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Water Resources Data New Jersey Water Year 2003

Volume 1
Surface-Water Data

Water-Data Report NJ-03-1

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

Prepared in cooperation with the New Jersey Department of Environmental Protection and with other agencies

CALENDAR FOR WATER YEAR 2003

2002

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Water Resources Data
New Jersey
Water Year 2003

Volume 1. Surface-Water Data

By T.J. Reed, B.T. White, G.L. Centinaro, J.F. Dudek, A.R. Protz, J.C. Shvanda, and A.F. Watson

Water-Data Report NJ-03-1

Prepared in cooperation with the New Jersey Department of Environmental Protection and with other agencies

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

U.S. Department of the Interior
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PREFACE

This volume of the annual hydrologic data report of New Jersey 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 (Volume 1), ground-water levels (Volume 2), and water quality (Volume 3) 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 New Jersey are contained in 3 volumes:

Volume 1. Surface-Water Data
Volume 2. Ground-Water Data
Volume 3. Water-Quality Data

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

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M.D. Morgan and I.C. Heerwagen word processed the text of the report. G.L. Simpson, W.H. Ellis and D.K. Sun drafted the illustrations. Text was edited by R.M. Larkins and D.L. Simmons.

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This report was prepared in cooperation with the State of New Jersey and with other agencies under the supervision of Robert G. Reiser, Chief of the Hydrologic Data Assessment Program or Steven P. Nieswand, Chief of Hydrologic Studies Program; under the general supervision of Steven P. Nieswand; David A. Stedfast, Associate District Chief; Richard H. Kropp, District Chief, New Jersey; and Catherine L. Hill, Regional Hydrologist, Northeastern Region.

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13. ABSTRACT *(Maximum 200 words)*

Water-resources data for the 2003 Water Year for New Jersey are presented in three volumes, and consists of records of stage, discharge, and water quality of streams; stage and contents of lakes and reservoirs; and water levels and water quality of ground water. Volume 1 contains discharge records for 100 gaging stations; tide summaries at 29 tidal gaging stations; and stage and contents at 39 lakes and reservoirs. Also included are stage and discharge for 106 crest-stage partial-record stations, stage-only at 33 tidal crest-stage gages, and discharge for 142 low-flow partial-record stations. Locations of these sites are shown in figures 8-11. Additional discharge measurements were made at 143 miscellaneous sites that are not part of the systematic data-collection program. Discontinued station tables for gaging stations, crest-stage gages, tidal crest-stage and tidal gaging stations show historical coverage. The data in this report represent that part of the National Water Information System (NWIS) data collected by the United States Geological Survey (USGS). Hydrologic conditions are also described for this water year, including streamflow, precipitation, reservoir conditions, and air temperatures.

14. SUBJECT TERMS
*New Jersey, *hydrologic data, *surface water, *streamflow, *tide, *tidal, flow, flood, flow rate, gaging stations, lakes, reservoirs, water temperatures, gage height, crest-stage gage, runoff, water level, discharge, drought, datum, USGS, Geological Survey.

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SURFACE WATER STATIONS, IN DOWNSTREAM ORDER, FOR WHICH RECORDS ARE PUBLISHED IN THIS VOLUME

Note.--Data for partial-record stations and miscellaneous sites for surface-water discharge are published in separate sections of the data report. See references at the end of this list for page numbers for these sections.

[Letter after station name designates type of data: (d) discharge, (e) elevation, gage height or contents]

SURFACE WATER STATIONS, IN DOWNSTREAM ORDER, FOR WHICH RECORDS ARE PUBLISHED IN THIS VOLUME

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DISCONTINUED SURFACE-WATER DISCHARGE STATIONS

The following continuous-record surface-water discharge stations in New Jersey have been discontinued. Daily streamflow records were collected and published for the period of record, expressed in water years, shown for each station. Those stations with an asterisk (*) after the station number are currently operated as crest-stage partial-record stations. Discontinued project stations with less than 1 year of record have not been included. Information regarding these stations may be obtained from the District Office at the address given on the back side of the title page of this report.

Discontinued Surface-Water Discharge Stations

Station name	Station number	Drainage area (mi^2)	Period of record
Wallkill River near Unionville, NY	01368000	140	1938-81
Auxiliary outlet of Upper Greenwood Lake at Moe, NJ	01368720	----	1968-80a
Passaic River near Bernardsville, NJ	01378690*	8.83	1968-77
Passaic River at Hanover Neck, NJ	01379580	132	1993-97b
Russia Brook tributary at Milton, NJ	01379630	1.64	1969-71
Rockaway River at Berkshire Valley, NJ	01379700	24.4	1985-96
Beaver Brook at Splitrock Reservoir, NJ	01380000	5.50	1925-46, 1976-88a
Passaic River at Towaco, NJ	01381950	355	1993-97b
Pequannock River at Riverdale, NJ	01382800	83.9	1994-97
Wanaque River at Monks, NJ	01384000	40.4	1935-85
Cupsaw Brook near Wanaque, NJ	01385000	4.37	1935-58
Erskine Brook near Wanaque, NJ	01385500	1.14	1934-38
Blue Mine Brook near Wanaque, NJ	01386500	1.01	1935-58
Ramapo River downstream of Pond Brook, at Oakland, NJ	01387890	143	1999-2000
Pompton River at Mountain View, NJ	01388910	371	1993-97b
Deepavaal Brook near Fairfield, NJ	01389130	1.37	1993-97b
Passaic River at Paterson, NJ	01389800	785	1897-1955
Hohokus Brook at Ho-Ho-Kus, NJ	01391000*	16.4	1954-73, 1977-96
Weasel Brook at Clifton, NJ	01392000	4.45	1937-62
Third River at Passaic, NJ	01392210	11.8	1977-97
Second River at Belleville, NJ	01392500	11.6	1938-64
Elizabeth River at Irvington, NJ	01393000	2.90	1931-38
Elizabeth River at Elizabeth, NJ	01393500	20.2	1922-73
East Fork East Branch Rahway River, at West Orange, NJ	01393800	.83	1972-74
West Branch Rahway River at Millburn, NJ	01394000	7.10	1940-50
Robinsons Branch at Goodmans, NJ	01395500	12.7	1921-24
Robinsons Branch at Rahway, NJ	01396000	21.6	1939-96
Walnut Brook near Flemington, NJ	01397500*	2.24	1936-61
Back Brook tributary near Ringoes, NJ	01398045*	1.98	1977-88
Holland Brook at Readington, NJ	01398107	9.00	1978-95
North Branch Raritan River at Pluckemin, NJ	01399000	52.0	1903-06
Lamington (Black) River at Succasunna, NJ	01399190	7.37	1976-87
Lamington (Black) River near Ironia, NJ	01399200	10.9	1975-87
Upper Cold Brook near Pottersville, NJ	01399510	2.18	1972-96
Axle Brook near Pottersville, NJ	01399525*	1.22	1977-88
South Branch Rockaway Creek at Whitehouse, NJ	01399690	13.2	1977-86
Rockaway Creek at Whitehouse, NJ	01399700	37.1	1977-84
North Branch Raritan River at North Branch, NJ	01399830*	174	1977-81
Peters Brook near Raritan, NJ	01400300	4.19	1978-95
Macs Brook at Somerville, NJ	01400350	.77	1982-95
Millstone River at Plainsboro, NJ	01400730	65.8	1964-75, 1987-89
Baldwins Creek at Baldwin Lake, near Pennington, NJ	01400932	2.52	1963-70
Honey Branch near Pennington, NJ	01400953	.70	1967-75
Millstone River at Carnegie Lake, at Princeton, NJ	01401301	159	1972-74, 1987-89
Millstone River near Kingston, NJ	01401500	171	1934-49

DISCONTINUED SURFACE-WATER DISCHARGE STATIONS--Continued

Station name	Station number	Drainage area (mi^2)	Period of record
Royce Brook tributary at Frankfort, NJ	01402590	.29	1969-74
Royce Brook tributary near Belle Mead, NJ	01402600	1.20	1966-74, 1980-95
Raritan River at Bound Brook, NJ	01403000	779	1903-09, 1945-66
West Branch Middle Brook near Somerville, NJ	01403160	3.83	1983-86
Green Brook at Plainfield, NJ	01403500*	9.75	1938-84
East Branch Stony Brook at Best Lake, at Watchung	01403535*	1.57	1980-2000
Bound Brook at Middlesex, NJ	01403900*	48.4	1972-77, 1997-98
Bound Brook at Bound Brook, NJ	01404000	49.0	1923-30
Lawrence Brook at Patricks Corner, NJ	01404500	29.0	1922-26
Lawrence Brook at Farrington Dam, NJ	01405000	34.4	1927-90
Matchaponix Brook at Spotswood, NJ	01405300	43.9	1957-67
South River at Old Bridge, NJ	01405500	94.6	1939-88
Deep Run near Browntown, NJ	01406000	8.07	1932-40
Tennent Brook near Browntown, NJ	01406500	5.25	1932-41
Matawan Creek at Matawan, NJ	01407000	6.11	1932-55
South Branch Metedeconk River at Lakewood, NJ	01408140	26.0	1973-76
South Branch Metedeconk River near Lakewood, NJ	01408150	27.5	1992-99
Cedar Creek at Lanoka Harbor, NJ	01409000	55.3	1933-58, 1971
Oyster Creek near Brookville, NJ	01409095	7.43	1965-84
West Branch Wading River near Jenkins, NJ	01409810	84.1	1974-96
Absecon Creek at Absecon, NJ	01410500	17.9	1946-85
Great Egg Harbor River at Sicklerville, NJ	01410784	15.1	1996-98
Great Egg Harbor River tributary at Sicklerville, NJ	01410787	1.64	1972-79
Fourmile Branch at New Brooklyn, NJ	01410810	7.74	1973-79
Great Egg Harbor River near Blue Anchor, NJ	01410820	37.3	1972-79
Maurice River at Brotmanville, NJ	01411485	88.1	1992-94
Blackwater Branch at Norma, NJ	01411495	12.5	1992-94
Maurice River near Millville, NJ	01411800	191 (revised)	1992-94
Maurice River at Union Lake Dam, at Millville, NJ	01411878	216	1993-94
Menantico Creek near Millville, NJ	01412000	23.2	1931-57, 1978-85
West Branch Cohansey River at Seeley, NJ	01412500*	2.58	1951-67
Loper Run near Bridgeton, NJ	01413000	2.34	1937-59
Delaware River near Delaware Water Gap, PA	01440200	3,850	1964-96
Paulins Kill at Columbia, NJ	01444000	179	1908-09
Pequest River at Townsbury, NJ	01445430	92.5	1977-80
Delaware River at Easton, PA	01446700	4,636	1968-78
Brass Castle Creek near Washington, NJ	01455160	2.34	1970-83a
Pohatcong Creek at New Village, NJ	01455200	33.3	1960-69
Beaver Brook near Weldon, NJ	01455355	1.72	1969-71
Musconetcong River at outlet of Lake Hopatcong, NJ	01455500	25.3	1928-75
Musconetcong River near Hackettstown, NJ	01456000	68.9	1922-73
Delaware River at Riegelsville, NJ	01457500*	6,328	1906-71
Delaware and Raritan Canal at Carnegie Lake, NJ	01460490	---	1951-99ab
Delaware and Raritan Canal at Kingston, NJ	01460500	---	1947-91
Delaware River at Lambertville, NJ	01462000	6,680	1898-1906
New Sharon Run at Carsons Mills, NJ	01463587	6.63	1976-77
Shipetaukin Creek tributary at Lawrenceville, NJ	01463657	.78	1976-77
Little Shabakunk Creek at Bakersville, NJ	01463690	3.98	1976-77
Thorton Creek at Bordentown, NJ	01464525*	.84	1976-77
Middle Branch Mount Misery Brook in Lebanon State Forest, NJ	01466000	2.82	1953-65, 1977

DISCONTINUED SURFACE-WATER DISCHARGE STATIONS--Continued

Station name	Station number	Drainage area (mi^2)	Period of record
Mill Creek near Willingboro, NJ	01467019	4.12	1975-78
Mill Creek at Levitt Parkway, at Willingboro, NJ	01467021	9.12	1975-77
Still Run near Mickleton, NJ	01476600	3.98	1957-66
Oldmans Creek near Woodstown, NJ	01477500	18.5	1932-40
Alloway Creek at Alloway, NJ	01483000	20.3	1953-72

a Not published, data on file at U.S. Geological Survey, West Trenton, NJ.
b Stage only.
* Currently operated as crest-stage partial-record station.

DISCONTINUED CREST-STAGE PARTIAL-RECORD STATIONS

The following crest-stage partial-record stations in New Jersey have been discontinued. Annual maximum gage height and discharge measurements were made for the period of record shown for each station

Station name	Station number	Drainage area (mi^2)	Period of Record (water years)
Musquapsink Brook near Westwood, NJ	01377475	2.12	1965-86
Tenakill Brook at Cresskill, NJ	01378350	3.01	1965-78
Wolf Creek at Ridgefield, NJ	01378615	1.18	1965-86
Rockaway River at Warren Street, at Dover, NJ	01379845	52.1	1981-97
Pequannock River at Riverdale, NJ	01382800	83.9	1981,1984,1994-97*
Fleischer Brook at East Paterson, NJ	01389905	1.78	1965-66
Saddle River at Paramus, NJ	01391110	45.0	1965-78
Sprout Brook at Rochelle Park, NJ	01391485	5.56	1965-78
Weasel Brook at Clifton, NJ	01392000	4.45	1938-62*,1963-78,1989-90
Second River at Belleville, NJ	01392500	11.6	1937-64*,1963-95
East Fork East Branch Rahway River, at Orange, NJ	01393810	.83	1972-78
South Branch Raritan River near Bartley, NJ	01396117	11.7	1970
Lamington River near Whitehouse, NJ	01399550	57.3	1978-79
South Branch Rockaway Creek at Whitehouse Station, NJ	01399690	13.2	1977-86*, 1987-88
Rockaway Creek at Whitehouse, NJ	01399700	37.1	1978-84*, 1985-95
Lamington River at Lamington Road, near North Branch, NJ	01399760	97.6	1978-79
Millstone River at Southfield Road, near Grovers Mill, NJ	01400630	41.0	1971, 1975, 1979-99
Millstone River at Plainsboro, NJ	01400730	65.8	1965-75, 1976-87, 1987-89,1990-99
Bear Brook at Route 535, near Locust Corner, NJ	01400775	6.69	1971, 1975, 1979-99
Bear Brook at Route 571, near Grovers Mill, NJ	01400795	9.28	1986-99
Little Bear Brook at Penns Neck, NJ	01400822	1.84	1971, 1975, 1979-95
Woodsville Brook at Woodsville, NJ	01400850	1.78	1957-58, 1964-80
Stony Brook at Glenmoore, NJ	01400900	17.0	1957-95
Stony Brook at Pennington, NJ	01400947	26.5	1965-78
Honey Branch near Pennington, NJ	01400953	.70	1966, 1967-74*
Honey Branch near Mount Rose, NJ	01400960	1.28	1969-78
Honey Branch near Rosedale, NJ	01400970	3.83	1967-78
Duck Pond Run near Princeton Junction, NJ	01401160	1.81	1980-99
Duck Pond Run at Clarksville, NJ	01401200	5.21	1965-85
Beden Brook near Hopewell, NJ	01401520	6.67	1967-85
East Branch Middle Brook at Warrenville, NJ	01403080	2.71	1994-95
Green Brook at North Plainfield, NJ	01403470	8.01	1972-78
Green Brook at Dunellen, NJ	01403700	20.7	1972-77
Bound Brook at South Bound Brook, NJ	01404080	65.0	1972-77
Lawrence Brook at Farrington Dam, NJ	01405000	34.3	1927-90*, 1991-95
Manasquan River near Georgia, NJ	01407830	10.6	1969-95
Manasquan River at Allenwood, NJ	01408030	63.9	1969-95
Cedar Creek at Lanoka Harbor, NJ	01409000	53.3	1933-58*, 1971*, 1979-84, 1993
Oyster Creek near Brookville, NJ	01409095	7.43	1966-85*, 1991
Westecunk Creek at Stafford Forge, NJ	01409280	15.8	1973-88*, 1991
Mullica River near Atco, NJ	01409375	3.22	1975-87
Hays Mill Creek near Chesilhurst, NJ	01409402	7.13	1975-78
Wildcat Branch at Chesilhurst, NJ	01409403	1.03	1975-87
Pump Branch near Blue Anchor, NJ	01409407	6.20	1975-77
Blue Anchor Brook near Blue Anchor, NJ	01409409	3.01	1975-87

DISCONTINUED CREST-STAGE PARTIAL-RECORD STATIONS--Continued

Station name	Station number	Drainage area (mi^2)	Period of record
Great Egg Harbor River at Berlin, NJ	01410775	1.88	1964-71
Fourmile Branch at New Brooklyn, NJ	01410810	7.74	1972-79*, 1980-91
Menantico Creek near Millville, NJ	01412000	23.2	1931-57*,1978-84*,1985-95
Cohansey River at Seeley, NJ	01412800	28.0	1978-88*, 1989-95
Pequest River at Huntsville, NJ	01445000	31.0	1940-62*, 1963-95
Pequest River at Townsbury, NJ	01445430	92.5	1978-80*, 1981-93
Furnace Brook at Oxford, NJ	01445490	4.29	1966-78
Beaver Brook near Belvidere, NJ	01446000	36.7	1923-61*, 1962-95
Pohatcong Creek at New Village, NJ	01455200	33.3	1960-69*, 1970-95
Musconetcong River at outlet of Lake Hopatcong, NJ	01455500	25.3	1929-75*, 1976-95
Musconetcong River near Hackettstown, NJ	01456000	68.9	1922-73*, 1974-95
Crosswicks Creek at New Egypt, NJ	01464400	41.2	1968-94
Crosswicks Creek at Groveville, NJ	01464505	98.2	1968-74
Doctors Creek at Allentown, NJ	01464515	17.4	1968-95
Doctors Creek at Groveville, NJ	01464520	25.3	1968-79
Blacks Creek at Mansfield Square, NJ	01464530	19.7	1978-95
Assiscunk Creek near Columbus, NJ	01464582	10.9	1978-95
Southwest Branch Rancocas Creek at Medford, NJ	01465880	47.2	1983-95
Southwest Branch Rancocas Creek at Route 70, at Medford, NJ	01465882	47.9	1978-82
Middle Branch Mount Misery Brook in Lebanon State Forest, NJ	01466000	2.82	1953-65*, 1967-78
Parkers Creek near Mount Laurel, NJ	01467010	2.68	1967-71
North Branch Pennsauken Creek near Moorestown, NJ	01467069	12.8	1975-88
South Branch Pennsauken Creek at Maple Shade, NJ	01467080	8.10	1964-68
Cooper River at Kirkwood, NJ	01467130	5.10	1964-80
Cooper River at Lawnside, NJ	01467140	12.7	1964-68
North Branch Cooper River near Marlton, NJ	01467160	5.34	1964-88
North Branch Cooper River at Ellisburg, NJ	01467180	10.5	1964-75
Cooper River at Camden, NJ	01467190	35.2	1967-73, 1994
Newton Creek at West Collingswood, NJ	01467312	4.51	1964-68
South Branch Big Timber Creek at Blackwood, NJ	01467330	20.9	1964-84
North Branch Big Timber Creek at Laurel Springs, NJ	01467350	6.55	1964-68
Mantua Creek at Pitman, NJ	01475000	6.05	1940-76*, 1977-94
Mantua Creek at Salina, NJ	01475019	14.1	1975-88
Raccoon Creek at Mullica Hill, NJ	01477110	15.6	1940, 1978-95
Oldmans Creek near Harrisonville, NJ	01477480	13.8	1975-95
Salem River at Woodstown, NJ	01482500	14.6	1940*, 1942-84*, 1985-88, 1989-90*,1991-95

* Operated as a continuous-record gaging station.

DISCONTINUED LOW-FLOW STATIONS

The following low-flow partial-record stations in New Jersey have been discontinued. Streamflow measurements were made during periods of base-flow and when correlated with the simultaneous discharge at nearby continuous-record sites, will give a picture of the low-flow potentiality of a stream. The period of record may also include measurements made under rainfall-runoff conditions for other study purposes.

