16	78	45	e110	326	144	104	34	3.6	1.8	37	12
21	18	59	98	e94	319	140	96	39	5.3	.78	61	8.6
22	27	51	151	e80	269	206	101	35	37	.73	431	55
23	28	48	101	e70	487	201	101	29	19	2.0	348	343
24	26	47	67	e80	1290	155	91	25	9.0	2.8	103	319
25	22	44	56	e100	871	164	85	21	6.5	3.3	58	114
26	22	45	49	e150	436	184	79	30	3.7	3.6	65	81
27	24	53	43	e120	245	244	76	41	2.6	23	105	188
28	25	308	38	e150	185	1640	78	26	2.0	237	64	147
29	28	545	41	423	---	2570	72	18	2.5	444	41	72
30	32	306	51	407	---	1150	83	15	135	211	32	43
31	41	---	48	188	---	569	---	13	---	93	25	---
TOTAL	455.2	2280	2513	4688	7296	15226	4669	1543	427.2	1399.93	2673	1566.0
MEAN	14.7	76.0	81.1	151	261	491	156	49.8	14.2	45.2	86.2	52.2
MAX	41	545	341	423	1290	2570	372	106	135	444	431	343
MIN	2.7	24	38	44	69	140	72	13	2.0	.47	12	3.4
CFSM	.18	.95	1.01	1.89	3.26	6.15	1.95	.62	.18	.57	1.08	.65
IN.	.21	1.06	1.17	2.18	3.40	7.09	2.17	.72	.20	.65	1.24	.73

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1983 - 1994, BY WATER YEAR (WY)

	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994
MEAN	39.5	74.0	106	127	138	193	142	113	66.3	31.1	31.8	34.4
MAX	163	139	226	248	261	491	277	334	311	93.5	113	127
(WY)	1990	1986	1984	1990	1994	1994	1993	1989	1989	1989	1990	1992
MIN	7.93	7.35	41.9	49.1	57.6	57.0	30.5	25.5	2.07	4.47	.68	1.94
(WY)	1992	1992	1985	1985	1992	1985	1985	1986	1986	1987	1987	1991

POTOMAC RIVER BASIN

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01660920 ZEKIAH SWAMP RUN NEAR NEWTOWN, MD--Continued

SUMMARY STATISTICS

FOR 1993 CALENDAR YEAR

FOR 1994 WATER YEAR

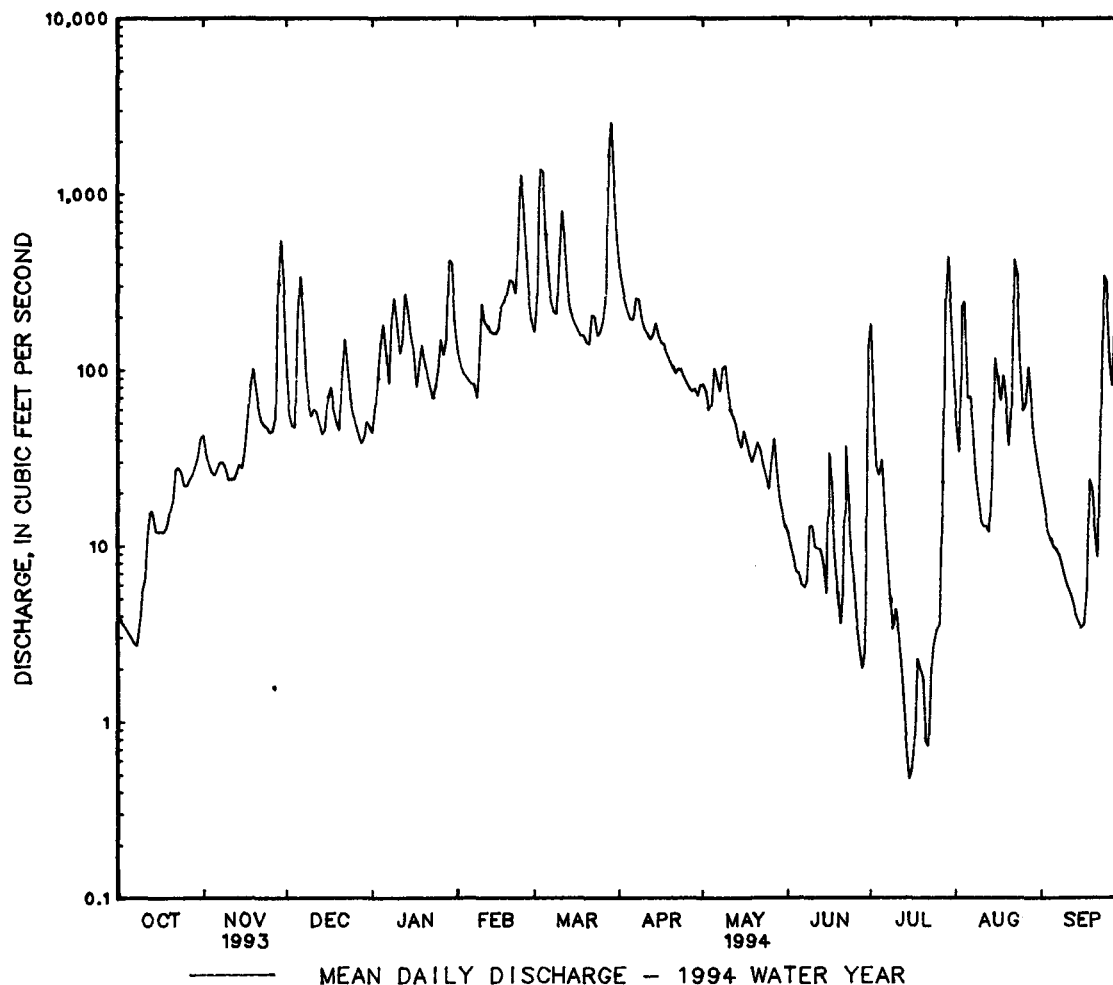
WATER YEARS 1983 - 1994

ANNUAL TOTAL	40290.60		44736.33			
ANNUAL MEAN	110		123		91.7	
HIGHEST ANNUAL MEAN					137	1990
LOWEST ANNUAL MEAN					45.1	1985
HIGHEST DAILY MEAN	1790	Mar 5	2570	Mar 29	2570	Mar 29 1994
LOWEST DAILY MEAN	.00	(a)	.47	(b)	.00	many days
ANNUAL SEVEN-DAY MINIMUM	.02	Sep 6	1.2	Jul 13	.00	many days
INSTANTANEOUS PEAK FLOW			3380	Mar 29	3380	Mar 29 1994
INSTANTANEOUS PEAK STAGE			5.26	Mar 29	5.26	Mar 29 1994
INSTANTANEOUS LOW FLOW			.40	Jul 15	.00	(c)
ANNUAL RUNOFF (CFSM)	1.38		1.53		1.15	
ANNUAL RUNOFF (INCHES)	18.76		20.83		15.59	
10 PERCENT EXCEEDS	265		256		201	
50 PERCENT EXCEEDS	56		58		50	
90 PERCENT EXCEEDS	.84		4.6		2.0	

a Aug. 1-5, 30, 31, Sept. 7-10, 15.

b July 15, 17.

c No flow for several days in 1983, 1985-89, 1991, 1993.



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 mi².

PERIOD OF RECORD.--October 1968 to current year.

REVISÉD 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 except those for estimated daily discharges (manometer 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.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 220 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Mar. 3	Unknown	*3,960	*6.47	Sep. 23	0230	255	3.74
Mar. 28	1930	292	4.01				

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.9	7.0	9.9	9.1	21	e80	65	22	5.3	30	2.9	2.4
2	1.6	4.0	8.5	30	19	e350	48	18	5.0	9.0	2.7	2.0
3	1.4	3.2	7.9	33	18	e1200	41	16	5.2	5.6	4.4	1.6
4	1.1	3.1	8.5	76	17	e350	38	19	4.7	8.8	3.3	1.4
5	.97	3.1	60	40	20	e70	36	38	3.6	6.0	3.5	1.3
6	.76	4.2	44	19	26	e52	43	23	3.9	3.7	5.3	1.2
7	.82	5.7	17	16	18	e45	62	20	5.2	2.9	3.5	1.2
8	.78	5.0	12	55	16	e40	42	23	4.3	2.0	2.1	1.1
9	.96	4.1	10	29	48	e37	35	19	4.2	1.5	1.4	1.0
10	1.1	3.6	9.8	14	53	79	34	16	3.8	1.5	1.1	.96
11	1.4	3.4	13	14	34	67	33	15	3.5	1.7	1.1	.86
12	2.3	3.4	10	48	71	40	31	14	4.5	1.2	1.4	.79
13	2.6	3.4	8.3	48	46	36	44	13	4.8	.83	1.6	.70
14	2.1	3.8	8.1	27	46	34	44	11	3.5	.76	1.3	.57
15	1.9	4.1	9.5	17	53	32	32	11	2.9	1.1	3.1	.61
16	1.6	3.9	18	12	64	31	46	12	3.2	1.5	3.1	.68
17	1.5	3.8	13	14	63	27	39	10	9.3	1.3	40	1.2
18	1.7	15	9.8	43	65	28	30	9.9	7.1	1.5	41	8.3
19	1.6	11	9.3	35	e71	29	27	11	3.8	1.8	9.0	6.6
20	1.7	6.4	8.7	26	e69	26	25	13	2.7	1.3	4.7	2.5
21	2.1	4.7	46	22	e60	28	23	13	2.1	.87	30	1.7
22	4.0	4.1	26	17	e46	44	25	11	2.0	.69	75	64
23	3.3	4.2	15	18	e240	30	25	9.6	3.8	1.4	17	150
24	2.5	4.1	12	23	e350	28	22	8.4	16	3.1	7.4	23
25	2.1	4.1	11	24	e130	43	20	7.4	8.7	2.8	4.7	11
26	1.9	4.1	9.7	30	e60	39	19	7.2	4.7	5.1	6.1	45
27	2.3	4.6	8.7	20	e50	78	17	7.7	3.0	20	5.3	80
28	2.9	116	7.8	78	e45	233	17	6.6	4.9	8.1	4.3	21
29	2.8	55	7.8	73	---	231	17	6.1	4.6	5.1	3.5	11
30	5.0	14	10	31	---	87	32	5.7	17	4.9	3.1	7.9
31	9.9	---	9.5	23	---	56	---	5.5	---	3.8	2.7	---
TOTAL	68.59	316.1	458.8	964.1	1819	3550	1012	422.1	157.3	139.85	295.6	451.57
MEAN	2.21	10.5	14.8	31.1	65.0	115	33.7	13.6	5.24	4.51	9.54	15.1
MAX	9.9	116	60	78	350	1200	65	38	17	30	75	150
MIN	.76	3.1	7.8	9.1	16	26	17	5.5	2.0	.69	1.1	.57
CFSM	.12	.57	.80	1.68	3.51	6.19	1.82	.74	.28	.24	.52	.81
IN.	.14	.64	.92	1.94	3.66	7.14	2.03	.85	.32	.28	.59	.81

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1969 - 1994, BY WATER YEAR (WY)

MEAN	10.1	14.8	20.9	26.3	29.4	34.5	26.7	22.4	16.4	11.5	11.4	12.3
MAX	46.8	45.3	40.3	77.4	85.7	115	54.7	57.9	116	56.4	45.0	75.2
(WY)	1980	1980	1973	1978	1979	1994	1983	1978	1972	1975	1985	1979
MIN	.73	3.23	5.01	5.30	11.9	10.1	9.05	4.39	1.32	.50	.036	.000
(WY)	1989	1982	1989	1981	1991	1981	1985	1991	1988	1988	1988	1988

POTOMAC RIVER BASIN

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01661050 ST. CLEMENT CREEK NEAR CLEMENTS, MD--Continued

SUMMARY STATISTICS

FOR 1993 CALENDAR YEAR

FOR 1994 WATER YEAR

WATER YEARS 1969 - 1994

ANNUAL TOTAL	7222.98	9655.01		
ANNUAL MEAN	19.8	26.5	19.7	
HIGHEST ANNUAL MEAN			34.5	1972
LOWEST ANNUAL MEAN			9.19	1981
HIGHEST DAILY MEAN	336 Mar 5	(e)1200 Mar 3	1580	Jun 22 1972
LOWEST DAILY MEAN	.00 (a)	.57 Sep 14	.00	many days
ANNUAL SEVEN-DAY MINIMUM	.00 Jul 27	.74 Sep 10	.00	Aug 31 1980
INSTANTANEOUS PEAK FLOW		3960 Mar 3	(b)4500	Sep 6 1979
INSTANTANEOUS PEAK STAGE		(c)6.47 Mar 3	(d)6.96	Sep 6 1979
INSTANTANEOUS LOW FLOW		.52 (f)	.00	(g)
ANNUAL RUNOFF (CFSM)	1.07	1.43	1.06	
ANNUAL RUNOFF (INCHES)	14.52	19.41	14.46	
10 PERCENT EXCEEDS	45	54	38	
50 PERCENT EXCEEDS	10	9.7	11	
90 PERCENT EXCEEDS	.61	1.4	1.3	

e Estimated.

a July 27-31, Aug. 1-5.

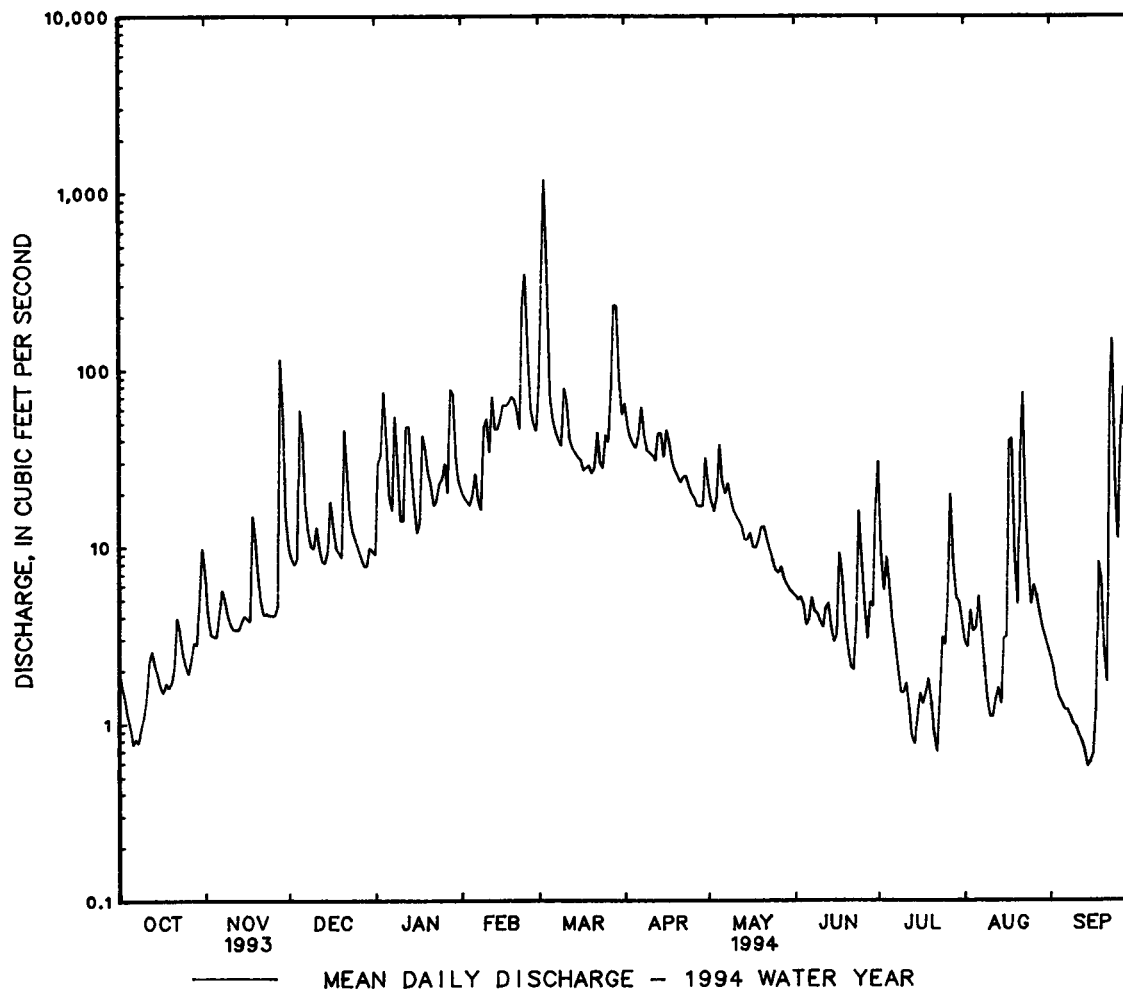
b From rating curve extended above 480 ft³/s on basis of contracted-opening and flow-over-road measurement of peak flow.

c From CSG mark.

d Backwater from tide; maximum gage height unaffected by backwater, 6.55 ft, June 22, 1972.

f Sept. 14, 15.

g No flow at times in 1977, 1980, 1981, 1983, 1985-89, 1991, 1993.



POTOMAC RIVER BASIN

01661500 ST. MARYS RIVER AT GREAT MILLS, MD

LOCATION.--Lat 38°14'36", long 76°30'13", St. Marys County, Hydrologic Unit 02070011, on left bank at downstream side of bridge on State Highway 471 in Great Mills, 0.3 mi downstream from Western Branch, and 12.0 mi upstream from mouth.

DRAINAGE AREA.--24.0 mi².

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.--Records good except those for estimated daily discharges (ice effect), which are fair. 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.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 400 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Feb. 23	2200	731	6.56	Mar. 28	1800	581	5.61
Mar. 3	0300	*3,470	*11.21				

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.2	6.5	24	6.8	28	37	145	22	7.4	31	15	5.0
2	2.9	4.8	6.4	30	23	336	85	17	8.0	15	16	4.3
3	2.8	4.4	5.9	29	19	1430	61	15	6.7	46	17	3.6
4	2.7	4.2	5.9	57	18	353	48	32	6.3	83	11	3.2
5	2.4	4.5	51	29	21	237	41	91	5.6	35	13	3.1
6	2.1	5.9	31	16	24	214	45	42	5.6	22	14	3.2
7	2.3	7.0	13	15	19	136	50	30	6.3	15	8.8	3.3
8	2.6	5.2	9.0	37	17	74	40	27	6.3	11	6.8	3.1
9	2.7	4.7	8.3	28	57	53	35	22	5.6	12	5.8	3.1
10	3.9	4.5	7.0	20	66	124	32	18	4.9	16	5.0	2.9
11	3.3	4.8	12	17	100	142	29	16	4.8	8.8	4.7	2.6
12	4.1	4.7	7.9	34	155	78	27	15	11	6.8	23	2.5
13	4.3	4.6	6.6	36	86	55	47	13	19	5.9	24	2.6
14	3.7	4.6	6.5	29	75	45	50	12	10	5.2	8.0	2.7
15	3.5	4.5	7.5	23	88	39	37	11	8.0	16	13	2.6
16	3.2	4.2	17	17	103	35	41	11	6.6	23	9.2	2.7
17	3.3	4.5	9.2	16	95	30	34	9.7	6.4	9.4	22	2.9
18	3.6	24	7.7	59	83	29	28	9.1	6.1	11	19	12
19	3.8	8.6	8.7	45	86	27	25	9.0	5.4	9.7	11	6.8
20	5.8	6.3	7.5	30	92	25	23	9.6	4.6	8.6	8.6	4.5
21	6.2	5.1	53	22	84	26	20	9.6	4.3	7.4	7.6	3.7
22	9.4	4.6	21	17	68	35	21	8.9	4.2	8.3	28	65
23	5.3	4.6	12	14	350	28	23	8.0	7.0	9.1	21	69
24	4.3	24	9.1	16	456	26	20	7.3	7.6	6.5	10	26
25	3.4	45	8.3	16	199	39	17	8.1	5.4	12	7.7	16
26	3.3	44	7.2	19	95	35	15	13	4.6	81	20	14
27	4.4	44	6.6	16	60	110	14	14	23	53	13	17
28	4.6	105	6.5	86	46	465	15	9.8	13	34	9.0	9.2
29	4.1	58	7.5	75	---	502	15	8.2	7.8	21	7.3	6.9
30	11	45	7.2	46	---	246	33	7.2	39	17	6.4	5.5
31	12	---	6.5	35	---	123	---	6.7	---	27	5.5	---
TOTAL	134.2	501.8	397.0	935.8	2613	5134	1116	532.2	260.5	666.7	390.4	309.0
MEAN	4.33	16.7	12.8	30.2	93.3	166	37.2	17.2	8.68	21.5	12.6	10.3
MAX	12	105	53	86	456	1430	145	91	39	83	28	69
MIN	2.1	4.2	5.9	6.8	17	25	14	6.7	4.2	5.2	4.7	2.5
CFSM	.18	.70	.53	1.26	3.89	6.90	1.55	.72	.36	.90	.52	.43
IN.	.21	.78	.62	1.45	4.05	7.96	1.73	.82	.40	1.03	.61	.48

e Estimated

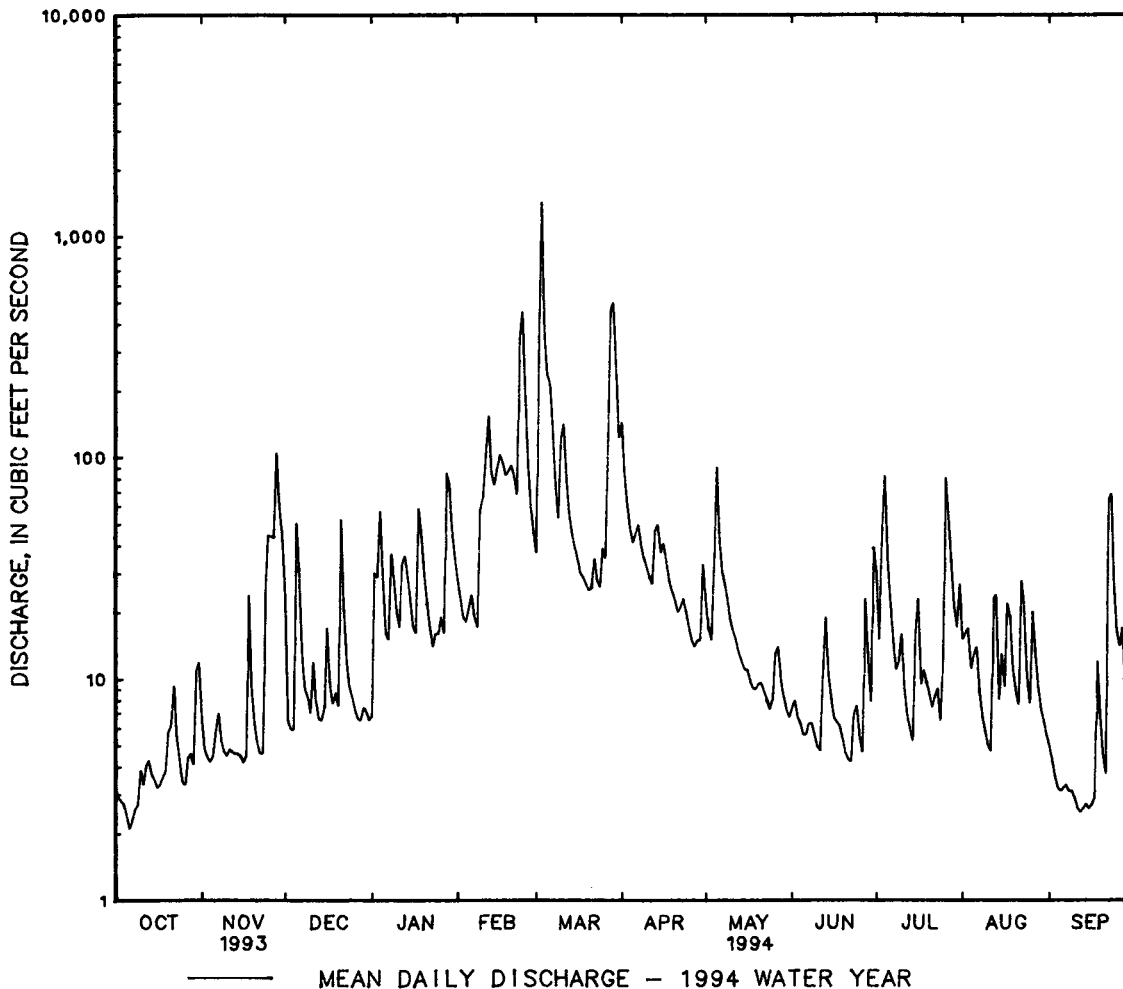
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1946 - 1994. BY WATER YEAR (WY)

MEAN	11.9	18.4	28.0	33.9	35.5	45.4	32.5	25.7	15.3	13.7	17.9	13.5
MAX	39.9	84.4	68.7	125	114	166	95.9	97.4	68.4	63.7	118	112
(WY)	1980	1957	1949	1978	1979	1994	1983	1990	1972	1960	1955	1979
MIN	2.58	4.29	5.27	6.45	9.31	8.52	6.82	5.36	2.68	1.48	1.46	2.02
(WY)	1969	1982	1966	1955	1968	1981	1985	1985	1986	1985	1966	1988

01661500 ST. MARYS RIVER AT GREAT MILLS, MD--Continued

SUMMARY STATISTICS	FOR 1993 CALENDAR YEAR	FOR 1994 WATER YEAR	WATER YEARS 1946 - 1994
ANNUAL TOTAL	9661.6	12990.6	
ANNUAL MEAN	26.5	35.6	24.2
HIGHEST ANNUAL MEAN			49.1
LOWEST ANNUAL MEAN			11.1
HIGHEST DAILY MEAN	484 Mar 4	1430 Mar 3	2260 Aug 13 1955
LOWEST DAILY MEAN	1.8 Jul 31	2.1 Oct 6	.30 Sep 7 1966
ANNUAL SEVEN-DAY MINIMUM	2.0 Jul 27	2.5 Oct 3	.39 Sep 3 1966
INSTANTANEOUS PEAK FLOW		3470 Mar 3	(a)7950 Aug 20 1969
INSTANTANEOUS PEAK STAGE		11.21 Mar 3	13.34 Aug 20 1969
INSTANTANEOUS LOW FLOW		2.1 (b)	.20 Sep 7 1966
ANNUAL RUNOFF (CFSM)	1.10	1.48	1.01
ANNUAL RUNOFF (INCHES)	14.98	20.14	13.72
10 PERCENT EXCEEDS	55	75	48
50 PERCENT EXCEEDS	9.5	13	12
90 PERCENT EXCEEDS	2.8	4.1	3.2

a From rating curve extended above 1,500 ft³/s on basis of contracted-opening measurement at gage height 12.08 ft.
 b October 5-7.