Station name	Station number	Drainage area (mi^2)	Period of record (water years)
Wallkill River at outlet of Lake Mohawk, at Sparta, NJ	01367620	4.38	1979-86
Wallkill River at Franklin, NJ	01367700	29.4	1959-64,1982-83,1985,1987-90, 1999
Beaver Run near Hamburg, NJ	01367750	5.59	1966-72,2002
Wallkill River near Sussex, NJ	01367770	60.8	1977-82,1985,1987-2004
Papakating Creek at Pellettown, NJ	01367800	15.8	1959-64,1999-2004
West Branch Papakating Creek at McCoys Corner, NJ	01367850	11.0	1967-72, 2001-04
Clove Brook above Clove Acre Lake, at Sussex, NJ	01367890	19.2	1967-72, 2002
Clove Brook at Sussex, NJ	01367900	19.7	1959-64
Black Creek near Vernon, NJ	01368950	17.3	1977-96,2001-02
Musquapsink Brook near Westwood, NJ	01377475	2.12	1964-72,1975-76,1978,1981-87, 2000
Tenakill Brook at Cresskill, NJ	01378350	3.01	1964-73,1975,1999-2000
Tenakill Brook at Closter, NJ	01378385	8.56	1964-75,1978,1982,1985-2003
Dwars Kill at Norwood, NJ	01378410	4.23	1973-80,1999,2002-03
Norwood Brook at Norwood, NJ	01378430	2.03	1973-80
Hirshfeld Brook at New Milford, NJ	01378520	4.54	1965-72,2002-03
French Brook at New Bridge, NJ	01378530	.46	1965-72
Coles Brook at Hackensack, NJ	01378560	7.00	1965-72, 1998-2004
Metzler Brook at Englewood, NJ	01378590	1.54	1964-72,1977-78,1982,1987-98, 2003
Wolf Creek at Ridgewood, NJ	01378615	1.18	1964-72,1978,1983
Passaic River near Bernardsville, NJ	01378690	8.83	1964-77,1983-84,1987,1989, 1992-93,1997-98,2001,2003
Passaic River at outlet Osborn Pond, at Osborn Mill, NJ	01378700	10.1	1961-68,1984-89
Great Brook at Green Village, NJ	01378750	7.92	1961-65,2002
Primrose Brook near New Vernon, NJ	01378800	4.68	1961-65,2002
Great Brook near Basking Ridge, NJ	01378850	23.1	1961-65,2002
Black Brook near Meyersville, NJ	01378900	11.7	1959-63,2002
Harrisons Brook at Liberty Corner, NJ	01379150	3.74	1964-67, 1983-84,2002
Dead River near Millington, NJ	01379200	20.8	1961-67,1973-75,1986-89, 1998-2004
Passaic River at Stirling, NJ	01379300	84.1	1968-70,1972-73,1983-84
Canoe Brook near Millburn, NJ	01379525	10.2	1989-2003
Passaic River at Lower Chatham Bridge, near Chatham, NJ	01379550	116.0	1964,1984
Passaic River at Hanover, NJ	01379570	128.0	1963-66,1973,1987-89
Rockaway River at Berkshire Valley, NJ	01379700	24.4	1960-72,1981,1984-98
Rockaway River at Dover, NJ	01379750	30.8	1963-66,1983-86
Hibernia Brook at outlet of Lake Telemark, NJ	01380050	2.53	1966-72
Stony Brook near Rockaway Valley, NJ	01380300	8.43	1963-67,1985-86
Crooked Brook near Boonton, NJ	01381150	7.86	1963-66
Rockaway River at Pine Brook, NJ	01381200	136	1963-70,1972-73,1979-81, 1983-83,1995-97,2001,2002-03
Whippany River near Morristown, NJ	01381400	14.0	1964-72
Jacquis Brook at Greystone Park State Hospital, NJ	01381470	1.39	1967-73,2002
Watnong Brook at Morris Plains NJ	01381490	7.77	1966-72,1995,2002

DISCONTINUED LOW-FLOW STATIONS--Continued

Station name	Station number	Drainage area (mi^2)	Period of record (water years)
Malapardis Brook at Whippany, NJ	01381550	5.07	1961,1989-2001
Whippany River near Whippany, NJ	01381600	48.5	1963-66,1973,2001
Troy Brook at Troy Hills, NJ	01381700	10.1	1961-66,1972-73
West Brook at Troy Hills, NJ	01381750	1.32	1961-66,2002
Whippany River near Pine Brook	01381800	68.5	1963-68,1973,1979-2001
Passaic River at Two Bridges, NJ	01382000	361	1963-68, 1983-98,2002-03
Pequannock River near Stockholm, NJ	01382050	5.39	1959-64, 2002-03
Kanouse Brook at Newfoundland, NJ	01382360	3.87	1963-67, 2002-03
Macopin River at Macopin Reservoir, NJ	01382450	5.25	1970-73,1998-2000
Pequannock River tributary no. 1 at Kinnelon, NJ	01382550	1.18	1992-2001
Stone House Brook at Kinnelon, NJ	01382700	3.45	1992-98,2001
Belcher Creek at Stowaway Road, at West Milford, NJ	01382870	5.44 (revised)	1973-80
Belcher Creek tributary at West Milford, NJ	01382880	.61	1973-77,1979-80
Belcher Creek at West Milford, NJ	01382890	7.27	1973-80, 1995
Morsetown Brook at West Milford, NJ	01382910	1.31	1973-80
Green Brook near West Milford, NJ	01382960	2.03 (revised)	1973-80
Cooley Brook near West Milford, NJ	01382990	1.34	1973-80
Masonicus Brook at West Mahwah, NJ	01387490	3.84	1982,1992-2001
Stag Brook near Mahwah, NJ	01387520	1.35	1963-70,1972,1982-83
Darlington Brook at Darlington, NJ	01387600	3.38	1963-67, 1982-83, 1999,2002
Ramapo River near Darlington, NJ	01387670	131	1963-66,1982-83,1989
Bear Swamp Brook near Oakland, NJ	01387700	3.25	1963-67, 1982-83,2002
Pond Brook at Oakland, NJ	01387880	6.76	1963-72,1976-77,1981-97, 2002-03
Ramapo River tributary No. 5 at Oakland, NJ	01387930	.86	1963-67, 1982,2002
Acid Brook at Pompton Lakes, NJ	01387950	1.79	1963-67, 1982,2002
Haycock Brook at Pompton Lakes, NJ	01387980	4.18	1963-64,1973-77, 1982,2002
Beaver Dam Brook at Lincoln Park, NJ	01388700	12.3	1992-2002
Pompton River at Two Bridges, NJ	01389000	372	1963-68,1984,1986-88,1998
Molly Ann Brook at Paterson, NJ	01389790	7.73	1963-72,1983-84,1994,2003
Goffle Brook at Hawthorne, NJ	01389850	8.77	1963-67,1983-84,1998,2003-04
Passaic River at Outwater Lane at Garfield	01389895		1970-71, 1986-88, 1992-97
Fleischer Brook at Elmwood Park, NJ	01389905	1.78	1964-72
Saddle River at Upper Saddle River, NJ	01390450	10.9	1964-72,1975-78,1982,1987-97
Hohokus Brook at Wyckoff, NJ	01390700	5.31	1963-67,2002
Valentine Brook at Allendale, NJ	01390800	2.48	1963-67,2002
Ramsey Brook at Allendale, NJ	01390900	2.55	1974-77,1982,1986-2003
Saddle River at Paramus, NJ	01391110	45.0	1964-69,1971-72,1978
Sprout Brook at Rochelle Park, NJ	01391485	5.56	1964-72,2002
Third River at Nutley, NJ	01392200	11.4	1963-73
Elizabeth River below Chancellor Avenue, at Irvington, NJ	01393200	5.14	1955,1961-62,1966
West Branch Elizabeth River near Union, NJ	01393350	2.53	1989-98,2001
South Branch Rahway River at Colonia, NJ	01396030	9.41	1979-86,2003
South Branch Raritan River tributary no. 6 at Budd Lake, NJ	01396070	.70	1973-77
South Branch Raritan River tributary no. 7 at Budd Lake, NJ	01396080	.21	1973-1977
South Branch Raritan River at outlet of Budd Lake, NJ	01396090	5.03	1964,1973-77,1980-83

DISCONTINUED LOW-FLOW STATIONS--Continued

Station name	Station number	Drainage area (mi^2)	Period of record (water years)
South Branch Raritan River at Bartley, NJ	01396120	12.5	1964-73,1990-91
Drakes Brook at Reger Road, at Flanders, NJ	01396160	11.6	1965,1990
Drakes Brook at Bartley, NJ	01396180	16.6	1964-73,1975-76,1988-91,2000, 2002-03
Stony Brook at Naughright, NJ	01396220	3.34	1964-67,1973,1991-98
Electric Brook at Long Valley, NJ	01396240	3.17	1991-2001
South Branch Raritan River at Middle Valley, NJ	01396280	47.7	1964-67,1973,1975,1980-92, 1995-99
South Branch Raritan River at Califon, NJ	01396350	58.5	1975-76,1989-90,2001-02
Spruce Run near High Bridge, NJ	01396590	15.5	1973-80
Spruce Run near Clinton, NJ	01396600	18.1	1959-64,1987
Mulhockaway Creek tributary at Van Syckel, NJ	01396670	2.76	1973-80
Mulhockaway Creek near Clinton, NJ	01396700	20.5	1959-63
Capoolong Creek at Lansdowne, NJ	01396900	14.1	1959-65, 2002-03
Prescott Brook at Round Valley, NJ	01397100	4.61	1958-63,1978-82
Assiscong Creek at Bartles Corners, NJ	01397290	2.98	1981-89
Neshanic River near Flemington, NJ	01397800	11.4	1981-89
Third Neshanic River near Ringoes, NJ	01397900	9.24	1981-89
Back Brook near Reaville, NJ	01398052	11.4	1981-89
Pleasant Run at Centerville, NJ	01398075	8.11	1982-89
India Brook near Mendham, NJ	01398220	4.36	1964-67
North Branch Raritan River near Chester, NJ	01398260	7.57	1964-67,1980-93,1996-97,2001
Dawsons Brook near Ironia, NJ	01398300	1.04	1964-67
Burnett Brook near Chester, NJ	01398360	6.64	1964-67
Peapack Brook at Gladstone, NJ	01398700	4.23	1964-67
Peapack Brook at Far Hills, NJ	01398850	11.7	1964-67,1973-76
Mine Brook at Far Hills, NJ	01398950	7.78	1964-67,1973
Middle Brook at Burnt Mills, NJ	01399100	6.67	1964-67,1976
Succasunna Brook at Succasunna, NJ	01399194	1.72	1977-82
Lamington River near Chester, NJ	01399280	17.3	1964,1973,1990-91
Tanners Brook near Milltown, NJ	01399295	2.78	1991-2000
Lamington River at Milltown, NJ	01399300	23.2	1988-2001
Cold Brook at Oldwick, NJ	01399540	5.32	1964-67
Rockaway Creek at McCrea Mills, NJ	01399570	17.0	1961-65, 2002-03
South Branch Rockaway Creek tributary at Lebanon, NJ	01399600	1.02	1958,1960-64,1978-82
Rockaway Creek at Whitehouse, NJ	01399700	37.1	1959-65,1973,1977-97,1999
Chambers Brook near North Branch, NJ	01399820	4.71	1964-72
Chambers Brook at North Branch Depot, NJ	01399900	10.2	1959-64,1976
Millstone River near Manalapan, NJ	01400540	7.37	1960-64,1971-72,1985-96
Millstone River at Applegarth, NJ	01400560	15.0	1960-64,1971-72,1980-81
Millstone River at Hightstown, NJ	01400580	19.7	1960-64,1967-74
Rocky Brook at Hightstown, NJ	01400593	9.58	1965-72, 1999
Peddie Brook at Hightstown, NJ	01400596	3.07	1965-72, 1999
Millstone River at Locust Corner, NJ	01400600	37.5	1959-64,1971-72
Millstone River near Grovers Mill, NJ	01400640	42.6	1959-65,1971-72,1986-88, 1992-95,1998-2004
Cranbury Brook at Old Church, NJ	01400670	3.69	1960-64,2003

DISCONTINUED LOW-FLOW STATIONS--Continued

Station name	Station number	Drainage area (mi^2)	Period of record (water years)
Cranbury Brook at Cranbury Station, NJ	01400700	9.56	1959-64,1971-72, 2002-03
Bear Brook near Hickory Corner, NJ	01400750	3.46	1960-65,2002
Little Bear Brook at Hickory Corner, NJ	01400770	1.88	1960-64,2002
Bear Brook near Grovers Mill, NJ	01400800	9.52	1959-64
Bear Brook at Princeton Junction, NJ	01400810	12.4	1962-67,1971-72
Millstone River at Princeton Junction, NJ	01400820	78.5	1960-61
Woodsville Brook at Woodsville, NJ	01400850	1.78	1957-59,1963-73, 1980,2002
Stony Brook at Glenmoore, NJ	01400900	17.0	1957-64,1969,1971-72,1982-89, 1992,1999
Baldwins Creek at Pennington, NJ	01400930	1.99	1957-61,1963-72,1982-94, 1997-98, 2001-03
Stony Brook at Pennington, NJ	01400947	26.7	1965-72, 1985-88,2002
Honey Branch near Rosedale, NJ	01400970	3.83	1957-59,1971-75, 1985-88,1965, 1968-75,2002
Stony Brook at Clarksville, NJ	01401100	46.5	1959-64,1987-88
Duck Pond Run at Clarksville, NJ	01401200	3.74 (revised)	1954-55,1960-67, 1973, 1977, 1979-80, 1984,2002
Heathcote Brook at Kingston, NJ	01401400	9.0	1971-72,1979-84,1989-92, 1998-2004
Beden Brook near Hopewell, NJ	01401520	6.67	1965-72,1975,1979,1982,1984-85, 1987,1999-2002
Rock Brook at Blawenburg, NJ	01401590	8.02	1962-67,1971-72, 1987-88
Beden Brook near Rocky Hill, NJ	01401600	27.0	1959-63,1965-67,1971-72,1977, 1979,1981-2003
Pike Run near Rocky Hill, NJ	01401700	22.2	1959-63,1971-72, 2001-02
Ten Mile Run near Blackwells Mills, NJ	01401800	4.36	1960-64,1971-72,2002
Six Mile Run at Blackwells Mills, NJ	01401900	16.1	1960-67,1971-72, 2001-02
Royce Brook at Manville, NJ	01402700	11.7	1960-64, 1999,2002
East Branch Middle Brook at Martinsville, NJ	01403100	8.45	1959-64,2002
Bound Brook at South Plainfield, NJ	01403330	9.55	1979-86
Cedar Brook at South Plainfield, NJ	01403350	7.10	1979-86
Ambrose Brook at Middlesex, NJ	01404060	13.9	1979-91
Mill Brook at Highland Park, NJ	01404180	1.41	1979-86
Lawrence Brook at outlet of Davidsons Mill Pond, NJ	01404300	12.2	1973-77
Oakeys Brook near Patricks Corner, NJ	01404400	4.75	1973-77
Ireland Brook at Patricks Corner, NJ	01404470	6.52	1973-77
Beaverdam Brook near Patricks Corner, NJ	01404700	1.51	1973-77
Milford Brook at Englishtown, NJ	01405170	4.86	1982,1984-91
McGellairds Brook at Englishtown, NJ	01405180	14.9	1982,1984-91
Pine Brook at Clarks Mills, NJ	01405210	4.66	1982,1984-91
Matchaponix Brook near Englishtown, NJ	01405240	29.1	1978-88
Barclay Brook near Englishtown, NJ	01405285	4.94	1977-88
Manalapan Brook near Manalapan, NJ	01405335	16.0	1979-88
Manalapan Brook at Bridge Street, at Spotswood, NJ	01405440	43.9	1973-76,1989-90,2000
Iresick Brook at East Spotswood, NJ	01405470	2.29	1973-77,1980
Deep Run near Browntown, NJ	01406000	8.07	1932-41,1982,1984-88
East Creek at North Centerville, NJ	01407055	1.33 (revised)	1969,1986-93
Waackaack Creek at Middle Road, near Keansburg, NJ	01407070	4.30	1987-93

DISCONTINUED LOW-FLOW STATIONS--Continued

Station name	Station number	Drainage area (mi^2)	Period of record (water years)
Town Brook at Church Street, at New Monmouth, NJ	01407102	3.35	1987-93
Gravelly Brook at Church Street at Matawan	01407012	2.36	1987-93
Mohingson (Wilkson) Creek at Church Street at Matawan	01407026	1.70	1987-93
Hop Brook at Holmdel, NJ	01407200	5.72	1969-74,1989,2002-03
Willow Brook at Holmdel, NJ	01407250	6.88	1969-74,1989,2002-03
Big Brook at Vanderburg, NJ	01407300	8.41	1969-74,1989
Yellow Brook at Colts Neck, NJ	01407400	9.71	1969-74,1989,1980-82,2002-03
Mine Brook at Colts Neck, NJ	01407450	5.48	1969-74,1989,1979-82,2002-03
Pine Brook at Tinton Falls, NJ	01407520	12.1	1969-74
Poricy Brook at Red Bank, NJ	01407532	2.54	1988-93
Whale Pond Brook near Oakhurst, NJ	01407618	6.20	1989-98
Poplar Brook near Deal, NJ	01407628	2.49	1989-98
Harvey (Hog Swamp) Brook at West Allenhurst, NJ	01407636	1.99	1989-98
Shark River at Glendola, NJ	01407700	9.14	1956-63,1966,2002-03
Jumping Brook above reservoir near Neptune City, NJ	01407755	5.58	1989-99,2001-03
Polly Pod Brook at South Belmar, NJ	01407780	.99	1989-2001
Wreck Pond Brook near Spring Lake, NJ	01407800	7.00	1956-63,1966, 1995,2002
Hannabrand Brook at Old Mill Rd, near Spring Lake Heights	01407806	3.13	1989-2002
Manasquan River near Georgia, NJ	01407830	10.6	1966,1969-74,1978-87,1989-95
Debois Creek at Adelphia, NJ	01407860	7.21	1966,1969-74,2002-03
Yellow Brook at West Farms, NJ	01407890	3.57	1966,1969-74
Manasquan River at West Farms, NJ	01407900	33.5	1959-66,1972-74,2002-03
Timber Swamp Creek near Farmingdale, NJ	01407970	3.38	1964-72
Mingamahone Brook at Farmingdale, NJ	01408015	6.20	1969-74,1985,1987,1989-96,1999, 2002-03
Mingamahone Brook at Squankum, NJ	01408020	10.7	1966,1969-74
Manasquan River at Allenwood, NJ	01408030	63.9	1956-57,1966,1969-74,1982-95
North Branch Metedeconk River at Lakewood, NJ	01408100	19.4	1959-63,1966,1998-2004
Toms River at Whitesville, NJ	01408300	45.2	1959-63,1966
Union Branch at Lakehurst, NJ	01408440	19.0	1960-64,2002
Manapaqua Brook at Lakehurst, NJ	01408460	6.32	1960-64,2002
Ridgeway Branch near Lakehurst, NJ	01408490	28.2	1959-63,2002
Webbs Mill Branch near Whiting, NJ	01408800	2.92	1973-77
Webbs Mill Branch tributary near Whiting, NJ	01408810	.53	1973-77
North Branch Forked River near Forked River, NJ	01409050	13.4	1961-65
South Branch Forked River near Forked River, NJ	01409080	1.28	1968-74
Oyster Creek near Waretown, NJ	01409100	9.95	1961-65
Mill Creek near Manahawkin, NJ	01409150	10.4	1961-67,2002-04
Fourmile Branch near Manahawkin, NJ	01409200	5.24	1961-67
Cedar Run near Manahawkin, NJ	01409250	3.34	1961-67
Mill Branch near Tuckerton, NJ	01409300	4.89	1961-67,2002
Mullica River at Atco, NJ	01409375	3.22	1974-85,1991-2004
Mullica River at outlet Atsion Lake, at Atsion, NJ	01409387	26.7	1980-81,1985-2004
Mullica River at Atsion, NJ	01409390	33.1	1975-86
Mullica River tributary near Atsion, NJ	01409395	4.10	1975-79
Hays Mill Creek at Atco, NJ	01409401	3.80	1979,1991-2003
Hays Mill Creek near Chesilhurst, NJ	01409402	7.13	1974-80,1991-2004

DISCONTINUED LOW-FLOW STATIONS--Continued

Station name	Station number	Drainage area (mi^2)	Period of record (water years)
Cooper Branch near Chesilhurst, NJ	0140940250	1.93	1979,1991-2001
Wildcat Branch at Chesilhurst, NJ	01409403	1.03	1974-80,1985
Wildcat Branch near Chesilhurst, NJ	0140940310	2.27	1979,1991-2003
Sleeper Branch Diversion Channel near Atsion, NJ	0140940365	--	1979,1991-2004
Sleeper Branch near Atsion, NJ	0140940370	16.1	1991-2003
Sleeper Branch at U.S. Route 206, near Atsion, NJ	01409404	18.2	1975-80
Clark Branch at railroad bridge, near Atsion, NJ	0140940480	6.42	1979,1991-2003
Clark Branch near Atsion, NJ	01409405	7.12	1975-80
Sleeper Branch at Batsto, NJ	01409406	36.1	1975-80
Pump Branch near Blue Anchor, NJ	01409407	6.20	1974-80
Pump Branch near Waterford Works, NJ	01409408	9.78	1991-2004
Blue Anchor Brook near Blue Anchor, NJ	01409409	3.01	1974-80,1983-85
Blue Anchor Brook at Elm, NJ	0140940950	4.86	1991-2004
Albertson Branch near Elm, NJ	0140940970	17.1	1991-2004
Albertson Brook near Hammonton, NJ	01409410	19.3	1975-86
Great Swamp Branch at Elm, NJ	0140941050	2.83	1991-2001
Nescochague Creek at Pleasant Mills, NJ	01409411	43.8	1975-86,1995-98,2003-04
Springers Brook near Indian Mills, NJ	01409450	12.6	1959-63,1977,1985
Springers Brook near Atsion, NJ	01409460	21.2	1975-83
Landing Creek at Philadelphia Avenue, at Egg Harbor City, NJ	01409575	4.86	1974-81
West Branch Wading River near Chatsworth, NJ	01409730	44.8	1975-80
Tulpehocken Creek near Jenkins, NJ	01409780	21.9	1975-81,1996-98
West Branch Wading River near Harrisville, NJ	01409800	83.9	1957-63
Oswego River at Oswego Lake, NJ	01409970	61.4	1975-81
West Branch Bass River near New Gretna, NJ	01410200	6.54	1969-74,2002
Clarks Mill Stream at Port Republic, NJ	01410215	8.61	1986-93
Morses Mill Stream at Port Republic, NJ	01410225	8.25	1986-93
Great Egg Harbor River at Berlin, NJ	01410775	1.88	1964-74,2002
Great Egg Harbor River near Sicklerville, NJ	01410784	15.1	1971-81,1985-2004
Fourmile Branch near Williamstown, NJ	01410800	5.34	1959-64,1971
Fourmile Branch at Winslow Crossing, NJ	01410803	6.22	1972-80, 1989-96,2001-04
Squankum Branch above sewage plant at Williamstown	01410855	1.50	1974, 1990-94
Squankum Branch at Malaga Road, near Williamstown, NJ	01410865	3.02	1974,1990-96,2001-04
Penny Pot Stream near Folsom, NJ	01411020	5.35	1968-72,2002
Hospitality Branch at Blue Bell Road near Cecil, NJ	01411035	4.51	1990-2004
Hospitality Branch near Cecil, NJ	01411040	8.30	1990-92
Whitehall Branch near Cecil, NJ	01411042	2.21	1990-92
Whitehall Branch below Victory Lakes, near Cecil, NJ	01411047	4.60	1990-96,2001-04
Hospitality Branch at Berryland, NJ	01411053	20.0	1976-86
Deep Run at Weymouth, NJ	01411140	20.0	1976-86,2003-04
Great Egg Harbor River at Mays Landing, NJ	01411170	205	1988-98,2001
Babcock Creek at Mays Landing, NJ	01411200	20.0	1959-63,2002
South River near Belcoville, NJ	01411220	20.4	1994-99,2001
English Creek near Scullville, NJ	01411250	3.80	1986-93
Tarkiln Brook near Head of River, NJ	01411299	7.40	1990-92,2002
Mill Creek near Steelmantown, NJ	01411302	3.82	1990-92,2003
Mill Branch near Northfield, NJ	01411305	7.47	1986-93,2003-04

DISCONTINUED LOW-FLOW STATIONS--Continued

Station name	Station number	Drainage area (mi^2)	Period of record (water years)
Mill Creek at outlet Magnolia Lake, at Ocean View, NJ	01411351	2.28	1991-92,2003
Mill Creek at Cold Spring, NJ	01411388	1.34	1991-92,2003
Fishing Creek at Rio Grande, NJ	01411400	2.29	1965-72,1990-92,1998-2004
Green Creek at Green Creek, NJ	01411404	2.49	1965-72
Dias Creek near Cape May Court House, NJ	01411408	1.27	1965-73,1991-92,2003
Bidwell Creek trib. no. 1 near Cape May Court House, NJ	01411410	.41	1967-73,1990-92,2003
Bidwell Creek trib. no. 2 near Cape May Court House, NJ	01411412	.19	1967-72,1990
Goshen Creek at Goshen, NJ	01411418	.33	1967-72,1990-92,2003
Dennis Creek tributary no. 2 at Dennisville, NJ	01411428	4.00	1990-92,2003
Sluice Creek at Clermont, NJ	01411430	.67	1967-72,1990-91
Sluice Creek near South Dennis, NJ	01411434	8.47	1991-92,2003
Dennis Creek tributary near Dennisville, NJ	01411438	2.74	1990-92,2003
East Creek near Eldora, NJ	01411442	8.10	1990-92,2003
West Creek at outlet Pickle Factory Pond, near Eldora, NJ	01411445	11.9	1990-92,2003
Still Run at Aura, NJ	01411450	3.21	1976-90,1996
Scotland Run near Williamstown, NJ	01411460	3.96	1966,1990-92
Scotland Run at Fries Mill, NJ	01411461	9.25	1990-92
Scotland Run at Franklinville, NJ	01411462	14.8	1976-90
Muddy Run at Centerton, NJ	01411700	37.7	1976-84
Maurice River near Millville, NJ	01411800	191.0	1966-72,1992-94,2003
Mill Creek near Millville, NJ	01411850	15.1	1973-79,1993,1995-98
Maurice River at Sharp Street, at Millville, NJ	01411880	216	1973-76,1988-93
Buckshutem Creek near Laurel Lake, NJ	01411950	16.1	1976-84,1998
Manumuskin River near Manumuskin, NJ	01412100	32.1	1964-71,1994-96,1998
Muskee River near Port Elizabeth, NJ	01412120	13.1	1969,1976-84
Cohansey River near Beals Mill, NJ	01412405	9.44	1976-84
Barrett Run near Bridgeton, NJ	01413010	7.02	1966,1976-84
Indian Fields Branch at Bridgeton, NJ	01413020	4.64	1976-84
Stow Creek at Jericho, NJ	01413050	8.00	1966-74
Canton Ditch near Canton, NJ	01413060	2.50	1959-63
Raccoon Ditch at Davis Mill, NJ	01413080	3.19	1976-84,2003
Shimers Brook near Montague, NJ	01438400	7.07	1943,1958-64,1966,2001-04
Big Flat Brook near Hainesville, NJ	01439800	22.6	1959-64,1966,2002
Big Flat Brook at Tuttles Corner, NJ	01439830	28.2	1963,1970-73,1978-80,2001-04
Little Flat Brook at Hainesville, NJ	01439900	7.73	1959-64,2002
Vancampens Brook near Millbrook, NJ	01440100	7.27	1958-68, 2002-04
Stony Brook near Columbia, NJ	01442800	3.51	1958-68,2002
East Branch Paulins Kill trib. no. 2 near Woodruffs, NJ	01443260	2.81	1992-97
East Branch Paulins Kill trib. no. 1 near Lafayette, NJ	01443275	1.81	1992-97
Paulins Kill at Lafayette, NJ	01443300	33.0	1959-64,1966,2002
Culvers Creek at Branchville, NJ	01443400	11.2	1959-64,2002
Paulins Kill near Newton, NJ	01443450	69.0	1973-80
Paulins Kill at Paulins Kill, NJ	01443460	72.9	1973-80
Trout Brook near Middleville, NJ	01443475	24.0	1979-89
Blair Creek at Blairstown, NJ	01443510	13.1	1989-2001
Bear Creek near Johnsonburg, NJ	01445200	12.9	1940-42,1987-98,2001

DISCONTINUED LOW-FLOW STATIONS--Continued

Station name	Station number	Drainage area (mi^2)	Period of record (water years)
Furnace Brook at Oxford, NJ	01445490	4.29	1965-72,1978,1990, 1994-2001
Mountain Lake Brook near Pequest, NJ	01445520	4.35	1991-2001
Honey Run near Ramseysburg, NJ	01445800	2.21	1982-90
Honey Run near Hope, NJ	01445900	10.3	1966-72,2002
Pophandusing Brook at Belvidere, NJ	01446520	5.36	1991-98,2000-01
Buckhorn Creek at Hutchinson Road, at Hutchinson, NJ	01446568	8.38	1991-97,2000-02
Lopatcong Creek at Phillipsburg, NJ	01455100	14.5	1958-64,1979-81,1991-2001
Merrill Creek at Coopersville, NJ	01455230	3.85	1982-93
Pohatcong Creek at Carpentersville, NJ	01455300	57.0	1932,1952-64, 1978-83,2002
Weldon Brook near Woodport, NJ	01455350	3.27	1965-69,1971-72
Beaver Brook near Woodport, NJ	01455360	2.79	1966-72
Weldon Brook at Hurdtown, NJ	01455370	8.10	1973-80,2002-03
Musconetcong River at Stanhope, NJ	01455550	29.7	1973-76,1981
Lubbers Run at Lockwood, NJ	01455780	16.3	1982-90, 1995,2001-02
Mine Brook near Hackettstown, NJ	01456080	4.96	1991-2001
Hatchery Brook at Hackettstown, NJ	01456100	1.81	1966-72
Hances Brook near Beattystown, NJ	01456210	4.13	1991-2002
Hakihokake Creek at Milford, NJ	01458100	17.2	1944,1958-64, 1977-81,2002-04
Harihokake Creek near Frenchtown, NJ	01458400	9.75	1944,1958-65, 1979-81,2002-04
Nishisakawick Creek at Frenchtown, NJ	01458600	11.0	1958-64,2002
Little Nishisakawick Creek at Frenchtown, NJ	01458700	3.50	1958-65,2002
Lockatong Creek near Raven Rock, NJ	01460900	23.2	1944-45,1958-64,2002-04
Wickecheoke Creek at Stockton, NJ	01461300	26.6	1944,1958-64,1977-83,1985-90
Alexauken Creek near Lambertville, NJ	01461900	14.9	1945,1955,1958-64,1977-82, 2000-04
Moore Creek near Titusville, NJ	01462200	10.2	1958-64,2002
Jacobs Creek at Somerset, NJ	01462800	13.3	1945,1958-64, 1985-88, 2000
Shipetaukin Creek at Lawrenceville, NJ	01463650	4.47	1963-67,2002
Shipetaukin Creek at Bakersville, NJ	01463670	8.97	1963-67,2002
Little Shabakunk Creek at Bakersville, NJ	01463690	3.98	1963-72,1976-77
Shabakunk Creek at Ewingville, NJ	01463750	5.00	1963-67,2002
West Branch Shabakunk Creek near Ewingville, NJ	01463790	4.56	1963-72,2002
Miry Run at Robbinsville, NJ	01463830	4.02	1963-67,2002
Miry Run at Mercerville, NJ	01463860	12.4	1963-67,2002
Pond Run at Trenton, NJ	01463980	8.94	1963-69,1971-72
Crosswicks Creek near Cookstown, NJ	01464300	24.9	1966,1969-74,2002-04
North Run at Cookstown, NJ	01464380	7.28	1966,1969-74,2002-04
Lahaway Creek near Hornerstown, NJ	01464460	21.4	1966,1969-74,2002-04
Miry Run at Holmes Mills, NJ	01464480	3.15	1966,1969-74,2002
Doctors Creek at Allentown, NJ	01464515	17.4	1966,1968-72,1975,1979-95, 1998-2004
Blacks Creek at Mansfield Square, NJ	01464530	19.7	1966-72, 1978-79,1983-94,2002
Crafts Creek at Hedding, NJ	01464540	10.6	1959-63,2003-04
Assiscunk Creek at Columbus, NJ	01464580	8.28	1958-63,2002
Assiscunk Creek near Burlington, NJ	01464590	37.4	1966-74,1998,2002
Southwest Branch Rancocas Creek at Medford, NJ	01465880	47.2	1961-66,1973, 1982-93,1997,2002
Sharps Run at Medford, NJ	01465884	4.41	1982-90

DISCONTINUED LOW-FLOW STATIONS--Continued

Station name	Station number	Drainage area (mi^2)	Period of record (water years)
Little Creek near Lumberton, NJ	01465898	19.2	1982-90,1999
Parkers Creek near Mount Laurel, NJ	01467010	2.66	1964-72,2002
Mill Creek at Willingboro, NJ	01467020	7.77	1959-64,1976,2002
Pompeston Creek at Cinnaminson, NJ	01467057	5.74	1964-85,2002
North Branch Pennsauken Creek at Maple Shade, NJ	01467070	13.0	1959-63,2002
South Branch Pennsauken Creek at Maple Shade, NJ	01467080	8.13	1964-67
Cooper River at Kirkwood, NJ	01467130	5.10	1964-72,1988-98
Cooper River at Lawnside, NJ	01467140	12.7	1964-72,1979-81,1985-98, 2002-03
North Branch Cooper River near Marlton, NJ	01467160	5.34	1964-69, 1971-72, 1977-78, 1982-98
North Branch Cooper River at Ellisburg, NJ	01467180	10.5	1964-72,1977,1988-98
Newton Creek at Collingswood, NJ	01467305	1.32	1964-72, 1983-84, 1993-98, 2002-03
Newton Creek at West Collingswood, NJ	01467312	3.48	1964-72
South Branch Newton Creek at Glover Ave., at Haddon Heights, NJ	01467315	.52	1968-74
South Branch Newton Creek at Haddon Heights, NJ	01467317	.63	1964-68, 1971, 1977, 1982-86, 1990, 1994-98, 2001-03
South Branch Big Timber Creek at Blackwood, NJ	01467330	19.6	1964-72,1978,1982-83,1994-2001
North Branch Big Timber Creek at Laurel Springs, NJ	01467350	6.55	1959-72,2002
Mantua Creek at Glassboro, NJ	01474950	1.20	1965-66,1974-77
Mantua Creek at Greentree Road, at Glassboro, NJ	01474970	2.78	1965-66,1974-77
Mantua Creek at Sewell, NJ	01475020	14.5	1966-72,1994-99,2001
Raccoon Creek near Mullica Hill, NJ	01477100	10.1	1959-63, 1966, 1981-83,2002
South Branch Raccoon Creek near Mullica Hill, NJ	01477118	8.30	1966-72,2002
Salem River at Sharptown, NJ	01482520	27.3	1966-72,1974-75
Major Run at Sharptown, NJ	01482530	3.04	1966-72,1974-75,2003-04
Cool Run near Alloway, NJ	01482900	4.92	1959-63,1994-99,2001
Cedar Brook near Alloway, NJ	01482950	3.76	1959-63,1994-99,2001
Deep Run near Alloway, NJ	01483010	5.30	1977-84

DISCONTINUED TIDAL CREST-STAGE AND TIDAL GAGING STATIONS

Station name	Station number	Period of Record (water years)	
		Tidal Crest-Stage Gage	Tidal Gaging Station
South River below Duhernal Dam, at Old Bridge, NJ	01405700		Aug 1967-Sept 1970
Raritan River at Old Raritan Arsenal, at Metuchen, NJ	01406680		Jan 1966-Sept 1969a Oct 1969-Sept 1974
Cedar Creek at Lanoka Harbor, NJ	01409000	1932-58*, 1971*, 1979-85	
Tuckerton Cove near Tuckerton, NJ	01409290	1965-80	July 1971-Sept 1973
Tuckerton Creek at Tuckerton, NJ	01409310		July 1971-Sept 1971
Head of Big Thorofare near Tuckerton, NJ	01409315		July 1971-June 1972
Big Thorofare at mouth near Tuckerton, NJ	01409317		July 1971-Sept 1971
Marshelder Channel at Story Island, near Tuckerton, NJ	01409323		July 1971-Sept 1971
Big Sheepshead Creek at Great Bay Boulevard, near Tuckerton, NJ	01409326		July 1971-Sept 1971
East Entrance Big Sheepshead Creek near Tuckerton, NJ	01409329		July 1971-Sept 1971
Little Sheepshead Creek at Great Bay Boulevard, near Tuckerton, NJ	01409332		July 1971-Sept 1971
Newmans Thorofare at Fish Factory, near Tuckerton, NJ	01409340		July 1971-Sept 1971
Great Bay at Cape Horn Marina, near Tuckerton, NJ	01409345		July 1971-Feb 1972
Big Creek at Radio Road, near Tuckerton, NJ	01409360		July 1971-July 1973
Great Bay at Great Bay Marina, near Tuckerton, NJ	01409370		July 1971-Sept 1974
Ballangers Creek below Polly Ditch, near Tuckerton, NJ	01410300		July 1971-Sept 1971
Ballangers Creek entrance near Tuckerton, NJ	01410305		July 1971-Sept 1971
Whale Creek near Strathmere, NJ	01411340		Mar 1976-Feb 1977
Townsend Channel at Townsends Inlet, NJ	01411353	1978*	Oct 1976-Apr 1978
Grassy Sound at West Wildwood, NJ	01411380	1965-81	Oct 1977-Apr 1978
Cape May Canal at North Cape May, NJ	01411395	1965-85	
Delaware Bay at Reeds Beach	01411409	1979-85	
Delaware River at Florence, NJ	01464560		Apr 1964-Feb 1970
Rancocas Creek at Rancocas, NJ	01467009		Oct 1976-Apr 1977
Delaware River at Torresdale Intake, Philadelphia, PA	01467030		Oct 1963-Sept 1970
Delaware River at Palmyra, NJ	01467060		Dec 1962-Sept 1974
Delaware River at Delair, NJ	01467090		Dec 1962-Aug 1969
Delaware River below Christina River at Wilmington, DE	01481602		Dec 1982-Sept 1991
Delaware River at Delaware Memorial Bridge, at Wilmington, DE	01482100		July 1967-May 1983
Salem River at Winslow Farms Dock, near Pennsville, NJ	01482620		July 1971-Dec 1971
Delaware River at Oakwood Beach, NJ	01482705	1965-74	

* Operated as a continuous-record gaging station.
a Revised.

INTRODUCTION

The Water Resources Division of the United States Geological Survey (USGS), in cooperation with Federal, State, and local agencies, collects a large amount of data pertaining to the water resources of New Jersey each water year. These data, accumulated over 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 USGS, the data are published annually in this report series, titled "Water Resources Data-New Jersey." This data is also available on the world wide web at http://nj.usgs.gov/.

This report series includes records of stage, discharge, and water quality in streams; stage and contents, and water quality in lakes and reservoirs; and water levels and water quality in ground-water wells. This volume contains records of water discharge at 100 gaging stations, tide summaries at 29 tidal gaging stations, and stage and contents at 39 lakes and reservoirs. Also included are stage and discharge for 106 crest-stage partial-record stations and stage-only at 33 tidal crest-stage gages, and discharge for 142 low-flow partial-record stations. Locations of these sites are shown in figures 8-11. Additional discharge measurements were made at 143 miscellaneous sites that are not part of the systematic data-collection program. The data in this report represent that part of the National Water Information System (NWIS) data collected by the USGS and cooperating Federal, State, and local agencies in New Jersey.

This series of annual reports for New Jersey 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 in 1975, surface-water, water-quality, and ground-water data were combined in one volume. Beginning with the 1977 water year, these data were published in two volumes based on drainage basins. Beginning with the 1990 water year, the format was changed to include all surface-water discharge and surface-water quality records in Volume 1 and all ground-water level and ground-water quality records in Volume 2. Beginning with the 1998 water year, the format has changed to include surface-water discharge records in Volume 1, ground-water level records in Volume 2, and surface-water and ground-water quality records in Volume 3.

Prior to introduction of this series and for several water years concurrent with it, water-resources data for New Jersey 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, Part 1B." For water years 1961 through 1970, the data were published in two 5-year reports. Data on chemical quality, temperature, and suspended sediment for water years 1941 through 1970 were published annually under the title "Quality of Surface Waters of the United States," and water levels for water years 1935 through 1974 were published under the title "Ground-Water Levels in the United States." The above-mentioned Water-Supply Papers can be consulted in the libraries of the principal cities of the United States and can be purchased from U.S. Geological Survey, Branch of Information Services, Box 25286, Denver, CO 80225-0286, (303) 202-4610.

Publications similar to this report are produced annually by the USGS for all States. These 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 NJ-02-1." For archiving and general distribution purposes, the reports for water years 1971 through 1974 also are identified as water-data reports. Water-data reports are available for purchase in paper copy, compact disc, microfiche, or electronic format from the U.S. Department of Commerce, National Technical Information Service, Springfield, VA 22161, (703) 605-6100, http://www.ntis.gov/.

Additional information, including current prices, for ordering specific reports can be obtained from the District Chief, USGS, New Jersey District, at the address given on the back of the title page of this report or by telephone (609-771-3900).

The U.S. Geological Survey, New Jersey District, maintains a World Wide Web site which has water-resource related information for New Jersey and information on New Jersey District activities. Links to other USGS and Federal web sites are also available. We invite you to visit us at:

http://nj.usgs.gov.

COOPERATION

The U.S. Geological Survey and agencies of the State of New Jersey have had joint-funding agreements for the collection of water-resource records since 1921. Organizations that assisted in collecting the data in this report through joint-funding agreements with the USGS are--

New Jersey Department of Environmental Protection, Bradley M. Campbell, Commissioner
New Jersey Department of Transportation, John F. Lettiere, Jr., Commissioner
New Jersey Water Supply Authority, Henry Patterson, III, Executive Director
Delaware River Basin Commission, Carol R. Collier, Executive Director

Lake Hopatcong Commission, Kenneth H. Klipstein, Acting Chairman
North Jersey District Water Supply Commission, Michael Barnes, General Manager
Passaic Valley Water Commission, Joseph A. Bella, Executive Director
Pinelands Commission, Annette M. Barbaccia, Executive Director
County of Bergen, Paul Juliano, Director of Public Works
County of Essex, Mehdi Mohammadish, County Engineer (interim)
County of Hunterdon, Marcia A. Karrow, Freeholder Director
County of Gloucester, Charles E. Romick, Director of Planning
County of Mercer, Steven J. Dixon, Executive Director, Mercer County Improvement Authority
County of Morris, Glen Schweizer, Executive Director, Morris County Municipal Utilities Authority
County of Somerset, Michael J. Amorosa, Director of Public Works
County of Union, Frank E. Dann, Jr., Director of Department of Engineering and Public Works
City of New Brunswick, Shawn Maloney, Director, Water Utility Department
City of Perth Amboy, Joseph Vas, Mayor
Brick Township Municipal Utilities Authority, Kevin F. Donald, Executive Director
Borough of Westwood, Donald F. Rainey, Borough Administrator
Ocean County Soil Conservation District, David B. Friedman, Director
Princeton Sewer Operating Committee, Donald W. Mayer-Brown, Manager

Funding assistance was provided by the U.S. Army Corps of Engineers, for the collection of records at 4 surface-water stations, by the Fort Dix Directorate of Public Works for collection of records at 1 surface-water station, and by the U.S. Army Armament Research and Development Center for the collection of records at 3 surface-water stations. In addition, several stations were operated fully or partially with funds appropriated directly to the USGS. Funding also was supplied by the following Federal Energy Regulatory Commission licensees: GPU Generation Corporation, Passaic Valley Water Commission, and Great Falls Hydroelectric Company. Assistance was provided by the National Weather Service and the National Ocean Service.

The following organizations aided in collecting records:

New Jersey Department of Environmental Protection; Municipalities of Jersey City, Newark, New Brunswick, and Spotswood; Elizabethtown Water Company; Ewing-Lawrence Sewerage Authority; United Water New Jersey; New Jersey-American Water Company; Rockaway Valley Regional Sewerage Authority; and GPU Generation Corporation.

Organizations that supplied data are acknowledged in station descriptions.

SUMMARY OF HYDROLOGIC CONDITIONS

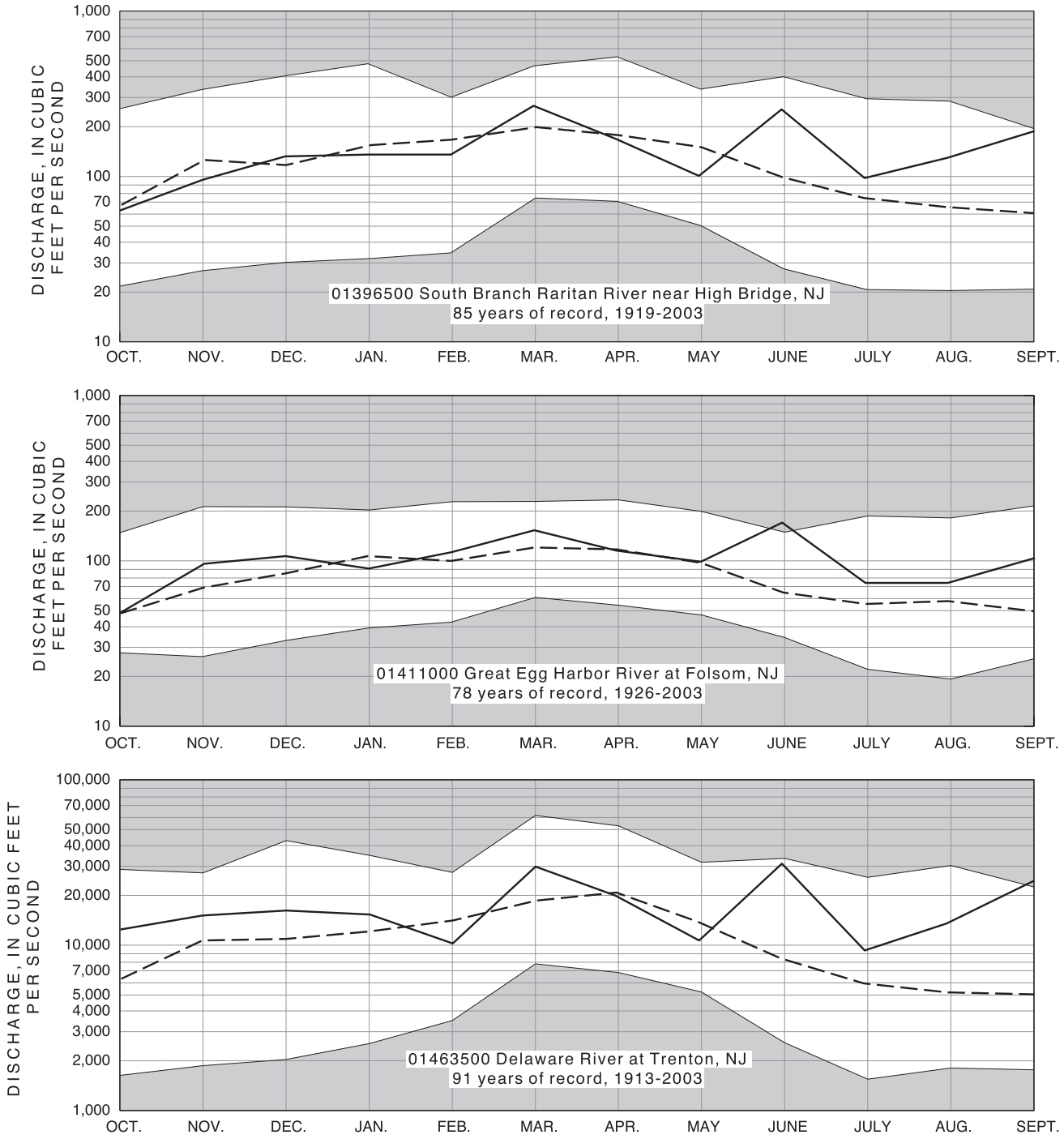
Streamflow

Three gaging stations, located in north, south, and central New Jersey, are considered index stations for statewide streamflow conditions. Streamflow at the index station in northern New Jersey (South Branch Raritan River near High Bridge) averaged 145 ft^3/s for the water year, which is 119 percent of the 1919-2003 average. Peak flow for the water year was 1,350 ft^3/s on September 23; the recurrence interval is less than 2 years. The lowest daily mean flow was 16 ft^3/s on October 9, which is about the 99-percent flow exceedance.