MONONGAHELA RIVER BASIN

03075500 YOUGHIOGHENY RIVER NEAR OAKLAND, MD

LOCATION.--Lat 39°25'19", long 79°25'32", Garrett County, Hydrologic Unit 05020006, on left bank 200 ft downstream from Baltimore and Ohio 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 mi².

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 except those for estimated daily discharges (ice effect, missing record), which are fair.

Town of Oakland diverted an average of 0.4 ft³/s for water supply. The diversion is returned upstream from station as sewage. 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.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 5	1530	2,260	5.54	Mar. 10	1400	3,150	6.40
Jan. 8	0245	2,330	5.61	Mar. 22	0500	3,380	6.61
Jan. 26	1700	2,120	5.39	Mar. 28	1230	2,470	5.75
Jan. 29	0700	3,240	6.49	Apr. 10	2200	2,270	5.55
Feb. 9	1400	*9,800	*11.05	Apr. 13	1815	2,990	6.26
Mar. 8	1000	2,750	6.03	May 8	0600	4,000	7.14

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	146	322	336	143	538	373	818	215	131	80	189	380
2	114	261	267	e140	415	311	645	171	109	53	139	207
3	128	271	236	e140	382	294	538	138	92	57	131	153
4	106	452	246	e138	335	275	481	281	82	80	105	168
5	83	827	1670	e134	272	271	387	309	72	55	616	128
6	68	1130	1330	e130	209	234	313	501	65	40	666	108
7	59	666	816	928	186	457	484	940	60	80	306	96
8	53	427	550	2000	364	2490	373	3370	55	173	203	84
9	50	312	409	972	7370	1600	312	1440	49	84	154	72
10	70	245	533	615	3600	2690	1020	809	43	70	128	73
11	62	204	783	499	e1500	1740	1630	554	39	53	103	85
12	104	175	566	489	e800	1040	1150	477	40	40	88	63
13	132	180	437	578	e600	848	2070	384	38	33	72	54
14	97	326	364	462	e475	1120	1940	302	32	56	112	49
15	86	252	340	322	371	1380	1110	269	31	97	221	45
16	74	225	457	295	324	1520	1230	350	59	99	113	44
17	73	266	391	303	283	977	902	276	140	66	623	40
18	121	827	346	251	290	829	654	243	65	50	1250	58
19	106	537	466	204	465	1010	486	218	46	41	652	52
20	131	438	381	197	819	755	364	202	51	35	382	40
21	197	317	363	171	1530	1160	284	183	66	38	295	35
22	242	250	312	159	1700	2960	235	162	95	64	921	31
23	184	211	269	156	1540	1970	199	146	59	102	653	30
24	154	187	235	e370	1650	1880	174	116	49	57	391	30
25	133	163	220	682	1200	1680	156	123	48	50	272	29
26	115	144	162	e1000	847	1080	140	404	44	113	243	33
27	103	262	203	1340	593	1680	138	768	85	136	212	43
28	96	1200	174	1290	472	2340	151	354	119	442	176	34
29	87	704	164	e2600	---	1900	117	238	81	225	148	28
30	182	470	139	e1500	---	1380	114	180	128	582	129	26
31	443	---	151	765	---	1030	---	150	---	236	118	---
TOTAL	3799	12251	13316	18973	29130	39274	18615	14273	2073	3387	9811	2318
MEAN	123	408	430	612	1040	1267	620	460	69.1	109	316	77.3
MAX	443	1200	1670	2600	7370	2960	2070	3370	140	582	1250	380
MIN	50	144	139	130	186	234	114	116	31	33	72	26
CFSM	.91	3.05	3.21	4.57	7.76	9.45	4.63	3.44	.52	.82	2.36	.58
IN.	1.05	3.40	3.70	5.27	8.09	10.90	5.17	3.96	.58	.94	2.72	.64

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1941 - 1994, BY WATER YEAR (WY)

	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951	1952
MEAN	116	241	410	424	495	610	459	324	202	159	131	81.1
MAX	608	1152	1027	861	1100	1477	879	676	730	629	586	533
(WY)	1955	1986	1973	1952	1986	1963	1973	1956	1981	1978	1956	1945
MIN	4.45	7.08	62.2	63.2	127	168	121	76.0	24.0	10.3	10.5	5.99
(WY)	1954	1954	1944	1977	1978	1990	1946	1982	1965	1953	1944	1953

MONONGAHELA RIVER BASIN

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03075500 YOUGHIOGHENY RIVER NEAR OAKLAND, MD--Continued

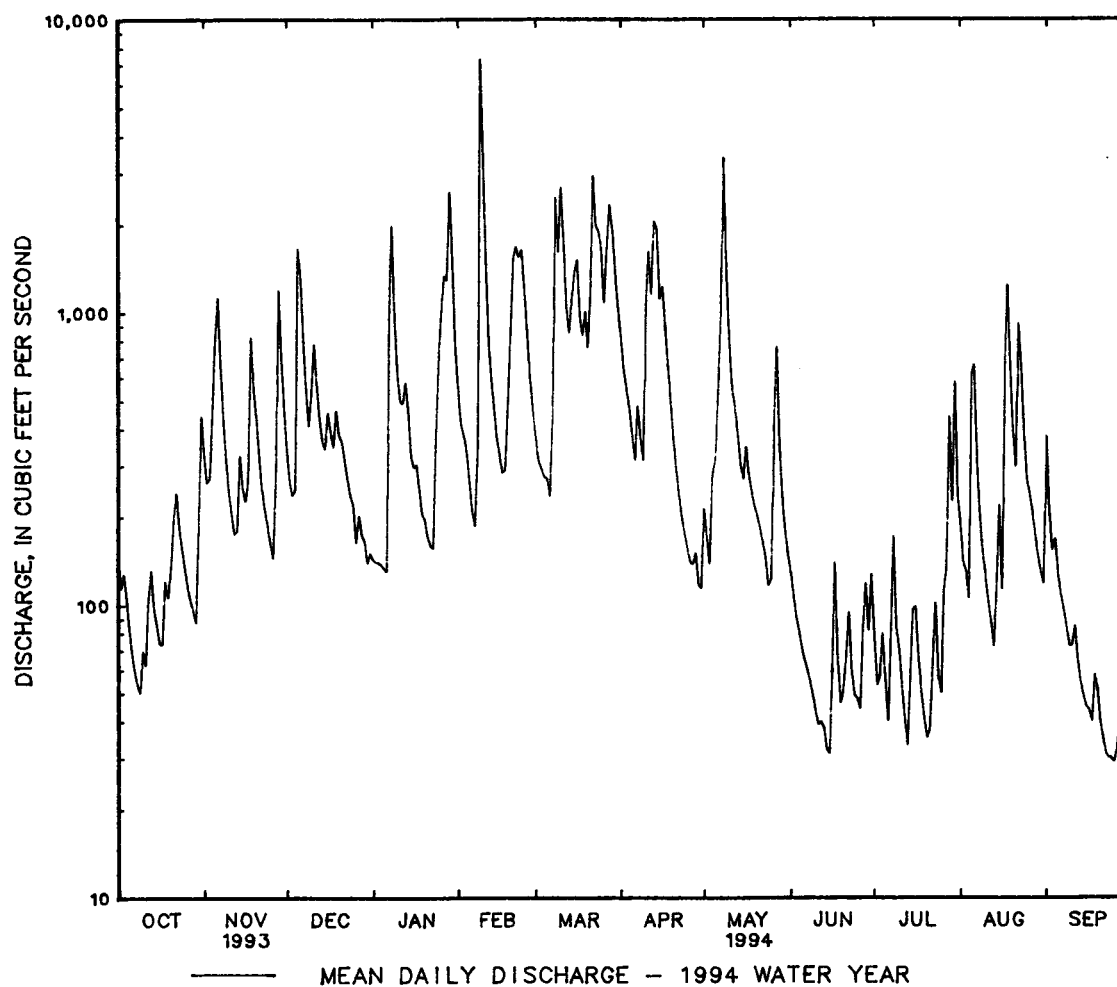
SUMMARY STATISTICS

FOR 1993 CALENDAR YEAR

FOR 1994 WATER YEAR

WATER YEARS 1941 - 1994

ANNUAL TOTAL	115359.6		167220			
ANNUAL MEAN	316		458		303	
HIGHEST ANNUAL MEAN					458	1994
LOWEST ANNUAL MEAN					193	1947
HIGHEST DAILY MEAN	3510	Mar 24	7370	Feb 9	8570	Nov 5 1985
LOWEST DAILY MEAN	6.3	Aug 30	26	Sep 30	2.5	Oct 4 1953
ANNUAL SEVEN-DAY MINIMUM	7.8	Aug 25	32	Sep 24	2.7	Oct 2 1953
INSTANTANEOUS PEAK FLOW			9800	Feb 9	(a)11800	Oct 16 1954
INSTANTANEOUS PEAK STAGE			11.05	Feb 9	12.16	Oct 16 1954
INSTANTANEOUS LOW FLOW			25	Sep 30	UNKNOWN	
ANNUAL RUNOFF (CFSM)	2.36		3.42		2.26	
ANNUAL RUNOFF (INCHES)	32.03		46.42		30.77	
10 PERCENT EXCEEDS	716		1200		719	
50 PERCENT EXCEEDS	162		234		164	
90 PERCENT EXCEEDS	17		52		24	

a From rating curve extended above 7,000 ft³/s.

MONONGAHELA RIVER BASIN

03076000 DEEP CREEK RESERVOIR NEAR OAKLAND, MD

LOCATION.--Lat 39°30'34", long 79°23'28", Garrett County, Hydrologic Unit 05020006, on Deep Creek at dam, 1.8 mi upstream from mouth and 7.0 mi north of Oakland.

DRAINAGE AREA.--64.7 mi².

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, 90,400 acre-ft, May 8, elevation, 2,461.3 ft; minimum, 64,000 acre-ft, Sep. 29, elevation, 2,453.9 ft.

MONTHEND ELEVATION AND CONTENTS AT 2400, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

Date	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)
Sept. 30	2458.5	80000	
Oct. 31	2457.9	77900	-2100
Nov. 30	2457.5	76400	-1500
Dec. 31	2457.0	74700	-1700
CAL YR 1993			+2500
Jan. 31	2456.8	73900	-800
Feb. 28	2456.7	73600	-300
Mar. 31	2459.9	85200	+11600
Apr. 30	2460.3	86700	+1500
May 31	2460.9	88900	+2200
June 30	2460.35	86800	-2100
July 31	2459.3	83000	-3800
Aug. 31	2457.9	77900	-5100
Sept. 30	2453.9	64000	-13900
WTR YR 1994			-16000

03076500 YOUGHIOGHENY RIVER AT FRIENDSVILLE, MD

LOCATION.--Lat 39°39'13", long 79°24'31", Garrett County, Hydrologic Unit 05020006, on left bank 0.7 mi upstream from bridge on State Highway 42 at Friendsville, and 1.5 mi upstream from Bear Creek.

DRAINAGE AREA.--295 mi².

PERIOD OF RECORD.--August 1898 to December 1904 and October 1940 to current year. Annual maximum, water years 1905, 1923-31, 1940, published in WSP 1675. October, November 1940 monthly discharge only, published in WSP 1305. September 1922 to September 1926 (gage heights only) in reports of Pennsylvania Department of Forests and Waters.

REVISED RECORDS.--WSP 1385: Drainage area at former site, 1898-1905, 1941(M), 1942, 1944-45, 1948-49, 1951(M).

GAGE.--Water-stage recorder. Datum of gage is 1,487.33 ft 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 except those for estimated daily discharges (missing record), which are fair. 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.

PEAK DISCHARGE FOR CURRENT YEAR.--Peak discharge 12,000 ft³/s, Feb. 9, gage height, 8.25 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	554	707	663	390	1210	969	1680	364	281	289	414	633
2	415	573	546	316	996	876	1270	436	315	212	332	510
3	309	603	678	447	971	923	1380	305	284	259	394	418
4	497	883	509	494	787	1090	1270	383	266	403	326	411
5	375	1110	2350	507	606	750	1080	511	196	248	661	373
6	304	1500	2630	532	592	631	890	679	235	284	1180	486
7	296	1010	1770	1170	651	1080	1270	1210	284	259	613	491
8	245	930	1410	3030	705	3850	1010	4760	151	506	494	451
9	172	715	1130	1630	8600	2790	840	2750	208	329	471	444
10	198	617	1250	1290	5570	3760	2060	1560	203	256	394	437
11	275	572	1600	1150	2520	2950	3410	957	106	237	358	461
12	290	524	1000	967	1630	1800	2670	1160	140	202	315	453
13	363	381	1090	1170	1350	1480	3310	927	180	202	343	427
14	315	547	1050	1030	1180	1770	3580	580	175	231	246	395
15	289	775	797	810	1030	2410	2050	570	269	429	539	413
16	213	738	849	756	950	2790	2520	747	189	388	410	388
17	208	806	799	787	867	1990	2090	652	288	329	866	375
18	340	1680	600	e500	844	1660	1380	585	278	270	2430	395
19	351	1560	704	e470	1020	1970	1050	489	134	284	1340	437
20	353	878	814	e450	1470	1480	882	439	179	270	790	387
21	476	629	789	e430	2610	2000	733	340	166	252	645	391
22	538	829	727	e420	3110	4740	643	307	198	218	1400	364
23	444	745	655	e410	2650	3990	445	342	214	326	1380	362
24	372	674	624	e500	2750	4140	405	385	290	304	1020	391
25	399	402	432	747	2510	3790	498	459	198	218	804	352
26	360	538	389	2130	1450	2750	335	455	115	249	814	385
27	341	510	580	1850	1020	3400	313	1060	185	289	689	411
28	327	1880	526	2370	1000	4370	327	647	212	611	650	244
29	295	1250	573	3800	---	3670	342	431	249	474	594	159
30	284	862	478	2220	---	2890	270	415	254	792	411	155
31	737	---	544	1520	---	2260	---	319	---	517	468	---
TOTAL	10935	25428	28556	34293	50649	75019	40003	25224	6442	10137	21791	11999
MEAN	353	848	921	1106	1809	2420	1333	814	215	327	703	400
MAX	737	1880	2630	3800	8600	4740	3580	4760	315	792	2430	633
MIN	172	381	389	316	592	631	270	305	106	202	246	155
(†)	-34.1	-25.2	-27.6	-13.0	-5.4	+189	+25.2	+35.8	-35.3	-62.0	-83.2	-233
MEAN#	319	823	893	1093	1804	2609	1358	850	180	265	620	167
CFSM#	1.08	2.79	3.03	3.71	6.12	8.84	4.60	2.88	0.61	0.90	2.11	0.57
IN#	1.24	3.11	3.49	4.28	6.37	10.19	5.13	3.32	0.68	1.04	2.43	0.64

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1898 - 1994, BY WATER YEAR (WY)

	MEAN	285	500	858	871	991	1230	960	680	479	366	296	234
MAX	1103	2190	2147	1664	2277	2644	2231	1564	1823	1335	1319	920	
(WY)	1955	1986	1903	1952	1903	1963	1901	1967	1903	1990	1956	1945	
MIN	50.2	55.7	145	140	337	285	342	176	84.2	64.6	51.0	49.8	
(WY)	1992	1905	1944	1981	1954	1990	1946	1982	1969	1991	1991	1991	

† Change in contents in Deep Creek Reservoir, equivalent in cubic feet per second, provided by Pennsylvania Electric Co.

Adjusted for change in reservoir contents.

MONONGAHELA RIVER BASIN

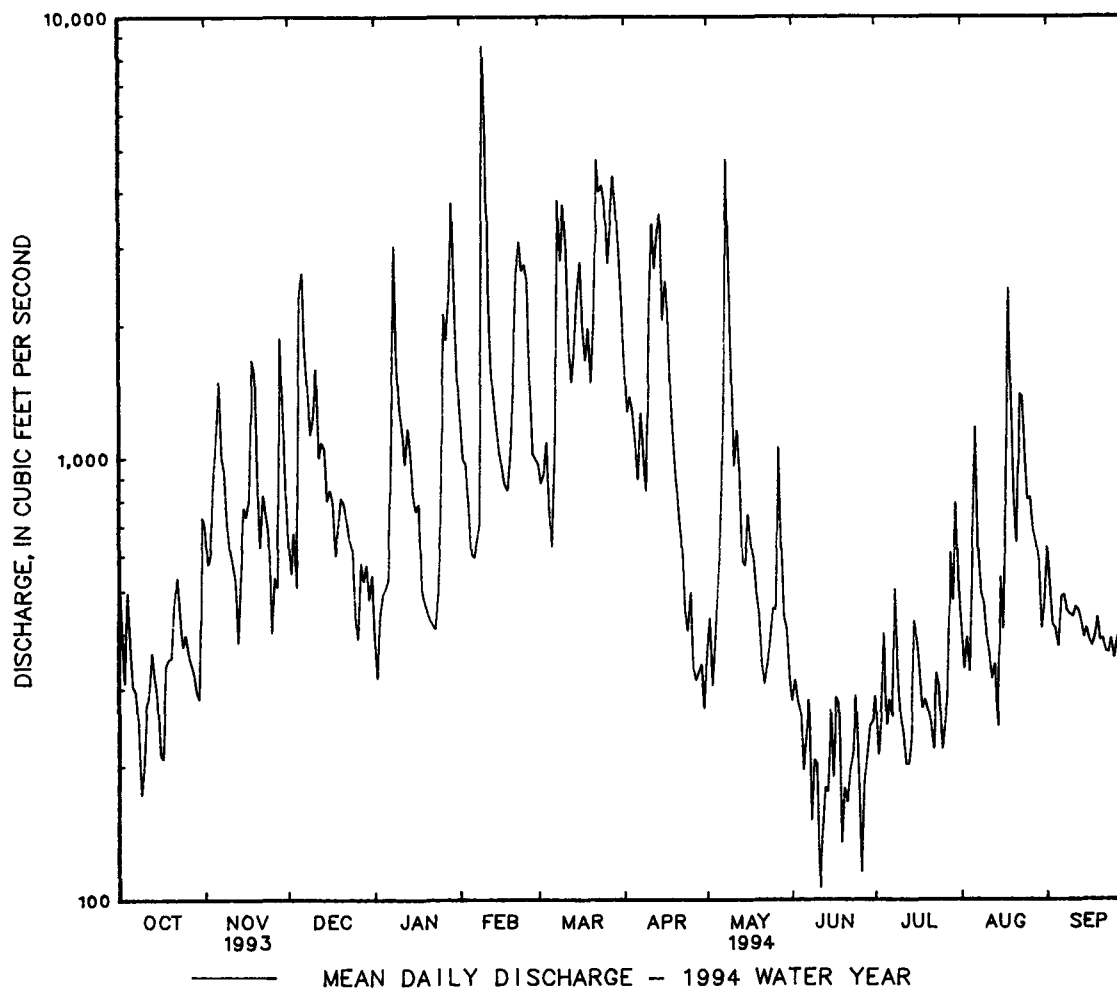
03076500 YOUGHIOGHENY RIVER AT FRIENDSVILLE, MD--Continued

SUMMARY STATISTICS	FOR 1993 CALENDAR YEAR		FOR 1994 WATER YEAR		WATER YEARS 1898 - 1994	
ANNUAL TOTAL	237057		340476			
ANNUAL MEAN	649		933		642	
ANNUAL MEAN*	652		911		646	
HIGHEST ANNUAL MEAN					1052	
LOWEST ANNUAL MEAN					375	
HIGHEST DAILY MEAN	5090	Mar 26	8600	Feb 9	10000	Aug 6 1956
LOWEST DAILY MEAN	29	Aug 29	106	Jun 11	8.2	Sep 11 1966
ANNUAL SEVEN-DAY MINIMUM	71	Jul 20	166	Jun 8	29	Sep 21 1972
INSTANTANEOUS PEAK FLOW			12000	Feb 9	(a)15600	Mar 29 1924
INSTANTANEOUS PEAK STAGE			8.25	Feb 9	(b)14.20	Mar 29 1924
INSTANTANEOUS LOW FLOW			106	Jun 11	UNKNOWN	
ANNUAL RUNOFF (CFSM)	2.20		3.16		2.18	
ANNUAL RUNOFF (CFSM)*	2.21		3.09		2.19	
ANNUAL RUNOFF (INCHES)	29.89		42.93		29.59	
ANNUAL RUNOFF (INCHES)*	30.01		41.94		29.74	
10 PERCENT EXCEEDS	1400		2300		1430	
50 PERCENT EXCEEDS	381		554		408	
90 PERCENT EXCEEDS	113		249		106	

* Adjusted for change in reservoir contents since October 1940.

a From rating curve extended above 5,800 ft³/s on basis of slope-area measurement of peak flow.

b From floodmarks, site and datum then in use or 10.2 ft, present site and datum.



MONONGAHELA RIVER BASIN

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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 mi².

PERIOD OF RECORD.--October 1964 to current year.

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. Several measurements of water temperature were made during the year. Water-quality records for some prior periods have been collected at this location.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 660 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 27	2400	614	3.71	Mar. 16	0015	774	3.94
Dec. 5	1115	694	3.83	Mar. 22	0445	937	4.21
Jan. 21	----	ICE JAM	*4.58	Mar. 24	1900	*1,010	4.34
Jan. 28	1945	880	4.11	Mar. 28	0830	831	4.02
Mar. 8	1000	766	3.93	May 7	2330	891	4.13
Mar. 10	0945	729	3.88	Aug. 17	1615	601	3.69

REVISIONS--Revised daily discharges, in cubic feet per second, for August and September 1993, are given below. These figures supersede those published in the report for 1993.

August	1.....	9.5	August	17.....	10	September	1.....	4.5	September	17.....	23
	2.....	16		18.....	10		2.....	4.5		18.....	14
	3.....	14		19.....	8.4		3.....	12		19.....	10
	4.....	9.4		20.....	7.7		4.....	30		20.....	8.3
	5.....	7.9		21.....	7.8		5.....	20		21.....	8.3
	6.....	9.0		22.....	6.9		6.....	10		22.....	15
	7.....	16		23.....	6.1		7.....	6.5		23.....	10
	8.....	9.9		24.....	5.7		8.....	5.5		24.....	11
	9.....	7.3		25.....	5.4		9.....	6.0		25.....	15
	10.....	6.6		26.....	4.4		10.....	8.0		26.....	90
	11.....	7.8		27.....	4.8		11.....	6.5		27.....	440
	12.....	63		28.....	4.6		12.....	5.5		28.....	170
	13.....	31		29.....	4.5		13.....	5.0		29.....	90
	14.....	17		30.....	8.0		14.....	4.5		30.....	62
	15.....	13		31.....	5.0		15.....	7.0			
	16.....	10					16.....	35			

MONTH	TOTAL	MEAN	MAX	MIN	CFSM	IN
August 1993	346.7	11.2	63	4.4	.23	.26
September 1993	1137.1	37.9	440	4.5	.78	.87
Water Yr 1993	32330	88.6	1300	4.4	1.81	24.59

MONONGAHELA RIVER BASIN

03076600 BEAR CREEK AT FRIENDSVILLE, MD--Continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e40	84	137	57	189	135	279	62	33	20	19	87
2	e32	77	108	50	145	106	245	47	31	15	15	63
3	e34	84	94	45	129	101	239	43	29	85	19	50
4	e30	121	96	42	122	91	212	52	27	64	17	46
5	e28	140	533	44	84	85	161	52	25	38	116	39
6	e26	124	419	46	73	76	140	70	24	30	90	35
7	e24	98	283	234	66	127	164	189	23	54	57	32
8	e23	80	210	419	e150	705	126	582	23	49	43	28
9	22	70	152	275	e700	538	115	338	21	36	35	25
10	23	60	156	215	e400	583	e500	243	19	32	30	28
11	19	53	150	146	e250	416	e470	164	18	25	25	25
12	36	48	132	134	e170	297	e350	146	31	21	22	21
13	30	53	116	120	e150	273	e550	109	19	19	23	19
14	25	61	105	111	e140	341	e450	89	16	28	30	17
15	24	58	100	102	e120	542	e350	84	29	31	29	16
16	22	54	108	98	e110	604	e370	114	50	34	21	15
17	26	86	98	137	e100	362	e270	88	32	25	207	15
18	38	230	96	130	e90	306	e210	80	26	22	306	21
19	33	186	106	e110	e150	303	e170	72	20	19	189	15
20	46	146	92	e90	e250	272	134	65	19	16	109	13
21	60	106	93	e70	e450	428	106	57	24	15	77	12
22	67	85	83	e60	e500	832	88	51	28	18	192	11
23	59	73	74	e75	e400	691	76	48	19	21	156	11
24	51	65	67	e200	e300	811	67	43	18	14	102	11
25	44	57	65	e260	e260	693	61	44	19	13	76	12
26	39	50	e55	e500	e230	439	55	58	17	14	65	14
27	36	130	61	333	e210	541	50	57	22	14	54	18
28	33	445	52	511	186	731	46	46	21	27	47	13
29	30	287	e50	610	---	588	43	42	29	16	47	12
30	51	202	e46	346	---	449	47	39	27	35	38	11
31	87	---	e50	258	---	332	---	36	---	23	66	---
TOTAL	1138	3413	3987	5828	6124	12798	6144	3210	739	873	2322	735
MEAN	36.7	114	129	188	219	413	205	104	24.6	28.2	74.9	24.5
MAX	87	445	533	610	700	832	550	582	50	85	306	87
MIN	19	48	46	42	66	76	43	36	16	13	15	11
CFSM	.75	2.33	2.63	3.84	4.47	8.44	4.19	2.12	.50	.58	1.53	.50
IN.	.87	2.60	3.03	4.43	4.66	9.74	4.67	2.44	.56	.66	1.77	.56

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1965 - 1994, BY WATER YEAR (WY)

MEAN	36.4	71.8	124	111	151	194	158	100	51.6	51.7	32.1	31.2
MAX	187	341	293	248	387	413	293	215	153	274	117	256
(WY)	1980	1986	1991	1975	1986	1994	1984	1989	1981	1990	1980	1971
MIN	4.05	12.0	23.2	19.1	39.8	45.5	66.0	23.5	10.6	6.35	4.32	2.98
(WY)	1992	1992	1966	1977	1993	1990	1968	1982	1991	1965	1966	1991

MONONGAHELA RIVER BASIN

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03076600 BEAR CREEK AT FRIENDSVILLE, MD--Continued