Streamflow at the index station in southern New Jersey (Great Egg Harbor River at Folsom) averaged 101 ft^3/s, which is 119 percent of the 1926-2003 average. Peak flow for the water year was 381 ft^3/s on February 25; the recurrence interval is from 2 to 5 years. The lowest daily mean flow was 20 ft^3/s on October 7, which is about the 99-percent flow exceedance.

The observed annual mean discharge for the Delaware River at Trenton was 17,110 ft^3/s, which is 147 percent of the 1913-2003 average. Peak flow for the water year was 83,100 ft^3/s on March 22 and the recurrence interval is from 2 to 5 years. The lowest daily mean flow was 3,130 ft^3/s on October 5, which is about the 90-percent flow exceedance. The Delaware River is significantly regulated by reservoirs and diversions. Monthly mean discharge at each of these index gaging stations during the current water year and the long-term normal monthly discharge are shown in figure 1. Annual mean discharge at each of these index gaging stations and the mean annual discharge for the period of record are shown in figure 2.

Annual mean discharges for water year 2003 at 46 selected gaging stations that had 40 years or more of continuous record and mean annual discharge for the period of record at each gaging station are shown in table 1. The differences are listed as percent difference. Discharge at 45 of the 46 gaging stations was above normal for water year 2003. The percent differences ranged from -7.1 to 61.0. In contrast, during water year 2002, flow at all 46 gaging stations was well below normal with the



EXPLANATION

UNSHADED AREA--Indicates range between highest and lowest mean discharge recorded for the month, prior to 2003 water year

BROKEN LINE--Indicates normal discharge (median of the monthly means) for the standard reference period, 1971-2000

SOLID LINE--Indicates observed monthly mean discharge for the 2003 water year

Figure 1. Monthly mean discharge at index gaging stations.

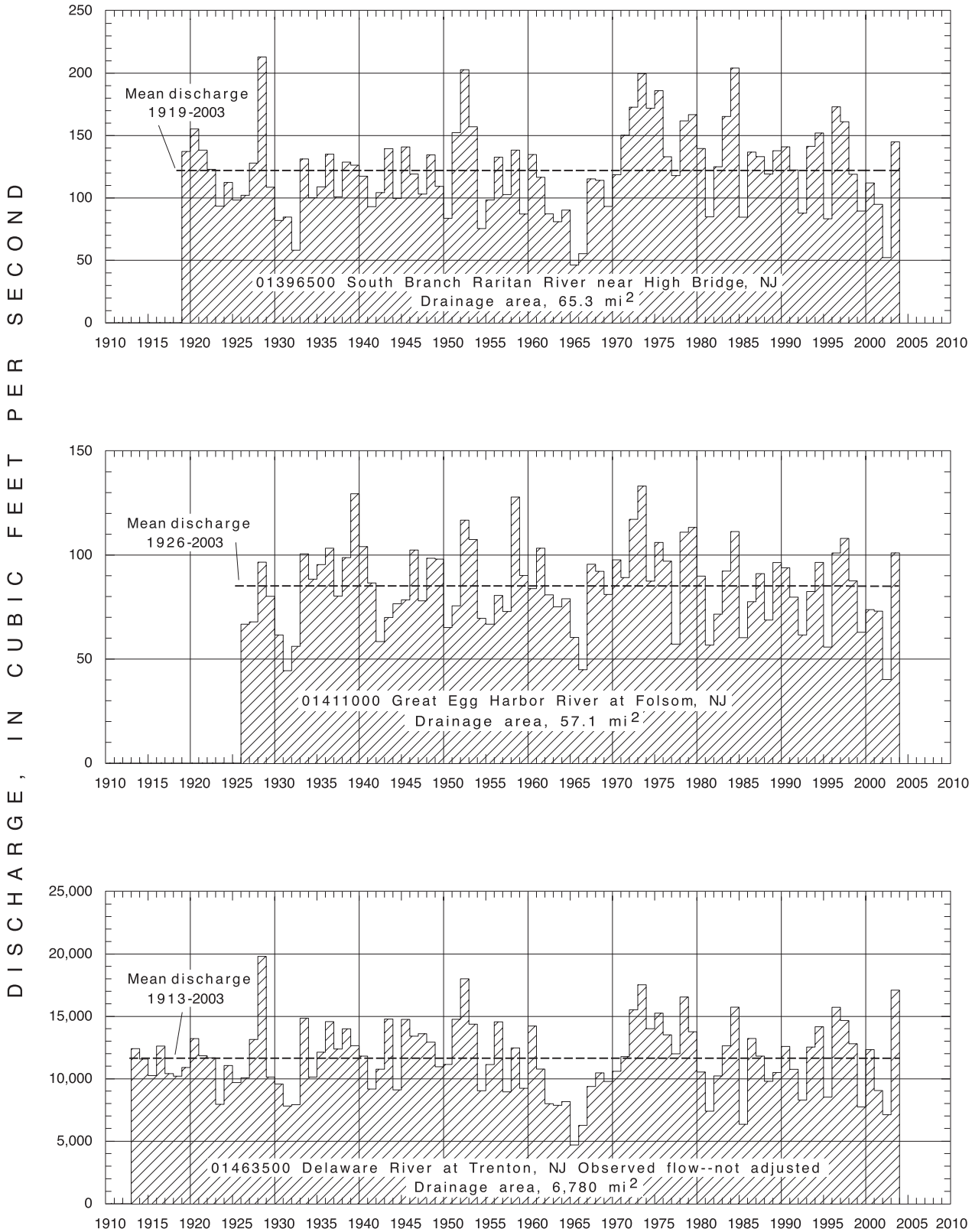


Figure 2. Annual mean discharge at index gaging stations.

Table 1. Annual mean discharges for water year 2003 and mean annual discharge for the period of record at selected continuous gaging stations with 40 years or more of records

[ft^3/s, cubic feet per second; mi^2, square miles]

Station number	Station name	Drainage area (mi^2)	Number of years of record	Annual mean discharge for 2003 water year (ft^3/s)	Mean annual discharge for period of record (ft^3/s)	Percent difference
01377000	Hackensack River at Rivervale, NJ	58.0	62	98.6	86.2	14.4
01377500	Pascack Brook at Westwood, NJ	29.6	69	62.3	53.8	15.8
01379000	Passaic River near Millington, NJ	55.4	82	122	90.7	34.5
01379500	Passaic River near Chatham, NJ	100	75	230	171	34.5
01380500	Rockaway River above reservoir, at Boonton, NJ	116	66	303	229	32.3
01381500	Whippany River at Morristown, NJ	29.4	82	71.2	54.3	31.1
01382500	Pequannock River at Macopin Intake Dam, NJ	63.7	80	71.8	46.6	54.1
01383500	Wanaque River at Awosting, NJ	27.1	84	74.7	54.1	38.1
01384500	Ringwood Creek near Wanaque, NJ	19.1	62	45.5	33.1	37.5
01387500	Ramapo River near Mahwah, NJ	120	85	290	227	27.8
01388000	Ramapo River at Pompton Lakes, NJ	160	82	392	285	37.5
01388500	Pompton River at Pompton Plains, NJ	355	64	731	488	49.8
01389500	Passaic River at Little Falls, NJ	762	105	1526	1132	34.8
01390500	Saddle River at Ridgewood, NJ	21.6	46	45.8	33.6	36.3
01391500	Saddle River at Lodi, NJ	54.6	81	138	99.7	38.4
01393450	Elizabeth River at Ursino Lake, at Elizabeth, NJ	16.9	82	34.1	25.9	31.7
01394500	Rahway River near Springfield, NJ	25.5	66	49.1	30.5	61.0
01395000	Rahway River at Rahway, NJ	40.9	81	78.0	49.1	58.9
01396500	South Branch Raritan River near High Bridge, NJ	65.3	85	145	122	18.9
01396800	Spruce Run at Clinton, NJ	41.3	44	71.2	65	9.5
01397000	South Branch Raritan River at Stanton, NJ	147	87	302	247	22.3
01398000	Neshanic River at Reaville, NJ	25.7	73	57.0	37.8	50.8
01398500	North Branch Raritan River near Far Hills, NJ	26.2	80	53.8	47.8	12.6
01399500	Lamington (Black) River near Pottersville, NJ	32.8	82	66.4	55.5	19.6
01400000	North Branch Raritan River near Raritan, NJ	190	80	379	309	22.7
01400500	Raritan River at Manville, NJ	490	86	1018	773	31.7
01401000	Stony Brook at Princeton, NJ	44.5	50	94.5	66.5	42.1
01402000	Millstone River at Blackwells Mills, NJ	258	82	543	382	42.1
01403060	Raritan River below Calco Dam, at Bound Brook, NJ	785	65	1573	1189	32.3
01405400	Manalapan Brook at Spotswood, NJ	40.7	46	83.1	61.5	35.1
01408000	Manasquan River at Squankum, NJ	44.0	72	84.7	73.5	15.2
01408500	Toms River near Toms River, NJ	123	75	241	210	14.8
01409400	Mullica River near Batsto, NJ	46.7	46	133	105	26.7
01409500	Batsto River at Batsto, NJ	67.8	76	130	120	8.3
01410000	Oswego River at Harrisville, NJ	72.5	73	86.8	85.8	1.2
01411000	Great Egg Harbor River at Folsom, NJ	57.1	78	101	85.1	18.7
01411500	Maurice River at Norma, NJ	112	71	203	162	25.3
01440000	Flat Brook near Flatbrookville, NJ	64.0	80	147	110	33.6
01443500	Paulins Kill at Blairstown, NJ	126	81	308	197	56.3
01445500	Pequest River at Pequest, NJ	106	82	220	157	40.1
01457000	Musconetcong River near Bloomsbury, NJ	141	86	327	238	37.4
01463500	Delaware River at Trenton, NJ	6780	91	17110	11660	46.7
01464000	Assunpink Creek at Trenton, NJ	90.6	80	178	134	32.8
01464500	Crosswicks Creek at Extonville, NJ	81.5	62	159	133	19.5
01466500	McDonalds Branch in Lebanon State Forest, NJ	2.35	50	1.97	2.12	-7.1
01467000	North Branch Rancocas Creek at Pemberton, NJ	118	82	185	169	9.5

percent differences ranging from -38.6 to -94.4. Discharge at 40 of the 46 gaging stations was below normal for water year 2001, and the percent differences ranged from -28.7 to 17.9. Discharge at 36 of the 46 gaging stations was below normal for the water year 2000, and the percent differences ranged from -14.3 to -36.3. Several gaging stations that monitor heavily regulated rivers were not included in this comparison because of large artificial deficits related to regulation. The criterion of assessing gaging stations with 40 years or more of record was used in order to encompass at least one of the approximately 30-year drought cycles that New Jersey has experienced.

Minor riverine and coastal flooding occurred several times throughout the water year, most notably in September as a result of Tropical Storm Isabel. Two major floods occurred in the last 5 years -- the Sparta Flood caused by a series of heavy, localized thunderstorms in August 2000 and the flooding of historical proportions that occurred in many areas of the State when Tropical Storm Floyd combined with a storm system from the west in September 1999.

Reservoir Contents

Reservoir levels that reached near record lows at times during water year 2002 increased this water year as a result of above normal precipitation for most of water year 2003. Combined usable contents of 13 major water-supply reservoirs in New Jersey were 47.2 billion gallons at the end of September 2002, which is 89.4 percent of the 30-year mean (normal) contents for the end of September and 58.7 percent of capacity. Combined usable contents climbed steadily from September 2002 to a maximum for the water year of 80.2 billion gallons by the end of March 2003, which is 115 percent of normal contents for the end of March and 99.7 percent of capacity. Reservoir levels remained high until the end of June, then experienced a slow, but normal, decline during the summer because of an increased demand for water supplies. Above normal air temperatures during the summer months can increase evaporation rates for the reservoirs. By September 30, 2003, combined usable contents totalled 73.5 billion gallons, which is 139 percent of the 30-year mean (normal) contents for the end of September and 91.5 percent of capacity (fig. 3). The term “usable contents” is used here as a measure of the total volume of water that can be removed from a reservoir without pumping and does not account for the volume of water below the bottom of the lowest outlet or pipe (sometimes referred to as dead storage).

Precipitation and Temperature

Prior to this water year, the State of New Jersey had been in a state of water emergency, declared on March 4, 2002, by Governor James E. McGreevey (Executive Order No. 11), after many months of precipitation deficits (including February 2002, the driest February on record). Water year 2003 began with 3 months of above normal precipitation from October to December 2002, making it the sixth wettest fall on record (compared to 108 years of record). This prompted Governor McGreevey to lift the statewide drought emergency on January 8, 2003. On March 26, 2003, the drought warning was lifted in Coastal South and Southwest Drought Regions, bringing the entire State to “Normal” status. More information on the New Jersey drought is available at http://www.njdrought.org/.

Before water year 2003, a trend of precipitation deficit began approximately July 1998, possibly as early as 1997. For 38 of 69 months from January 1997 to September 2002, monthly spatially weighted average-precipitation values throughout New Jersey were below the statewide long-term monthly means (1895-2002) as shown in figure 4. Precipitation data can be accessed at http://climate.rutgers.edu/stateclim/. For 32 of 51 months from July 1998 to September 2002, the monthly spatially weighted values were below the long-term monthly means. For water year 2003, the spatially weighted values for 8 of 12 months were above the long-term mean (October through December, February, March, June, August, and September were above their respective means). Calendar year 2003 is the fifth wettest for the period of record. For water year 2003, the statewide spatially weighted average-precipitation total was 59.09 inches, which is 14.35 inches more than the long-term mean-annual precipitation from 1895 to 2002 (David Robinson, New Jersey State Climatologist, Rutgers University, oral commun., 2004). The average annual precipitation for New Jersey is approximately 45 inches.

The greatest daily rainfall totals for each month in water year 2003 as reported by the National Weather Service (NWS) are as follows: October 11, 3.41 inches in High Point Park; November 17, 2.60 inches in Toms River; December 26, 3.00 inches in Long Branch Oak Hurst; January 4, 2.25 inches in Toms River; February 17, 3.04 inches in Plainfield; March 30, 2.16 inches in Belleplain State Forest; April 8, 1.21 inches in Long Branch Oakhurst; May 26, 1.62 inches in Cranford; June 5, 3.79 inches in Harrison; July 22, 2.20 inches in Flemington; August 6, 2.82 inches in Canoe Brook; and September 4, 3.76 inches in Indian Mills.

Thirteen snowfall events occurred this year, starting as early as October 30; the last event was April 7. Most notable was the February 17 snowstorm that left 15 to 20 or more inches covering most of New Jersey. A weak El Nino subsided, and the Pacific Ocean temperatures returned to normal in March. These circumstances can contribute to increased rain and snowfall. The April 7 snowfall left 5 to 8 inches in central and north central New Jersey and 1 to 3 inches in the northern and southern areas. Tropical Storm Isabel passed south of New Jersey on September 19, but associated rainfall caused some flooding.

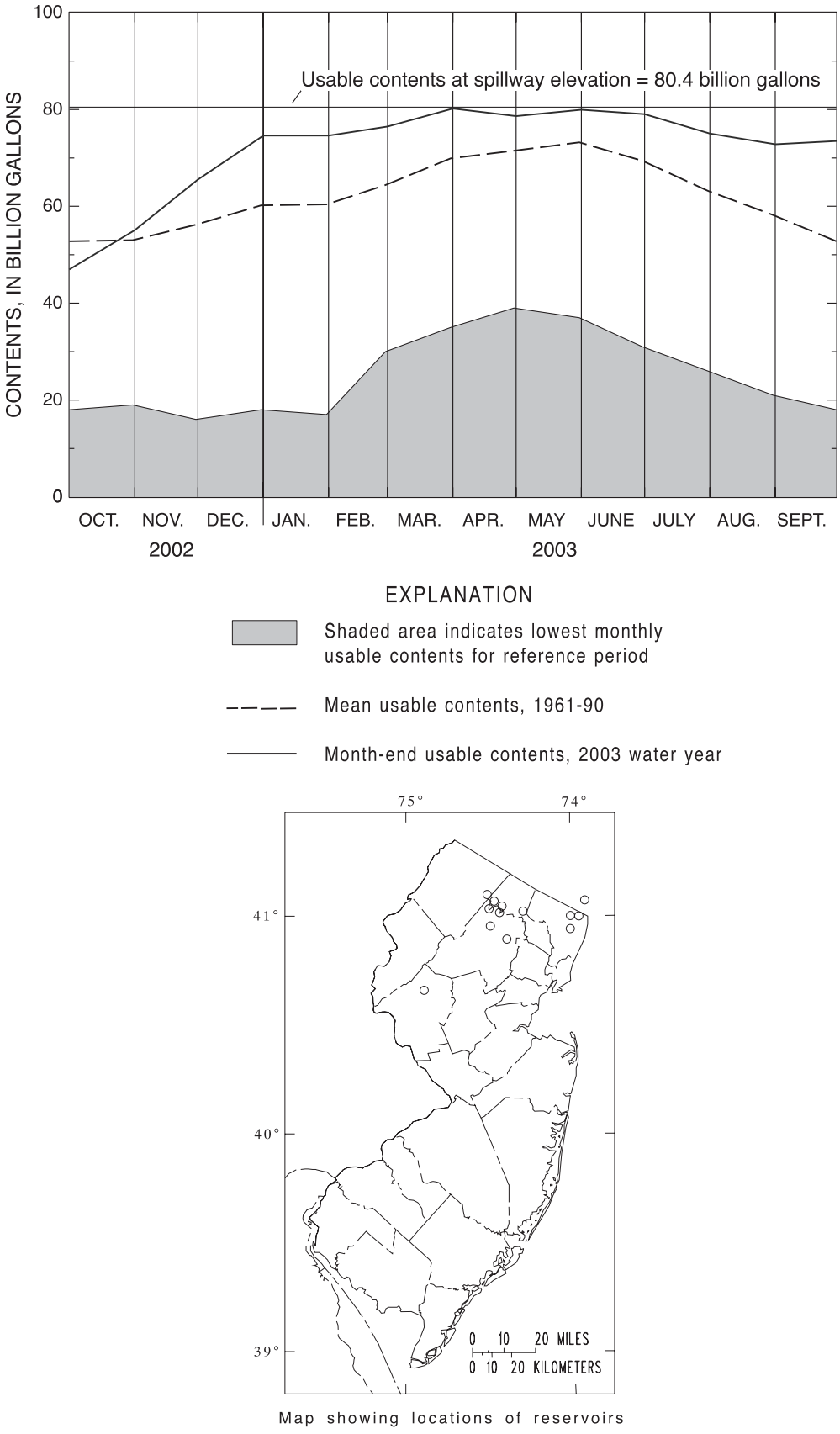


Figure 3. Combined usable contents of 13 major water-supply reservoirs.

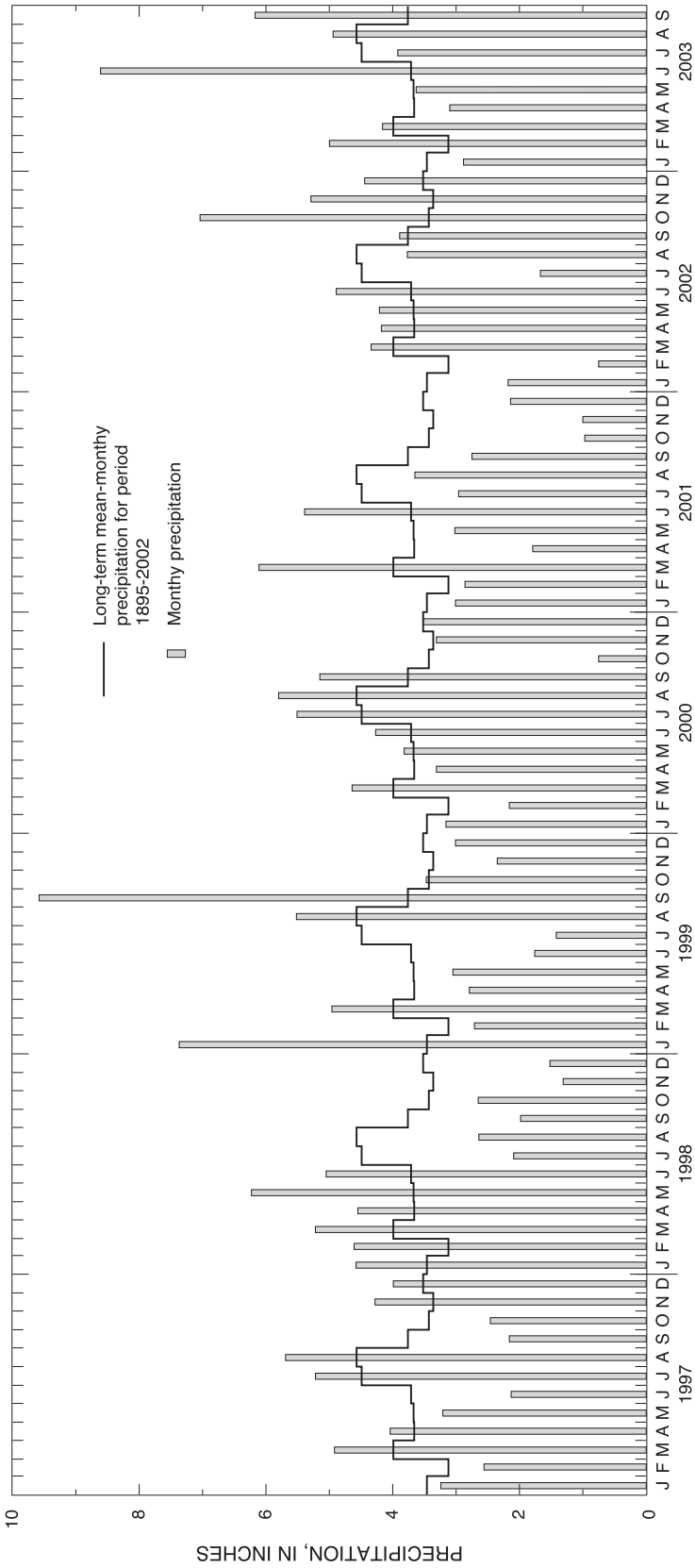


Figure 4. Monthly precipitation for water years 1997 to 2003 in New Jersey and long-term mean-monthly precipitation for period 1895-2002. (Long-term mean-monthly and monthly precipitation are spatially weighted averages for several dozen stations throughout the State.)

Three NWS precipitation stations in Newark, Trenton, and Atlantic City have been selected as index sites for precipitation. During water year 2003, precipitation totals were above normal for all three index sites. Monthly totals were above or near normal for 8 of the 12 months at all three NWS index stations. The Newark station recorded 58.55 inches, which is 127 percent of the 30-year reference-period (1971-2000) mean. The Atlantic City station recorded 50.04 inches, which is 123 percent of the 30-year mean, and the Trenton station recorded 49.14 inches, which is 119 percent of the 30-year mean. Monthly precipitation at the three NWS stations, along with the 30-year mean, is shown in figure 5.

Three tornados were reported in New Jersey on September 23. These were classified as F1 Category Tornados on the Fujita Tornado Scale (moderate tornado with 73-112 mph wind speed, causes moderate damage). One of the tornados damaged at least three houses in Hunterdon County. A tornado in Florence uprooted approximately 100 trees, and the other tornado damaged several commercial establishments in Mercer County.

Eight of the 12 monthly mean temperatures in the 2003 water year (determined from spatially weighted average temperatures recorded throughout New Jersey) were below or equal to the long-term mean monthly average (1895-2002). The October monthly mean equaled the long-term average temperature. Monthly mean temperatures ranged from 0.3 to 2.3 degrees Celsius below average for November through February. March averaged 0.6 degrees Celsius above average. Monthly means from April through June were as much as 1.8 degrees Celsius below average. From July through September, temperatures were above average (fig. 6). Generally, the average temperature this water year was lower than in water year 2002. Temperature data can be accessed at http://climate.rutgers.edu/stateclim/.

Downstream Order and Station Number

Since October 1, 1950, hydrologic-station records in USGS reports have been listed in order of downstream direction along the main stream. All stations on a tributary entering upstream from a main-stream station are listed before that station. A station on a tributary entering between two main-stream stations is listed between those stations. A similar order is followed in listing stations on first rank, second rank, and other ranks of tributaries. The rank of any tributary on which a station is located with respect to the stream to which it is immediately tributary is indicated by an indention in that list of stations in the front of this report. Each indentation represents one rank. This downstream order and system of indentation indicates which stations are on tributaries between any two stations and the rank of the tributary on which each station is located.

As an added means of identification, each hydrologic station and partial-record station has been assigned a station number. These station numbers are in the same downstream order used in this report. In assigning a station number, 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 composed of both types of stations. Gaps are consecutive. The complete 8-digit (or 10-digit) number for each station such as 09004100, which appears just to the left of the station name, includes a 2-digit part number “09” plus the 6-digit (or 8-digit) downstream order number “004100.” In areas of high station density, an additional two digits may be added to the station identification number to yield a 10-digit number. The stations are numbered in downstream order as described above between stations of consecutive 8-digit numbers.

NUMBERING SYSTEM FOR WELLS AND MISCELLANEOUS SITES

The USGS well and miscellaneous site-numbering system is based on the grid system of latitude and longitude. The system provides the geographic location of the well or miscellaneous site and a unique number for each site. The number consists of 15 digits. The first 6 digits denote the degrees, minutes, and seconds of latitude, and the next 7 digits denote degrees, minutes, and seconds of longitude; the last 2 digits are a sequential number for wells within a 1-second grid. In the event that the latitude-longitude coordinates for a well and miscellaneous site are the same, a sequential number such as “01,” “02,” and so forth, would be assigned as one would for wells (see fig. 7). The 8-digit, downstream order station numbers are not assigned to wells and miscellaneous sites where only random water-quality samples or discharge measurements are taken.

SPECIAL NETWORKS AND PROGRAMS

Hydrologic Benchmark Network is a network of 61 sites in small drainage basins in 39 States that was established in 1963 to provide consistent streamflow data representative of undeveloped watersheds nationwide, and from which data could be analyzed on a continuing basis for use in comparison and contrast with conditions observed in basins more obviously affected by human activities. At selected sites, water-quality information is being gathered on major ions and nutrients, primarily to assess the effects of acid deposition on stream chemistry. Additional information on the Hydrologic Benchmark Program may be accessed from *http://water.usgs.gov/hbn/*.

National Stream-Quality Accounting Network (NASQAN) is a network of sites used to monitor the water quality of large rivers within the Nation’s largest river basins. From 1995 through 1999, a network of approximately 40 stations was operated in the Mississippi, Columbia, Colorado, and Rio Grande River basins. For the period 2000 through 2004, sampling was reduced to a few index stations on the Colorado and Columbia Rivers so that a network of 5 stations could be implemented on the Yukon River. Samples are collected with sufficient frequency that the flux of a wide range of constituents can be estimated. The objective of NASQAN is to characterize the water quality of these large rivers by measuring concentration and

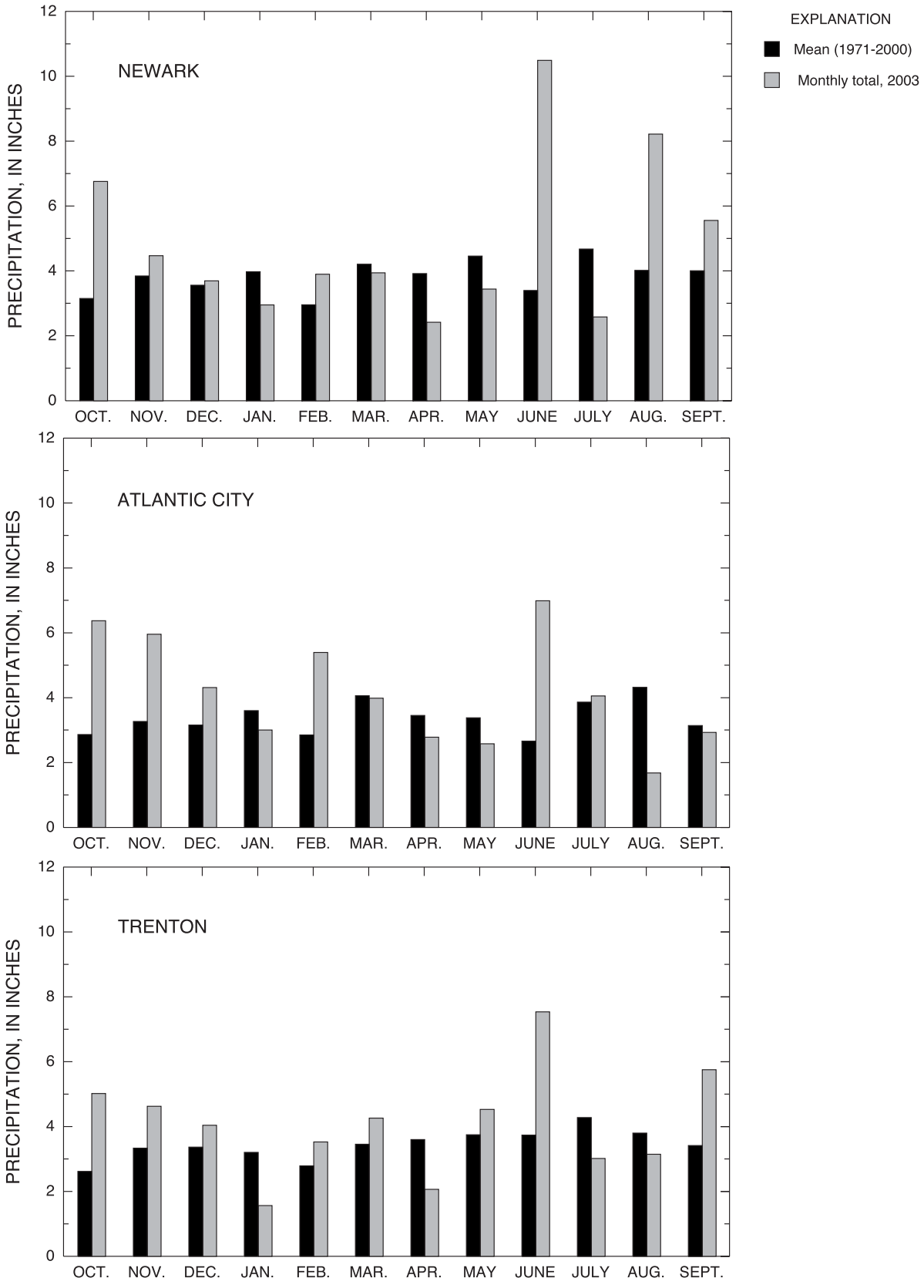


Figure 5. Monthly precipitation at three National Weather Service stations.

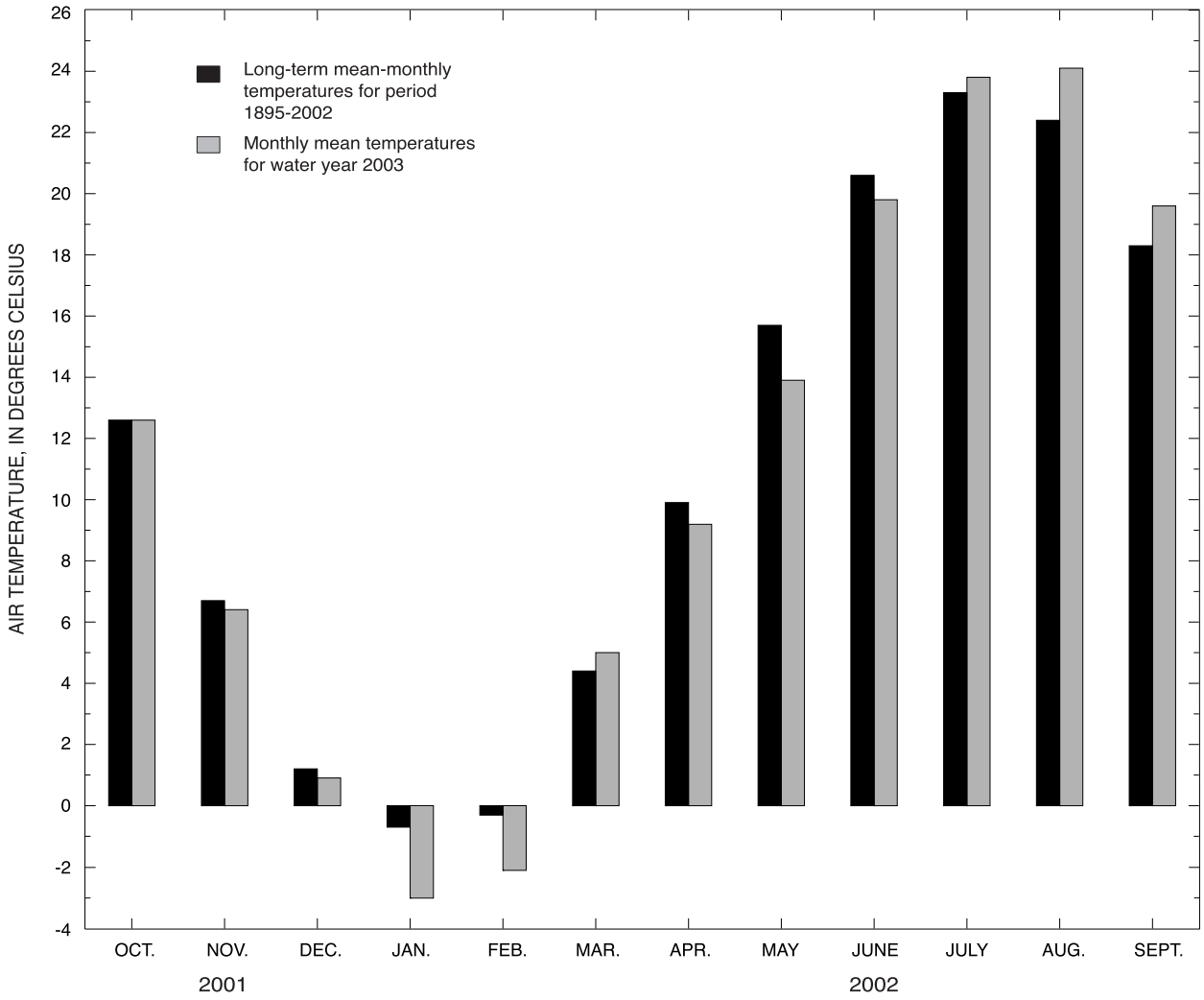


Figure 6. Water year 2003 monthly mean air temperatures and long-term mean-monthly air temperatures for New Jersey.

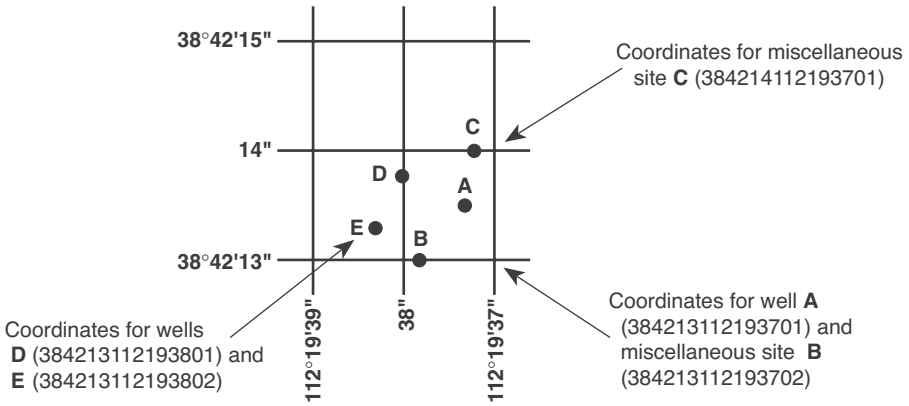


Figure 7. System for numbering wells and miscellaneous sites (latitude and longitude).

mass transport of a wide range of dissolved and suspended constituents, including nutrients, major ions, dissolved and sediment-bound heavy metals, common pesticides, and inorganic and organic forms of carbon. This information will be used (1) to describe the long-term trends and changes in concentration and transport of these constituents; (2) to test findings of the National Water-Quality Assessment (NAWQA) Program; (3) to characterize processes unique to large-river systems such as storage and re-mobilization of sediments and associated contaminants; and (4) to refine existing estimates of off-continent transport of water, sediment, and chemicals for assessing human effects on the world's oceans and for determining global cycles of carbon, nutrients, and other chemicals. Additional information about the NASQAN Program may be accessed from *http://water.usgs.gov/nasqan/*.

The National Atmospheric Deposition Program/National Trends Network (NADP/NTN) is a network of monitoring sites that provide continuous measurement and assessment of the chemical constituents in precipitation throughout the United States. As the lead Federal agency, the USGS works together with over 100 organizations to provide a long-term, spatial and temporal record of atmospheric deposition generated from this network of 250 precipitation-chemistry monitoring sites. The USGS supports 74 of these 250 sites. This long-term, nationally consistent monitoring program, coupled with ecosystem research, provides critical information toward a national scorecard to evaluate the effectiveness of ongoing and future regulations intended to reduce atmospheric emissions and subsequent impacts to the Nation's land and water resources. Reports and other information on the NADP/NTN Program, as well as data from the individual sites, may be accessed from *http://bqs.usgs.gov/acidrain/*.

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

Assessment activities are being conducted in 42 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 is 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 water-resources managers to use in making decisions and a foundation for aggregation and comparison of findings to address water-quality issues of regional and national interest.

Communication and coordination between USGS personnel and other local, State, and Federal interests are critical components of the NAWQA Program. Each study unit has a local liaison committee consisting of representatives from key Federal, State, and local water-resources agencies, Indian nations, and universities in the study unit. Liaison committees typically meet semiannually to discuss their information needs, monitoring plans and progress, desired information products, and opportunities to collaborate efforts among the agencies. Additional information about the NAWQA Program may be accessed from *http://water.usgs.gov/nawqa/*.

The USGS National Streamflow Information Program (NSIP) is a long-term program with goals to provide framework streamflow data across the Nation. Included in the program are creation of a permanent Federally funded streamflow network, research on the nature of streamflow, regional assessments of streamflow data and databases, and upgrades in the streamflow information delivery systems. Additional information about NSIP may be accessed from *http://water.usgs.gov/nsip/*.

EXPLANATION OF STAGE- AND WATER-DISCHARGE RECORDS

Data Collection and Computation

The base data collected at gaging stations (fig. 8-11) consist of records of stage and measurements of discharge of streams or canals, and stage, surface area, and volume of lakes or reservoirs. In addition, observations of factors affecting the stage-discharge relation or the stage-capacity relation, weather records, and other information are used to supplement base data in determining the daily flow or volume of water in storage. Records of stage are obtained from a water-stage recorder that is either downloaded electronically in the field to a laptop computer or similar device or is transmitted using telemetry such as GOES satellite, land-line or cellular-phone modems, or by radio transmission. Measurements of discharge are made with a current meter or acoustic Doppler current profiler, using the general methods adopted by the USGS. These methods are described in standard textbooks, USGS Water-Supply Paper 2175, and the Techniques of Water-Resources Investigations of the United States Geological Survey (TWRIs), Book 3, Chapters A1 through A19 and Book 8, Chapters A2 and B2. The methods are consistent with the American Society for Testing and Materials (ASTM) standards and generally follow the standards of the International Organization for Standards (ISO).

For stream-gaging stations, discharge-rating tables for any stage are prepared from stage-discharge curves. If extensions to the rating curves are necessary to express discharge greater than measured, the extensions are made on the basis of indirect measurements of peak discharge (such as slope-area or contracted-opening measurements, or computation of flow over dams and weirs), step-backwater techniques, velocity-area studies, and logarithmic plotting. The daily mean discharge is computed from gage heights and rating tables, then the monthly and yearly mean discharges are computed from the daily values. If the stage-discharge relation is subject to change because of frequent or continual change in the physical features of the stream channel, the daily mean discharge is computed by the shifting-control method in which correction factors based on individual discharge measurements and notes by engineers and observers are used when applying the gage heights to the rating tables. If the stage-discharge relation for a station is temporarily changed by the presence of aquatic growth or debris on the controlling section, the daily mean discharge is computed by the shifting-control method.

The stage-discharge relation at some stream-gaging stations is affected by backwater from reservoirs, tributary streams, or other sources. Such an occurrence 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 at some distance from the base gage.

An index velocity is measured using ultrasonic or acoustic instruments at some stream-gaging stations and this index velocity is used to calculate an average velocity for the flow in the stream. This average velocity along with a stage-area relation is then used to calculate average discharge.

At some stations, stage-discharge relation is affected by changing stage. At these stations, the rate of change in stage is used as a factor in computing discharge.

At some stream-gaging stations in the northern United States, the stage-discharge relation is affected by ice in the winter; therefore, computation of the discharge in the usual manner is impossible. Discharge for periods of ice effect is computed on the basis of gage-height record and occasional winter-discharge measurements. Consideration is given to the available information on temperature and precipitation, notes by gage observers and hydrologists, and comparable records of discharge from other stations in the same or nearby basins.

For a lake or reservoir station, capacity tables giving the volume or contents for any stage are prepared from stage-area relation curves defined by surveys. The application of the stage to the capacity table gives the contents, from which the daily, monthly, or yearly changes are computed.

If the stage-capacity curve is subject to changes because of deposition of sediment in the reservoir, periodic resurveys of the reservoir are necessary to define new stage-capacity curves. During the period between reservoir surveys, the computed contents may be increasingly in error due to the gradual accumulation of sediment.

For some stream-gaging stations, periods of time occur when no gage-height record is obtained or the recorded gage height is faulty and cannot be used to compute daily discharge or contents. Such a situation can happen when the recorder stops or otherwise fails to operate properly, the intakes are plugged, the float is frozen in the well, or for various other reasons. For such periods, the daily discharges are estimated on the basis of recorded range in stage, prior and subsequent records, discharge measurements, weather records, and comparison with records from other stations in the same or nearby basins. Likewise, lake or reservoir volumes may be estimated on the basis of operator’s log, prior and subsequent records, inflow-outflow studies, and other information.

Data Presentation

The records published for each continuous-record surface-water discharge station (stream-gaging station) consist of five parts: (1) the station manuscript or description; (2) the data table of daily mean values of discharge for the current water year with summary data; (3) a tabular statistical summary of monthly mean flow data for a designated period, by water year; (4) 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; and (5) a hydrograph of discharge.

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 follow that clarify information presented under the various headings of the station description.

LOCATION.—Location information 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 term indicates the time 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 its flow reasonably can be considered equivalent to flow at the present station.

REVISED RECORDS.—If a critical error in published records is discovered, a revision is included in the first report published following discovery of the error.

GAGE.—The type of gage in current use, the datum of the current gage referred to a standard datum, 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 either will be identified by date in this paragraph of the station description for water-discharge stations or flagged in the daily discharge table. (See section titled Identifying Estimated Daily Discharge.) Information is presented relative to the accuracy of the records, to special methods of computation, and to conditions that affect natural flow at the station. In addition, information may be presented pertaining to average discharge data for the period of record; to extremes 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, the outlet works and spillway, and the purpose and use of the reservoir.

COOPERATION.—Records provided by a cooperating organization or obtained for the USGS by a cooperating organization are identified here.

EXTREMES OUTSIDE PERIOD OF RECORD.—Information here documents 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 USGS.

REVISIONS.—Records are revised if errors in published records are discovered. Appropriate updates are made in the USGS distributed data system, NWIS, and subsequently to its Web-based National data system, NWISWeb (*http://water.usgs.gov/nwis/nwis*). Users are encouraged to obtain all required data from NWIS or NWISWeb to ensure that they have the most recent data updates. Updates to NWISWeb are made on an annual basis.

Although rare, occasionally the records of a discontinued gaging station may need revision. Because no current or, possibly, future station manuscript would be published for these stations to document the revision in a REVISED RECORDS entry, users of data for these stations who obtained the record from previously published data reports may wish to contact the District Office (address given on the back of the title page of this report) to determine if the published records were revised after the station was discontinued. If, however, the data for a discontinued station were obtained by computer retrieval, the data would be current. 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 stage-capacity table when daily volumes are given.

Peak Discharge Greater than Base Discharge

Tables of peak discharge above base discharge are included for some stations where secondary instantaneous peak discharge data are used in flood-frequency studies of highway and bridge design, flood-control structures, and other flood-related projects. The base discharge value is selected so an average of three peaks a year will be reported. This base discharge value has a recurrence interval of approximately 1.1 years or a 91-percent chance of exceedence in any 1 year.