SUMMARY STATISTICS

FOR 1993 CALENDAR YEAR

FOR 1994 WATER YEAR

WATER YEARS 1965 - 1994

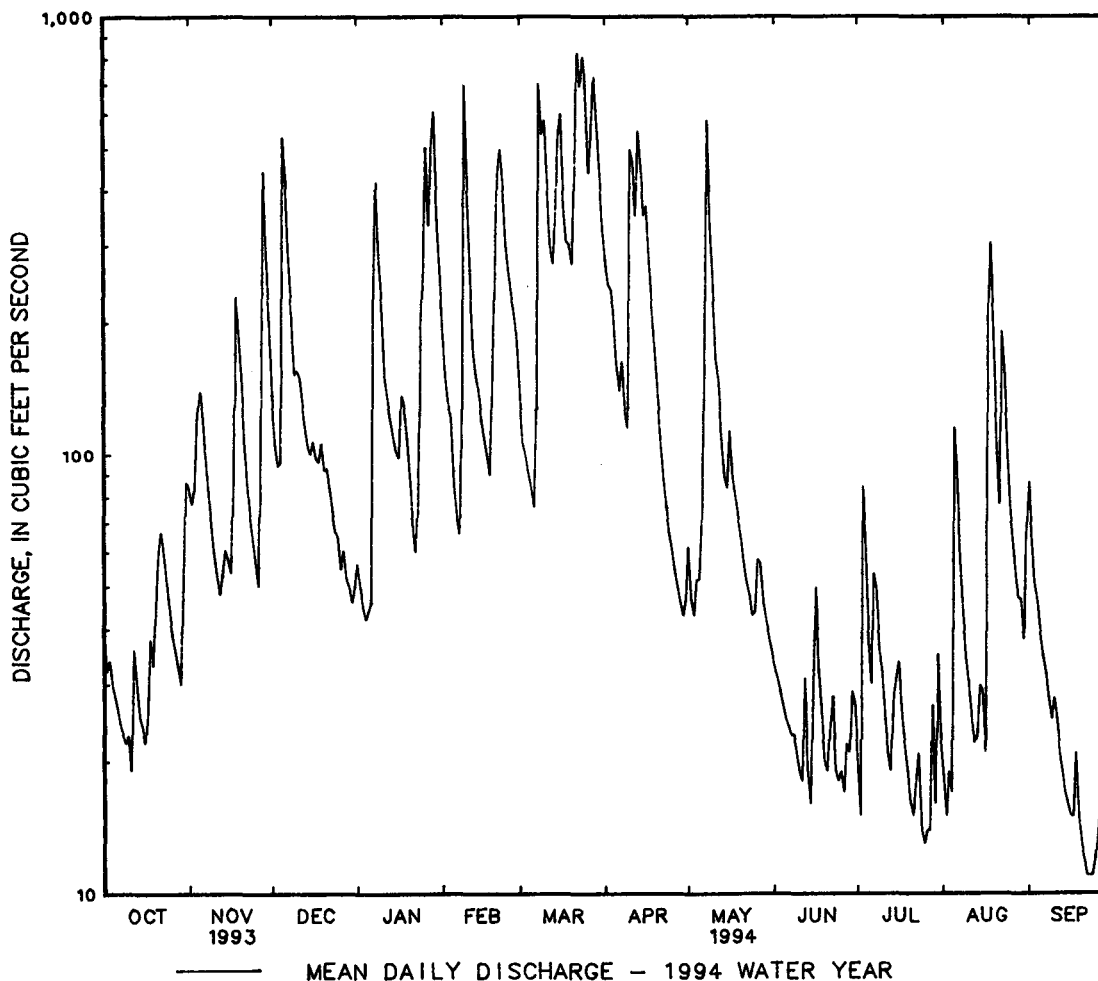
ANNUAL TOTAL	34947.7		47311		92.5	
ANNUAL MEAN	95.7		130		130	1994
HIGHEST ANNUAL MEAN					53.4	1966
LOWEST ANNUAL MEAN					3100	Sep 14 1971
HIGHEST DAILY MEAN	1300	Mar 26	832	Mar 22		
LOWEST DAILY MEAN	4.4	Aug 26	11	(a)	1.6	(b)
ANNUAL SEVEN-DAY MINIMUM	5.1	Aug 23	12	Sep 20	2.0	Sep 7 1966
INSTANTANEOUS PEAK FLOW			1010	Mar 24	(c)4650	Sep 14 1971
INSTANTANEOUS PEAK STAGE			4.58	Jan 21	(d)9.60	Sep 14 1971
INSTANTANEOUS LOW FLOW			10	Sep 21	1.5	Sep 12 1966
ANNUAL RUNOFF (CFSM)	1.96		2.65		1.89	
ANNUAL RUNOFF (INCHES)	26.59		35.99		25.70	
10 PERCENT EXCEEDS	221		350		228	
50 PERCENT EXCEEDS	46		65		50	
90 PERCENT EXCEEDS	7.8		19		8.7	

a Sept. 22-24, 30.

b Sept. 12, 13, 1966.

c From rating curve extended above 2,000 ft³/s on basis of slope-area measurement of peak flow.

d From floodmarks.



MONONGAHELA RIVER BASIN

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 north-east of Grantsville.

DRAINAGE AREA.--62.5 mi².

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.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 28	0330	1,230	3.99	Mar. 23	2115	1,440	4.24
Jan. 26	0845	1,070	3.79	Mar. 24	2130	*1,750	4.55
Jan. 28	1930	1,630	4.44	Mar. 28	0530	1,380	4.17
Jan. 28	----	ICE JAM	*5.65	Apr. 10	2000	1,230	3.98
Feb. 9	1100	1,310	4.09	May 8	0230	1,220	3.97
Mar. 22	0600	1,180	3.91				

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	46	149	160	e90	183	160	329	96	43	28	16	154
2	37	116	139	e80	159	140	353	73	38	20	11	71
3	40	123	134	e75	e140	140	423	61	35	95	10	51
4	34	171	163	e70	e130	149	386	99	32	82	11	58
5	28	190	730	e70	e120	146	300	104	30	41	79	48
6	23	176	388	e80	e110	131	273	142	27	29	67	38
7	21	135	255	e550	e100	243	317	262	25	32	30	35
8	20	111	198	e350	e160	755	225	772	26	24	19	30
9	19	99	168	e260	e900	417	188	310	24	21	14	26
10	20	88	211	e230	412	557	602	211	20	22	11	25
11	19	82	219	e200	252	372	587	165	18	17	10	27
12	60	75	168	e180	e220	276	421	169	25	13	9.2	22
13	54	85	150	e170	e200	259	657	146	19	11	8.9	19
14	37	129	134	e160	e180	347	499	118	15	14	16	17
15	36	106	133	e150	e160	559	342	116	66	23	23	17
16	31	89	169	e140	e140	567	393	192	182	20	15	15
17	41	125	142	e200	130	324	276	134	113	18	237	14
18	93	315	126	e190	143	297	219	114	48	14	302	20
19	55	179	158	e170	211	329	186	102	38	11	110	17
20	117	158	133	e160	356	272	159	92	30	9.7	59	13
21	115	127	129	e130	624	453	138	82	34	9.4	46	12
22	91	110	116	e110	599	1050	122	72	50	12	127	11
23	67	98	109	e95	445	991	108	66	30	18	98	11
24	54	90	100	e130	336	1270	98	58	33	14	56	12
25	46	83	95	e250	267	1110	88	63	41	11	44	11
26	41	76	75	e850	227	591	80	122	28	11	40	12
27	39	240	104	605	211	908	74	127	36	14	98	27
28	38	794	e90	e650	188	1220	67	77	36	39	58	19
29	35	297	e80	579	---	735	62	64	37	24	50	14
30	106	201	e75	291	---	488	62	55	39	44	42	12
31	226	---	e80	220	---	371	---	49	---	25	45	---
TOTAL	1689	4817	5131	7485	7303	15627	8034	4313	1218	766.1	1762.1	858
MEAN	54.5	161	166	241	261	504	268	139	40.6	24.7	56.8	28.6
MAX	226	794	730	850	900	1270	657	772	182	95	302	154
MIN	19	75	75	70	100	131	62	49	15	9.4	8.9	11
CFSM	.87	2.57	2.65	3.86	4.17	8.07	4.28	2.23	.65	.40	.91	.46
IN.	1.01	2.87	3.05	4.46	4.35	9.30	4.78	2.57	.72	.46	1.05	.51

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1947 - 1994, BY WATER YEAR (WY)

	MEAN	MAX	(WY)	MIN	(WY)
1947	47.3	288	1955	1.65	1954
1948	87.0	449	1986	3.38	1954
1949	150	341	1973	14.5	1954
1950	159	333	1952	26.4	1977
1951	195	414	1956	60.3	1964
1952	267	582	1963	57.0	1990
1953	215	468	1970	77.1	1968
1954	133	287	1968	40.1	1976
1955	71.1	200	1951	10.0	1965
1956	48.0	169	1990	4.30	1965
1957	36.4	202	1956	2.87	1991
1958	30.9	236	1971	1.58	1991

MONONGAHELA RIVER BASIN

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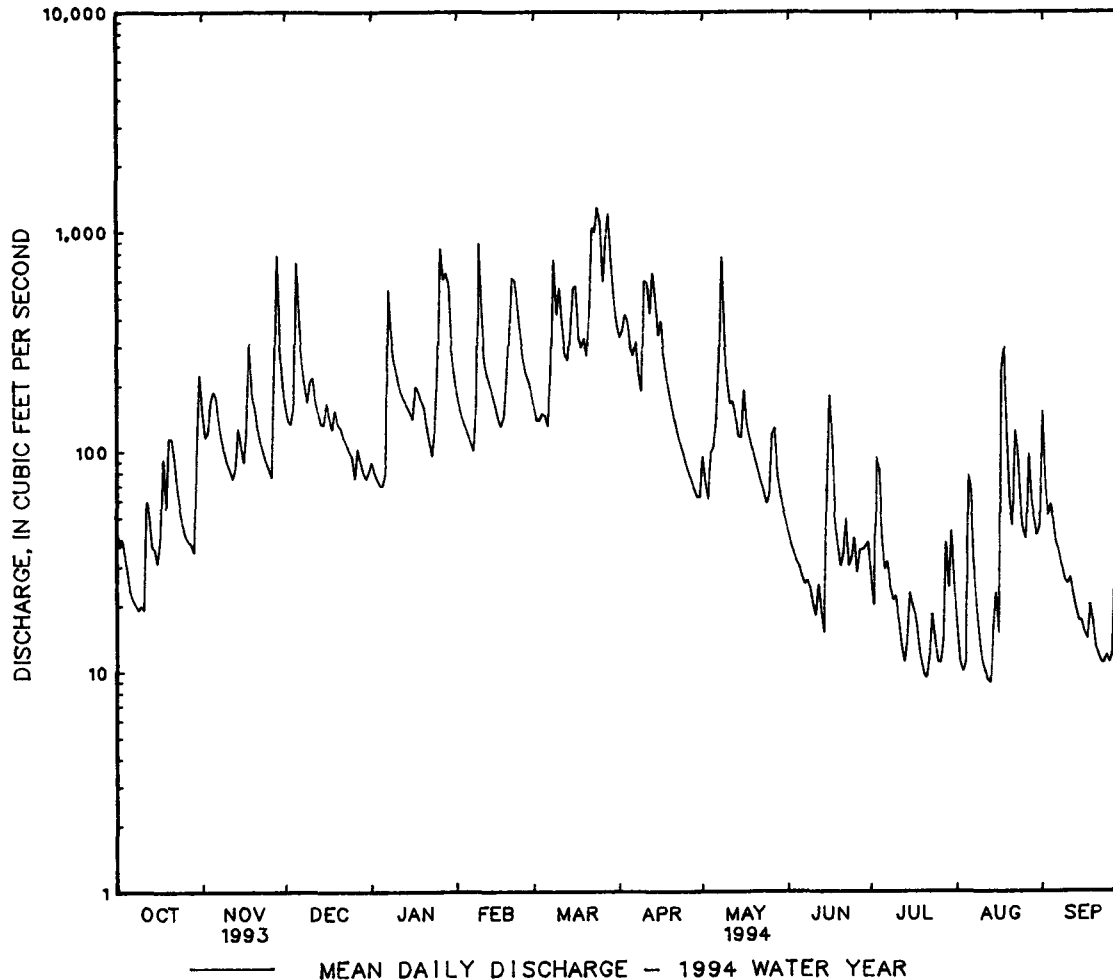
03078000 CASSELMAN RIVER AT GRANTSVILLE, MD--Continued

SUMMARY STATISTICS	FOR 1993 CALENDAR YEAR		FOR 1994 WATER YEAR		WATER YEARS 1947 - 1994	
ANNUAL TOTAL	51387.2		59003.2		120	
ANNUAL MEAN	141		162		162	
HIGHEST ANNUAL MEAN					64.2	
LOWEST ANNUAL MEAN					2630	
HIGHEST DAILY MEAN	2250	Apr 1	1270	Mar 24	(a).00	Oct 15 1954
LOWEST DAILY MEAN	3.9	Jul 25	8.9	Aug 13	.89	Aug 31 1962
ANNUAL SEVEN-DAY MINIMUM	5.8	Jul 20	12	Sep 20	(b)8400	Aug 27 1962
INSTANTANEOUS PEAK FLOW			1750	Mar 24	10.70	Oct 15 1954
INSTANTANEOUS PEAK STAGE			5.65	Jan 28	(a).00	Oct 15 1954
INSTANTANEOUS LOW FLOW			8.2	Aug 13	1.91	(c)
ANNUAL RUNOFF (CFSM)	2.25		2.59		25.99	
ANNUAL RUNOFF (INCHES)	30.59		35.12		280	
10 PERCENT EXCEEDS	257		387		65	
50 PERCENT EXCEEDS	75		98		8.3	
90 PERCENT EXCEEDS	10		17			

a Result of regulation from unknown source.

b From rating curve extended above 1,600 ft³/s on basis of contracted-opening measurement at gage height 8.13 ft.

c Aug. 31, Sept. 1, 1962.



DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

As the number of streams on which streamflow information is likely to be desired far exceeds the number of stream-gaging stations feasible to operate at one time, the Geological Survey collects limited streamflow data at sites other than stream-gaging stations. When limited streamflow data are collected on a systematic basis over a period of years for use in hydrologic analyses, the site at which the data are collected is called a partial-record station. Data collected at these partial-record stations are usable in low-flow or floodflow analyses, depending on the type of data collected. In addition, discharge measurements are made at other sites not included in the partial-record program. These measurements are generally made in times of drought or flood to give better areal coverage to those events. Those measurements and others collected for some special reason are called measurements at miscellaneous sites.

Records collected at partial-record stations are presented in two tables. The first is a table of annual maximum stage and discharge at crest-stage stations and the second is a table of annual maximum stage for tidal crest-stage stations.

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

Station name and number	Location and drainage area	Period of record	Water year 1994 maximum		Period of record maximum	
			Gage height	Dis- charge	Gage height	Dis- charge
			Date	(ft) (ft ³ /s)	Date	(ft) (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 Kitz- miller. Drainage area is 225 mi ² .	1950-85*, 1986-94	2-9-94	11.06 19,300	10-15-54	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 .	1967-85*, 1986-94	3-25-94	7.53 5,390	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 down- stream from Mill Run. Drain- age area is 596 mi ² .	1939-85*, 1986-94	3-27-94	10.50 9,560	10-16-54	23.23 37,000

* Operated as a continuous-record station.
a From floodmark

DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

Tidal crest-stage partial-record stations

The following table contains annual maximum stages for tidal crest-stage stations. The information is obtained from a crest-stage gage or a water-stage recorder located at each site. A crest-stage gage is a device which will register the peak stage occurring between inspections of the gage. All stages are elevations above National Geodetic Vertical Datum of 1929. Only the maximum stage is given. Information on some other high stages may have been obtained but is not published herein. The years given in the period of record represent water years for which the annual maximum has been determined.

Annual maximum stage at tidal crest-stage partial-record stations during water year 1994

Station No.	Station Name	Location	Period of Record	Annual Maximum	
				Date	Elevation, in feet NGVD
DELAWARE RIVER BASIN					
01483158	Appoquinimink River at Odessa, De.	Lat 39°27'09", long 75°39'20", New Castle County, Hydrologic Unit 02040205, on left bank 100 ft down- stream from bridge on State Highway 299, at Odessa and 6.4 mi up- stream from the confluence with Delaware River.	1993-94 (Discontinued)	3-3-94	6.27
INDIAN RIVER BASIN					
01484549	Vines Creek near Dagsboro, De.	Lat 38°33'23", long 75°12'13", Sussex County, Hydrologic Unit 02060010, on right bank at upstream side of bridge on State Highway 26, 2.4 mi east of Dagsboro and 3.8 mi up- stream from the confluence with Indian River at Indian River Bay.	1985-94	3-3-94	4.72
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.	1992-94	3-3-94	5.18
01484670	Rehoboth Bay at Dewey Beach, De.	Lat 38°41'40", long 75°05'05", Sussex County, Hydrologic Unit 02060010, on north shore of Rehoboth Bay at Head of Bay Cove, at Dewey Beach and at south end of Ventian Drive on bulkhead of a boat slip.	1985-94	3-3-94	3.95
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.	1992-94	3-3-94	*4.5
NANTICOKE RIVER BASIN					
01488110	Nanticoke River at Sharptown, Md.	Lat 38°32'38", long 75°43'13", Wicomico County, Hydrologic Unit 02060008, on left bank at upstream side of fishing pier (remains of old State Highway 313 bridge), at Sharptown.	1992-94	3-3-94	4.11

* From high water mark.

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 1993 TO SEPTEMBER 1994

PATUXENT RIVER BASIN

01591210

- CATTAIL CREEK AT CARRS MILL, MD

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH WATER WHOLE FIELD (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	TEMPER-ATURE AIR (DEG C)	ALKA-LINITY WAT DIS TOT IT (MG/L AS CACO3)	NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS NO3)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)
AUG 1994 10...	1115	3.4	231	7.0	19.0	23.0	21	27	0.040	6.10	6.10

01591380

- CATTAIL CREEK AT DAISY, MD

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH WATER WHOLE FIELD (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	TEMPER-ATURE AIR (DEG C)	HARD-NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY WAT DIS TOT IT (MG/L AS CACO3)
SEP 1994 13...	1145	7.4	183	7.0	16.0	27.0	53	12	5.7	9.9	1.9	18

DATE	TIME	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS NO3)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	IRON, DIS-SOLVED (UG/L AS FE)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)
SEP 1994 13...	2.5	25	<0.10	9.7	114	53	0.020	12.0	12.0	43	24	

01591660

- HAWLINGS RIVER NEAR LAYTONSVILLE, MD

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH WATER WHOLE FIELD (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	TEMPER-ATURE AIR (DEG C)	ALKA-LINITY WAT DIS TOT IT (MG/L AS CACO3)	NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS NO3)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)
AUG 1994 11...	1515	2.4	80	6.0	20.0	24.0	13	12	0.010	2.80	2.80

01591670

- HAWLINGS RIVER NEAR BROOKEVILLE, MD

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH WATER WHOLE FIELD (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	TEMPER-ATURE AIR (DEG C)	HARD-NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)
SEP 1994 13...	1330	2.9	86	6.6	16.0	26.0	25	5.4	2.8	4.7	1.4

DATE	TIME	ALKA-LINITY WAT DIS TOT IT (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS NO3)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	IRON, DIS-SOLVED (UG/L AS FE)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)
SEP 1994 13...	14	2.0	7.9	<0.10	12	62	<0.010	2.40	2.40	90	8	

WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

PATUXENT RIVER BASIN--Continued

01591850

- PATUXENT RIVER NEAR ASHTON, MD

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH WATER WHOLE FIELD (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	TEMPER-ATURE AIR (DEG C)	ALKA-LINITY WAT DIS TOT IT FIELD MG/L AS CACO3	NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS NO3)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)
AUG 1994 11...	1245	54	133	6.6	21.0	27.0	26	5.2	0.030	1.20	1.20

01593190

- LITTLE PATUXENT RIVER NEAR WEST FRIENDSHIP, MD

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH WATER WHOLE FIELD (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	TEMPER-ATURE AIR (DEG C)	ALKA-LINITY WAT DIS TOT IT FIELD MG/L AS CACO3	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)
AUG 1994 10...	0715	0.43	288	7.4	19.0	21.0	62	<0.010	2.10	2.10

01593600

- MIDDLE PATUXENT RIVER NEAR WEST FRIENDSHIP, MD

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH WATER WHOLE FIELD (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	TEMPER-ATURE AIR (DEG C)	ALKA-LINITY WAT DIS TOT IT FIELD MG/L AS CACO3	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)
AUG 1994 10...	0930	4.7	167	7.0	19.0	23.0	21	<0.010	3.50	3.50

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

01593655

- AGRICULTURAL RUNOFF SITE NEAR CLARKESVILLE, MD

DATE	TIME	ENDING DATE	ENDING TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	TUR-BID-ITY (NTU)	OXYGEN DEMAND, CHEM-ICAL (LOW LEVEL) (MG/L)	SILICA, DIS-SOLVED (MG/L AS SIO2)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (MG/L)	NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS NO3)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)
MAR 1992 26-26	1852	920326	2023	0.22	1100	29	2.1	1020	0.63	0.007
MAR 26-26	2037	920326	2156	0.54	1400	17	1.5	1580	0.50	0.006
MAR 26-26	2210	920326	2322	0.27	770	17	1.5	700	0.50	0.007
DATE	TIME	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA + ORGANIC DIS. (MG/L AS N)	PHOS-PHORUS TOTAL (MG/L AS P)	PHOS-PHORUS DIS-SOLVED (MG/L AS P)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DIS-SOLVED (MG/L AS C)
MAR 1992 26-26	0.150	0.150	0.056	6.3	0.80	2.80	0.420	--	32	12
MAR 26-26	0.120	0.120	0.036	7.8	0.75	3.60	0.430	--	33	7.4
MAR 26-26	0.120	0.120	0.032	4.0	0.70	2.00	0.430	0.500	18	7.3

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

PATUXENT RIVER BASIN--Continued

01593655

- AGRICULTURAL RUNOFF SITE NEAR CLARKESVILLE, MD--Continued

SUSPENDED SEDIMENT DISCHARGE

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY)
DEC 1991				
09...	2342	0.08	204	0.04
MAR 1992				
26-26	1852	0.22	1190	0.71
MAR				
26-26	2037	0.54	3350	4.9
MAR				
26-26	2210	0.27	681	0.50
JUL				
01...	1657	2.2	3240	19
01...	1659	2.5	3870	27
01...	1701	2.6	3900	27
01...	1703	2.3	3110	19
01...	1705	1.9	2040	10
01...	1708	1.0	1250	3.5

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

01593655

- AGRICULTURAL RUNOFF SITE NEAR CLARKESVILLE, MD

DATE	TIME	ENDING DATE	ENDING TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	TUR- BID- ITY (NTU)	OXYGEN DEMAND, CHEM- ICAL (LOW LEVEL) (MG/L)	SILICA, DIS- SOLVED (MG/L AS SIO2)	RESIDUE TOTAL AT 105 DEG. C, SUS- PENDED (MG/L)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS NO3)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)
NOV 1992										
03-03	0111	921103	0254	0.12	360	41	2.8	250	6.5	0.028
NOV										
12-12	2334	921112	2341	2.3	2400	62	2.1	5	2.9	0.039
NOV										
12-13	2343	921113	0008	0.59	1200	92	2.4	3	4.2	0.041
NOV										
23-23	0136	921123	0143	0.69	1600	46	--	1800	--	--
NOV										
23-23	0148	921123	0206	0.61	950	46	3.6	1000	1.8	0.021
NOV										
23-23	0215	921123	0236	4.0	4900	24	1.7	2200	0.80	0.010
DEC										
10-10	1706	921210	1830	0.21	440	62	2.1	285	7.4	0.029
DEC										
10-10	2304	921210	2359	0.07	180	40	--	58	--	--
DEC										
11-11	0541	921211	0630	0.38	360	38	2.4	305	3.7	0.015
DEC										
11-11	0636	921211	0739	0.35	290	22	1.9	220	2.6	0.015
DEC										
11-11	0819	921211	0910	0.41	250	17	1.9	215	2.4	0.011
DEC										
11-11	0917	921211	1039	0.24	280	21	1.7	250	2.2	0.011
DEC										
11-11	1254	921211	1353	0.24	290	19	1.9	120	2.3	0.010
DEC										
11-11	1417	921211	1503	0.29	190	14	1.9	100	2.0	0.009
11...	1541	--	--	0.06	130	14	--	44	--	--
11...	1708	--	--	0.08	180	<10	--	66	--	--
JAN 1993										
05-05	0557	930105	0625	0.17	2000	30	3.0	340	2.5	0.028
MAR										
23-24	1625	930324	0255	0.18	460	<10	1.8	295	1.9	0.013
24...	0705	--	--	0.03	150	<10	--	25	--	--
APR										
01...	0110	--	--	0.26	1000	22	--	590	--	--
01...	0230	--	--	0.14	610	22	--	420	--	--
APR										
21-21	2025	930421	2230	0.10	740	41	2.0	380	1.1	0.012
22...	0120	--	--	0.04	340	40	--	155	--	--

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

PATUXENT RIVER BASIN--Continued

01593655

- AGRICULTURAL RUNOFF SITE NEAR CLARKESVILLE, MD--Continued

DATE	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N)	PHOS- PHORUS TOTAL (MG/L AS P)	PHOS- PHORUS DIS- SOLVED (MG/L AS P)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)
NOV 1992										
03-03	1.50	1.50	0.072	2.8	1.2	1.00	0.500	0.400	16	12
NOV 12-12	0.700	0.700	0.096	12	1.8	4.40	0.800	0.500	65	38
NOV 12-13	1.00	1.00	0.024	6.1	1.5	2.80	1.20	0.800	52	45
NOV 23-23	--	--	--	--	--	--	--	--	39	--
NOV 23-23	0.430	0.430	0.012	--	--	--	--	0.500	32	16
NOV 23-23	0.190	0.190	0.012	--	--	--	--	0.400	38	10
DEC 10-10	1.70	1.70	0.320	4.1	1.4	2.20	1.00	0.700	31	24
DEC 10-10	--	--	--	2.4	--	1.50	--	--	24	--
DEC 11-11	0.850	0.850	0.036	3.0	0.80	1.90	0.700	0.600	19	13
DEC 11-11	0.600	0.600	0.024	2.1	0.60	1.70	0.800	0.700	18	14
DEC 11-11	0.560	0.560	0.012	2.1	0.35	1.20	0.700	--	23	10
DEC 11-11	0.500	0.500	0.008	1.9	0.50	1.20	0.700	--	13	9.3
DEC 11-11	0.530	0.530	0.008	1.8	0.35	1.10	0.700	--	14	8.8
DEC 11-11	0.450	0.450	0.008	1.5	0.30	1.00	0.450	--	11	10
11...	--	--	--	1.2	--	1.00	--	--	11	--
11...	--	--	--	1.3	--	1.00	--	--	12	--
JAN 1993										
05-05	0.590	0.590	0.096	7.9	1.1	3.50	0.600	0.700	39	14
MAR 23-24	0.450	0.450	0.047	1.6	0.50	0.800	0.230	0.214	7.6	6.9
24...	--	--	--	0.90	--	0.450	--	--	7.1	--
APR 01...	--	--	--	--	--	--	--	--	24	--
01...	--	--	--	--	--	--	--	--	19	--
APR 21-21	0.250	0.250	0.050	2.6	0.76	--	0.370	0.359	22	9.7
22...	--	--	--	3.0	--	--	--	--	17	--