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 arithmetic average flow in cubic feet per second for the month; and the lines headed MAX and MIN give the maximum and minimum daily mean discharges, respectively, for each month. Discharge for the month is 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). Values for cubic feet per second per square mile and runoff in inches or in acre-feet may be omitted if extensive regulation or diversion is in effect 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 volumes are given. These values are identified by a symbol and a corresponding footnote.

Statistics of Monthly Mean Data

A tabular summary of the mean (line headed MEAN), maximum (MAX), and minimum (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 values. 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. The designated period will consist of all of the station record within the specified water years, including complete months of record for partial water years, and may coincide with the period of record for the station. The water years for which the statistics are computed are consecutive, unless a break in the station record is indicated in the manuscript.

Summary Statistics

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

The date or water year, as appropriate, of the first occurrence of each statistic reporting extreme values of discharge is provided adjacent to the statistic. Repeated occurrences may be noted in the REMARKS paragraph of the manuscript or in footnotes. Because the designated period may not be the same as 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 the dates of occurrence do not fall within the selected water years listed in the heading, it will be noted in the REMARKS paragraph or in footnotes. Selected streamflow duration-curve statistics and runoff data also are given. Runoff data may be omitted if extensive regulation or diversion of flow is in effect in the drainage basin.

The following summary statistics data are provided with each continuous record of discharge. Comments that 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.

ANNUAL MEAN.—The arithmetic mean for the individual daily mean discharges for the year noted or for the designated period.

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-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.

MAXIMUM PEAK FLOW.—The maximum instantaneous peak discharge occurring for the water year or designated period. Occasionally the maximum flow for a year may occur at midnight at the beginning or end of the year, on a recession from or rise toward a higher peak in the adjoining year. In this case, the maximum peak flow is given in the table and the maximum flow may be reported in a footnote or in the REMARKS paragraph in the manuscript.

MAXIMUM PEAK STAGE.—The maximum instantaneous peak stage occurring for the water year or designated period. Occasionally the maximum stage for a year may occur at midnight at the beginning or end of the year, on a recession from or rise toward a higher peak in the adjoining year. In this case, the maximum peak stage is given in the table and the maximum stage may be reported in the REMARKS paragraph in the manuscript or in a footnote. If the dates of occurrence of the maximum peak stage and maximum peak flow are different, 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 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) indicate 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 table lists annual maximum stage and discharge at crest-stage stations, and the second table lists 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 often made in times of drought or flood to give better areal coverage to those events. Those measurements and others collected for a 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. This identification is shown either by flagging individual daily values with the letter “e” and noting in a table footnote, “e–Estimated,” or by listing the dates of the estimated record in the REMARKS paragraph of the station description.

Accuracy of Field Data and Computed Results

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

The degree of accuracy of the records is stated in the REMARKS in the station description. “Excellent” indicates that about 95 percent of the daily discharges are within 5 percent of the true value; “good” within 10 percent; and “fair,” within 15 percent. “Poor” indicates that daily discharges have less than “fair” accuracy. Different accuracies may be attributed to different parts of a given record.

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

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

Other Data Records Available

Information of a more detailed nature than that published for most of the stream-gaging stations such as discharge measurements, gage-height records, and rating tables is available from the District office. Also, most stream-gaging station records are available in computer-usable form and many statistical analyses have been made.

Information on the availability of unpublished data or statistical analyses may be obtained from the District office (see address that is shown on the back of the title page of this report).

EXPLANATION OF PRECIPITATION RECORDS

Data Collection and Computation

Rainfall data generally are collected using electronic data loggers that measure the rainfall in 0.01-inch increments every 15 minutes using either a tipping-bucket rain gage or a collection well gage. Twenty-four hour rainfall totals are tabulated and presented. A 24-hour period extends from just past midnight of the previous day to midnight of the current day. Snowfall-affected data can result during cold weather when snow fills the rain-gage funnel and then melts as temperatures rise. Snowfall-affected data are subject to errors. Missing values are indicated by this symbol “---” in the table.

Data Presentation

Precipitation records collected at surface-water gaging stations are identified with the same station number and name as the stream-gaging station. Where a surface-water daily-record station is not available, the precipitation record is published with its own name and latitude-longitude identification number.

Information pertinent to the history of a precipitation station is provided in descriptive headings preceding the tabular data. These descriptive headings give details regarding location, period of record, and general remarks.

The following information is provided with each precipitation station. Comments that follow clarify information presented under the various headings of the station description.

LOCATION.—See Data Presentation in the EXPLANATION OF STAGE- AND WATER-DISCHARGE RECORDS section of this report (same comments apply).

PERIOD OF RECORD.—See Data Presentation in the EXPLANATION OF STAGE- AND WATER-DISCHARGE RECORDS section of this report (same comments apply).

INSTRUMENTATION.—Information on the type of rainfall collection system is given.

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

Water Temperature

Water temperatures are measured at most of the water-quality stations. In addition, water temperatures are taken at the 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 District office.

ACCESS TO USGS WATER DATA

The USGS provides near real-time stage and discharge data for many of the gaging stations equipped with the necessary telemetry and historic daily-mean and peak-flow discharge data for most current or discontinued gaging stations through the World Wide Web (WWW). These data may be accessed from *http://water.usgs.gov*.

Water-quality data and ground-water data also are available through the WWW. In addition, data can be provided in various machine-readable formats on various media. Information about the availability of specific types of data or products, and user charges, can be obtained locally from each Water Discipline District Office (See address that is shown on the back of the title page of this report.)

DEFINITION OF TERMS

Specialized technical terms related to streamflow, water-quality, and other hydrologic data, as used in this report, are defined below. Terms such as algae, water level, and precipitation are used in their common everyday meanings, definitions of which are given in standard dictionaries. Not all terms defined in this alphabetical list apply to every State. See also table for converting English units to International System (SI) Units. Other glossaries that also define water-related terms are accessible from *http://water.usgs.gov/glossaries.html*.

Acre-foot (AC-FT, acre-ft) is a unit of volume, commonly used to measure quantities of water used or stored, equivalent to the volume of water required to cover 1 acre to a depth of 1 foot and equivalent to 43,560 cubic feet, 325,851 gallons, or 1,233 cubic meters. (See also “Annual runoff”)

Adjusted discharge is discharge data that hae been mathematically adjusted (for example, to remove the effects of a daily tide cycle or reservoir storage).

Annual runoff is the total quantity of water that is discharged (“runs off”) from a drainage basin in a year. Data reports may present annual runoff data as volumes in acre-feet, as discharges per unit of drainage area in cubic feet per second per square mile, or as depths of water on the drainage basin in inches.

Annual 7-day minimum is the lowest mean value for any 7-consecutive-day period in a year. Annual 7-day minimum values are reported herein for the calendar year and the water year (October 1 through September 30). Most low-flow frequency analyses use a climatic year (April 1-March 31), which tends to prevent the low-flow period from being artificially split between adjacent years. 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.)

Bankfull stage, as used in this report, is the stage at which a stream first overflows its natural banks formed by floods with 1- to 3-year recurrence intervals.

Base discharge (for peak discharge) is a discharge value, determined for selected stations, above which peak discharge data are published. The base discharge at each station is selected so that an average of about three peak flows per year will be published. (See also “Peak flow”)

Base flow is sustained flow of a stream in the absence of direct runoff. It includes natural and human-induced streamflows. Natural base flow is sustained largely by ground-water discharge.

Bedload discharge (tons per day) is the rate of sediment moving as bedload, reported as dry weight, that passes through a cross section in a given time. NOTE: Bedload discharge values in this report may include a component of the suspended-sediment discharge. A correction may be necessary when computing the total sediment discharge by summing the bedload discharge and the suspended-sediment discharge. (See also “Bedload,” “Dry weight,” “Sediment,” and “Suspended-sediment discharge”)

DEFINITION OF TERMS--Continued

Canadian Geodetic Vertical Datum 1928 is a geodetic datum derived from a general adjustment of Canada's first order level network in 1928.

Cfs-day (See "Cubic foot per second-day")

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.

Continuous-record station is a site where data are collected with sufficient frequency to define daily mean values and variations within a day.

Control designates a feature in the channel that physically affects the water-surface elevation and thereby determines the stage-discharge relation at the gage. This feature may be a constriction of the channel, a bedrock outcrop, a gravel bar, an artificial structure, or a uniform cross section over a long reach of the channel.

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

Cubic foot per second (CFS, ft^3/s) is the rate of discharge representing a volume of 1 cubic foot passing a given point in 1 second. It is equivalent to approximately 7.48 gallons per second or approximately 449 gallons per minute, or 0.02832 cubic meters per second. The term "second-foot" sometimes is used synonymously with "cubic foot per second" but is now obsolete.

Cubic foot per second-day (CFS-DAY, Cfs-day, [$(ft^3/s)/d$]) is the volume of water represented by a flow of 1 cubic foot per second for 24 hours. It is equivalent to 86,400 cubic feet, 1.98347 acre-feet, 646,317 gallons, or 2,446.6 cubic meters. The daily mean discharges reported in the daily value data tables are numerically equal to the daily volumes in cfs-days, and the totals also represent volumes in cfs-days.

Cubic foot per second per square mile [CFSM, $(ft^3/s)/mi^2$] 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. (See also "Annual runoff")

Daily-record station is a site where data are collected with sufficient frequency to develop a record of one or more data values per day. The frequency of data collection can range from continuous recording to periodic sample or data collection on a daily or near-daily basis.

Data collection platform (DCP) is an electronic instrument that collects, processes, and stores data from various sensors, and transmits the data by satellite data relay, line-of-sight radio, and/or landline telemetry.

Data logger is a microprocessor-based data acquisition system designed specifically to acquire, process, and store data. Data are usually downloaded from onsite data loggers for entry into office data systems.

Datum is a surface or point relative to which measurements of height and/or horizontal position are reported. A vertical datum is a horizontal surface used as the zero point for measurements of gage height, stage, or elevation; a horizontal datum is a reference for positions given in terms of latitude-longitude, State Plane coordinates, or UTM coordinates. (See also "Gage datum," "Land-surface datum," "National Geodetic Vertical Datum of 1929," and "North American Vertical Datum of 1988")

Diel is of or pertaining to a 24-hour period of time; a regular daily cycle.

Discharge, or **flow**, is the rate that matter passes through a cross section of a stream channel or other water body per unit of time. The term commonly refers to the volume of water (including, unless otherwise stated, any sediment or other constituents suspended or dissolved in the water) that passes a cross section in a stream channel, canal, pipeline, and so forth, within a given period of time (cubic feet per second). Discharge also can apply to the rate at which constituents, such as suspended sediment, bedload, and dissolved or suspended chemicals, pass through a cross section, in which cases the quantity is expressed as the mass of constituent that passes the cross section in a given period of time (tons per day).

Drainage area of a stream at a specific location is that area upstream from the location, measured in a horizontal plane, that has a common outlet at the site for its surface runoff from precipitation that normally drains by gravity into a stream. Drainage areas given herein include all closed basins, or noncontributing areas, within the area unless otherwise specified.

Drainage basin is a part of the Earth's surface that contains a drainage system with a common outlet for its surface runoff. (See "Drainage area")

DEFINITION OF TERMS--Continued

Flow-duration percentiles are values on a scale of 100 that indicate the percentage of time for which a flow is not exceeded. For example, the 90th percentile of river flow is greater than or equal to 90 percent of all recorded flow rates.

Gage datum is a horizontal surface used as a zero point for measurement of stage or gage height. This surface usually is located slightly below the lowest point of the stream bottom such that the gage height is usually slightly greater than the maximum depth of water. Because the gage datum itself is not an actual physical object, the datum usually is defined by specifying the elevations of permanent reference marks such as bridge abutments and survey monuments, and the gage is set to agree with the reference marks. Gage datum is a local datum that is maintained independently of any national geodetic datum. However, if the elevation of the gage datum relative to the national datum (North American Vertical Datum of 1988 or National Geodetic Vertical Datum of 1929) has been determined, then the gage readings can be converted to elevations above the national datum by adding the elevation of the gage datum to the gage reading.

Gage height (G.H.) is the water-surface elevation, in feet above the gage datum. If the water surface is below the gage datum, the gage height is negative. Gage height often is used interchangeably with the more general term "stage," although gage height is more appropriate when used in reference to a reading on a gage.

Gage values are values that are recorded, transmitted, and/or computed from a gaging station. Gage values typically are collected at 5-, 15-, or 30-minute intervals.

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

High tide is the maximum height reached by each rising tide. The high-high and low-high tides are the higher and lower of the two high tides, respectively, of each tidal day. *See NOAA web site: http://www.co-ops.nos.noaa.gov/tideglos.html*

Horizontal datum (See "Datum")

Hydrologic index stations referred to in this report are continuous-record gaging stations that have been selected as representative of streamflow patterns for their respective regions. Station locations are shown on index maps.

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

Inch (IN., in.), in reference to streamflow, as used in the report, refers to the depth to which the drainage area would be covered with water if all of the runoff for a given time period were distributed uniformly on it. (See also "Annual runoff")

Instantaneous discharge is the discharge at a particular instant of time. (See also "Discharge")

International Boundary Commission Survey Datum refers to a geodetic datum established at numerous monuments along the United States-Canada boundary by the International Boundary Commission.

Low tide is the minimum height reached by each falling tide. The high-low and low-low tides are the higher and lower of the two low tides, respectively, of each tidal day. *See NOAA web site: http://www.co-ops.nos.noaa.gov/tideglos.html*

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

Mean high or **low tide** is the average of all high or low tides, respectively, over a specific period.

Mean sea level is a local tidal datum. It is the arithmetic mean of hourly heights observed over the National Tidal Datum Epoch. Shorter series are specified in the name; for example, monthly mean sea level and yearly mean sea level. In order that they may be recovered when needed, such datums are referenced to fixed points known as benchmarks. (See also "Datum")

Miscellaneous site, miscellaneous station, or miscellaneous sampling site is a site where streamflow, sediment, and/or water-quality data or water-quality or sediment samples are collected once, or more often on a random or discontinuous basis to provide better areal coverage for defining hydrologic and water-quality conditions over a broad area in a river basin.

DEFINITION OF TERMS--Continued

National Geodetic Vertical Datum of 1929 (NGVD of 1929) is a fixed reference adopted as a standard geodetic datum for elevations determined by leveling. It was formerly called "Sea Level Datum of 1929" or "mean sea level." Although the datum was derived from the mean sea level at 26 tide stations**,** it does not necessarily represent local mean sea level at any particular place. *See NOAA web site: http://www.ngs.noaa.gov/faq.shtml#WhatVD29VD88* (See "North American Vertical Datum of 1988")

North American Datum of 1927 (NAD 27) is the horizontal control datum for the United States that was defined by a location and azimuth on the Clarke spheroid of 1866.

North American Datum of 1983 (NAD 83) is the horizontal control datum for the United States, Canada, Mexico, and Central America that is based on the adjustment of 250,000 points including 600 satellite Doppler stations that constrain the system to a geocentric origin. NAD 83 has been officially adopted as the legal horizontal datum for the United States by the Federal government.

North American Vertical Datum of 1988 (NAVD 88) is a fixed reference adopted as the official civilian vertical datum for elevations determined by Federal surveying and mapping activities in the United States. This datum was established in 1991 by minimum-constraint adjustment of the Canadian**,** Mexican, and United States first-order terrestrial leveling networks.

Parameter code is a 5-digit number used in the USGS computerized data system, National Water Information System (NWIS), to uniquely identify a specific constituent or property.

Partial-record station is a site where discrete measurements of one or more hydrologic parameters are obtained over a period of time without continuous data being recorded or computed. A common example is a crest-stage gage partial-record station at which only peak stages and flows are recorded.

Peak flow (peak stage) is an instantaneous local maximum value in the continuous time series of streamflows or stages, preceded by a period of increasing values and followed by a period of decreasing values. Several peak values ordinarily occur in a year. The maximum peak value in a year is called the annual peak; peaks lower than the annual peak are called secondary peaks. Occasionally, the annual peak may not be the maximum value for the year; in such cases, the maximum value occurs at midnight at the beginning or end of the year, on the recession from or rise toward a higher peak in the adjoining year. If values are recorded at a discrete series of times, the peak recorded value may be taken as an approximation of the true peak, which may occur between the recording instants. If the values are recorded with finite precision, a sequence of equal recorded values may occur at the peak; in this case, the first value is taken as the peak.

Periodic-record station is a site where stage, discharge, sediment, chemical, physical, or other hydrologic measurements are made one or more times during a year but at a frequency insufficient to develop a daily record.

Pool, as used in this report, is a small part of a stream reach with little velocity, commonly with water deeper than surrounding areas.

Reach, as used in this report, is a length of stream that is chosen to represent a uniform set of physical, chemical, and biological conditions within a segment. It is the principal sampling unit for collecting physical, chemical, and biological data.

Recurrence interval, also referred to as return period, is the average time, usually expressed in years, between occurrences of hydrologic events of a specified type (such as exceedances of a specified high flow or nonexceedance of a specified low flow). The terms "return period" and "recurrence interval" do not imply regular cyclic occurrence. The actual times between occurrences vary randomly, with most of the times being less than the average and a few being substantially greater than the average. For example, the 100-year flood is the flow rate that is exceeded by the annual maximum peak flow at intervals whose average length is 100 years (that is, once in 100 years, on average); almost two-thirds of all exceedances of the 100-year flood occur less than 100 years after the previous exceedance, half occur less than 70 years after the previous exceedance, and about one-eighth occur more than 200 years after the previous exceedance. Similarly, the 7-day, 10-year low flow ($7Q_{10}$) is the flow rate below which the annual minimum 7-day-mean flow dips at intervals whose average length is 10 years (that is, once in 10 years, on average); almost two-thirds of the nonexceedances of the $7Q_{10}$ occur less than 10 years after the previous nonexceedance, half occur less than 7 years after, and about one-eighth occur more than 20 years after the previous nonexceedance. The recurrence interval for annual events is the reciprocal of the annual probability of occurrence. Thus, the 100-year flood has a 1-percent chance of being exceeded by the maximum peak flow in any year, and there is a 10-percent chance in any year that the annual minimum 7-day-mean flow will be less than the $7Q_{10}$.

Return period (See "Recurrence interval")

Riffle, as used in this report, is a shallow part of the stream where water flows swiftly over completely or partially submerged obstructions to produce surface agitation.

DEFINITION OF TERMS--Continued

River mileage is the curvilinear distance, in miles, measured upstream from the mouth along the meandering path of a stream channel in accordance with Bulletin No. 14 (October 1968) of the Water Resources Council and typically is used to denote location along a river.

Run, as used in this report, is a relatively shallow part of a stream with moderate velocity and little or no surface turbulence.

Runoff is the quantity of water that is discharged ("runs off") from a drainage basin during a given time period. Runoff data may be presented as volumes in acre-feet, as mean discharges per unit of drainage area in cubic feet per second per square mile, or as depths of water on the drainage basin in inches. (See also "Annual runoff")

Sea level, as used in this report, refers to one of the two commonly used national vertical datums (NGVD 1929 or NAVD 1988). See separate entries for definitions of these datums.

Seven-day, 10-year low flow ($7Q_{10}$) is the discharge below which the annual 7-day minimum flow falls in 1 year out of 10 on the long-term average. The recurrence interval of the $7Q_{10}$ is 10 years; the chance that the annual 7-day minimum flow will be less than the $7Q_{10}$ is 10 percent in any given year. (See also "Annual 7-day minimum" and "Recurrence interval")

Shelves, as used in this report, are streambank features extending nearly horizontally from the flood plain to the lower limit of persistent woody vegetation.

Stage (See "Gage height")

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

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.

Surface area of a lake is that area (acres) encompassed by the boundary of the lake as shown on USGS topographic maps, or other available maps or photographs. Because surface area changes with lake stage, surface areas listed in this report represent those determined for the stage at the time the maps or photographs were obtained.

Thalweg is the line formed by connecting points of minimum streambed elevation (deepest part of the channel).

Vertical datum (See "Datum")

Water year in USGS 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, 2002, is called the "2002 water year."

Watershed (See "Drainage basin")

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

CURRENT WATER RESOURCES PROJECTS IN NEW JERSEY

The U.S. Geological Survey is currently involved in a number of hydrologic investigations in the State of New Jersey. The following is a list of these investigations. Results are published at the conclusion of short-term projects or periodically in the case of long-term projects. Hydrologic data from these projects are entered into the NWIS data base.

Aquifer Flow and Chemistry in Salem County

Assessment of Current Ground-Water and Surface-Water Conditions within the NJ-NY Highlands Area

CURRENT WATER RESOURCES PROJECTS IN NEW JERSEY--Continued

Delaware River Basin National Water Quality Assessment

Determination of the hydrologic and ecological effects of ground-water diversions from the Kirkwood-Cohansey aquifer system in the Pinelands Area

Determination of Total Annual Nonpoint Source Pollution Loads to Selected River Systems in New Jersey

Determining Impacts on Special Protection Waters in the Delaware Water Gap National recreation Area

Development of Database, Models, and Determination of Vulnerability of Public Supply Wells and Surface-Water Intakes in New Jersey for Chemicals of Concern to Support Source Water Assessment Program

Distribution of MTBE and Related Volatile Organic Compounds in Lakes in Northern NJ and Investigation of Lake-Well Interactions

Distribution of Radium and Related Radionuclides in Coastal-Plain Aquifers

Effects of Land Use, Septic Systems, and Sewering on the Distribution of Nitrate in Shallow Ground Water

EPA Technical Assistance Program

Estimation of the Relative Importance of Nonpoint Source Loads in the Raritan River Basin

Evaluation of Bacterial Contamination in Surface and Ground Water in Morristown National Historical Park

Flood Characteristics of New Jersey Streams

Flow Characteristics and Basis for Development of Ecological Goals for New Jersey Streams

Geohydrology of the Naval Air Warfare Center, West Trenton, New Jersey

Ground-Water Data Collection Network

Ground-Water Levels and Chloride Concentrations in Major Aquifers of the Coastal Plain

Ground-Water Supply Availability in Southern Ocean County

Head of Tide Sampling Program for the New Jersey Harbour Toxic Contaminant Assessment Reduction Program

High-Flow Water Quality Management Objectives

Hydrogeologic Investigation to Ensure Sustainable Water Supply for Cape May County

Hydrogeologic Support to McGuire Air Force Base, Burlington County, New Jersey

Hydrology of Surficial Aquifer Systems

Investigation of Ground-Water/Surface-Water Interaction in the Northern Passaic River Valley, New Jersey

Investigation of Hydrogeology and Volatile Organic Compound Contamination in Fair Lawn, New Jersey

Investigation of Hydrogeology and Volatile Organic Compound Contamination in the Pohatcong Valley, New Jersey

Investigation of Potential Threats to Water Supply from the Potomac-Raritan-Magothy Aquifer in Salem and Western Gloucester Counties, New Jersey

Low Flow Characteristics of New Jersey Streams

Lower Delaware Non-Point Source

Modeling and Experimental Investigation of Hydrocarbon Transport and Biodegradation in the Unsaturated Zone

Movement of Chromium in the Ground Water of Pennsauken Township, Camden County

Natural Radionuclide Occurrence in Principal New Jersey Aquifers

New Jersey Drought Monitoring System

New Jersey-Long Island National Water Quality Assessment

New Jersey Tide Telemetry System

Pascack Brook Flood Warning System

Passaic Flood Warning System

Passaic River Basin Flow Model

Program to Maintain and Update Ground-Water Models to Evaluate Continued Water-Supply Development

CURRENT WATER RESOURCES PROJECTS IN NEW JERSEY--Continued

Quality of Water Data Collection Network

Quantification of Radium Mass Loading and Radioactivity in the Shallow Aquifer from the Water-Softening-Treatment Backwash Waste Stream that is Discharged to Septic Systems

Rahway Flood Warning System

Refinement of a Data Model for Watershed Water Transfer Analysis

Small Watershed Flood Data Collection

Somerset County Flood-Information System

Surface Water Data Collection Network

Vulnerability Assessment of the Kirkwood-Cohansey Aquifer System to Radium, Mercury, and Trace Metals

Water Budget Analysis of Confined Aquifers for Water-Supply Planning and Regulation

Water Budgets and Ground-Water Availability in the Delaware River Basin

Water-Quality Charactistics of Upper-Delaware Watershed

WATER-RELATED REPORTS FOR NEW JERSEY COMPLETED BY THE U.S. GEOLOGICAL SURVEY IN RECENT YEARS

Ayers, M.A., Kennen, J.G., and Stackelberg, P.E., 2000, Water quality in the Long Island-New Jersey Coastal drainages, New York and New Jersey, 1996-98: U.S. Geological Survey Water Resources Circular 1201, 40 p.