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

PATUXENT RIVER BASIN--Continued

01593655

- AGRICULTURAL RUNOFF SITE NEAR CLARKESVILLE, MD--Continued

SUSPENDED SEDIMENT DISCHARGE

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)
OCT 1992				
09-09	2126	0.93	2080	5.2
OCT				
09-09	2144	0.82	819	1.8
NOV				
03-03	0111	0.12	248	0.08
NOV				
12-12	2334	2.3	2020	13
NOV				
12-13	2343	0.59	784	1.2
NOV				
23-23	0136	0.69	1070	2.0
NOV				
23-23	0148	0.61	674	1.1
NOV				
23-23	0215	4.0	2490	27
DEC				
10-10	1706	0.21	363	0.21
DEC				
10-10	2304	0.07	87	0.02
DEC				
11-11	0541	0.38	338	0.35
DEC				
11-11	0636	0.35	232	0.22
DEC				
11-11	0819	0.41	216	0.24
DEC				
11-11	0917	0.24	177	0.11
DEC				
11-11	1254	0.24	160	0.10
DEC				
11-11	1417	0.29	123	0.10
11...	1541	0.06	66	0.01
11...	1708	0.08	84	0.02
JAN 1993				
05-05	0557	0.17	1570	0.72
MAR				
17-17	1024	0.88	64	0.15
MAR				
23-24	1625	0.18	270	0.13
24...	0705	0.03	57	0.00
APR				
01...	0110	0.26	561	0.39
01...	0230	0.14	283	0.11
APR				
21-21	2025	0.10	484	0.13
22...	0120	0.04	168	0.02

WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

PATUXENT RIVER BASIN--Continued

01593677

- MIDDLE PATUXENT RIVER NEAR COLUMBIA, MD

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT- ANCE (US/CM)	PH WATER WHOLE FIELD (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	TEMPER- ATURE AIR (DEG C)	HARD- NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LITY WAT DIS TOT IT FIELD MG/L AS CACO3
SEP 1994 13...	1445	13	230	7.2	17.0	325.0	78	21	6.1	10	2.3	46

DATE	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS NO3)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	IRON, DIS- SOLVED (UG/L AS FE)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)
SEP 1994 13...	5.2	25	<0.10	12	134	15	0.010	3.40	3.40	47	17

01594464

- ROCK CREEK NEAR BAYARD, MD

DATE	TIME	SPE-CIFIC CON-DUCT- ANCE (US/CM)	PH WATER WHOLE FIELD (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	TEMPER- ATURE AIR (DEG C)	HARD- NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LITY WAT DIS TOT IT FIELD MG/L AS CACO3
SEP 1994 21...	0900	188	6.4	14.0	15.5	63	18	4.3	5.1	3.3	12

DATE	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	IRON, DIS- SOLVED (UG/L AS FE)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)
SEP 1994 21...	45	13	0.20	27	145	<0.010	0.290	0.290	130	12

01594475

- WILSON OWENS BRANCH AT DRURY, MD

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT- ANCE (US/CM)	PH WATER WHOLE FIELD (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	TEMPER- ATURE AIR (DEG C)	HARD- NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
SEP 1994 20...	1330	0.60	193	6.9	17.0	23.0	66	21	3.2	7.9	2.9

DATE	ALKA- LITY WAT DIS TOT IT FIELD MG/L AS CACO3	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	IRON, DIS- SOLVED (UG/L AS FE)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)
SEP 1994 20...	31	23	18	0.20	30	120	<0.010	0.340	0.340	160	15

WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

PATUXENT RIVER BASIN--Continued

01594542

- LYONS CREEK NEAR TRACYS LANDING, MD

DATE	TIME	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH WATER WHOLE FIELD (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	TEMPER- ATURE AIR (DEG C)	ALKA- LITY WAT DIS TOT IT FIELD MG/L AS CACO3	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS NO3)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)
SEP 1994 16...	0910	198	6.5	19.0	22.0	26	2.5	0.010	0.570	0.570

01594544

- CABIN BRANCH AT LYONS CREEK, MD

DATE	TIME	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH WATER WHOLE FIELD (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	TEMPER- ATURE AIR (DEG C)	HARD- NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LITY WAT DIS TOT IT FIELD MG/L AS CACO3
SEP 1994 21...	1030	152	6.4	15.5	21.5	51	15	3.3	5.8	2.5	24

DATE	TIME	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	IRON, DIS- SOLVED (UG/L AS FE)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)
SEP 1994 21...	20	13	0.20	34	103	<0.010	0.240	0.240	73	82	

01594545

- LYONS CREEK AT LYONS CREEK, MD

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH WATER WHOLE FIELD (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	TEMPER- ATURE AIR (DEG C)	ALKA- LITY WAT DIS TOT IT FIELD MG/L AS CACO3	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS NO3)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)
SEP 1994 16...	0800	1.4	173	6.8	19.0	22.0	24	2.7	0.010	0.620	0.620

01594563

- HALL CREEK AT DUNKIRK, MD

DATE	TIME	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH WATER WHOLE FIELD (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	TEMPER- ATURE AIR (DEG C)	HARD- NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LITY WAT DIS TOT IT FIELD MG/L AS CACO3
SEP 1994 21...	1130	224	6.7	16.0	22.0	65	20	3.7	13	1.8	21

DATE	TIME	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	IRON, DIS- SOLVED (UG/L AS FE)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)
SEP 1994 21...	25	30	0.30	31	157	<0.010	0.870	0.870	160	32	

WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

PATUXENT RIVER BASIN--Continued

01594590 - CHEW CREEK NEAR LOWER MARLBORO, MD

DATE	TIME	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH WATER WHOLE FIELD (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	TEMPER- ATURE AIR (DEG C)	HARD- NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LITY WAT DIS TOT IT FIELD MG/L AS CACO3
SEP 1994 21...	1345	209	6.6	17.0	24.0	70	22	3.7	10	1.8	41
DATE	TIME	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	IRON, DIS- SOLVED (UG/L AS FE)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)
SEP 1994 21...	18	21	0.20	21	141	<0.010	0.320	0.320	260	100	

01594712 - LOCKES SWAMP CREEK AT MECHANICSVILLE, MD

DATE	TIME	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH WATER WHOLE FIELD (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	TEMPER- ATURE AIR (DEG C)	ALKA- LITY WAT DIS TOT IT FIELD MG/L AS CACO3	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)
SEP 1994 14...	1400	228	7.5	20.0	27.0	54	<0.010	0.460	0.460

01594713 - LOCKES SWAMP CREEK AT HUNTERSVILLE, MD

DATE	TIME	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH WATER WHOLE FIELD (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	TEMPER- ATURE AIR (DEG C)	HARD- NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LITY WAT DIS TOT IT FIELD MG/L AS CACO3
SEP 1994 14...	1245	212	7.0	21.0	28.0	73	23	3.7	10	1.9	59
DATE	TIME	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	IRON, DIS- SOLVED (UG/L AS FE)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)
SEP 1994 14...	8.1	19	0.20	9.6	119	<0.010	0.110	0.110	380	310	

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

PATUXENT RIVER BASIN--Continued

01594780

- AGRICULTURAL RUNOFF SITE NEAR ST. LEONARD, MD

DATE	TIME	ENDING DATE	ENDING TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	TUR- BID- ITY (NTU)	OXYGEN DEMAND, CHEM- ICAL (LOW LEVEL) (MG/L)	SILICA, DIS- SOLVED (MG/L AS SIO2)	RESIDUE TOTAL AT 105 DEG. C, SUS- PENDE (MG/L)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS NO3)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)
JAN 1992										
04-04	1033	920104	1051	0.74	3500	--	2.0	1430	--	--
JAN 04-04	1055	920104	1130	0.50	2000	--	1.9	940	--	--
JAN 04-04	1148	920104	1239	0.12	980	--	2.4	605	--	--
MAR 10-10	1821	920310	1930	0.10	290	13	2.6	138	17	0.090
MAR 10-10	1948	920310	2010	0.15	320	21	2.4	290	17	0.084
MAR 26-26	1650	920326	1847	0.31	350	<10	1.8	410	19	0.021
MAR 26-26	1853	920326	2007	0.49	280	10	1.6	265	14	0.022
JUN 24...	1739	--	--	0.33	31	--	--	32	--	--

DATE	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N)	PHOS- PHORUS TOTAL (MG/L AS P)	PHOS- PHORUS DIS- SOLVED (MG/L AS P)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)
JAN 1992										
04-04	--	--	--	--	--	--	--	--	--	--
JAN 04-04	--	--	--	--	--	--	--	--	--	--
JAN 04-04	--	--	--	--	--	--	--	--	--	--
MAR 10-10	3.90	3.90	3.30	5.9	5.2	0.500	0.060	0.028	17	9.5
MAR 10-10	3.90	3.90	3.10	5.7	4.9	0.600	0.080	0.028	12	8.0
MAR 26-26	4.30	4.30	0.172	2.5	0.40	0.600	0.020	0.012	13	5.6
MAR 26-26	3.20	3.20	0.192	2.1	0.30	0.500	0.020	0.010	11	4.4
JUN 24	--	--	--	2.6	--	1.10	--	--	25	--

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

PATUXENT RIVER BASIN--Continued

01594780

- AGRICULTURAL RUNOFF SITE NEAR ST. LEONARD, MD--Continued

SUSPENDED SEDIMENT DISCHARGE

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)
OCT 1991				
17...	1135	0.18	1790	0.87
17...	1208	0.04	655	0.07
17...	1442	0.20	1460	0.79
17...	1456	0.24	1280	0.83
17...	1510	0.22	1050	0.62
17...	1533	0.11	573	0.17
17...	1627	0.03	259	0.02
DEC				
03-03	1415	1.3	870	3.1
DEC				
03-03	1426	2.1	1060	5.9
DEC				
03-03	1432	0.89	551	1.3
DEC				
03-03	1510	0.06	152	0.02
JAN 1992				
04-04	1033	0.74	3260	6.5
JAN				
04-04	1055	0.50	1560	2.1
JAN				
04-04	1148	0.12	497	0.16
FEB				
26-26	0322	0.03	93	0.01
MAR				
07-07	0516	0.38	748	0.77
MAR				
07-07	0549	0.85	860	2.0
MAR				
07-07	0619	0.52	592	0.83
MAR				
10-10	1821	0.10	185	0.05
MAR				
10-10	1948	0.15	182	0.07
MAR				
26-26	1650	0.31	250	0.21
MAR				
26-26	1853	0.49	217	0.29
JUN				
24...	1739	0.33	55	0.05
JUL				
24-24	1420	1.6	107	0.45
JUL				
24-24	1430	0.59	65	0.10
AUG				
15-15	0410	0.46	79	0.10
AUG				
15-15	0550	1.6	33	0.14
17...	1246	0.07	37	0.01
17...	1408	0.02	24	0.00
SEP				
06-06	1125	0.32	33	0.03
SEP				
06-06	1322	2.5	30	0.20

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

PATUXENT RIVER BASIN--Continued

01594780

- AGRICULTURAL RUNOFF SITE NEAR ST. LEONARD, MD

DATE	TIME	ENDING DATE	ENDING TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	TUR- BID- ITY (NTU)	OXYGEN DEMAND, CHEM- ICAL (LOW LEVEL) (MG/L)	SILICA, DIS- SOLVED (MG/L AS SIO2)	RESIDUE TOTAL AT 105 DEG. C, SUS- PENDED (MG/L)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS NO3)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)
DEC 1992										
10-10	1609	921210	1736	0.32	340	54	4.3	162	16	0.027
DEC 10-10	1742	921210	1814	0.32	160	46	3.2	80	12	0.021
DEC 10-10	1827	921210	2103	0.14	130	39	3.6	72	12	0.022
DEC 11-11	0902	921211	0954	0.18	120	37	5.1	60	9.2	0.016
DEC 11-11	1007	921211	1100	0.20	100	31	4.3	30	8.3	0.015
DEC 11-11	1120	921211	1220	0.23	80	29	3.9	32	7.5	0.014
DEC 11-11	1234	921211	1457	0.15	83	21	3.6	54	7.0	0.012
11...	1638	--	--	0.03	100	27	--	3	--	--
11...	2057	--	--	0.04	170	27	--	4	--	--
11...	2358	--	--	0.01	120	30	--	3	--	--
12...	0254	--	--	0.03	120	27	--	3	--	--
20...	0944	--	--	0.05	170	37	--	8	--	--
JAN 1993										
05-05	0542	930105	0601	0.16	450	34	3.6	270	4.8	0.016
JAN 05-05	0618	930105	0645	0.12	270	25	4.5	705	5.2	0.018
FEB 21...	1648	--	--	0.07	170	32	--	116	--	--
21...	1718	--	--	0.11	190	26	--	118	--	--
21...	1748	--	--	0.12	170	26	--	88	--	--
21...	1818	--	--	0.09	--	--	--	94	--	--
21...	1921	--	--	0.02	170	27	--	68	--	--
MAR 04-04	0617	930304	0747	0.25	--	--	--	--	--	--
MAR 04-04	0752	930304	0830	0.53	--	--	--	--	--	--
MAR 04-04	0836	930304	0904	0.94	--	--	--	--	--	--

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

PATUXENT RIVER BASIN--Continued

01594780

- AGRICULTURAL RUNOFF SITE NEAR ST. LEONARD, MD--Continued

DATE	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN, AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, AM- MONIA + ORGANIC DIS. (MG/L AS N)	PHOS- PHORUS TOTAL (MG/L AS P)	PHOS- PHORUS DIS- SOLVED (MG/L AS P)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)
DEC 1992										
10-10	3.60	3.60	0.180	6.2	1.7	1.10	0.190	0.200	32	27
DEC 10-10	2.80	2.80	0.128	3.5	1.2	0.800	0.110	0.122	26	20
DEC 10-10	2.70	2.70	0.068	6.8	1.0	1.10	0.100	0.112	23	9.3
DEC 11-11	2.10	2.10	0.012	3.1	1.2	0.500	0.150	--	22	16
DEC 11-11	1.90	1.90	0.016	2.4	1.2	0.350	0.110	--	9.9	--
DEC 11-11	1.70	1.70	0.020	2.3	1.1	0.340	0.120	--	17	13
DEC 11-11	1.60	1.60	0.012	1.8	0.90	0.280	0.100	--	14	12
11...	--	--	--	2.1	--	0.320	--	--	17	--
11...	--	--	--	2.7	--	0.500	--	--	20	--
11...	--	--	--	2.3	--	0.390	--	--	20	--
12...	--	--	--	2.3	--	0.390	--	--	19	--
20...	--	--	--	2.8	--	0.500	--	--	23	--
JAN 1993										
05-05	1.10	1.10	0.024	9.6	1.1	2.30	0.140	0.068	24	16
JAN 05-05	1.20	1.20	0.036	3.9	1.2	0.900	0.090	0.038	22	16
FEB										
21...	--	--	--	2.3	--	0.360	--	--	16	--
21...	--	--	--	2.2	--	0.350	--	--	15	--
21...	--	--	--	2.4	--	0.410	--	--	15	--
21...	--	--	--	2.4	--	0.290	--	--	17	--
21...	--	--	--	2.4	--	0.320	--	--	17	--
MAR										
04-04	--	--	--	8.0	--	1.70	--	--	20	--
MAR 04-04	--	--	--	2.4	--	0.600	--	--	14	--
MAR 04-04	--	--	--	4.3	--	1.20	--	--	15	--

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

PATUXENT RIVER BASIN--Continued

01594780

- AGRICULTURAL RUNOFF SITE NEAR ST. LEONARD, MD--Continued

SUSPENDED SEDIMENT DISCHARGE

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)
DEC 1992				
10-10	1609	0.32	605	0.52
DEC				
10-10	1742	0.32	195	0.17
DEC				
10-10	1827	0.14	241	0.09
DEC				
11-11	0902	0.18	74	0.04
DEC				
11-11	1007	0.20	60	0.03
DEC				
11-11	1120	0.23	57	0.03
DEC				
11-11	1234	0.15	40	0.02
11...	1638	0.03	53	0.00
11...	2057	0.04	80	0.01
12...	0254	0.03	50	0.00
20...	0944	0.05	89	0.01
JAN 1993				
05-05	0542	0.16	1680	0.73
JAN				
05-05	0618	0.12	274	0.09
08...	0933	0.06	114	0.02
08...	1027	0.05	86	0.01
08...	1225	0.01	215	0.01
09...	0212	0.02	247	0.01
09...	0505	0.04	137	0.02
09...	0803	0.02	84	0.00
09...	1043	0.04	72	0.01
09...	1315	0.04	81	0.01
09...	1538	0.02	77	0.00
FEB				
12...	1706	0.08	118	0.02
12...	1748	0.06	76	0.01
FEB				
12-12	1846	0.13	105	0.04
FEB				
12-12	2018	0.14	84	0.03
12...	2152	0.02	70	0.00
21...	1648	0.07	158	0.03
21...	1718	0.11	164	0.05
21...	1748	0.12	121	0.04
21...	1818	0.09	115	0.03
21...	1921	0.02	93	0.00
MAR				
04-04	0617	0.25	887	0.60
MAR				
04-04	0752	0.53	535	0.77
MAR				
04-04	0836	0.94	835	2.1
MAY				
12-12	1825	2.3	733	4.6
MAY				
12-12	1846	3.4	508	4.6
AUG				
06-06	1228	0.57	322	0.50
AUG				
06-06	1254	0.83	1240	2.8
AUG				
06-06	1305	0.75	441	0.89
AUG				
06-06	1325	0.84	1460	3.3
AUG				
06-06	1343	0.48	560	0.73
06...	1544	0.03	20	0.00
AUG				
06-06	1653	0.37	187	0.19

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

PATUXENT RIVER BASIN--Continued

01594812

- HELLEN CREEK NEAR LUSBY, MD

DATE	TIME	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH WATER WHOLE FIELD (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	TEMPER- ATURE AIR (DEG C)	HARD- NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LITY WAT DIS TOT IT FIELD MG/L AS CACO3
SEP 1994 15...	1400	82	5.6	19.0	25.0	12	1.8	1.9	8.1	1.1	3

DATE	TIME	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	IRON, DIS- SOLVED (UG/L AS FE)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)
SEP 1994 15...	4.8	16	<0.10	10	57	<0.010	0.120	0.120	300	18	

DATE	TIME	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH WATER WHOLE FIELD (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	TEMPER- ATURE AIR (DEG C)	HARD- NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LITY WAT DIS TOT IT FIELD MG/L AS CACO3
SEP 1994 15...	1315	175	6.5	23.0	26.0	20	3.2	3.0	23	2.2	21

DATE	TIME	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS NO3)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	IRON, DIS- SOLVED (UG/L AS FE)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)
SEP 1994 15...	9.1	28	<0.10	7.5	104	2.7	0.010	0.620	0.620	290	39	

01594816

- CUCKOLD CREEK NEAR HOLLYWOOD, MD

DATE	TIME	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH WATER WHOLE FIELD (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	TEMPER- ATURE AIR (DEG C)	HARD- NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LITY WAT DIS TOT IT FIELD MG/L AS CACO3
SEP 1994 15...	1130	314	7.4	19.0	24.0	150	47	7.1	5.5	2.2	12

DATE	TIME	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS NO3)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	IRON, DIS- SOLVED (UG/L AS FE)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)
SEP 1994 15...	13	9.1	0.20	16	193	0.97	0.010	0.230	0.230	48	51	

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

PATUXENT RIVER BASIN--Continued

01594826

- LEWIS CREEK AT CALIFORNIA, MD

DATE	TIME	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH WATER WHOLE FIELD (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	TEMPER- ATURE AIR (DEG C)	HARD- NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LITY WAT DIS TOT IT FIELD MG/L AS CACO3
SEP 1994											
15...	1000	109	5.7	18.0	24.0	14	2.2	2.1	13	1.3	9
15...	1015	141	5.8	17.0	24.0	20	3.2	2.8	15	1.4	6

DATE	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	IRON, DIS- SOLVED (UG/L AS FE)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)
SEP 1994										
15...	4.0	20	<0.10	8.8	69	<0.010	0.490	0.490	540	27
15...	3.6	29	<0.10	9.2	84	<0.010	1.50	1.50	170	24

POTOMAC RIVER BASIN

01637950

- BROAD RUN NEAR JEFFERSON, MD

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH WATER WHOLE FIELD (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	TEMPER- ATURE AIR (DEG C)	BARO- METRIC PRES- SURE (MM OF HG)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED SATUR- ATION	HARD- NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)
AUG 1994												
24...	1810	6.7	257	7.4	20.5	26.5	761	8.2	91	90	24	7.4

DATE	SODIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LITY WAT DIS TOT IT FIELD MG/L AS CACO3	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS NO3)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)
AUG 1994											
24...	8.8	3.0	49	60	19	22	0.20	20	176	19	0.010

DATE	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N)	PHOS- PHORUS DIS- SOLVED (MG/L AS P)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P)	IRON, DIS- SOLVED (UG/L AS FE)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	DIMETH- OATE WATER FLTRD 0.7 U GG, REC (UG/L)	ETHAL- FLUR- ALIN WAT FLT 0.7 U GF, REC (UG/L)	PHORATE WATER FLTRD 0.7 U GF, REC (UG/L)
AUG 1994											
24...	4.30	4.30	0.020	0.30	0.110	0.100	87	25	<0.02	<0.01	<0.01

DATE	TER- BACIL WATER FLTRD 0.7 U GF, REC (UG/L)	TRI- FLUR- ALIN WAT FLT 0.7 U GF, REC (UG/L)	2,6-DI- ETHYL ANILINE WAT FLT 0.7 U GF, REC (UG/L)	ALA- CHLOR, WATER, DISS, REC, (UG/L)	ALPHA BHC DIS- SOLVED (UG/L)	ATRA- ZINE, WATER, DISS, REC (UG/L)	BEN- FLUR- ALIN WAT FLD 0.7 U GF, REC (UG/L)	BUTYL- ATE, WATER, DISS, REC (UG/L)	CAR- BARYL WATER FLTRD 0.7 U GF, REC (UG/L)	CARBO- FURAN WATER FLTRD 0.7 U GF, REC (UG/L)	CHLOR- PYRIFOS DIS- SOLVED (UG/L)
AUG 1994											
24...	<0.03	<0.01	<0.01	<0.01	<0.01	E0.34	<0.01	<0.01	<0.05	<0.01	<0.005

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

POTOMAC RIVER BASIN--Continued

01637950

- BROAD RUN NEAR JEFFERSON, MD--Continued

DATE	CYANA- ZINE, WATER, DISS, REC (UG/L)	DCPA WATER FLTRD 0.7 U GF, REC (UG/L)	P,P' DDE DISSOLV (UG/L)	DEETHYL ATRA- ZINE, WATER, DISS, REC (UG/L)	DI- AZINON, DIS- SOLVED (UG/L)	DI- ELDRIN DIS- SOLVED (UG/L)	DISUL- FOTON WATER FLTRD 0.7 U GF, REC (UG/L)	EPTC WATER FLTRD 0.7 U GF, REC (UG/L)	ETHO- PROP WATER FLTRD 0.7 U GF, REC (UG/L)	FONOFOS WATER DISS REC (UG/L)	LINDANE DIS- SOLVED (UG/L)
AUG 1994 24...	<0.01	<0.004	E0.002	E0.21	<0.01	<0.01	<0.01	<0.005	<0.01	<0.01	<0.01
DATE	LIN- URON WATER FLTRD 0.7 U GF, REC (UG/L)	MALA- THION, WAT DIS- SOLVED (UG/L)	METHYL AZIN- PHOS WAT FLT 0.7 U GF, REC (UG/L)	METHYL PARA- THION WAT FLT 0.7 U GF, REC (UG/L)	METO- LACHLOR WATER DISSOLV (UG/L)	METRI- BUZIN WATER DISSOLV (UG/L)	MOL- INATE WATER FLTRD 0.7 U GF, REC (UG/L)	NAPROP- AMIDE WATER FLTRD 0.7 U GF, REC (UG/L)	PEB- ULATE WATER FILTRD 0.7 U GF, REC (UG/L)	PARA- THION, WAT DIS- SOLVED (UG/L)	PENDI- METH- ALIN WAT FLT 0.7 U GF, REC (UG/L)
AUG 1994 24...	<0.04	<0.01	<0.04	<0.03	E0.08	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02
DATE	PER- METHRIN CIS WAT FLT 0.7 U GF, REC (UG/L)	PRO- METON, WATER, DISS, REC (UG/L)	PRON- AMIDE WATER FLTRD 0.7 U GF, REC (UG/L)	PROP- CHLOR, WATER, DISS, REC (UG/L)	PRO- PARGITE WATER FLTRD 0.7 U GF, REC (UG/L)	PRO- PANIL WATER FLTRD 0.7 U GF, REC (UG/L)	SI- MAZINE, WATER, DISS, REC (UG/L)	TEBU- THIURON WATER FLTRD 0.7 U GF, REC (UG/L)	TER- BIFOS WATER FLTRD 0.7 U GF, REC (UG/L)	THIO- BENCARB WATER FLTRD 0.7 U GF, REC (UG/L)	TRIAL- LATE WATER FLTRD 0.7 U GF, REC (UG/L)
AUG 1994 24...	<0.02	E0.01	<0.01	<0.02	<0.01	<0.02	E0.04	<0.02	<0.01	<0.01	<0.01

01638050

- CATOCTIN CREEK AT OLIVE MD

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT- ANCE (US/CM)	PH WATER WHOLE FIELD (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	TEMPER- ATURE AIR (DEG C)	BARO- METRIC PRES- SURE (MM OF HG)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (MG/L)	ALKA- LITY WAT DIS TOT IT FIELD MG/L AS CACO3	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS NO3)
JUN 1994	09...	38	220	7.3	18.0	21.5	758	8.1	86	51	63	--
	16...	E38	228	7.5	27.5	32.0	761	8.2	104	54	66	5.2
DATE		NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N)	PHOS- PHORUS TOTAL (MG/L AS P)	PHOS- PHORUS DIS- SOLVED (MG/L AS P)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P)	DIMETH- OATE WATER FLTRD 0.7 U GG, REC (UG/L)	ETHAL- FLUR- ALIN WAT FLT 0.7 U GF, REC (UG/L)	PHORATE WATER FLTRD 0.7 U GF, REC (UG/L)
JUN 1994	09...	--	--	--	--	--	--	--	--	--	--	--
	16...	0.030	1.20	1.20	0.060	1.1	0.30	0.080	0.080	0.070	<0.02	<0.01
DATE		TER- BACIL WATER FLTRD 0.7 U GF, REC (UG/L)	TRI- FLUR- ALIN WAT FLT 0.7 U GF, REC (UG/L)	2,6-DI- ETHYL ANILINE WAT FLT 0.7 U GF, REC (UG/L)	ALA- CHLOR, WATER, DISS, REC, (UG/L)	ALPHA BHC DIS- SOLVED (UG/L)	ATRA- ZINE, WATER, DISS, REC (UG/L)	BEN- FLUR- ALIN WAT FLD 0.7 U GF, REC (UG/L)	BUTYL- ATE, WATER, DISS, REC (UG/L)	CAR- BARYL WATER FLTRD 0.7 U GF, REC (UG/L)	CARBO- FURAN WATER FLTRD 0.7 U GF, REC (UG/L)	CHLOR- PYRIFOS DIS- SOLVED (UG/L)
JUN 1994	09...	--	--	--	--	--	--	--	--	--	--	--
	16...	<0.03	<0.01	<0.01	0.01	<0.01	0.23	<0.01	<0.01	<0.05	<0.01	<0.005