Baehr, A.L., Kauffman, L.J., Perkins, Kimberlie, Nolan, B.T., 2003, Estimating spatial variability of recharge in sourthern New Jersey from unsaturated-zone measurements: U.S. Geological Survey Water-Resources Investigations Report 02-4288, 31 p.

Baehr, A.L., and Reilly, T.J.,, 2001, Water quality and occurrence of Methyl tert-butyl ether (MTBE) and other fuel-related compounds in lakes and ground water at lakeside communities in Sussex and Morris Counties, New Jersey, 1998-1999: U.S. Geological Survey Water-Resources Investigations Report 01-4149, 86 p.

Baehr, A.L., and Zapecza, O.S., 1998, Methyl tert-butyl ether (MTBE) and other volatile organic compounds in lakes in Byram Township, Sussex County, New Jersey, summer 1998: U.S. Geological Survey Water-Resources Investigations Report 98-4264, unpaginated.

Barringer, J.L., 1998, Arsenic and metals in soils in the vicinity of the Imperial Oil Superfund site, Marlboro Township, New Jersey: U.S. Geological Survey Water Resources Investigations Report 98-4016, 251 p.

Barringer, J.L., Barringer, T.H., Lacombe, P.J., and Holmes, C.W., 2001, Arsenic in soils and sediments adjacent to Birch Swamp Brook in the vicinity of Texas Road (downstream from the Imperial Oil Company Superfund site), Monmouth County, New Jersey: U.S. Geological Survey Water-Resources Investigations Report 00-4185, 111 p.

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Barringer, T.H., Reiser, R.G., and Price, C.V., 2000, Use of low-flow trend and transfer-function models to determine relation of low flows to regional urbanization and precipitation, Rahway River Basin, New Jersey, 1940-91: U.S. Geological Survey Open-File Report 99-257, 24 p.

Brown, G.A., Pustay, E.A., Gibs, Jacob, 2003, Methods for quality assurance review of water-quality data in New Jersey: U.S. Geological Survey Open-File Report 02-383, variously paged.

Buxton, D.E., Hunchak-Kariouk, Kathryn, and Hickman, R.E., 1998, Relations of surface-water quality to stream flow in the Hackensack, Passaic, Elizabeth, and Rahway River Basins, New Jersey, water years 1976-93: U.S. Geological Survey Water-Resources Investigations Report 98-4049, 102 p.

_____ 1999, Relations of surface-water quality to streamflow in the Raritan River Basin, New Jersey, water years 1976-93: U.S. Geological Survey Water-Resources Investigations Report 99-4045, 109 p.

WATER-RELATED REPORTS FOR NEW JERSEY COMPLETED BY THE U.S. GEOLOGICAL SURVEY IN RECENT YEARS--Continued

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3–A3. *Measurement of peak discharge at culverts by indirect methods*, by G.L. Bodhaine: USGS–TWRI book 3, chap. A3. 1968. 60 p.

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3–Al0. *Discharge ratings at gaging stations,* by E.J. Kennedy: USGS–TWRI book 3, chap. A10. 1984. 59 p.

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3–B4. *Regression modeling of ground-water flow,* by R.L. Cooley and R.L. Naff: USGS–TWRI book 3, chap. B4. 1990. 232 p.

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3–C1. *Fluvial sediment concepts,* by H.P. Guy: USGS–TWRI book 3, chap. C1. 1970. 55 p.

3–C2. *Field methods for measurement of fluvial sediment,* by T.K. Edwards and G.D. Glysson: USGS–TWRI book 3, chap. C2. 1999. 89 p.

3–C3. *Computation of fluvial-sediment discharge,* by George Porterfield: USGS–TWRI book 3, chap. C3. 1972. 66 p.

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4–A1. *Some statistical tools in hydrology,* by H.C. Riggs: USGS–TWRI book 4, chap. A1. 1968. 39 p.

4–A2. *Frequency curves,* by H.C. Riggs: USGS–TWRI book 4, chap. A2. 1968. 15 p.

4–A3. *Statistical methods in water resources,* by D.R. Helsel and R.M. Hirsch: USGS–TWRI book 4, chap. A3. 1991. Available only online at http://water.usgs.gov/pubs/twri/twri4a3/. (Accessed August 30, 2002.)

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5–A1. *Methods for determination of inorganic substances in water and fluvial sediments,* by M.J. Fishman and L.C. Friedman, editors: USGS–TWRI book 5, chap. A1. 1989. 545 p.

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5–C1. *Laboratory theory and methods for sediment analysis,* by H.P. Guy: USGS–TWRI book 5, chap. C1. 1969. 58 p.

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

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

6–A6. *A coupled surface-water and ground-water flow model (MODBRANCH) for simulation of stream-aquifer interaction,* by Eric D. Swain and Eliezer J. Wexler: USGS–TWRI book 6, chap. A6. 1996. 125 p.

6–A7. *User's guide to SEAWAT: A computer program for simulation of three-dimensional variable-density ground-water flow,* by Weixing Guo and Christian D. Langevin: USGS–TWRI book 6, chap. A7. 2002. 77 p.

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

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, chap. C3. 1981. 110 p.

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8–A2. *Installation and service manual for U.S. Geological Survey manometers*, by J.D. Craig: USGS–TWRI book 8, chap. A2. 1983. 57 p.

Section B. Instruments for Measurement of Discharge

8–B2. *Calibration and maintenance of vertical-axis type current meters*, by G.F. Smoot and C.E. Novak: USGS–TWRI book 8, chap. B2. 1968. 15 p.

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9–A1. *National field manual for the collection of water-quality data: Preparations for water sampling*, by F.D. Wilde, D.B. Radtke, Jacob Gibs, and R.T. Iwatsubo: USGS–TWRI book 9, chap. A1. 1998. 47 p.

9–A2. *National field manual for the collection of water-quality data: Selection of equipment for water sampling*, edited by F.D. Wilde, D.B. Radtke, Jacob Gibs, and R.T. Iwatsubo: USGS–TWRI book 9, chap. A2. 1998. 94 p.

9–A3. *National field manual for the collection of water-quality data: Cleaning of equipment for water sampling*, edited by F.D. Wilde, D.B. Radtke, Jacob Gibs, and R.T. Iwatsubo: USGS–TWRI book 9, chap. A3. 1998. 75 p.

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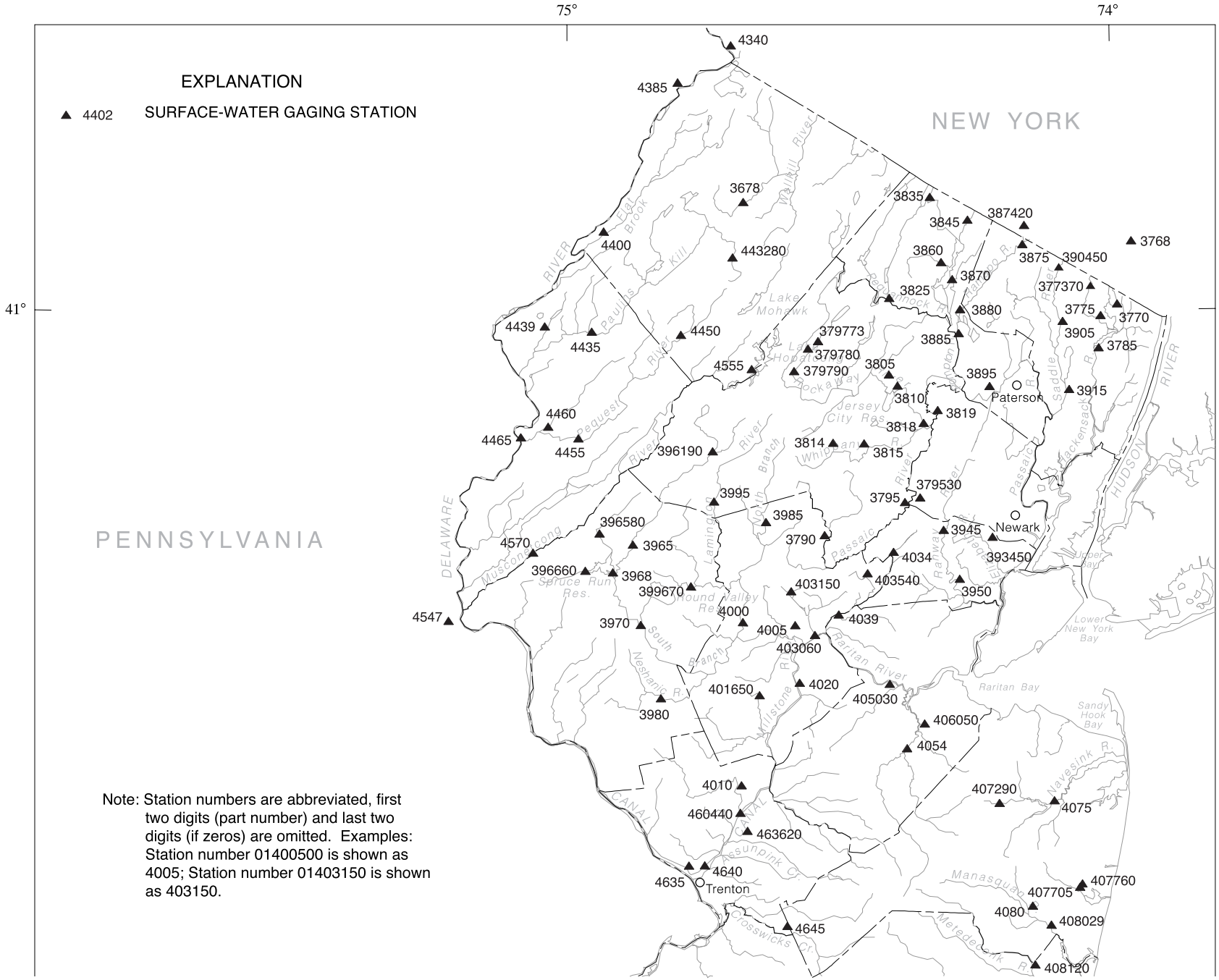
9–A5. *National field manual for the collection of water-quality data: Processing of water samples*, edited by F.D. Wilde, D.B. Radtke, Jacob Gibs, and R.T. Iwatsubo: USGS–TWRI book 9, chap. A5. 1999, 149 p.

9–A6. *National field manual for the collection of water-quality data: Field measurements*, edited by F.D. Wilde and D.B. Radtke: USGS–TWRI book 9, chap. A6. 1998. Variously paginated.

9–A7. *National field manual for the collection of water-quality data: Biological indicators*, edited by D.N. Myers and F.D. Wilde: USGS–TWRI book 9, chap. A7. 1997 and 1999. Variously paginated.

9–A8. *National field manual for the collection of water-quality data: Bottom-material samples*, by D.B. Radtke: USGS–TWRI book 9, chap. A8. 1998. 48 p.

9–A9. *National field manual for the collection of water-quality data: Safety in field activities*, by S.L. Lane and R.G. Fay: USGS–TWRI book 9, chap. A9. 1998. 60 p.



Note: Station numbers are abbreviated, first two digits (part number) and last two digits (if zeros) are omitted. Examples: Station number 01400500 is shown as 4005; Station number 01403150 is shown as 403150.

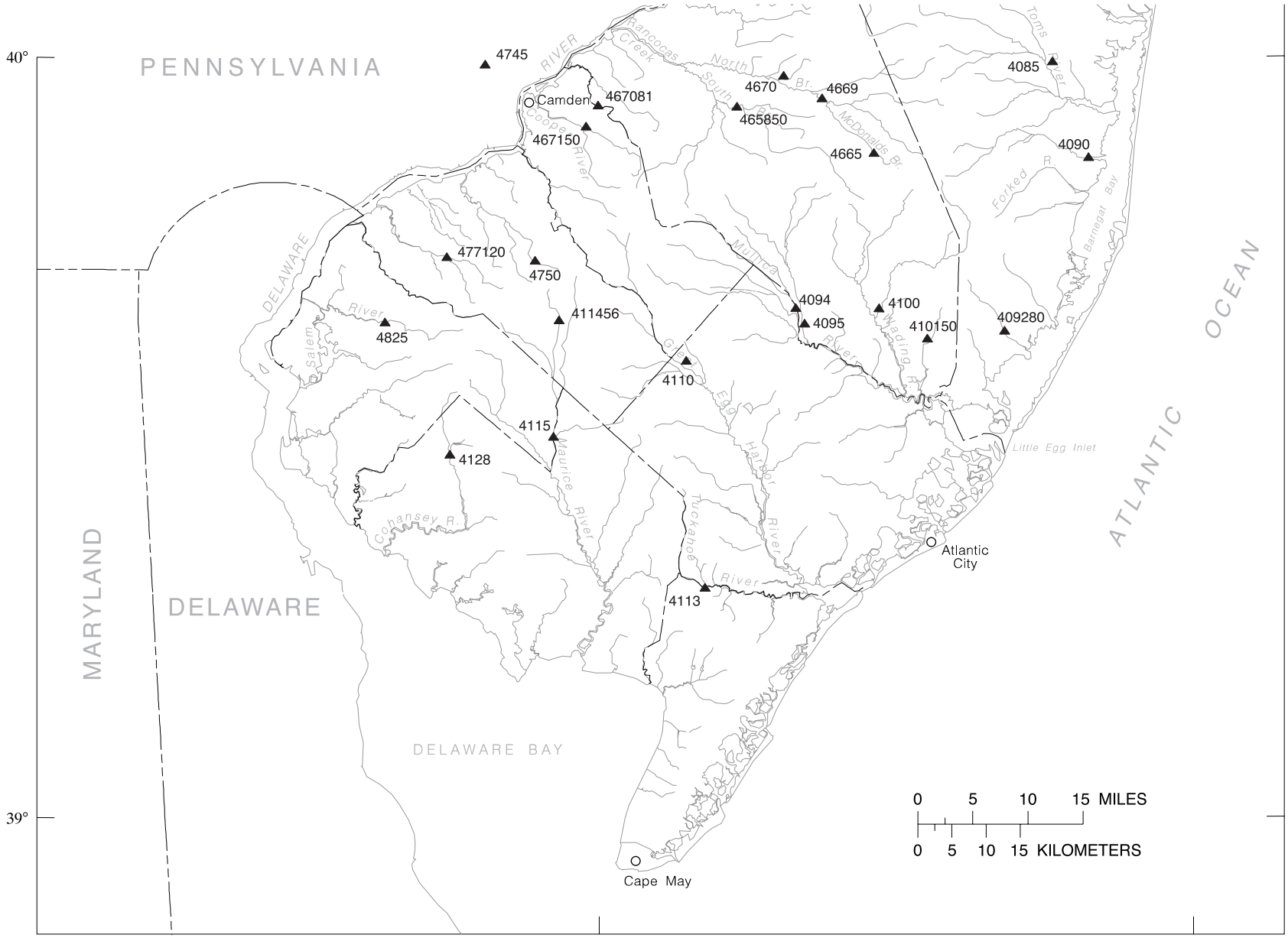


Figure 8. Map showing location of surface-water gaging stations.

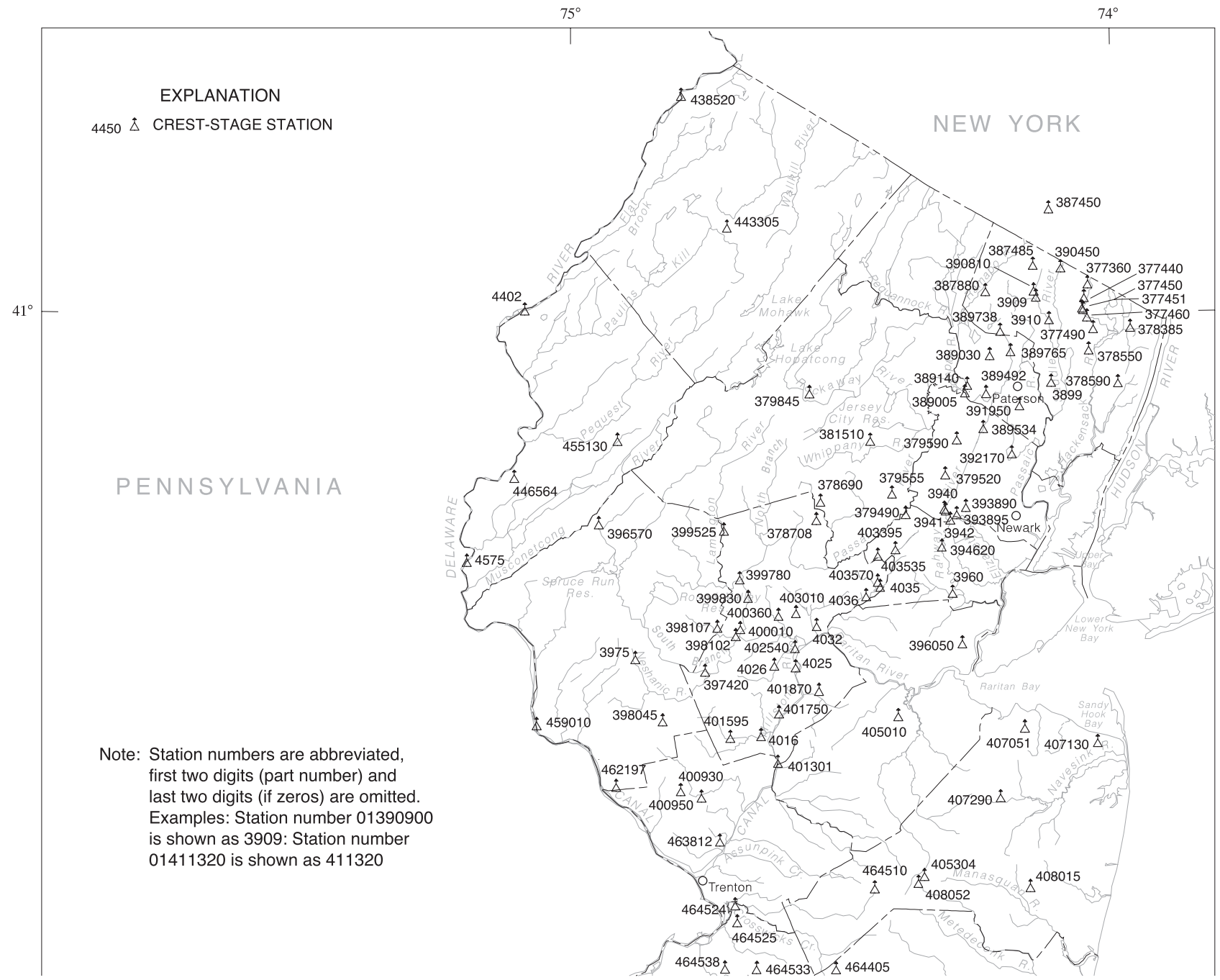
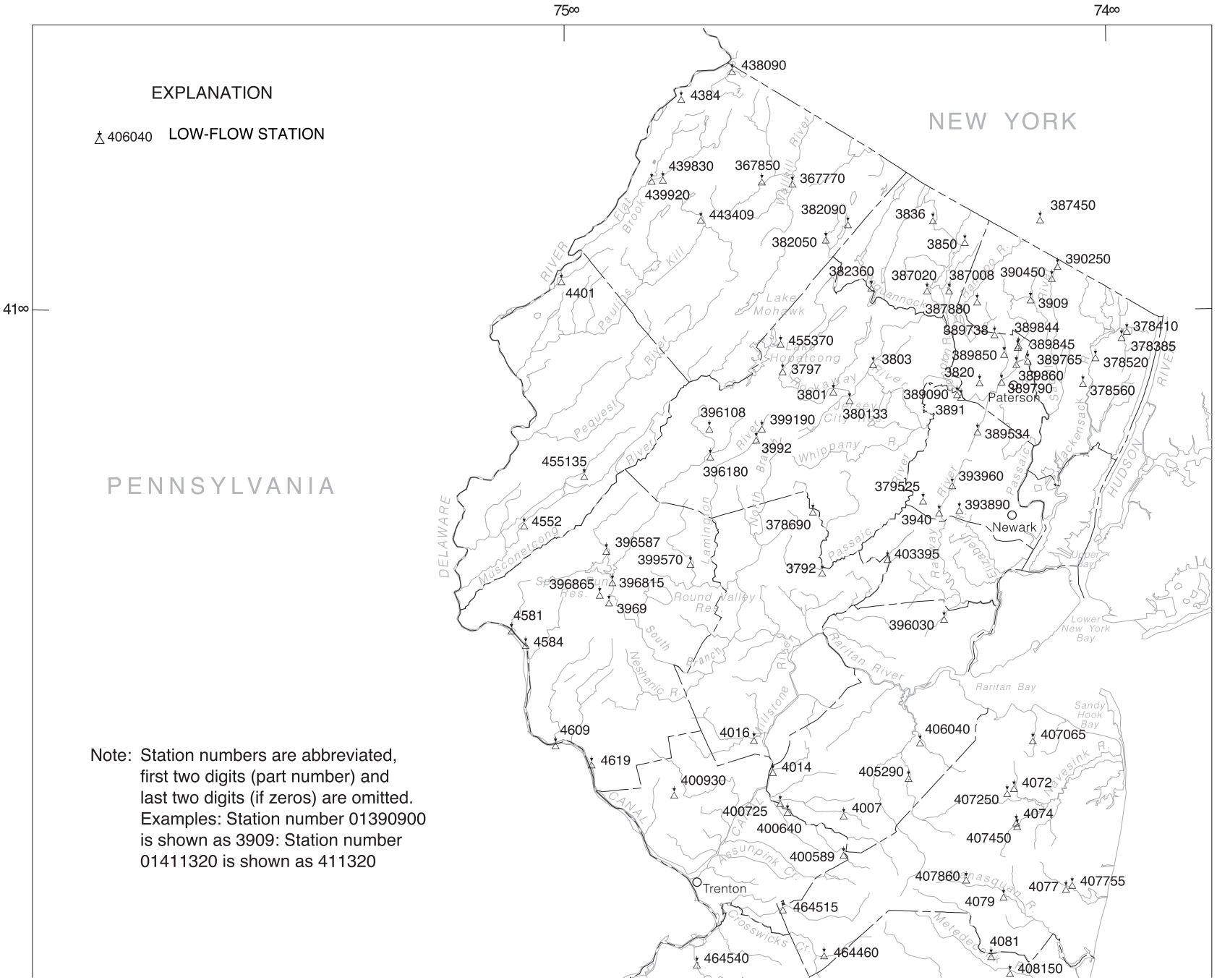

EXPLANATION
4450 CREST-STAGE STATION
75°
74°
41°
NEW YORK
PENNSYLVANIA
438520
443305
387450
387485
390450
390810
377360
377440
387880
377450
377451
3909
377460
389738
3910
378385
377490
389030
389765
378550
389140
389492
378590
379845
389005
Paterson
3899
391950
Jersey City Res.
389534
381510
379590
455130
392170
379555
379520
446564
378690
3940
393890
379490
393895
3941
Newark
396570
399525
378708
403395
3942
394620
4575
403535
399780
403570
3960
4035
399830
403010
4036
400360
398107
400010
4032
396050
398102
402540
3975
4026
4025
397420
401870
401750
459010
398045
401595
405010
407051
407130
4016
401301
462197
400930
407290
400950
463812
405304
464510
408015
Trenton
408052
464524
464525
464538
464533
464405
Note: Station numbers are abbreviated, first two digits (part number) and last two digits (if zeros) are omitted. Examples: Station number 01390900 is shown as 3909: Station number 01411320 is shown as 411320

Figure 9. Map showing location of crest-stage partial-record stations.