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

POTOMAC RIVER BASIN--Continued

01638050

- CATOCTIN CREEK AT OLIVE MD--Continued

DATE	CYANA- ZINE, WATER, DISS, REC (UG/L)	DCPA WATER FLTRD 0.7 U GF, REC (UG/L)	P,P' DDE DISSOLV (UG/L)	DEETHYL ATRA- ZINE, WATER, DISS, REC (UG/L)	DI- AZINON, DIS- SOLVED (UG/L)	DI- ELDRIN DIS- SOLVED (UG/L)	DISUL- FOTON WATER FLTRD 0.7 U GF, REC (UG/L)	EPTC WATER FLTRD 0.7 U GF, REC (UG/L)	ETHO- PROP WATER FLTRD 0.7 U GF, REC (UG/L)	FONOFOS WATER DISS REC (UG/L)	LINDANE DIS- SOLVED (UG/L)
JUN 1994 09... 16...	-- <0.01	-- <0.004	-- <0.01	-- 0.11	-- <0.01	-- <0.01	-- <0.01	-- <0.005	-- <0.01	-- <0.01	-- <0.01
DATE	LIN- URON WATER FLTRD 0.7 U GF, REC (UG/L)	MALA- THION, DIS- SOLVED (UG/L)	METHYL AZIN- PHOS WAT FLT 0.7 U GF, REC (UG/L)	METHYL PARA- THION WAT FLT 0.7 U GF, REC (UG/L)	METO- LACHLOR WATER DISSOLV (UG/L)	METRI- BUZIN WATER DISSOLV (UG/L)	MOL- INATE WATER FLTRD 0.7 U GF, REC (UG/L)	NAPROP- AMIDE WATER FLTRD 0.7 U GF, REC (UG/L)	PEB- ULATE WATER FLTRD 0.7 U GF, REC (UG/L)	PARA- THION, DIS- SOLVED (UG/L)	PENDI- METH- ALIN WAT FLT 0.7 U GF, REC (UG/L)
JUN 1994 09... 16...	-- <0.04	-- <0.01	-- <0.04	-- <0.03	-- 0.06	-- <0.01	-- <0.01	-- <0.01	-- <0.01	-- <0.02	-- <0.02
DATE	PER- METHRIN CIS WAT FLT 0.7 U GF, REC (UG/L)	PRO- METON, WATER, DISS, REC (UG/L)	PRON- AMIDE WATER FLTRD 0.7 U GF, REC (UG/L)	PROP- CHLOR, WATER, DISS, REC (UG/L)	PRO- FARGITE WATER FLTRD 0.7 U GF, REC (UG/L)	PRO- PANIL WATER FLTRD 0.7 U GF, REC (UG/L)	SI- MAZINE, WATER, DISS, REC (UG/L)	TEBU- THIURON WATER FLTRD 0.7 U GF, REC (UG/L)	TER- BUFOS WATER FLTRD 0.7 U GF, REC (UG/L)	THIO- BENCARB WATER FLTRD 0.7 U GF, REC (UG/L)	TRIAL- LATE WATER FLTRD 0.7 U GF, REC (UG/L)
JUN 1994 09... 16...	-- <0.02	-- 0.01	-- <0.01	-- <0.02	-- <0.01	-- <0.02	-- 0.15	-- <0.02	-- <0.01	-- <0.01	-- <0.01

SUSPENDED SEDIMENT DISCHARGE

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SEDI- MENT, DIS- CHARGE, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)
JUN 1994 09... 16...	0850 1205	38 E38	38 23	3.9 --

01639380

- FLAT RUN AT EMMITSBURG, MD

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH WATER WHOLE FIELD (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	TEMPER- ATURE AIR (DEG C)	BARO- METRIC PRES- SURE (MM OF HG)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (MG/L)	HARD- NESS TOTAL (MG/L AS CaCO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)
AUG 1994 25...	0840	1.8	223	7.5	18.5	22.0	757	9.5	102	94	27	6.5	
DATE	TIME	SODIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY WAT DIS TOT IT FIELD (MG/L AS CaCO3)	BICAR- BONATE WATER DIS IT FIELD (MG/L AS HCO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)
AUG 1994 25...	7.4	4.2	69	84	27	6.8	0.20	17	158	<0.010	0.360	0.360	

WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

POTOMAC RIVER BASIN--Continued

01639380

- FLAT RUN AT EMMITSBURG, MD--Continued

DATE	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN, AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, AM- MONIA + ORGANIC DIS. (MG/L AS N)	PHOS- PHORUS TOTAL (MG/L AS P)	PHOS- PHORUS DIS- SOLVED (MG/L AS P)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P)	IRON, DIS- SOLVED (UG/L AS FE)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	DIMETH- OATE WATER FLTRD 0.7 U GG, REC (UG/L)	ETHAL- FLUR- ALIN WAT FLT 0.7 U GF, REC (UG/L)	PHORATE WATER FLTRD 0.7 U GF, REC (UG/L)
AUG 1994 25...	0.020	<0.20	0.70	<0.010	0.080	0.070	180	19	<0.02	<0.01	<0.01
DATE	TER- BACIL WATER FLTRD 0.7 U GF, REC (UG/L)	TRI- FLUR- ALIN WAT FLT 0.7 U GF, REC (UG/L)	2,6-DI- ETHYL ANILINE WAT FLT 0.7 U GF, REC (UG/L)	ALA- CHLOR, WATER, DISS, REC (UG/L)	ALPHA BHC DIS- SOLVED (UG/L)	ATRA- ZINE, WATER, DISS, REC (UG/L)	BEN- FLUR- ALIN WAT FLD 0.7 U GF, REC (UG/L)	BUTYL- ATE, WATER, DISS, REC (UG/L)	CAR- BARYL WATER FLTRD 0.7 U GF, REC (UG/L)	CARBO- FURAN WATER FLTRD 0.7 U GF, REC (UG/L)	CHLOR- PYRIFOS DIS- SOLVED (UG/L)
AUG 1994 25...	<0.03	<0.01	<0.01	<0.01	<0.01	0.19	<0.01	<0.01	<0.05	<0.01	<0.01
DATE	CYANA- ZINE, WATER, DISS, REC (UG/L)	DCPA WATER FLTRD 0.7 U GF, REC (UG/L)	P,P' DDE DISSOLV (UG/L)	DEETHYL ATRA- ZINE, WATER, DISS, REC (UG/L)	DI- AZINON, DIS- SOLVED (UG/L)	DI- ELDRIN DIS- SOLVED (UG/L)	DISUL- FOTON WATER FLTRD 0.7 U GF, REC (UG/L)	EPTC WATER FLTRD 0.7 U GF, REC (UG/L)	ETHO- PROP WATER FLTRD 0.7 U GF, REC (UG/L)	FONOFOS WATER DISS REC (UG/L)	LINDANE DIS- SOLVED (UG/L)
AUG 1994 25...	<0.01	<0.004	<0.01	0.03	<0.01	<0.01	<0.06	<0.005	<0.01	<0.01	<0.01
DATE	LIN- URON WATER FLTRD 0.7 U GF, REC (UG/L)	MALA- THION, DIS- SOLVED (UG/L)	METHYL AZIN- PHOS WAT FLT 0.7 U GF, REC (UG/L)	METHYL PARA- THION WAT FLT 0.7 U GF, REC (UG/L)	METO- LACHLOR WATER DISSOLV (UG/L)	METRI- BUZIN SENCOR WATER DISSOLV (UG/L)	MOL- INATE WATER FLTRD 0.7 U GF, REC (UG/L)	NAPROP- AMIDE WATER FLTRD 0.7 U GF, REC (UG/L)	PEB- ULATE WATER FILTRD 0.7 U GF, REC (UG/L)	PARA- THION, DIS- SOLVED (UG/L)	PENDI- METH- ALIN WAT FLT 0.7 U GF, REC (UG/L)
AUG 1994 25...	<0.04	<0.01	<0.05	<0.03	0.06	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02
DATE	PER- METHRIN CIS WAT FLT 0.7 U GF, REC (UG/L)	PRO- METON, WATER, DISS, REC (UG/L)	FRON- AMIDE WATER FLTRD 0.7 U GF, REC (UG/L)	PROP- CHLOR, WATER, DISS, REC (UG/L)	PRO- PARGITE WATER FLTRD 0.7 U GF, REC (UG/L)	PRO- PANIL WATER FLTRD 0.7 U GF, REC (UG/L)	SI- MAZINE, WATER, DISS, REC (UG/L)	TEBU- THIURON WATER FLTRD 0.7 U GF, REC (UG/L)	TER- BUFOS WATER FLTRD 0.7 U GF, REC (UG/L)	THIO- BENCARB WATER FLTRD 0.7 U GF, REC (UG/L)	TRIAL- LATE WATER FLTRD 0.7 U GF, REC (UG/L)
AUG 1994 25...	<0.02	<0.01	<0.01	<0.02	<0.01	<0.02	0.11	<0.02	<0.01	<0.01	<0.01

SUSPENDED SEDIMENT DISCHARGE

DATE	TIME	DIS- CHARGE, INST CUBIC FEET PER SECOND	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)
AUG 1994 25...	0840	1.8	9	0.04

WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

POTOMAC RIVER BASIN--Continued

01639400

- BIG PIPE CREEK AT BACHMAN MILLS, MD

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT- ANCE (US/CM)	PH WATER WHOLE FIELD (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	TEMPER- ATURE AIR (DEG C)	BARO- METRIC PRES- SURE (MM OF HG)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED SATUR- ATION	HARD- NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)
AUG 1994 30...	1445	6.5	188	7.3	19.0	24.0	746	8.7	96	71	21	4.4
DATE		SODIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LITY WAT DIS TOT IT FIELD MG/L AS CACO3	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS NO3)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)
AUG 1994 30...		5.8	1.7	70	85	6.1	16	<0.10	8.5	127	15	0.010
DATE		NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN, AM- MONIA + ORGANIC DIS. (MG/L AS N)	PHOS- PHORUS DIS- SOLVED (MG/L AS P)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P)	IRON, DIS- SOLVED (UG/L AS FE)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	DIMETH- OATE WATER FLTRD 0.7 U GG, REC (UG/L)	ETHAL- FLUR- ALIN WAT FLT 0.7 U GF, REC (UG/L)	PHORATE WATER FLTRD 0.7 U GF, REC (UG/L)
AUG 1994 30...		3.30	3.30	0.020	<0.20	0.030	0.020	110	30	<0.02	<0.01	<0.01
DATE		TER- BACIL WATER FLTRD 0.7 U GF, REC (UG/L)	TRI- FLUR- ALIN WAT FLT 0.7 U GF, REC (UG/L)	2,6-DI- ETHYL ANILINE WAT FLT 0.7 U GF, REC (UG/L)	ALA- CHLOR, WATER, DISS, REC, SOLVED (UG/L)	ALPHA BHC DIS- SOLVED (UG/L)	ATRA- ZINE, WATER, DISS, REC (UG/L)	BEN- FLUR- ALIN WAT FLD 0.7 U GF, REC (UG/L)	BUTYL- ATE, WATER, DISS, REC (UG/L)	CAR- BARYL WATER FLTRD 0.7 U GF, REC (UG/L)	CARBO- FURAN WATER FLTRD 0.7 U GF, REC (UG/L)	CHLOR- PYRIFOS DIS- SOLVED (UG/L)
AUG 1994 30...		<0.03	<0.01	<0.01	<0.01	<0.01	0.17	<0.01	<0.01	<0.05	<0.01	<0.01
DATE		CYANA- ZINE, WATER, DISS, REC (UG/L)	DCPA WATER FLTRD 0.7 U GF, REC (UG/L)	DEETHYL ATRA- ZINE, WATER, DISS, REC (UG/L)	DI- AZINON, DIS- SOLVED (UG/L)	DI- ELDRIN DIS- SOLVED (UG/L)	DISUL- FOTON WATER FLTRD 0.7 U GF, REC (UG/L)	EPTC WATER FLTRD 0.7 U GF, REC (UG/L)	ETHO- PROP WATER FLTRD 0.7 U GF, REC (UG/L)	FONOFOS WATER DISS REC (UG/L)	LINDANE DIS- SOLVED (UG/L)	
AUG 1994 30...		<0.01	<0.004	<0.01	0.11	<0.01	<0.01	<0.06	<0.005	<0.01	<0.01	<0.01
DATE		LIN- URON WATER FLTRD 0.7 U GF, REC (UG/L)	MALA- THION, DIS- SOLVED (UG/L)	METHYL AZIN- PHOS WAT FLT 0.7 U GF, REC (UG/L)	METHYL PARA- THION WAT FLT 0.7 U GF, REC (UG/L)	METO- LACHLOR WATER DISSOLV (UG/L)	METRI- BUZIN WATER DISSOLV (UG/L)	MOL- INATE WATER FLTRD 0.7 U GF, REC (UG/L)	NAPROP- AMIDE WATER FLTRD 0.7 U GF, REC (UG/L)	FEB- ULATE WATER FILTRD 0.7 U GF, REC (UG/L)	PARA- THION, DIS- SOLVED (UG/L)	PENDI- METH- ALIN WAT FLT 0.7 U GF, REC (UG/L)
AUG 1994 30...		<0.04	<0.01	<0.05	<0.03	0.07	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02

WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

POTOMAC RIVER BASIN--Continued

01639400

- BIG PIPE CREEK AT BACHMAN MILLS, MD--Continued

DATE	PER-METHRIN CIS WAT FLT 0.7 U GF, REC (UG/L)	PRO-METON, WATER, DISS, REC (UG/L)	PRON-AMIDE WATER FLTRD 0.7 U GF, REC (UG/L)	PROF-CHLOR, WATER, DISS, REC (UG/L)	PRO-PARGITE WATER FLTRD 0.7 U GF, REC (UG/L)	PRO-PANIL WATER FLTRD 0.7 U GF, REC (UG/L)	SI-MAZINE, WATER, DISS, REC (UG/L)	TEBU-THIURON WATER FLTRD 0.7 U GF, REC (UG/L)	TER-BUFOS WATER FLTRD 0.7 U GF, REC (UG/L)	THIO-BENCARB WATER FLTRD 0.7 U GF, REC (UG/L)	TRIAL-LATE WATER FLTRD 0.7 U GF, REC (UG/L)
AUG 1994 30...	<0.02	<0.01	<0.01	<0.02	<0.01	<0.02	0.03	<0.02	<0.01	<0.01	<0.01

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SEDI-MENT, DIS-CHARGE, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)
AUG 1994 30...	1445	6.5	9	0.16

01639440

- SILVER RUN NEAR SILVER RUN, MD

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT- ANCE (US/CM)	PH WATER WHOLE FIELD (STAND- WANCE UNITS)	TEMPER- ATURE WATER (DEG C)	TEMPER- ATURE AIR (DEG C)	BARO-METRIC PRES-SURE (MM OF HG)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR- ATION)	HARD- NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)
AUG 1994 30...	1150	3.9	236	7.6	19.0	22.5	755	9.2	100	94	29	
DATE		MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY WAT DIS TOT IT FIELD MG/L AS CACO3	BICAR-BONATE WATER DIS IT FIELD MG/L AS HCO3	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)
AUG 1994 30...	5.2	5.9	1.8	47	57	11	15	<0.10	7.9	129	<0.010	
DATE		NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN, AM- MONIA + ORGANIC DIS-SOLVED (MG/L AS N)	PHOS-PHORUS ORTHODIS-SOLVED (MG/L AS P)	PHOS-PHORUS ORTHODIS-SOLVED (MG/L AS P)	IRON, DIS-SOLVED (UG/L AS FE)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	DIMETH-OATE WATER FLTRD 0.7 U GG, REC (UG/L)	ETHAL-FLUR- ALIN WAT FLT 0.7 U GF, REC (UG/L)	PHORATE WATER FLTRD 0.7 U GF, REC (UG/L)
AUG 1994 30...	3.10	3.10	0.010	<0.20	<0.010	<0.010	64	29	<0.02	<0.01	<0.01	
DATE		TER-BACIL WATER FLTRD 0.7 U GF, REC (UG/L)	TRI-FLUR- ALIN WAT FLT 0.7 U GF, REC (UG/L)	2,6-DI-ETHYL ANILINE WAT FLT 0.7 U GF, REC (UG/L)	ALA-CHLOR, WATER, DISS, REC (UG/L)	ALPHA BHC DIS-SOLVED (UG/L)	ATRA-ZINE, WATER, DISS, REC (UG/L)	BEN-FLUR- ALIN WAT FLD 0.7 U GF, REC (UG/L)	BUTYL-ATE, WATER, DISS, REC (UG/L)	CAR-BARYL WATER FLTRD 0.7 U GF, REC (UG/L)	CARBO-FURAN WATER FLTRD 0.7 U GF, REC (UG/L)	CHLOR-PYRIFOS DIS-SOLVED (UG/L)
AUG 1994 30...	<0.03	<0.01	<0.01	0.01	<0.01	0.32	<0.01	<0.01	<0.01	<0.05	<0.01	<0.01

WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

POTOMAC RIVER BASIN--Continued

01639440

- SILVER RUN NEAR SILVER RUN, MD--Continued

DATE	CYANA- ZINE, WATER, DISS, REC (UG/L)	DCPA WATER FLTRD 0.7 U GF, REC (UG/L)	P,P' DDE DISSOLV (UG/L)	DEETHYL ATRA- ZINE, WATER, DISS, REC (UG/L)	DI- AZINON, DIS- SOLVED (UG/L)	DI- ELDRIN DIS- SOLVED (UG/L)	DISUL- FOTON WATER FLTRD 0.7 U GF, REC (UG/L)	EPTC WATER FLTRD 0.7 U GF, REC (UG/L)	ETHO- PROP WATER FLTRD 0.7 U GF, REC (UG/L)	FONOFOS WATER DISS REC (UG/L)	LINDANE DIS- SOLVED (UG/L)
AUG 1994 30...	<0.01	<0.004	<0.01	0.08	<0.01	<0.01	<0.06	<0.005	<0.01	<0.01	<0.01
DATE	LIN- URON WATER FLTRD 0.7 U GF, REC (UG/L)	MALA- THION, DIS- SOLVED (UG/L)	METHYL AZIN- PHOS WAT FLT 0.7 U GF, REC (UG/L)	METHYL PARA- THION WAT FLT 0.7 U GF, REC (UG/L)	METO- LACHLOR WATER DISSOLV (UG/L)	METRI- BUZIN WATER DISSOLV (UG/L)	MOL- INATE WATER FLTRD 0.7 U GF, REC (UG/L)	NAPROP- AMIDE WATER FLTRD 0.7 U GF, REC (UG/L)	PEB- ULATE WATER FILTRD 0.7 U GF, REC (UG/L)	PARA- THION, DIS- SOLVED (UG/L)	PENDI- METH- ALIN WAT FLT 0.7 U GF, REC (UG/L)
AUG 1994 30...	<0.04	<0.01	<0.05	<0.03	0.07	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02
DATE	PER- METHRIN CIS WAT FLT 0.7 U GF, REC (UG/L)	PRO- METON, WATER, DISS, REC (UG/L)	PRON- AMIDE WATER FLTRD 0.7 U GF, REC (UG/L)	PROP- CHLOR, WATER, DISS, REC (UG/L)	PRO- FARGITE WATER FLTRD 0.7 U GF, REC (UG/L)	PRO- PANIL WATER FLTRD 0.7 U GF, REC (UG/L)	SI- MAZINE, WATER, DISS, REC (UG/L)	TEBU- THIURON WATER FLTRD 0.7 U GF, REC (UG/L)	TER- BUFOS WATER FLTRD 0.7 U GF, REC (UG/L)	THIO- BENCARB WATER FLTRD 0.7 U GF, REC (UG/L)	TRIAL- LATE WATER FLTRD 0.7 U GF, REC (UG/L)
AUG 1994 30...	<0.02	<0.01	<0.01	<0.02	<0.01	<0.02	0.34	<0.02	<0.01	<0.01	<0.01

SUSPENDED SEDIMENT DISCHARGE

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SEDI- MENT, DIS- CHARGE, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)
AUG 1994 30...	1150	3.9	12	0.13

01639462

- BEAR BRANCH NEAR FRIZZELLBURG, MD

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT- ANCE (US/CM)	PH WATER WHOLE FIELD (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	TEMPER- ATURE AIR (DEG C)	BARO- METRIC PRES- SURE (MM OF HG)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	HARD- NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)
AUG 1994 25...	1445	5.7	211	7.6	19.5	25.5	752	8.7	96	83	25	4.9
DATE	SODIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY WAT DIS TOT IT FIELD MG/L AS CACO3	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS NO3)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	
AUG 1994 25...	5.8	2.0	56	68	8.0	14	<0.10	7.6	122	18	0.020	

WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

POTOMAC RIVER BASIN--Continued

01639462

- BEAR BRANCH NEAR FRIZZELBURG, MD--Continued

DATE	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA + DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N)	PHOS- PHORUS DIS- SOLVED (MG/L AS P)	PHOS- PHORUS ORTHOS, DIS- SOLVED (MG/L AS P)	IRON, DIS- SOLVED (UG/L AS FE)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	DIMETH- OATE WATER FLTRD 0.7 U GG, REC (UG/L)	ETHAL- FLUR- ALIN WAT FLT 0.7 U GF, REC (UG/L)	PHORATE WATER FLTRD 0.7 U GF, REC (UG/L)
AUG 1994 25...	4.10	4.10	0.020	<0.20	0.030	0.020	92	42	<0.02	<0.01	<0.01
DATE	TER- BACIL WATER FLTRD 0.7 U GF, REC (UG/L)	TRI- FLUR- ALIN WAT FLT 0.7 U GF, REC (UG/L)	2,6-DI- ETHYL ANILINE WAT FLT 0.7 U GF, REC (UG/L)	ALA- CHLOR, WATER, DISS, REC (UG/L)	ALPHA BHC DIS- SOLVED (UG/L)	ATRA- ZINE, WATER, DISS, REC (UG/L)	BEN- FLUR- ALIN WAT FLD 0.7 U GF, REC (UG/L)	BUTYL- ATE, WATER, DISS, REC (UG/L)	CAR- BARYL WATER FLTRD 0.7 U GF, REC (UG/L)	CARBO- FURAN WATER FLTRD 0.7 U GF, REC (UG/L)	CHLOR- PYRIFOS DIS- SOLVED (UG/L)
AUG 1994 25...	<0.03	<0.01	<0.01	<0.01	<0.01	0.05	<0.01	<0.01	<0.05	<0.01	<0.01
DATE	CYANA- ZINE, WATER, DISS, REC (UG/L)	DCPA WATER FLTRD 0.7 U GF, REC (UG/L)	P,P' DDE DISSOLV (UG/L)	DEETHYL ATRA- ZINE, WATER, DISS, REC (UG/L)	DI- AZINON, DIS- SOLVED (UG/L)	DI- ELDRIN DIS- SOLVED (UG/L)	DISUL- FOTON WATER FLTRD 0.7 U GF, REC (UG/L)	EPTC WATER FLTRD 0.7 U GF, REC (UG/L)	ETHO- PROP WATER FLTRD 0.7 U GF, REC (UG/L)	FONOFOS WATER DISS REC (UG/L)	LINDANE DIS- SOLVED (UG/L)
AUG 1994 25...	<0.01	<0.004	<0.01	0.03	<0.01	<0.01	<0.06	<0.005	<0.01	<0.01	<0.01
DATE	LIN- URON WATER FLTRD 0.7 U GF, REC (UG/L)	MALA- THION, DIS- SOLVED (UG/L)	METHYL AZIN- PHOS WAT FLT 0.7 U GF, REC (UG/L)	METHYL PARA- THION WAT FLT 0.7 U GF, REC (UG/L)	METO- LACHLOR WATER DISSOLV (UG/L)	METRI- BUZIN SENCOR WATER DISSOLV (UG/L)	MOL- INATE WATER FLTRD 0.7 U GF, REC (UG/L)	NAPROP- AMIDE WATER FLTRD 0.7 U GF, REC (UG/L)	PEB- ULATE WATER FILTRD 0.7 U GF, REC (UG/L)	PARA- THION, DIS- SOLVED (UG/L)	PENDI- METH- ALIN WAT FLT 0.7 U GF, REC (UG/L)
AUG 1994 25...	<0.04	<0.01	<0.05	<0.03	0.04	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02
DATE	PER- METHRIN CIS WAT FLT 0.7 U GF, REC (UG/L)	PRO- METON, WATER, DISS, REC (UG/L)	FRON- AMIDE WATER FLTRD 0.7 U GF, REC (UG/L)	PROP- CHLOR, WATER, DISS, REC (UG/L)	PRO- PARGITE WATER FLTRD 0.7 U GF, REC (UG/L)	PRO- PANIL WATER FLTRD 0.7 U GF, REC (UG/L)	SI- MAZINE, WATER, DISS, REC (UG/L)	TEBU- THIURON WATER FLTRD 0.7 U GF, REC (UG/L)	TER- BUFOS WATER FLTRD 0.7 U GF, REC (UG/L)	THIO- BENCARB WATER FLTRD 0.7 U GF, REC (UG/L)	TRIAL- LATE WATER FLTRD 0.7 U GF, REC (UG/L)
AUG 1994 25...	<0.02	<0.01	<0.01	<0.02	<0.01	<0.02	0.01	<0.02	<0.01	<0.01	<0.01

WATER-QUALITY DATA. WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

POTOMAC RIVER BASIN--Continued

01640155

- SAMS CREEK NEAR UNION BRIDGE. MD

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH WATER WHOLE FIELD (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	TEMPER-ATURE AIR (DEG C)	BARO-METRIC PRES-SURE (MM OF HG)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, (PER-CENT SATUR-ATION)	HARD-NESS TOTAL (MG/L AS CaCO3)	CALCIUM DIS-SOLVED (MG/L AS Ca)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)
AUG 1994 25...	1010	5.8	262	7.4	19.0	24.0	757	9.6	104	110	34	5.9
DATE		SODIUM, DIS-SOLVED (MG/L AS Na)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY WAT DIS TOT IT FIELD MG/L AS CaCO3	BICAR-BONATE WATER DIS IT FIELD MG/L AS HCO3	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L AS NO3)	NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)
AUG 1994 25...	6.7	2.4	80	98	9.3	16	<0.10	8.1	155	14	0.040	
DATE		NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC DIS. (MG/L AS N)	PHOS-PHORUS DIS-SOLVED (MG/L AS P)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P)	IRON, DIS-SOLVED (UG/L AS FE)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	DIMETH-OATE WATER FLTRD 0.7 U GG, REC (UG/L)	ETHAL-FLUR-ALIN WAT FLT 0.7 U GF, REC (UG/L)	PHORATE WATER FLTRD 0.7 U GF, REC (UG/L)
AUG 1994 25...	3.30	3.30	0.070	0.30	0.020	0.010	170	61	<0.02	<0.01	<0.01	
DATE		TER-BACIL WATER FLTRD 0.7 U GF, REC (UG/L)	TRI-FLUR-ALIN WAT FLT 0.7 U GF, REC (UG/L)	2,6-DI-ETHYL ANILINE WAT FLT 0.7 U GF, REC (UG/L)	ALA-CHLOR, WATER, DISS, REC (UG/L)	ALPHA BHC DIS-SOLVED (UG/L)	ATRA-ZINE, WATER, DISS, REC (UG/L)	BEN-FLUR-ALIN WAT FLD 0.7 U GF, REC (UG/L)	BUTYL-ATE, WATER, DISS, REC (UG/L)	CAR-BARYL WATER FLTRD 0.7 U GF, REC (UG/L)	CARBO-FURAN WATER FLTRD 0.7 U GF, REC (UG/L)	CHLOR-PYRIFOS DIS-SOLVED (UG/L)
AUG 1994 25...	<0.03	<0.01	<0.01	0.05	<0.01	0.20	<0.01	<0.01	<0.05	<0.01	<0.01	
DATE		CYANA-ZINE, WATER, DISS, REC (UG/L)	DCPA WATER FLTRD 0.7 U GF, REC (UG/L)	P,P' DDE DISSOLV (UG/L)	DEETHYL ATRA-ZINE, WATER, DISS, REC (UG/L)	DI-AZINON, DIS-SOLVED (UG/L)	DI-ELDRIN DIS-SOLVED (UG/L)	DISUL-FOTON WATER FLTRD 0.7 U GF, REC (UG/L)	EPTC WATER FLTRD 0.7 U GF, REC (UG/L)	ETHO-PROP WATER FLTRD 0.7 U GF, REC (UG/L)	FONOFOS WATER DISS REC (UG/L)	LINDANE DIS-SOLVED (UG/L)
AUG 1994 25...	0.01	<0.004	<0.01	0.17	<0.01	<0.01	<0.06	<0.005	<0.01	<0.01	<0.01	
DATE		LIN-URON WATER FLTRD 0.7 U GF, REC (UG/L)	MALA-THION, DIS-SOLVED (UG/L)	METHYL AZIN-PHOS WAT FLT 0.7 U GF, REC (UG/L)	METHYL PARA-THION WAT FLT 0.7 U GF, REC (UG/L)	METO-LACHLOR WATER DISSOLV (UG/L)	METRI-BUZIN SENCOR WATER DISSOLV (UG/L)	MOL-INATE WATER FLTRD 0.7 U GF, REC (UG/L)	NAPPROP-AMIDE WATER FLTRD 0.7 U GF, REC (UG/L)	PEB-ULATE WATER FILTRD 0.7 U GF, REC (UG/L)	PARA-THION, DIS-SOLVED (UG/L)	PENDI-METH-ALIN WAT FLT 0.7 U GF, REC (UG/L)
AUG 1994 25...	<0.04	<0.01	<0.05	<0.03	0.02	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02	

WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

POTOMAC RIVER BASIN--Continued

01640155

- SAMS CREEK NEAR UNION BRIDGE, MD--Continued

DATE	PER-METHRIN CIS WAT FLT 0.7 U GF, REC (UG/L)	PRO-METON, WATER, DISS, REC (UG/L)	PRON-AMIDE WATER FLTRD 0.7 U GF, REC (UG/L)	PROP-CHLOR, WATER, DISS, REC (UG/L)	PRO-PARGITE WATER FLTRD 0.7 U GF, REC (UG/L)	PRO-PANIL WATER FLTRD 0.7 U GF, REC (UG/L)	SI-MAZINE, WATER, DISS, REC (UG/L)	TEBU-THIURON WATER FLTRD 0.7 U GF, REC (UG/L)	TER-BUFOS WATER FLTRD 0.7 U GF, REC (UG/L)	THIO-BENCARB WATER FLTRD 0.7 U GF, REC (UG/L)	TRIAL-LATE WATER FLTRD 0.7 U GF, REC (UG/L)
AUG 1994 25...	<0.02	<0.01	<0.01	<0.02	<0.01	<0.02	0.04	<0.02	<0.01	<0.01	<0.01

SUSPENDED SEDIMENT DISCHARGE

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SEDI-MENT, DIS-CHARGE, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)
AUG 1994 25...	1010	5.8	16	0.25

01641830

- GLADE CREEK NEAR WALKERSVILLE, MD

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH WATER WHOLE FIELD (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	TEMPER- ATURE AIR (DEG C)	BARO- METRIC PRES- SURE (MM OF HG)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	HARD- NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)
AUG 1994 25...	0930	4.4	566	7.4	16.0	24.0	762	9.9	100	270	89
DATE	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY WAT DIS TOT IT FIELD MG/L AS CACO3	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS NO3)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)
AUG 1994 25...	12	9.9	3.0	212	15	22	<0.10	8.6	339	37	0.030
DATE	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N)	PHOS- PHORUS DIS- SOLVED (MG/L AS P)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P)	IRON, DIS- SOLVED (UG/L AS FE)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	DIMETH- OATE WATER FLTRD 0.7 U GG, REC (UG/L)	ETHAL- FLUR- ALIN WAT FLT 0.7 U GF, REC (UG/L)	PHORATE WATER FLTRD 0.7 U GF, REC (UG/L)
AUG 1994 25...	8.40	8.40	0.040	<0.20	0.010	<0.010	13	19	<0.02	<0.01	<0.01
DATE	TER- BACIL WATER FLTRD 0.7 U GF, REC (UG/L)	TRI- FLUR- ALIN WAT FLT 0.7 U GF, REC (UG/L)	2,6-DI- ETHYL ANILINE WAT FLT 0.7 U GF, REC (UG/L)	ALA- CHLOR, WATER, DISS, REC, (UG/L)	ALPHA BHC DIS- SOLVED (UG/L)	ATRA- ZINE, WATER, DISS, REC (UG/L)	BEN- FLUR- ALIN WAT FLD 0.7 U GF, REC (UG/L)	BUTYL- ATE, WATER, DISS, REC (UG/L)	CAR- BARYL WATER FLTRD 0.7 U GF, REC (UG/L)	CARBO- FURAN WATER FLTRD 0.7 U GF, REC (UG/L)	CHLOR- PYRIFOS DIS- SOLVED (UG/L)
AUG 1994 25...	<0.03	<0.01	<0.01	<0.01	<0.01	0.50	<0.01	<0.01	<0.05	<0.01	<0.01

WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

POTOMAC RIVER BASIN--Continued

01641830

- GLADE CREEK NEAR WALKERSVILLE, MD--Continued

DATE	CYANA- ZINE, WATER, DISS, REC (UG/L)	DCPA WATER FLTRD 0.7 U GF, REC (UG/L)	P,P' DDE DISSOLV (UG/L)	DEETHYL ATRA- ZINE, WATER, DISS, REC (UG/L)	DI- AZINON, DIS- SOLVED (UG/L)	DI- ELDRIN DIS- SOLVED (UG/L)	DISUL- FOTON WATER FLTRD 0.7 U GF, REC (UG/L)	EPTC WATER FLTRD 0.7 U GF, REC (UG/L)	ETHO- PROP WATER FLTRD 0.7 U GF, REC (UG/L)	FONOFOS WATER DISS REC (UG/L)	LINDANE DIS- SOLVED (UG/L)
AUG 1994 25...	<0.01	<0.004	<0.01	0.29	<0.01	<0.01	<0.06	<0.005	<0.01	<0.01	<0.01
DATE	LIN- URON WATER FLTRD 0.7 U GF, REC (UG/L)	MALA- THION, DIS- SOLVED (UG/L)	METHYL AZIN- PHOS WAT FLT 0.7 U GF, REC (UG/L)	METHYL PARA- THION WAT FLT 0.7 U GF, REC (UG/L)	METO- LACHLOR WATER DISSOLV (UG/L)	METRI- BUZIN SENCOR WATER DISSOLV (UG/L)	MOL- INATE WATER FLTRD 0.7 U GF, REC (UG/L)	NAPROP- AMIDE WATER FLTRD 0.7 U GF, REC (UG/L)	PEB- ULATE WATER FLTRD 0.7 U GF, REC (UG/L)	PARA- THION, DIS- SOLVED (UG/L)	PENDI- METH- ALIN WAT FLT 0.7 U GF, REC (UG/L)
AUG 1994 25...	<0.04	<0.01	<0.05	<0.03	0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02
DATE	PER- METHRIN CIS WAT FLT 0.7 U GF, REC (UG/L)	PRO- METON, WATER, DISS, REC (UG/L)	PRON- AMIDE WATER FLTRD 0.7 U GF, REC (UG/L)	PROP- CHLOR, WATER, DISS, REC (UG/L)	PRO- PARGITE WATER FLTRD 0.7 U GF, REC (UG/L)	PRO- PANIL WATER FLTRD 0.7 U GF, REC (UG/L)	SI- MAZINE, WATER, DISS, REC (UG/L)	TEBU- THIURON WATER FLTRD 0.7 U GF, REC (UG/L)	TER- BUFOS WATER FLTRD 0.7 U GF, REC (UG/L)	THIO- BENCARB WATER FLTRD 0.7 U GF, REC (UG/L)	TRIAL- LATE WATER FLTRD 0.7 U GF, REC (UG/L)
AUG 1994 25...	<0.02	0.19	<0.01	<0.02	<0.01	<0.02	0.05	<0.02	<0.01	<0.01	<0.01

SUSPENDED SEDIMENT DISCHARGE

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SEDI- MENT, DIS- CHARGE, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)
AUG 1994 25...	0930	4.4	123	1.5

01642200

- CARROLL CREEK AT FREDERICK, MD

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH WATER WHOLE FIELD (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	TEMPER-ATURE AIR (DEG C)	BARO-METRIC PRES-SURE (MM OF HG)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	HARD-NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)
AUG 1994 25...	0800	7.8	624	7.6	16.5	18.5	760	8.4	86	250	80	13
DATE		SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY WAT DIS TOT IT FIELD MG/L AS CACO3	BICAR-BONATE WATER DIS IT FIELD MG/L AS HCO3	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS NO3)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)
AUG 1994 25...	28	2.7	186	227	21	62	<0.10	9.2	367	19	0.020	

WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

POTOMAC RIVER BASIN--Continued

01642200

- CARROLL CREEK AT FREDERICK, MD--Continued

DATE	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N)	PHOS- PHORUS DIS- SOLVED (MG/L AS P)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P)	IRON, DIS- SOLVED (UG/L AS FE)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	DIMETH- OATE WATER FLTRD 0.7 U GG, REC (UG/L)	ETHAL- FLUR- ALIN WAT FLT 0.7 U GF, REC (UG/L)	PHORATE WATER FLTRD 0.7 U GF, REC (UG/L)
AUG 1994 25...	4.20	4.20	0.040	<0.20	0.030	<0.010	25	37	<0.02	<0.01	<0.01
DATE	TER- BACIL WATER FLTRD 0.7 U GF, REC (UG/L)	TRI- FLUR- ALIN WAT FLT 0.7 U GF, REC (UG/L)	2,6-DI- ETHYL ANILINE WAT FLT 0.7 U GF, REC (UG/L)	ALA- CHLOR, WATER, DISS, REC, (UG/L)	ALPHA BHC DIS- SOLVED (UG/L)	ATRA- ZINE, WATER, DISS, REC (UG/L)	BEN- FLUR- ALIN WAT FLD 0.7 U GF, REC (UG/L)	BUTYL- ATE, WATER, DISS, REC (UG/L)	CAR- BARYL WATER FLTRD 0.7 U GF, REC (UG/L)	CARBO- FURAN WATER FLTRD 0.7 U GF, REC (UG/L)	CHLOR- PYRIFOS DIS- SOLVED (UG/L)
AUG 1994 25...	<0.03	<0.01	<0.01	<0.01	<0.01	0.06	<0.01	<0.01	<0.05	<0.01	<0.01
DATE	CYANA- ZINE, WATER, DISS, REC (UG/L)	DCPA WATER FLTRD 0.7 U GF, REC (UG/L)	P,P' DDE DISSOLV (UG/L)	DEETHYL ATRA- ZINE, WATER, DISS, REC (UG/L)	DI- AZINON, DIS- SOLVED (UG/L)	DI- ELDRIN DIS- SOLVED (UG/L)	DISUL- FOTON WATER FLTRD 0.7 U GF, REC (UG/L)	EPTC WATER FLTRD 0.7 U GF, REC (UG/L)	ETHO- PROP WATER FLTRD 0.7 U GF, REC (UG/L)	FONOFOS WATER DISS REC (UG/L)	LINDANE DIS- SOLVED (UG/L)
AUG 1994 25...	<0.01	<0.004	<0.01	0.02	<0.01	<0.01	<0.06	<0.005	<0.01	<0.01	<0.01
DATE	LIN- URON WATER FLTRD 0.7 U GF, REC (UG/L)	MALA- THION, DIS- SOLVED (UG/L)	METHYL AZIN- PHOS WAT FLT 0.7 U GF, REC (UG/L)	METHYL PARA- THION WAT FLT 0.7 U GF, REC (UG/L)	METO- LACHLOR WATER DISSOLV (UG/L)	METRI- BUZIN WATER DISSOLV (UG/L)	MOL- INATE WATER FLTRD 0.7 U GF, REC (UG/L)	NAPROP- AMIDE WATER FLTRD 0.7 U GF, REC (UG/L)	PEB- ULATE WATER FLTRD 0.7 U GF, REC (UG/L)	PARA- THION, DIS- SOLVED (UG/L)	PENDI- METH- ALIN WAT FLT 0.7 U GF, REC (UG/L)
AUG 1994 25...	<0.04	<0.01	<0.05	<0.03	0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02
DATE	PER- METHRIN CIS WAT FLT 0.7 U GF, REC (UG/L)	PRO- METON, WATER, DISS, REC (UG/L)	PRON- AMIDE WATER FLTRD 0.7 U GF, REC (UG/L)	PROP- CHLOR, WATER, DISS, REC (UG/L)	PRO- PARGITE WATER FLTRD 0.7 U GF, REC (UG/L)	PRO- PANIL WATER FLTRD 0.7 U GF, REC (UG/L)	SI- MAZINE, WATER, DISS, REC (UG/L)	TEBU- THIURON WATER FLTRD 0.7 U GF, REC (UG/L)	TER- BUFOS WATER FLTRD 0.7 U GF, REC (UG/L)	THIO- BENCARB WATER FLTRD 0.7 U GF, REC (UG/L)	TRIAL- LATE WATER FLTRD 0.7 U GF, REC (UG/L)
AUG 1994 25...	<0.02	0.02	<0.01	<0.02	<0.01	<0.02	<0.01	<0.02	<0.01	<0.01	<0.01

SUSPENDED SEDIMENT DISCHARGE

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SEDI- MENT, DIS- CHARGE, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)
AUG 1994 25...	0800	7.8	91	1.9

ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

POTOMAC RIVER BASIN--Continued

01642425

- SOUTH FORK LINGANORE CREEK AT LINGANORE, MD

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH WATER WHOLE FIELD (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	TEMPER-ATURE AIR (DEG C)	BARO-METRIC PRES-SURE (MM OF HG)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, (PER-CENT SATUR-ATION)	HARD-NESS TOTAL (MG/L AS CaCO3)	CALCIUM DIS-SOLVED (MG/L AS Ca)
AUG 1994 25...	0820	9.8	146	7.0	17.0	20.5	758	10.4	108	55	15
DATE	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY WAT DIS TOT IT FIELD (MG/L AS CaCO3)	BICAR-BONATE WATER DIS IT FIELD (MG/L AS HCO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)
AUG 1994 25...	4.2	5.2	1.5	44	54	4.6	11	<0.10	6.9	98	<0.010
DATE	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC DIS. (MG/L AS N)	PHOS-PHORUS DIS-SOLVED (MG/L AS P)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P)	IRON, DIS-SOLVED (UG/L AS FE)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	DIMETH-OATE WATER FLTRD 0.7 U GG, REC (UG/L)	ETHAL-FLUR-ALIN WAT FLT 0.7 U GF, REC (UG/L)	PHORATE WATER FLTRD 0.7 U GF, REC (UG/L)
AUG 1994 25...	2.70	2.70	0.020	<0.20	0.010	<0.010	84	30	<0.02	<0.01	<0.01
DATE	TER-BACIL WATER FLTRD 0.7 U GF, REC (UG/L)	TRI-FLUR-ALIN WAT FLT 0.7 U GF, REC (UG/L)	2,6-DI-ETHYL ANILINE WAT FLT 0.7 U GF, REC (UG/L)	ALA-CHLOR, WATER, DISS, REC, (UG/L)	ALPHA BHC DIS-SOLVED (UG/L)	ATRA-ZINE, WATER, DISS, REC (UG/L)	BEN-FLUR-ALIN WAT FLD 0.7 U GF, REC (UG/L)	BUTYL-ATE, WATER, DISS, REC (UG/L)	CAR-BARYL WATER FLTRD 0.7 U GF, REC (UG/L)	CARBO-FURAN WATER FLTRD 0.7 U GF, REC (UG/L)	CHLOR-PYRIFOS DIS-SOLVED (UG/L)
AUG 1994 25...	<0.03	<0.01	<0.01	<0.01	<0.01	0.06	<0.01	<0.01	<0.05	<0.01	<0.01
DATE	CYANA-ZINE, WATER, DISS, REC (UG/L)	DCPA WATER FLTRD 0.7 U GF, REC (UG/L)	P,P' DDE DISSOLV (UG/L)	DEETHYL ATRA-ZINE, WATER, DISS, REC (UG/L)	DI-AZINON, DIS-SOLVED (UG/L)	DI-ELDRIN DIS-SOLVED (UG/L)	DISUL-FOTON WATER FLTRD 0.7 U GF, REC (UG/L)	EPTC WATER FLTRD 0.7 U GF, REC (UG/L)	ETHO-PROP WATER FLTRD 0.7 U GF, REC (UG/L)	FONOFOS WATER DISS REC (UG/L)	LINDANE DIS-SOLVED (UG/L)
AUG 1994 25...	<0.01	<0.004	<0.01	0.08	<0.01	<0.01	<0.06	<0.005	<0.01	<0.01	<0.01
DATE	LIN-URON WATER FLTRD 0.7 U GF, REC (UG/L)	MALA-THION, DIS-SOLVED (UG/L)	METHYL AZIN-PHOS WAT FLT 0.7 U GF, REC (UG/L)	METHYL PARA-THION WAT FLT 0.7 U GF, REC (UG/L)	METO-LACHLOR WATER DISSOLV (UG/L)	METRI-BUZIN SENCOR WATER DISSOLV (UG/L)	MOL-INATE WATER FLTRD 0.7 U GF, REC (UG/L)	NAPROP-AMIDE WATER FLTRD 0.7 U GF, REC (UG/L)	PEB-ULATE WATER FILTRD 0.7 U GF, REC (UG/L)	PARA-THION, DIS-SOLVED (UG/L)	PENDI-METH-ALIN WAT FLT 0.7 U GF, REC (UG/L)
AUG 1994 25...	<0.04	<0.01	<0.05	<0.03	0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02

WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

POTOMAC RIVER BASIN--Continued

01642425 - SOUTH FORK LINGANORE CREEK AT LINGANORE, MD--Continued

DATE	PER-METHRIN CIS WAT FLT 0.7 U GF, REC (UG/L)	PRO-METON, WATER, DISS, REC (UG/L)	PRON-AMIDE WATER FLTRD 0.7 U GF, REC (UG/L)	PROP-CHLOR, WATER, DISS, REC (UG/L)	PRO-PARGITE WATER FLTRD 0.7 U GF, REC (UG/L)	PRO-PANIL WATER FLTRD 0.7 U GF, REC (UG/L)	SI-MAZINE, WATER, DISS, REC (UG/L)	TEBU-THIURON WATER FLTRD 0.7 U GF, REC (UG/L)	TER-BUFOS WATER FLTRD 0.7 U GF, REC (UG/L)	THIO-BENCARB WATER FLTRD 0.7 U GF, REC (UG/L)	TRIAL-LATE WATER FLTRD 0.7 U GF, REC (UG/L)
AUG 1994 25...	<0.02	0.02	<0.01	<0.02	<0.01	<0.02	0.02	<0.02	<0.01	<0.01	<0.01

SUSPENDED SEDIMENT DISCHARGE

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SEDI-MENT, DIS-CHARGE, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)
AUG 1994 25...	0820	9.8	6	0.16

01643300 - BENNETT CREEK NEAR HYATTSTOWN, MD

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT- ANCE (US/CM)	PH WATER WHOLE FIELD (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	TEMPER- ATURE AIR (DEG C)	BARO-METRIC PRES-SURE (MM OF HG)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (MG/L)	HARD-NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)
AUG 1994 24...	1730	15	128	7.2	18.0	18.0	759	8.6	91	41	10
DATE	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY WAT DIS TOT IT FIELD MG/L AS CACO3	BICAR-BONATE WATER DIS IT FIELD MG/L AS HCO3	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)
AUG 1994 24...	3.8	5.0	1.7	23	28	5.6	11	0.20	7.5	70	<0.010
DATE	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N)	PHOS-PHORUS DIS-SOLVED (MG/L AS P)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P)	IRON, DIS-SOLVED (UG/L AS FE)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	DIMETH-OATE WATER FLTRD 0.7 U GG, REC (UG/L)	ETHAL-FLUR- ALIN WAT FLT 0.7 U GF, REC (UG/L)	PHORATE WATER FLTRD 0.7 U GF, REC (UG/L)
AUG 1994 24...	2.90	2.90	0.010	<0.20	0.010	0.020	35	14	<0.02	<0.01	<0.01
DATE	TER-BACIL WATER FLTRD 0.7 U GF, REC (UG/L)	TRI-FLUR- ALIN WAT FLT 0.7 U GF, REC (UG/L)	2,6-DI-ETHYL ANILINE WAT FLT 0.7 U GF, REC (UG/L)	ALA-CHLOR, WATER, DISS, REC, (UG/L)	ALPHA BHC DIS-SOLVED (UG/L)	ATRA-ZINE, WATER, DISS, REC (UG/L)	BEN-FLUR- ALIN WAT FLD 0.7 U GF, REC (UG/L)	BUTYL-ATE, WATER, DISS, REC (UG/L)	CAR-BARYL WATER FLTRD 0.7 U GF, REC (UG/L)	CARBO-FURAN WATER FLTRD 0.7 U GF, REC (UG/L)	CHLOR-PYRIFOS DIS-SOLVED (UG/L)
AUG 1994 24...	<0.03	<0.01	<0.01	<0.01	<0.01	0.08	<0.01	<0.01	<0.05	<0.01	<0.00

WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

POTOMAC RIVER BASIN--Continued

01643300

- BENNETT CREEK NEAR HYATTSTOWN, MD--Continued

DATE	CYANA- ZINE, WATER, DISS, REC (UG/L)	DCPA WATER FLTRD 0.7 U GF, REC (UG/L)	P,P' DDE DISSOLV (UG/L)	DEETHYL ATRA- ZINE, WATER, DISS, REC (UG/L)	DI- AZINON, DIS- SOLVED (UG/L)	DI- ELDRIN DIS- SOLVED (UG/L)	DISUL- FOTON WATER FLTRD 0.7 U GF, REC (UG/L)	EPTC WATER FLTRD 0.7 U GF, REC (UG/L)	ETHO- PROP WATER FLTRD 0.7 U GF, REC (UG/L)	FONOFOS WATER DISS REC (UG/L)	LINDANE DIS- SOLVED (UG/L)
AUG 1994 24...	<0.01	<0.004	<0.01	0.10	<0.01	<0.01	<0.01	<0.005	<0.01	<0.01	<0.01
DATE	LIN- URON WATER FLTRD 0.7 U GF, REC (UG/L)	MALA- THION, DIS- SOLVED (UG/L)	METHYL AZIN- PHOS WAT FLT 0.7 U GF, REC (UG/L)	METHYL PARA- THION WAT FLT 0.7 U GF, REC (UG/L)	METO- LACHLOR WATER DISSOLV (UG/L)	METRI- BUZIN WATER DISSOLV (UG/L)	MOL- INATE WATER FLTRD 0.7 U GF, REC (UG/L)	NAPROP- AMIDE WATER FLTRD 0.7 U GF, REC (UG/L)	PEB- ULATE WATER FILTRD 0.7 U GF, REC (UG/L)	PARA- THION, DIS- SOLVED (UG/L)	PENDI- METH- ALIN WAT FLT 0.7 U GF, REC (UG/L)
AUG 1994 24...	<0.04	<0.01	<0.04	<0.03	0.02	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02
DATE	PER- METHRIN CIS WAT FLT 0.7 U GF, REC (UG/L)	PRO- METON, WATER, DISS, REC (UG/L)	PRON- AMIDE WATER FLTRD 0.7 U GF, REC (UG/L)	PROP- CHLOR, WATER, DISS, REC (UG/L)	PRO- PARGITE WATER FLTRD 0.7 U GF, REC (UG/L)	PRO- PANIL WATER FLTRD 0.7 U GF, REC (UG/L)	SI- MAZINE, WATER, DISS, REC (UG/L)	TEBU- THIURON WATER FLTRD 0.7 U GF, REC (UG/L)	TER- BUFOS WATER FLTRD 0.7 U GF, REC (UG/L)	THIO- BENCARB WATER FLTRD 0.7 U GF, REC (UG/L)	TRIAL- LATE WATER FLTRD 0.7 U GF, REC (UG/L)
AUG 1994 24...	<0.02	<0.01	<0.01	<0.02	<0.01	<0.02	0.01	<0.02	<0.01	<0.01	<0.01

SUSPENDED SEDIMENT DISCHARGE

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SEDI- MENT, DIS- CHARGE, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)
AUG 1994 24...	1730	15	4	0.16

01644480

- GOSHEN BRANCH AT GOSHEN, MD

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH WATER WHOLE FIELD (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	TEMPER-ATURE AIR (DEG C)	BARO-METRIC PRES-SURE (MM OF HG)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	HARD-NESS TOTAL (MG/L AS CaCO3)	CALCIUM DIS-SOLVED (MG/L AS Ca)
AUG 1994 24...	1625	21	168	7.3	19.0	26.5	758	10.0	108	52	13
DATE	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY WAT DIS TOT IT FIELD MG/L AS CaCO3	BICAR-BONATE WATER DIS IT FIELD MG/L AS HCO3	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)
AUG 1994 24...	4.7	8.8	2.3	31	38	7.2	17	0.10	11	110	<0.010

WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

POTOMAC RIVER BASIN--Continued

01644480

- GOSHEN BRANCH AT GOSHEN, MD--Continued

DATE	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N)	PHOS- PHORUS DIS- SOLVED (MG/L AS P)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P)	IRON, DIS- SOLVED (UG/L AS FE)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	DIMETH- OATE WATER FLTRD 0.7 U GG, REC (UG/L)	ETHAL- FLUR- ALIN WAT FLT 0.7 U GF, REC (UG/L)	PHORATE WATER FLTRD 0.7 U GF, REC (UG/L)
AUG 1994 24...	3.40	3.40	0.020	<0.20	0.130	0.120	120	40	<0.02	<0.01	<0.01
DATE	TER- BACIL WATER FLTRD 0.7 U GF, REC (UG/L)	TRI- FLUR- ALIN WAT FLT 0.7 U GF, REC (UG/L)	2,6-DI- ETHYL ANILINE WAT FLT 0.7 U GF, REC (UG/L)	ALA- CHLOR, WATER, DISS, REC, (UG/L)	ALPHA BHC DIS- SOLVED (UG/L)	ATRA- ZINE, WATER, DISS, REC (UG/L)	BEN- FLUR- ALIN WAT FLD 0.7 U GF, REC (UG/L)	BUTYL- ATE, WATER, DISS, REC (UG/L)	CAR- BARYL WATER FLTRD 0.7 U GF, REC (UG/L)	CARBO- FURAN WATER FLTRD 0.7 U GF, REC (UG/L)	CHLOR- PYRIFOS DIS- SOLVED (UG/L)
AUG 1994 24...	<0.03	<0.01	<0.01	<0.01	<0.01	0.10	<0.01	<0.01	<0.05	<0.01	<0.01
DATE	CYANA- ZINE, WATER, DISS, REC (UG/L)	DCPA WATER FLTRD 0.7 U GF, REC (UG/L)	P,P' DDE DISSOLV (UG/L)	DEETHYL ATRA- ZINE, WATER, DISS, REC (UG/L)	DI- AZINON, DIS- SOLVED (UG/L)	DI- ELDRIN DIS- SOLVED (UG/L)	DISUL- FOTON WATER FLTRD 0.7 U GF, REC (UG/L)	EPTC WATER FLTRD 0.7 U GF, REC (UG/L)	ETHO- PROP WATER FLTRD 0.7 U GF, REC (UG/L)	FONOFOS WATER DISS REC (UG/L)	LINDANE DIS- SOLVED (UG/L)
AUG 1994 24...	<0.01	<0.004	<0.01	0.12	<0.01	<0.01	<0.06	<0.005	<0.01	<0.01	<0.01
DATE	LIN- URON WATER FLTRD 0.7 U GF, REC (UG/L)	MALA- THION, DIS- SOLVED (UG/L)	METHYL AZIN- PHOS WAT FLT 0.7 U GF, REC (UG/L)	METHYL PARA- THION WAT FLT 0.7 U GF, REC (UG/L)	METO- LACHLOR WATER DISSOLV (UG/L)	METRI- BUZIN WATER DISSOLV (UG/L)	MOL- INATE WATER FLTRD 0.7 U GF, REC (UG/L)	NAPROP- AMIDE WATER FLTRD 0.7 U GF, REC (UG/L)	PEB- ULATE WATER FILTRD 0.7 U GF, REC (UG/L)	PARA- THION, DIS- SOLVED (UG/L)	PENDI- METH- ALIN WAT FLT 0.7 U GF, REC (UG/L)
AUG 1994 24...	<0.04	<0.01	<0.05	<0.03	0.04	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02
DATE	PER- METHRIN CIS WAT FLT 0.7 U GF, REC (UG/L)	PRO- METON, WATER, DISS, REC (UG/L)	PRON- AMIDE WATER FLTRD 0.7 U GF, REC (UG/L)	PROP- CHLOR, WATER, DISS, REC (UG/L)	PRO- PARGITE WATER FLTRD 0.7 U GF, REC (UG/L)	PRO- PANIL WATER FLTRD 0.7 U GF, REC (UG/L)	SI- MAZINE, WATER, DISS, REC (UG/L)	TEBU- THIURON WATER FLTRD 0.7 U GF, REC (UG/L)	TER- BUFOS WATER FLTRD 0.7 U GF, REC (UG/L)	THIO- BENCARB WATER FLTRD 0.7 U GF, REC (UG/L)	TRIAL- LATE WATER FLTRD 0.7 U GF, REC (UG/L)
AUG 1994 24...	<0.02	<0.01	<0.01	<0.02	<0.01	<0.02	<0.01	<0.02	<0.01	<0.01	<0.01

ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

POTOMAC RIVER BASIN--Continued

01646350

- CABIN JOHN CREEK AT ROCKVILLE, MD

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH WATER WHOLE FIELD (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	TEMPER-ATURE AIR (DEG C)	BARO-METRIC PRES-SURE (MM OF HG)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, (PER-CENT SATUR-ATION)	HARD-NESS TOTAL (MG/L AS CaCO3)	CALCIUM DIS-SOLVED (MG/L AS Ca)
AUG 1994 24...	1410	0.91	330	7.3	20.0	25.5	760	8.6	95	100	25
DATE	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY WAT DIS TOT IT FIELD (MG/L AS CaCO3)	BICAR-BONATE WATER DIS IT FIELD (MG/L AS HCO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)
AUG 1994 24...	9.5	19	3.3	57	70	16	47	0.10	13	201	<0.010
DATE	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC DIS. (MG/L AS N)	PHOS-PHORUS DIS-SOLVED (MG/L AS P)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P)	IRON, DIS-SOLVED (UG/L AS FE)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	DIMETH-OATE WATER FLTRD 0.7 U GG, REC (UG/L)	ETHAL-FLUR-ALIN WAT FLT 0.7 U GF, REC (UG/L)	PHORATE WATER FLTRD 0.7 U GF, REC (UG/L)
AUG 1994 24...	1.60	1.60	0.020	<0.20	0.010	0.010	140	26	<0.02	<0.01	<0.01
DATE	TER-BACIL WATER FLTRD 0.7 U GF, REC (UG/L)	TRI-FLUR-ALIN WAT FLT 0.7 U GF, REC (UG/L)	2,6-DI-ETHYL ANILINE WAT FLT 0.7 U GF, REC (UG/L)	ALA-CHLOR, WATER, DISS, REC, (UG/L)	ALPHA BHC DIS-SOLVED (UG/L)	ATRA-ZINE, WATER, DISS, REC (UG/L)	BEN-FLUR-ALIN WAT FLD 0.7 U GF, REC (UG/L)	BUTYL-ATE, WATER, DISS, REC (UG/L)	CAR-BARYL WATER FLTRD 0.7 U GF, REC (UG/L)	CARBO-FURAN WATER FLTRD 0.7 U GF, REC (UG/L)	CHLOR-PYRIFOS DIS-SOLVED (UG/L)
AUG 1994 24...	<0.03	<0.01	<0.01	<0.01	<0.01	0.01	<0.01	<0.01	0.09	<0.01	0.01
DATE	CYANA-ZINE, WATER, DISS, REC (UG/L)	DCPA WATER FLTRD 0.7 U GF, REC (UG/L)	P,P' DDE DISSOLV (UG/L)	DEETHYL ATRA-ZINE, WATER, DISS, REC (UG/L)	DI-AZINON, DIS-SOLVED (UG/L)	DI-ELDRIN DIS-SOLVED (UG/L)	DISUL-FOTON WATER FLTRD 0.7 U GF, REC (UG/L)	EPTC WATER FLTRD 0.7 U GF, REC (UG/L)	ETHO-PROP WATER FLTRD 0.7 U GF, REC (UG/L)	FONOFOS WATER DISS REC (UG/L)	LINDANE DIS-SOLVED (UG/L)
AUG 1994 24...	<0.01	<0.004	<0.01	<0.00	0.02	<0.01	<0.06	<0.005	<0.01	<0.01	<0.01
DATE	LIN-URON WATER FLTRD 0.7 U GF, REC (UG/L)	MALA-THION, DIS-SOLVED (UG/L)	METHYL AZIN-PHOS WAT FLT 0.7 U GF, REC (UG/L)	METHYL PARA-THION WAT FLT 0.7 U GF, REC (UG/L)	METO-LACHLOR WATER DISSOLV (UG/L)	METRI-BUZIN SENCOR WATER DISSOLV (UG/L)	MOL-INATE WATER FLTRD 0.7 U GF, REC (UG/L)	NAPROP-AMIDE WATER FLTRD 0.7 U GF, REC (UG/L)	PEB-ULATE WATER FLTRD 0.7 U GF, REC (UG/L)	PARA-THION, DIS-SOLVED (UG/L)	PENDI-METH-ALIN WAT FLT 0.7 U GF, REC (UG/L)
AUG 1994 24...	<0.04	<0.01	<0.05	<0.03	0.10	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02

WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

POTOMAC RIVER BASIN--Continued

01646350

- CABIN JOHN CREEK AT ROCKVILLE, MD--Continued

DATE	PER-METHRIN CIS WAT FLT 0.7 U GF, REC (UG/L)	PRO-METON, WATER, DISS, REC (UG/L)	FRON-AMIDE WATER FLTRD 0.7 U GF, REC (UG/L)	PROP-CHLOR, WATER, DISS, REC (UG/L)	PRO-PARGITE WATER FLTRD 0.7 U GF, REC (UG/L)	PRO-PANIL WATER FLTRD 0.7 U GF, REC (UG/L)	SI-MAZINE, WATER, DISS, REC (UG/L)	TEBU-THIURON WATER FLTRD 0.7 U GF, REC (UG/L)	TER-BUFOS WATER FLTRD 0.7 U GF, REC (UG/L)	THIO-BENCARB WATER FLTRD 0.7 U GF, REC (UG/L)	TRIAL-LATE WATER FLTRD 0.7 U GF, REC (UG/L)
AUG 1994 24...	<0.02	<0.01	<0.01	<0.02	<0.01	<0.02	0.02	<0.02	<0.01	<0.01	<0.01

SUSPENDED SEDIMENT DISCHARGE

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SEDI-MENT, DIS-CHARGE, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)
AUG 1994 24...	1410	0.91	4	0.01

01646590

- POTOMAC RIVER TRIBUTARY AT WASHINGTON, DC

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	PH WATER WHOLE FIELD (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	TEMPER- ATURE AIR (DEG C)	HARD- NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LITY WAT DIS TOT IT FIELD MG/L AS CACO3
SEP 1994 21...	1400	0.12	7.4	17.5	18.5	210	46	22	23	5.4	83
DATE	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N)
SEP 1994 21...	46	81	0.10	22	326	<0.010	3.60	3.60	0.040	0.50	0.50
DATE	PHOS- PHORUS TOTAL (MG/L AS P)	PHOS- PHORUS DIS- SOLVED (MG/L AS P)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P)	IRON, DIS- SOLVED (UG/L AS FE)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	ETHAL- FLUR- ALIN WAT FLT 0.7 U GF, REC (UG/L)	PHORATE WATER FLTRD 0.7 U GF, REC (UG/L)	TER- BACIL WATER FLTRD 0.7 U GF, REC (UG/L)	TRI- FLUR- ALIN WAT FLT 0.7 U GF, REC (UG/L)	2,6-DI- ETHYL ANILINE WAT FLT 0.7 U GF, REC (UG/L)	ALA- CHLOR, WATER, DISS, REC, (UG/L)
SEP 1994 21...	0.050	0.030	0.040	22	51	<0.01	<0.01	<0.03	<0.01	<0.01	<0.01
DATE	ALPHA BHC DIS- SOLVED (UG/L)	ATRA- ZINE, WATER, DISS, REC (UG/L)	BEN- FLUR- ALIN WAT FLD 0.7 U GF, REC (UG/L)	BUTYL- ATE, WATER, DISS, REC (UG/L)	CAR- BARYL WATER FLTRD 0.7 U GF, REC (UG/L)	CARBO- FURAN WATER FLTRD 0.7 U GF, REC (UG/L)	CHLOR- PYRIFOS DIS- SOLVED (UG/L)	CYANA- ZINE, WATER, DISS, REC (UG/L)	DCPA WATER FLTRD 0.7 U GF, REC (UG/L)	P,P' DDE DISSOLV (UG/L)	
SEP 1994 21...	<0.01	E0.005	<0.01	<0.01	<0.05	<0.01	E0.005	<0.01	<0.004	<0.01	

WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

POTOMAC RIVER BASIN--Continued

01646590

- POTOMAC RIVER TRIBUTARY AT WASHINGTON, DC--Continued

DATE	DEETHYL ATRA- ZINE, WATER, DISS, REC (UG/L)	DI- AZINON, DIS- SOLVED (UG/L)	DI- ELDRIN DIS- SOLVED (UG/L)	DISUL- FOTON WATER FLTRD 0.7 U GF, REC (UG/L)	EPTC WATER FLTRD 0.7 U GF, REC (UG/L)	ETHO- PROP WATER FLTRD 0.7 U GF, REC (UG/L)	FONOFOS WATER DISS REC (UG/L)	LINDANE DIS- SOLVED (UG/L)	LIN- URON WATER FLTRD 0.7 U GF, REC (UG/L)	MALA- THION, DIS- SOLVED (UG/L)
SEP 1994 21...	E0.01	<0.01	<0.01	<0.06	<0.005	<0.01	<0.01	<0.01	<0.04	<0.01
DATE	METHYL AZIN- PHOS WAT FLT 0.7 U GF, REC (UG/L)	METHYL PARA- THION WAT FLT 0.7 U GF, REC (UG/L)	METO- LACHLOR WATER DISSOLV (UG/L)	METRI- BUZIN SENCOR WATER DISSOLV (UG/L)	MOL- INATE WATER FLTRD 0.7 U GF, REC (UG/L)	NAPROP- AMIDE WATER FLTRD 0.7 U GF, REC (UG/L)	PEB- ULATE WATER FLTRD 0.7 U GF, REC (UG/L)	PARA- THION, DIS- SOLVED (UG/L)	PENDI- METH- ALIN WAT FLT 0.7 U GF, REC (UG/L)	PER- METHRIN CIS WAT FLT 0.7 U GF, REC (UG/L)
SEP 1994 21...	<0.04	<0.03	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02	<0.02
DATE	PRO- METON, WATER, DISS, REC (UG/L)	PRON- AMIDE WATER FLTRD 0.7 U GF, REC (UG/L)	PROP- CHLOR, WATER, DISS, REC (UG/L)	PRO- PARGITE WATER FLTRD 0.7 U GF, REC (UG/L)	PRO- PANIL WATER FLTRD 0.7 U GF, REC (UG/L)	SI- MAZINE, WATER, DISS, REC (UG/L)	TEBU- THIURON WATER FLTRD 0.7 U GF, REC (UG/L)	TER- BUFOS WATER FLTRD 0.7 U GF, REC (UG/L)	THIO- BENCARB WATER FLTRD 0.7 U GF, REC (UG/L)	TRIAL- LATE WATER FLTRD 0.7 U GF, REC (UG/L)
SEP 1994 21...	<0.01	<0.01	<0.02	<0.01	<0.02	0.04	<0.02	<0.01	<0.01	<0.01

01648015

- BROAD BRANCH AT WASHINGTON, DC

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	PH WATER WHOLE FIELD (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	TEMPER- ATURE AIR (DEG C)	HARD- NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LITY WAT DIS TOT IT FIELD MG/L AS CACO3
SEP 1994 21...	1130	0.61	8.3	17.0	21.0	230	56	21	29	3.8	96
DATE	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N)
SEP 1994 21...	49	100	0.20	20	369	<0.010	1.80	1.80	0.020	<0.20	<0.20
DATE	PHOS- PHORUS TOTAL (MG/L AS P)	PHOS- PHORUS DIS- SOLVED (MG/L AS P)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P)	IRON, DIS- SOLVED (UG/L AS FE)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	ETHAL- FLUR- ALIN WAT FLT 0.7 U GF, REC (UG/L)	PHORATE WATER FLTRD 0.7 U GF, REC (UG/L)	TER- BACIL WATER FLTRD 0.7 U GF, REC (UG/L)	TRI- FLUR- ALIN WAT FLT 0.7 U GF, REC (UG/L)	2,6-DI- ETHYL ANILINE WAT FLT 0.7 U GF, REC (UG/L)	ALA- CHLOR, WATER, DISS, REC, (UG/L)
SEP 1994 21...	0.040	0.030	0.050	8	3	<0.01	<0.01	<0.03	<0.01	<0.01	<0.01

WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

POTOMAC RIVER BASIN--Continued

01648015

- BROAD BRANCH AT WASHINGTON, DC--Continued

DATE	ALPHA BHC DIS- SOLVED (UG/L)	ATRA- ZINE, WATER, DISS, REC (UG/L)	BEN- FLUR- ALIN WAT FLD 0.7 U GF, REC (UG/L)	BUTYL- ATE, WATER, DISS, REC (UG/L)	CAR- BARYL WATER FLTRD 0.7 U GF, REC (UG/L)	CARBO- FURAN WATER FLTRD 0.7 U GF, REC (UG/L)	CHLOR- PYRIFOS DIS- SOLVED (UG/L)	CYANA- ZINE, WATER, DISS, REC (UG/L)	DCPA WATER FLTRD 0.7 U GF, REC (UG/L)	P,P' DDE DISSOLV (UG/L)
SEP 1994 21...	<0.01	0.02	<0.01	<0.01	E0.005	<0.01	0.01	<0.01	<0.004	<0.01
DATE	DEETHYL ATRA- ZINE, WATER, DISS, REC (UG/L)	DI- AZINON, DIS- SOLVED (UG/L)	DI- ELDRIN DIS- SOLVED (UG/L)	DISUL- FOTON WATER FLTRD 0.7 U GF, REC (UG/L)	EPTC WATER FLTRD 0.7 U GF, REC (UG/L)	ETHO- PROP WATER FLTRD 0.7 U GF, REC (UG/L)	FONOFOS WATER DISS REC (UG/L)	LINDANE DIS- SOLVED (UG/L)	LIN- URON WATER FLTRD 0.7 U GF, REC (UG/L)	MALA- THION, DIS- SOLVED (UG/L)
SEP 1994 21...	E0.02	0.02	E0.01	<0.06	<0.005	<0.01	<0.01	<0.01	<0.04	<0.01
DATE	METHYL AZIN- PHOS WAT FLT 0.7 U GF, REC (UG/L)	METHYL PARA- THION WAT FLT 0.7 U GF, REC (UG/L)	METO- LACHLOR WATER DISSOLV (UG/L)	METRI- BUZIN SENCOR WATER DISSOLV (UG/L)	MOL- INATE WATER FLTRD 0.7 U GF, REC (UG/L)	NAPROP- AMIDE WATER FLTRD 0.7 U GF, REC (UG/L)	PEB- ULATE WATER FILTRD 0.7 U GF, REC (UG/L)	PARA- THION, DIS- SOLVED (UG/L)	PENDI- METH- ALIN WAT FLT 0.7 U GF, REC (UG/L)	PER- METHRIN CIS WAT FLT 0.7 U GF, REC (UG/L)
SEP 1994 21...	<0.04	<0.03	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02	<0.02
DATE	PRO- METON, WATER, DISS, REC (UG/L)	PRON- AMIDE WATER FLTRD 0.7 U GF, REC (UG/L)	PROP- CHLOR, WATER, DISS, REC (UG/L)	PRO- PARGITE WATER FLTRD 0.7 U GF, REC (UG/L)	PRO- PANIL WATER FLTRD 0.7 U GF, REC (UG/L)	SI- MAZINE, WATER, DISS, REC (UG/L)	TEBU- THIURON WATER FLTRD 0.7 U GF, REC (UG/L)	TER- BUFOS WATER FLTRD 0.7 U GF, REC (UG/L)	THIO- BENCARB WATER FLTRD 0.7 U GF, REC (UG/L)	TRIAL- LATE WATER FLTRD 0.7 U GF, REC (UG/L)
SEP 1994 21...	0.01	<0.01	<0.02	<0.01	<0.02	1.0	<0.02	<0.01	<0.01	<0.01

01649200

- PAINT BRANCH AT COLLEGE PARK, MD

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT- ANCE (US/CM)	PH WATER WHOLE FIELD (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	TEMPER- ATURE AIR (DEG C)	BARO- METRIC PRES- SURE (MM OF HG)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	HARD- NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)
AUG 1994 24...	0800	7.6	186	7.2	17.5	20.0	767	9.9	103		49	13	4.0
DATE	SODIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY WAT DIS TOT IT FIELD MG/L AS CACO3	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS NO3)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)		
AUG 1994 24...	13	2.7	26	32	13	21	<0.10	9.3	101	8.7	0.140		

WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

POTOMAC RIVER BASIN--Continued

01649200

- PAINT BRANCH AT COLLEGE PARK, MD--Continued

DATE	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N)	PHOS- PHORUS DIS- SOLVED (MG/L AS P)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P)	IRON, DIS- SOLVED (UG/L AS FE)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	DIMETH- OATE WATER FLTRD 0.7 U GG, REC (UG/L)	ETHAL- FLUR- ALIN WAT FLT 0.7 U GF, REC (UG/L)	PHORATE WATER FLTRD 0.7 U GF, REC (UG/L)
AUG 1994 24...	2.10	2.10	0.090	0.20	<0.010	<0.010	160	30	<0.02	<0.01	<0.01
DATE	TER- BACIL WATER FLTRD 0.7 U GF, REC (UG/L)	TRI- FLUR- ALIN WAT FLT 0.7 U GF, REC (UG/L)	2,6-DI- ETHYL ANILINE WAT FLT 0.7 U GF, REC (UG/L)	ALA- CHLOR, WATER, DISS, REC, (UG/L)	ALPHA BHC DIS- SOLVED (UG/L)	ATRA- ZINE, WATER, DISS, REC (UG/L)	BEN- FLUR- ALIN WAT FLD 0.7 U GF, REC (UG/L)	BUTYL- ATE, WATER, DISS, REC (UG/L)	CAR- BARYL WATER FLTRD 0.7 U GF, REC (UG/L)	CARBO- FURAN WATER FLTRD 0.7 U GF, REC (UG/L)	CHLOR- PYRIFOS DIS- SOLVED (UG/L)
AUG 1994 24...	<0.03	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.01	0.03	<0.01	<0.01
DATE	CYANA- ZINE, WATER, DISS, REC (UG/L)	DCPA WATER FLTRD 0.7 U GF, REC (UG/L)	P,P' DDE DISSOLV (UG/L)	DEETHYL ATRA- ZINE, WATER, DISS, REC (UG/L)	DI- AZINON, DIS- SOLVED (UG/L)	DI- ELDRIN DIS- SOLVED (UG/L)	DISUL- FOTON WATER FLTRD 0.7 U GF, REC (UG/L)	EPTC WATER FLTRD 0.7 U GF, REC (UG/L)	ETHO- PROP WATER FLTRD 0.7 U GF, REC (UG/L)	FONOFOS WATER DISS REC (UG/L)	LINDANE DIS- SOLVED (UG/L)
AUG 1994 24...	<0.01	<0.004	<0.01	<0.005	<0.01	<0.01	<0.06	<0.005	<0.01	<0.01	<0.01
DATE	LIN- URON WATER FLTRD 0.7 U GF, REC (UG/L)	MALA- THION, DIS- SOLVED (UG/L)	METHYL AZIN- PHOS WAT FLT 0.7 U GF, REC (UG/L)	METHYL PARA- THION WAT FLT 0.7 U GF, REC (UG/L)	METO- LACHLOR WATER DISSOLV (UG/L)	METRI- BUZIN SENCOR WATER DISSOLV (UG/L)	MOL- INATE WATER FLTRD 0.7 U GF, REC (UG/L)	NAPROP- AMIDE WATER FLTRD 0.7 U GF, REC (UG/L)	PEB- ULATE WATER FILTRD 0.7 U GF, REC (UG/L)	PARA- THION, DIS- SOLVED (UG/L)	PENDI- METH- ALIN WAT FLT 0.7 U GF, REC (UG/L)
AUG 1994 24...	<0.04	<0.01	<0.05	<0.03	0.00	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02
DATE	PER- METHRIN CIS WAT FLT 0.7 U GF, REC (UG/L)	PRO- METON, WATER, DISS, REC (UG/L)	PRON- AMIDE WATER FLTRD 0.7 U GF, REC (UG/L)	PROP- CHLOR, WATER, DISS, REC (UG/L)	PRO- PARGITE WATER FLTRD 0.7 U GF, REC (UG/L)	PRO- PANIL WATER FLTRD 0.7 U GF, REC (UG/L)	SI- MAZINE, WATER, DISS, REC (UG/L)	TEBU- THIURON WATER FLTRD 0.7 U GF, REC (UG/L)	TER- BUFOS WATER FLTRD 0.7 U GF, REC (UG/L)	THIO- BENCARB WATER FLTRD 0.7 U GF, REC (UG/L)	TRIAL- LATE WATER FLTRD 0.7 U GF, REC (UG/L)
AUG 1994 24...	<0.02	<0.01	<0.01	<0.02	<0.01	<0.02	<0.01	<0.02	<0.01	<0.01	<0.01

SUSPENDED SEDIMENT DISCHARGE

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SEDI- MENT, DIS- CHARGE, SUS- PENDE D (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE D (T/DAY)
AUG 1994 24...	0800	7.6	3	0.06

WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

POTOMAC RIVER BASIN--Continued

01650900

- SLIGO CREEK AT TAKOMA PARK, MD--Continued

DATE	PER-METHRIN CIS WAT FLT 0.7 U GF, REC (UG/L)	PRO-METON, WATER, DISS, REC (UG/L)	PRON-AMIDE WATER FLTRD 0.7 U GF, REC (UG/L)	PROP-CHLOR, WATER, DISS, REC (UG/L)	PRO-PARGITE WATER FLTRD 0.7 U GF, REC (UG/L)	PRO-PANIL WATER FLTRD 0.7 U GF, REC (UG/L)	SI-MAZINE, WATER, DISS, REC (UG/L)	TEBU-THIURON WATER FLTRD 0.7 U GF, REC (UG/L)	TER-BUFOS WATER FLTRD 0.7 U GF, REC (UG/L)	THIO-BENCARB WATER FLTRD 0.7 U GF, REC (UG/L)	TRIAL-LATE WATER FLTRD 0.7 U GF, REC (UG/L)
AUG 1994 23...	<0.02	0.04	<0.01	<0.02	<0.01	<0.02	0.01	<0.02	<0.01	<0.01	<0.01

SUSPENDED SEDIMENT DISCHARGE

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SEDI-MENT, DIS-CHARGE, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)
AUG 1994 23...	1635	3.3	4	0.04

01651780

- HICKEY RUN AT WASHINGTON, DC

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	PH WATER WHOLE FIELD (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	TEMPER- ATURE AIR (DEG C)	HARD- NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY WAT DIS TOT IT FIELD MG/L AS CACO3
SEP 1994 19...	1515	0.18	7.6	20.0	22.5	180	52	11	30	5.3	108
DATE	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS NO3)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)
SEP 1994 19...	49	55	0.60	8.3	315	4.1	0.030	0.950	0.950	0.070	0.40
DATE	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N)	PHOS- PHORUS TOTAL (MG/L AS P)	PHOS- PHORUS DIS- SOLVED (MG/L AS P)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P)	IRON, DIS- SOLVED (UG/L AS FE)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	ETHAL- FLUR- ALIN WAT FLT 0.7 U GF, REC (UG/L)	PHORATE WATER FLTRD 0.7 U GF, REC (UG/L)	TER- BACIL WATER FLTRD 0.7 U GF, REC (UG/L)	TRI- FLUR- ALIN WAT FLT 0.7 U GF, REC (UG/L)	2,6-DI- ETHYL ANILINE WAT FLT 0.7 U GF, REC (UG/L)
SEP 1994 19...	0.30	0.050	0.050	0.020	99	110	<0.01	<0.01	<0.03	<0.01	<0.01
DATE	ALA- CHLOR, WATER, DISS, REC (UG/L)	ALPHA BHC DIS- SOLVED (UG/L)	ATRA- ZINE, WATER, DISS, REC (UG/L)	BEN- FLUR- ALIN WAT FLD 0.7 U GF, REC (UG/L)	BUTYL- ATE, WATER, DISS, REC (UG/L)	CAR- BARYL WATER FLTRD 0.7 U GF, REC (UG/L)	CARBO- FURAN WATER FLTRD 0.7 U GF, REC (UG/L)	CHLOR- PYRIFOS DIS- SOLVED (UG/L)	CYANA- ZINE, WATER, DISS, REC (UG/L)	DCPA WATER FLTRD 0.7 U GF, REC (UG/L)	P,P' DDE DISSOLV (UG/L)
SEP 1994 19...	<0.01	<0.01	0.09	<0.01	<0.01	<0.05	<0.01	0.03	<0.01	<0.004	<0.01

WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

POTOMAC RIVER BASIN--Continued

01651780

- HICKEY RUN AT WASHINGTON, DC--Continued

DATE	DEETHYL ATRA- ZINE, WATER, DISS, REC (UG/L)	DI- AZINON, DIS- SOLVED (UG/L)	DI- ELDRIN DIS- SOLVED (UG/L)	DISUL- FOTON WATER FLTRD 0.7 U GF, REC (UG/L)	EPTC WATER FLTRD 0.7 U GF, REC (UG/L)	ETHO- PROP WATER FLTRD 0.7 U GF, REC (UG/L)	FONOFOS WATER DISS REC (UG/L)	LINDANE DIS- SOLVED (UG/L)	LIN- URON WATER FLTRD 0.7 U GF, REC (UG/L)	MALA- THION, DIS- SOLVED (UG/L)
SEP 1994 19...	EO.03	<0.01	<0.01	<0.06	<0.005	<0.01	<0.01	<0.01	<0.04	<0.01
DATE	METHYL AZIN- PHOS WAT FLT 0.7 U GF, REC (UG/L)	METHYL PARA- THION WAT FLT 0.7 U GF, REC (UG/L)	METO- LACHLOR WATER DISSOLV (UG/L)	METRI- BUZIN WATER DISSOLV (UG/L)	MOL- INATE WATER FLTRD 0.7 U GF, REC (UG/L)	NAPROP- AMIDE WATER FLTRD 0.7 U GF, REC (UG/L)	PEB- ULATE WATER FLTRD 0.7 U GF, REC (UG/L)	PARA- THION, DIS- SOLVED (UG/L)	PENDI- METH- ALIN WAT FLT 0.7 U GF, REC (UG/L)	PER- METHRIN CIS WAT FLT 0.7 U GF, REC (UG/L)
SEP 1994 19...	<0.04	<0.03	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02	<0.02
DATE	PRO- METON, WATER, DISS, REC (UG/L)	PRON- AMIDE WATER FLTRD 0.7 U GF, REC (UG/L)	PROP- CHLOR, WATER, DISS, REC (UG/L)	PRO- PARGITE WATER FLTRD 0.7 U GF, REC (UG/L)	PRO- PANIL WATER FLTRD 0.7 U GF, REC (UG/L)	SI- MAZINE, WATER, DISS, REC (UG/L)	TEBU- THIURON WATER FLTRD 0.7 U GF, REC (UG/L)	TER- BUFOS WATER FLTRD 0.7 U GF, REC (UG/L)	THIO- BENCARB WATER FLTRD 0.7 U GF, REC (UG/L)	TRIAL- LATE WATER FLTRD 0.7 U GF, REC (UG/L)
SEP 1994 19...	0.06	<0.01	<0.02	<0.01	<0.02	<0.01	0.06	<0.01	<0.01	<0.01

01651795

- WATTS BRANCH AT BENNING ROAD, WASHINGTON, DC

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	PH WATER WHOLE FIELD (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	TEMPER- ATURE AIR (DEG C)	HARD- NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
SEP 1994 19...	0945	0.61	7.4	19.5	21.5	140	43	8.2	19	4.2
DATE	ALKA- LITY WAT DIS TOT IT FIELD MG/L AS CACO3	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS NO3)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	
SEP 1994 19...	81	50	37	0.50	8.8	232	4.4	0.010	1.00	
DATE	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN, AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, AM- MONIA + ORGANIC DIS. (MG/L AS N)	PHOS- PHORUS TOTAL (MG/L AS P)	PHOS- PHORUS DIS- SOLVED (MG/L AS P)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P)	IRON, DIS- SOLVED (UG/L AS FE)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	
SEP 1994 19...	1.00	0.050	0.30	<0.20	<0.010	<0.010	<0.010	210	150	

WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

POTOMAC RIVER BASIN--Continued

01651805

- WATTS BRANCH NEAR WASHINGTON, DC

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	PH WATER WHOLE FIELD (STANDARD UNITS)	TEMPER-ATURE WATER (DEG C)	TEMPER-ATURE AIR (DEG C)	HARD-NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY WAT DIS TOT IT FIELD (MG/L AS CACO3)	
SEP 1994 19...	1345	0.44	7.6	19.5	22.5	120	38	6.7	19	4.6	82	
DATE		SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC DIS. (MG/L AS N)	
SEP 1994 19...	36	34	0.40	8.5	221	<0.010	0.290	0.290	0.040	0.30	0.30	
DATE		PHOS-PHORUS TOTAL (MG/L AS P)	PHOS-PHORUS DIS-SOLVED (MG/L AS P)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P)	IRON, DIS-SOLVED (UG/L AS FE)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	ETHAL-FLUR-ALIN WAT FLT 0.7 U GF, REC (UG/L)	PHORATE WATER FLTRD 0.7 U GF, REC (UG/L)	TER-BACIL WATER FLTRD 0.7 U GF, REC (UG/L)	TRI-FLUR-ALIN WAT FLT 0.7 U GF, REC (UG/L)	2,6-DI-ETHYL ANILINE WAT FLT 0.7 U GF, REC (UG/L)	ALA-CHLOR, WATER, DISS, REC, (UG/L)
SEP 1994 19...	0.050	0.020	0.020	240	47	<0.01	<0.01	<0.03	<0.01	<0.01	<0.01	
DATE		ALPHA BHC DIS-SOLVED (UG/L)	ATRA-ZINE, WATER, DISS, REC (UG/L)	BEN-FLUR-ALIN WAT FLT 0.7 U GF, REC (UG/L)	BUTYL-ATE, WATER, DISS, REC (UG/L)	CAR-BARYL WATER FLTRD 0.7 U GF, REC (UG/L)	CARBO-FURAN WATER FLTRD 0.7 U GF, REC (UG/L)	CHLOR-PYRIFOS DIS-SOLVED (UG/L)	CYANA-ZINE, WATER, DISS, REC (UG/L)	DCPA WATER FLTRD 0.7 U GF, REC (UG/L)	P,P' DDE DISSOLV (UG/L)	
SEP 1994 19...	<0.01	0.02	<0.01	<0.01	E0.04	<0.01	0.02	<0.01	<0.004	<0.01		
DATE		DEETHYL ATRA-ZINE, WATER, DISS, REC (UG/L)	DI-AZINON, DIS-SOLVED (UG/L)	DI-ELDRIN DIS-SOLVED (UG/L)	DISUL-FOTON WATER FLTRD 0.7 U GF, REC (UG/L)	EPTC WATER FLTRD 0.7 U GF, REC (UG/L)	ETHO-PROP WATER FLTRD 0.7 U GF, REC (UG/L)	FONOFOS WATER DISS REC (UG/L)	LINDANE DIS-SOLVED (UG/L)	LIN-URON WATER FLTRD 0.7 U GF, REC (UG/L)	MALA-THION, DIS-SOLVED (UG/L)	
SEP 1994 19...	E0.02	0.06	<0.01	<0.06	<0.005	<0.01	<0.01	<0.01	<0.04	<0.01		
DATE		METHYL AZIN-PHOS WAT FLT 0.7 U GF, REC (UG/L)	METHYL PARA-THION WAT FLT 0.7 U GF, REC (UG/L)	METO-LACHLOR WATER DISSOLV (UG/L)	METRI-BUZIN SENCOR WATER DISSOLV (UG/L)	MOL-INATE WATER FLTRD 0.7 U GF, REC (UG/L)	NAPROP-AMIDE WATER FLTRD 0.7 U GF, REC (UG/L)	PEB-ULATE WATER FILTRD 0.7 U GF, REC (UG/L)	PARA-THION, DIS-SOLVED (UG/L)	PENDI-METH-ALIN WAT FLT 0.7 U GF, REC (UG/L)	PER-METHRIN CIS WAT FLT 0.7 U GF, REC (UG/L)	
SEP 1994 19...	<0.04	<0.03	0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02	<0.02	
DATE		PRO-METON, WATER, DISS, REC (UG/L)	PRON-AMIDE WATER FLTRD 0.7 U GF, REC (UG/L)	PROP-CHLOR, WATER, DISS, REC (UG/L)	PRO-PARGITE WATER FLTRD 0.7 U GF, REC (UG/L)	PRO-PANIL WATER FLTRD 0.7 U GF, REC (UG/L)	SI-MAZINE, WATER, DISS, REC (UG/L)	TEBU-THIURON WATER FLTRD 0.7 U GF, REC (UG/L)	TER-BUFOS WATER FLTRD 0.7 U GF, REC (UG/L)	THIO-BENCARB WATER FLTRD 0.7 U GF, REC (UG/L)	TRIAL-LATE WATER FLTRD 0.7 U GF, REC (UG/L)	
SEP 1994 19...	0.14	<0.01	<0.02	<0.01	<0.02	<0.01	0.05	<0.01	<0.01	<0.01		

WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

POTOMAC RIVER BASIN--Continued

01651815

- POPE BRANCH AT WASHINGTON, DC

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	PH WATER WHOLE FIELD (STANDARD UNITS)	TEMPER-ATURE WATER (DEG C)	TEMPER-ATURE AIR (DEG C)	HARD-NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY WAT DIS TOT IT FIELD (MG/L AS CACO3)	
SEP 1994 20...	1030	0.10	7.7	17.5	19.0	110	29	8.0	22	2.9	60	
DATE		SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA + ORGANIC DIS. (MG/L AS N)	
SEP 1994 20...	33	42	0.40	8.5	196	<0.010	0.960	0.960	0.030	<0.20	<0.20	
DATE		PHOS-PHORUS TOTAL (MG/L AS P)	PHOS-PHORUS DIS-SOLVED (MG/L AS P)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P)	IRON, DIS-SOLVED (UG/L AS FE)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	ETHAL-FLUR-ALIN WAT FLT 0.7 U GF, REC (UG/L)	PHORATE WATER FLTRD 0.7 U GF, REC (UG/L)	TER-BACIL WATER FLTRD 0.7 U GF, REC (UG/L)	TRI-FLUR-ALIN WAT FLT 0.7 U GF, REC (UG/L)	2,6-DI-ETHYL ANILINE WAT FLT 0.7 U GF, REC (UG/L)	ALA-CHLOR, WATER, DISS, REC, (UG/L)
SEP 1994 20...	0.010	<0.010	<0.010	77	100	<0.01	<0.01	<0.03	<0.01	<0.01	<0.01	
DATE		ALPHA BHC DIS-SOLVED (UG/L)	ATRA-ZINE, WATER, DISS, REC (UG/L)	BEN-FLUR-ALIN WAT FLD 0.7 U GF, REC (UG/L)	BUTYL-ATE, WATER, DISS, REC (UG/L)	CAR-BARYL WATER FLTRD 0.7 U GF, REC (UG/L)	CARBO-FURAN WATER FLTRD 0.7 U GF, REC (UG/L)	CHLOR-PYRIFOS DIS-SOLVED (UG/L)	CYANA-ZINE, WATER, DISS, REC (UG/L)	DCPA WATER FLTRD 0.7 U GF, REC (UG/L)	P,P' DDE DISSOLV (UG/L)	
SEP 1994 20...	<0.01	0.03	<0.01	<0.01	E0.04	<0.01	0.01	<0.01	<0.004	<0.01		
DATE		DEETHYL ATRA-ZINE, WATER, DISS, REC (UG/L)	DI-AZINON, DIS-SOLVED (UG/L)	DI-ELDRIN DIS-SOLVED (UG/L)	DISUL-FOTON WATER FLTRD 0.7 U GF, REC (UG/L)	EPTC WATER FLTRD 0.7 U GF, REC (UG/L)	ETHO-PROP WATER FLTRD 0.7 U GF, REC (UG/L)	FONOFOS WATER DISS REC (UG/L)	LINDANE DIS-SOLVED (UG/L)	LIN-URON WATER FLTRD 0.7 U GF, REC (UG/L)	MALA-THION, DIS-SOLVED (UG/L)	
SEP 1994 20...	E0.03	<0.01	<0.01	<0.06	<0.005	<0.01	<0.01	<0.01	<0.04	<0.01		
DATE		METHYL AZIN-PHOS WAT FLT 0.7 U GF, REC (UG/L)	METHYL PARA-THION WAT FLT 0.7 U GF, REC (UG/L)	METO-LACHLOR WATER DISSOLV (UG/L)	METRI-BUZIN SENCOR WATER DISSOLV (UG/L)	MOL-INATE WATER FLTRD 0.7 U GF, REC (UG/L)	NAPROP-AMIDE WATER FLTRD 0.7 U GF, REC (UG/L)	PEB-ULATE WATER FILTRD 0.7 U GF, REC (UG/L)	PARA-THION, DIS-SOLVED (UG/L)	PENDI-METH-ALIN WAT FLT 0.7 U GF, REC (UG/L)	PER-METHRIN CIS WAT FLT 0.7 U GF, REC (UG/L)	
SEP 1994 20...	<0.04	<0.03	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.018	<0.02	
DATE		PRO-METON, WATER, DISS, REC (UG/L)	FRON-AMIDE WATER FLTRD 0.7 U GF, REC (UG/L)	PROP-CHLOR, WATER, DISS, REC (UG/L)	PRO-PARGITE WATER FLTRD 0.7 U GF, REC (UG/L)	PRO-PANIL WATER FLTRD 0.7 U GF, REC (UG/L)	SI-MAZINE, WATER, DISS, REC (UG/L)	TEBU-THIURON WATER FLTRD 0.7 U GF, REC (UG/L)	TER-BUFOS WATER FLTRD 0.7 U GF, REC (UG/L)	THIO-BENCARB WATER FLTRD 0.7 U GF, REC (UG/L)	TRIAL-LATE WATER FLTRD 0.7 U GF, REC (UG/L)	
SEP 1994 20...		0.01	<0.01	<0.02	<0.01	<0.02	0.01	E0.005	<0.01	<0.01	<0.01	

ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

POTOMAC RIVER BASIN--Continued

01651845

- OXON RUN NEAR WASHINGTON, DC

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	PH WATER WHOLE FIELD (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	TEMPERATURE AIR (DEG C)	HARDNESS TOTAL (MG/L AS CaCO3)	CALCIUM DIS-SOLVED (MG/L AS Ca)	MAGNESIUM, DIS-SOLVED (MG/L AS Mg)	SODIUM, DIS-SOLVED (MG/L AS Na)	POTASSIUM, DIS-SOLVED (MG/L AS K)	ALKALINITY TOT IT FIELD MG/L AS CaCO3
SEP 1994 20...	1345	0.41	7.5	20.0	23.5	110	34	7.0	25	3.7	65
DATE		SULFATE DIS-SOLVED (MG/L AS SO4)	CHLORIDE, DIS-SOLVED (MG/L AS CL)	FLUORIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	NITROGEN, NITRITE DIS-SOLVED (MG/L AS N)	NITROGEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITROGEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC DIS. (MG/L AS N)
SEP 1994 20...	37	49	0.30	7.9	224	<0.010	0.500	0.500	0.020	<0.20	<0.20
DATE		PHOSPHORUS TOTAL (MG/L AS P)	PHOSPHORUS, DIS-SOLVED (MG/L AS P)	PHOSPHORUS ORTHO, DIS-SOLVED (MG/L AS P)	IRON, DIS-SOLVED (UG/L AS FE)	MANGANESE, DIS-SOLVED (UG/L AS MN)	ETHYL-FLURALIN WATER FLT 0.7 U GF, REC (UG/L)	PHORATE WATER FLTRD 0.7 U GF, REC (UG/L)	TERBACIL WATER FLTRD 0.7 U GF, REC (UG/L)	TRIFLURALIN WATER FLT 0.7 U GF, REC (UG/L)	2,6-DIETHYL ANILINE WATER FLT 0.7 U GF, REC (UG/L)
SEP 1994 20...	0.030	<0.010	<0.010	84	18	<0.01	<0.01	<0.03	<0.01	<0.01	<0.01
DATE		ALPHA BHC DIS-SOLVED (UG/L)	ATRAZINE, WATER, DISS, REC (UG/L)	BENFLURALIN WAT FLD 0.7 U GF, REC (UG/L)	BUTYLATE, WATER, DISS, REC (UG/L)	CARBARYL WATER FLTRD 0.7 U GF, REC (UG/L)	CARBOFURAN WATER FLTRD 0.7 U GF, REC (UG/L)	CHLORPYRIFOS DIS-SOLVED (UG/L)	CYANAZINE, WATER, DISS, REC (UG/L)	DCPA WATER FLTRD 0.7 U GF, REC (UG/L)	P,P' DDE DISSOLV (UG/L)
SEP 1994 20...	<0.01	0.02	<0.01	<0.01	E0.01	<0.01	0.02	<0.01	<0.004	<0.01	
DATE		DEETHYL ATRAZINE, WATER, DISS, REC (UG/L)	DI-AZINON, DIS-SOLVED (UG/L)	DI-ELDRIN, DIS-SOLVED (UG/L)	DISULFOTON WATER FLTRD 0.7 U GF, REC (UG/L)	EPTC WATER FLTRD 0.7 U GF, REC (UG/L)	ETHO-PROP WATER FLTRD 0.7 U GF, REC (UG/L)	FONOFOS WATER DISS REC (UG/L)	LINDANE DIS-SOLVED (UG/L)	LINURON WATER FLTRD 0.7 U GF, REC (UG/L)	MALATHION, DIS-SOLVED (UG/L)
SEP 1994 20...	E0.02	0.01	<0.01	<0.06	<0.005	<0.01	<0.01	<0.01	<0.01	<0.04	<0.01
DATE		METHYL AZINPHOS WAT FLT 0.7 U GF, REC (UG/L)	METHYL PARATHION WAT FLT 0.7 U GF, REC (UG/L)	METO-LACHLOR WATER DISSOLV (UG/L)	METRI-BUZIN SENCOR WATER DISSOLV (UG/L)	MOLINATE WATER FLTRD 0.7 U GF, REC (UG/L)	NAPROP-AMIDE WATER FLTRD 0.7 U GF, REC (UG/L)	PEBULATE WATER FLTRD 0.7 U GF, REC (UG/L)	PARATHION, DIS-SOLVED (UG/L)	PENDIMETHALIN WAT FLT 0.7 U GF, REC (UG/L)	PERMETHRIN CIS WAT FLT 0.7 U GF, REC (UG/L)
SEP 1994 20...	<0.04	<0.03	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02	<0.02
DATE		PRO-METON, WATER, DISS, REC (UG/L)	PRON-AMIDE WATER FLTRD 0.7 U GF, REC (UG/L)	PROP-CHLOR, WATER, DISS, REC (UG/L)	PRO-PARGITE WATER FLTRD 0.7 U GF, REC (UG/L)	PRO-PANIL WATER FLTRD 0.7 U GF, REC (UG/L)	SI-MAZINE, WATER, DISS, REC (UG/L)	TEBU-THIURON WATER FLTRD 0.7 U GF, REC (UG/L)	TER-BUFOS WATER FLTRD 0.7 U GF, REC (UG/L)	THIO-BENCARB WATER FLTRD 0.7 U GF, REC (UG/L)	TRIAL-LATE WATER FLTRD 0.7 U GF, REC (UG/L)
SEP 1994 20...	0.08	<0.01	<0.02	<0.01	<0.02	0.02	0.08	<0.01	<0.01	<0.01	

WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

POTOMAC RIVER BASIN--Continued

01651855

- OXON RUN AT WASHINGTON, DC

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	PH WATER WHOLE FIELD (STANDARD UNITS)	TEMPER-ATURE WATER (DEG C)	TEMPER-ATURE AIR (DEG C)	HARD-NESS TOTAL (MG/L AS CaCO3)	CALCIUM DIS-SOLVED (MG/L AS Ca)	MAGNE-SIUM, DIS-SOLVED (MG/L AS Mg)	SODIUM, DIS-SOLVED (MG/L AS Na)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY WAT DIS TOT IT FIELD (MG/L AS CaCO3)	
SEP 1994 20...	1700	0.82	7.3	19.0	20.5	82	23	5.9	20	3.1	45	
DATE		SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC DIS. (MG/L AS N)	
SEP 1994 20...	25	38	0.20	9.4	169	<0.010	0.700	0.700	<0.010	<0.20	<0.20	
DATE		PHOS-PHORUS TOTAL (MG/L AS P)	PHOS-PHORUS DIS-SOLVED (MG/L AS P)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P)	IRON, DIS-SOLVED (UG/L AS FE)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	ETHAL-FLUR-ALIN WAT FLT 0.7 U GF, REC (UG/L)	PHORATE WATER FLTRD 0.7 U GF, REC (UG/L)	TER-BACIL WATER FLTRD 0.7 U GF, REC (UG/L)	TRI-FLUR-ALIN WAT FLT 0.7 U GF, REC (UG/L)	2,6-DI-ETHYL ANILINE WAT FLT 0.7 U GF, REC (UG/L)	ALA-CHLOR, WATER, DISS, REC, (UG/L)
SEP 1994 20...	0.020	0.010	<0.010	80	38	<0.01	<0.01	<0.03	<0.01	<0.01	<0.01	
DATE		ALPHA BHC DIS-SOLVED (UG/L)	ATRA-ZINE, WATER, DISS, REC (UG/L)	BEN-FLUR-ALIN WAT FLD 0.7 U GF, REC (UG/L)	BUTYL-ATE, WATER, DISS, REC (UG/L)	CAR-BARYL WATER FLTRD 0.7 U GF, REC (UG/L)	CARBO-FURAN WATER FLTRD 0.7 U GF, REC (UG/L)	CHLOR-PYRIFOS DIS-SOLVED (UG/L)	CYANA-ZINE, WATER, DISS, REC (UG/L)	DCPA WATER FLTRD 0.7 U GF, REC (UG/L)	P,P' DDE DISSOLV (UG/L)	
SEP 1994 20...	<0.01	E0.01	<0.01	<0.01	E0.01	<0.01	0.01	<0.01	<0.004	<0.01		
DATE		DEETHYL ATRA-ZINE, WATER, DISS, REC (UG/L)	DI-AZINON, DIS-SOLVED (UG/L)	DI-ELDRIN DIS-SOLVED (UG/L)	DISUL-FOTON WATER FLTRD 0.7 U GF, REC (UG/L)	EPTC WATER FLTRD 0.7 U GF, REC (UG/L)	ETHO-PROP WATER FLTRD 0.7 U GF, REC (UG/L)	FONOFOS WATER DISS REC (UG/L)	LINDANE DIS-SOLVED (UG/L)	LIN-URON WATER FLTRD 0.7 U GF, REC (UG/L)	MALA-THION, DIS-SOLVED (UG/L)	
SEP 1994 20...	E0.01	0.01	<0.01	<0.06	<0.005	<0.01	<0.01	<0.01	<0.04	<0.01		
DATE		METHYL AZIN-PHOS WAT FLT 0.7 U GF, REC (UG/L)	METHYL PARA-THION WAT FLT 0.7 U GF, REC (UG/L)	METO-LACHLOR WATER DISSOLV (UG/L)	METRI-BUZIN SENCOR WATER DISSOLV (UG/L)	MOL-INATE WATER FLTRD 0.7 U GF, REC (UG/L)	NAPROP-AMIDE WATER FLTRD 0.7 U GF, REC (UG/L)	PEB-ULATE WATER FLTRD 0.7 U GF, REC (UG/L)	PARA-THION, DIS-SOLVED (UG/L)	PENDI-METH-ALIN WAT FLT 0.7 U GF, REC (UG/L)	PER-METHRIN CIS WAT FLT 0.7 U GF, REC (UG/L)	
SEP 1994 20...	<0.04	<0.03	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02	<0.02	
DATE		PRO-METON, WATER, DISS, REC (UG/L)	PRON-AMIDE WATER FLTRD 0.7 U GF, REC (UG/L)	PROP-CHLOR, WATER, DISS, REC (UG/L)	PRO-PARGITE WATER FLTRD 0.7 U GF, REC (UG/L)	PRO-PANIL WATER FLTRD 0.7 U GF, REC (UG/L)	SI-MAZINE, WATER, DISS, REC (UG/L)	TEBU-THIURON WATER FLTRD 0.7 U GF, REC (UG/L)	TER-BUFOS WATER FLTRD 0.7 U GF, REC (UG/L)	THIO-BENCARB WATER FLTRD 0.7 U GF, REC (UG/L)	TRIAL-LATE WATER FLTRD 0.7 U GF, REC (UG/L)	
SEP 1994 20...	0.05	<0.01	<0.02	<0.01	<0.02	0.01	0.03	<0.01	<0.01	<0.01		

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CONVERSION FACTORS AND VERTICAL DATUM

Multiply	By	To obtain
<i>Length</i>		
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
<i>Area</i>		
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
<i>Volume</i>		
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
<i>Flow</i>		
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
<i>Mass</i>		
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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