Note: Station numbers are abbreviated, first two digits (part number) and last two digits (if zeros) are omitted. Examples: Station number 01390900 is shown as 3909: Station number 01411320 is shown as 411320

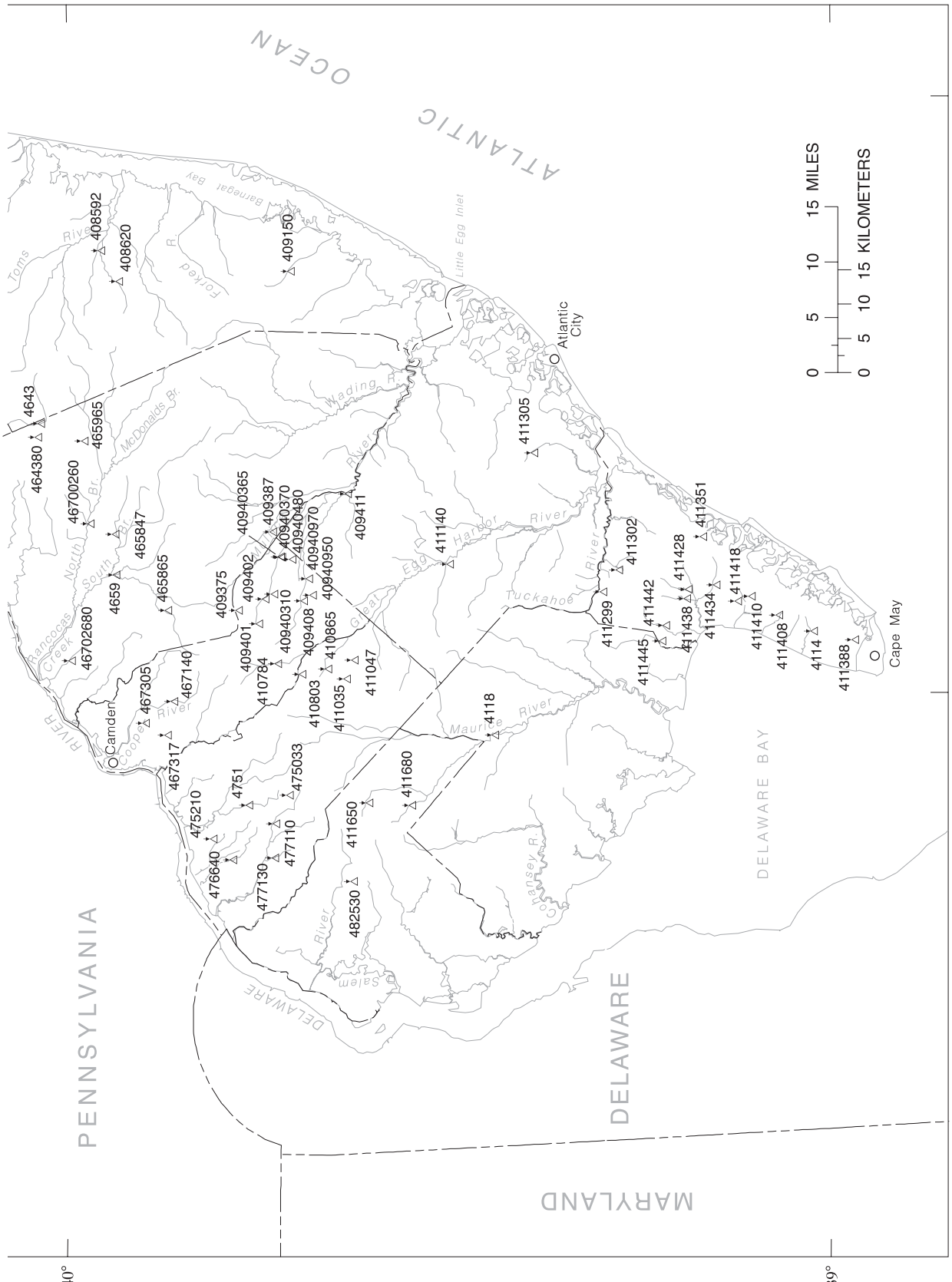
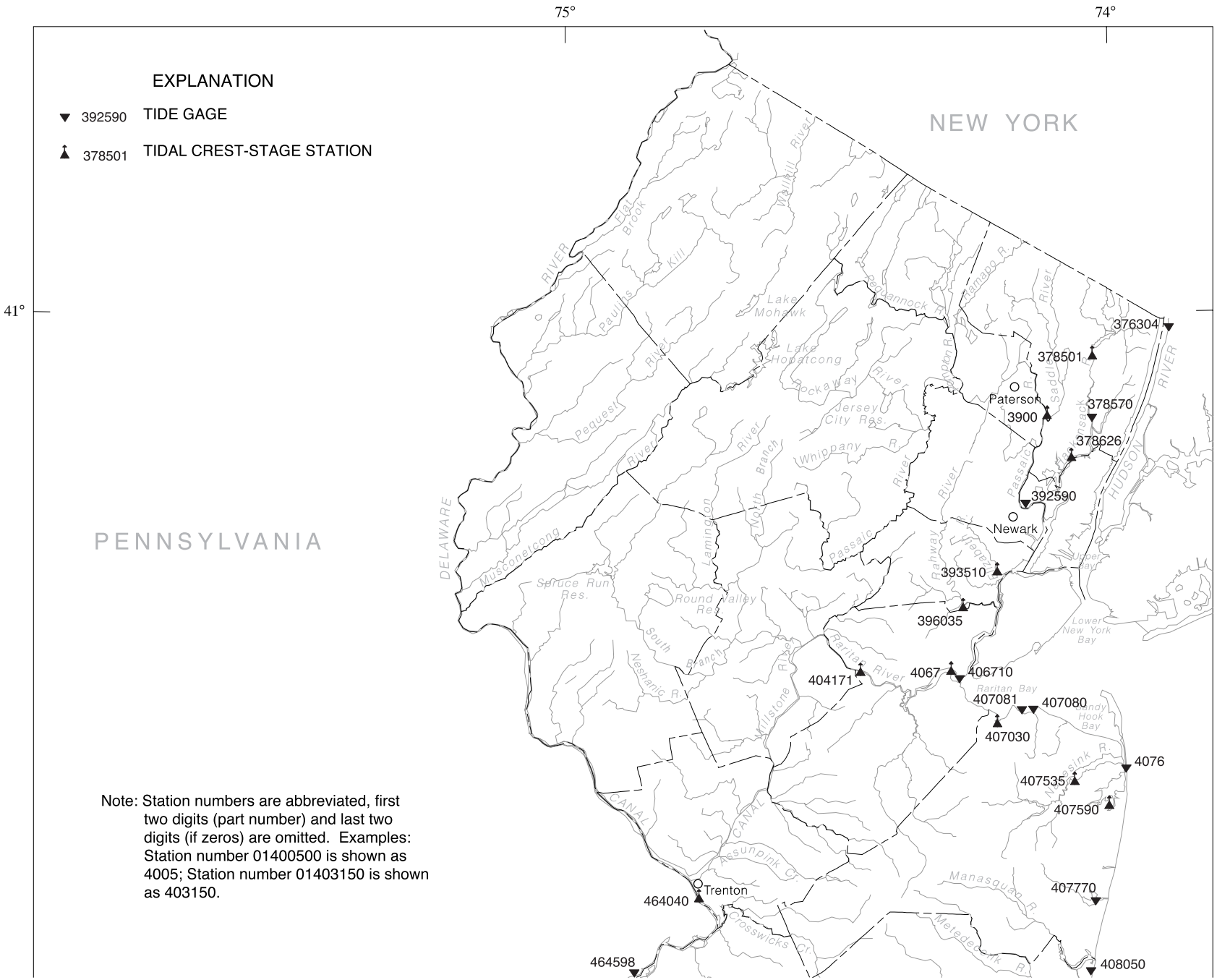


Figure 10. Map showing location of low-flow partial-record stations.



Note: Station numbers are abbreviated, first two digits (part number) and last two digits (if zeros) are omitted. Examples: Station number 01400500 is shown as 4005; Station number 01403150 is shown as 403150.

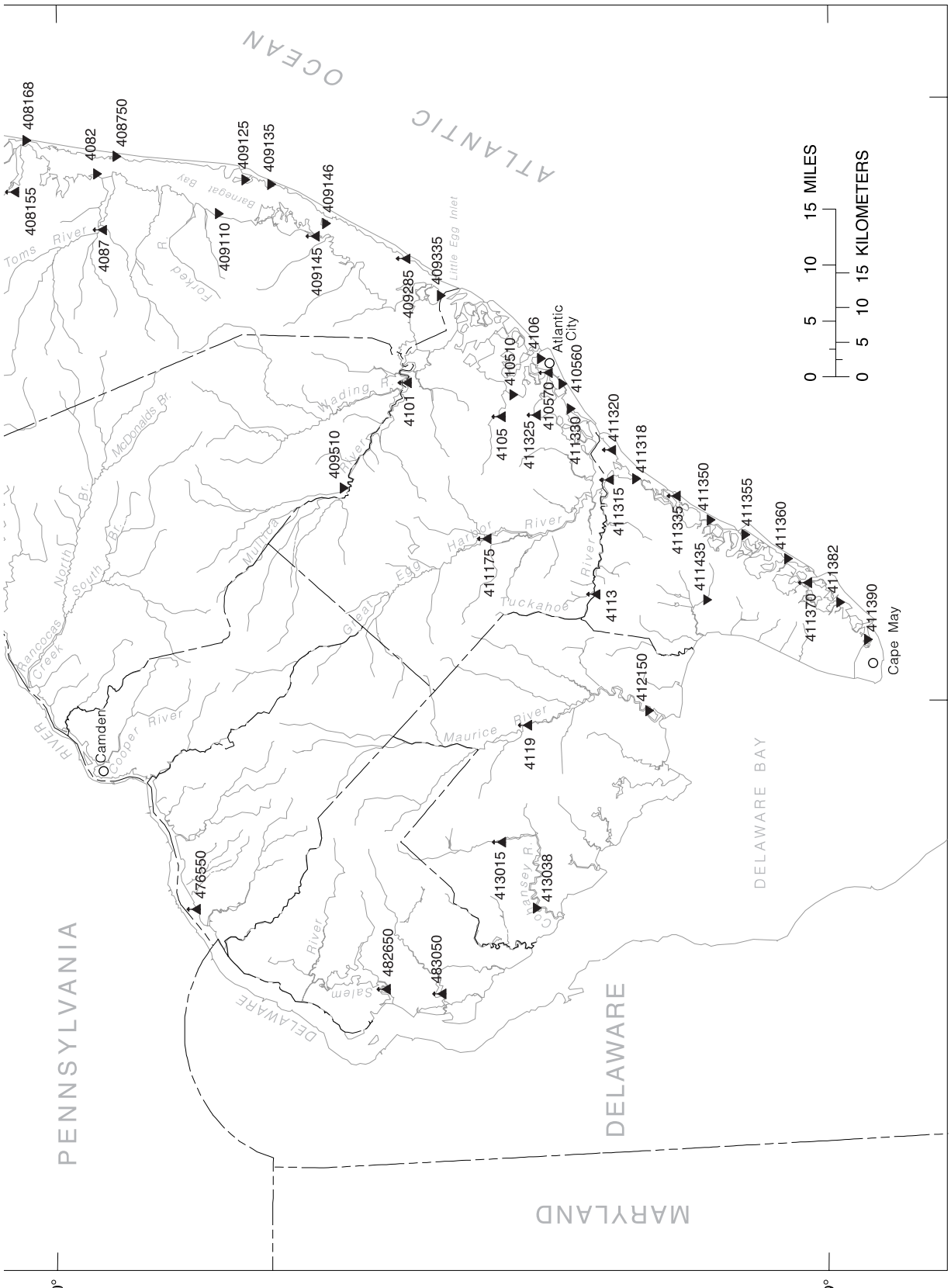


Figure 11. Map showing location of tide gage and tidal crest-stage partial-record stations.

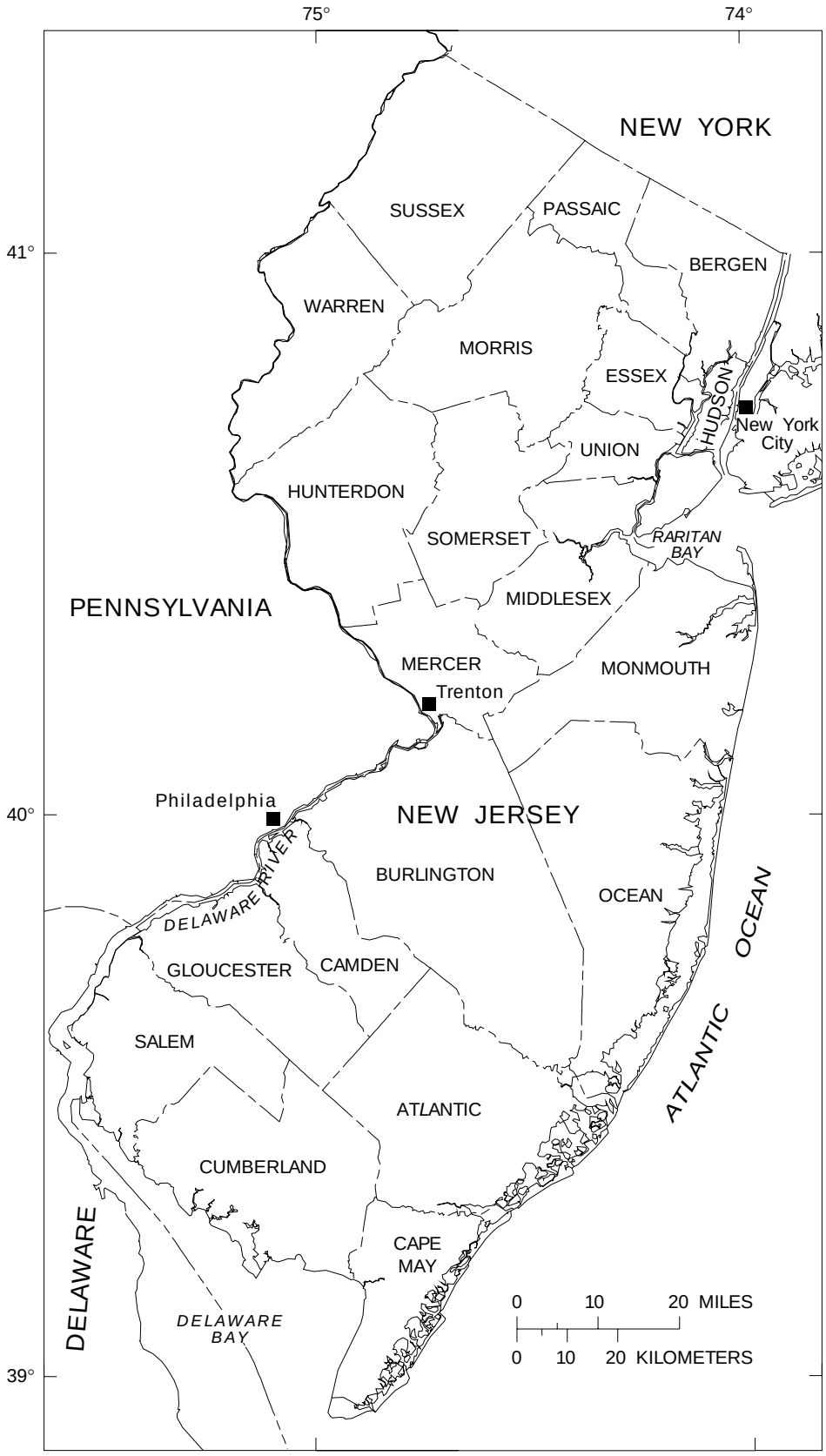


Figure 12. Map showing counties in New Jersey.

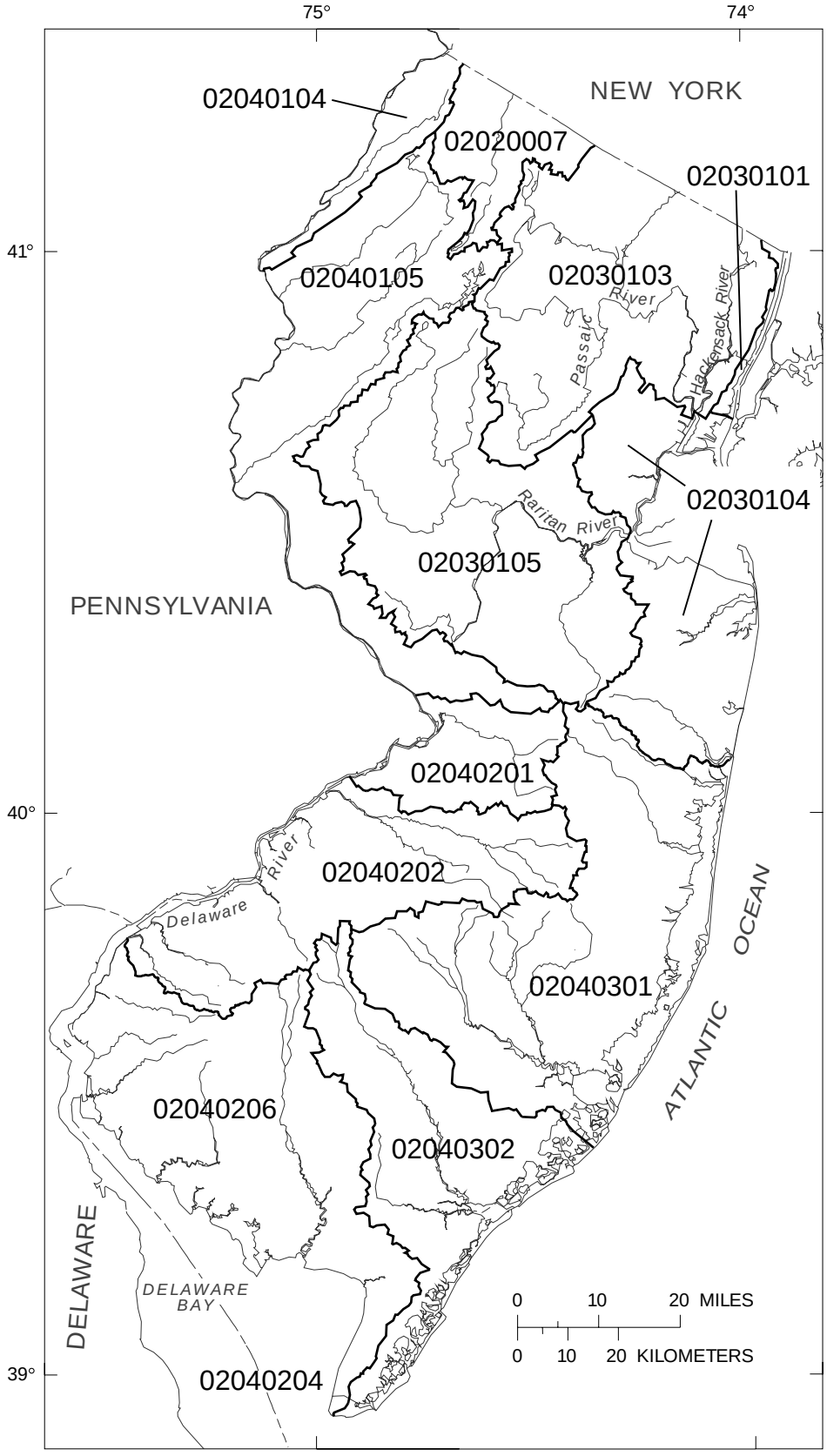


Figure 13. Map showing hydrologic cataloging units and codes in New Jersey. (Modified from Seaber and others, 1987)

HUDSON RIVER BASIN

01376304 HUDSON RIVER SOUTH OF HASTINGS-ON-HUDSON, NY

LOCATION.--Lat 40°59'16", long 73°53'15", Westchester County, Hydrologic Unit 02030101, 180 ft from left bank on abandoned Mobil Oil Corporation platform, 0.5 mi southwest of railroad station, at Hastings-on-Hudson. Water-quality sampling site at stage station.

DRAINAGE AREA.--13,265 mi^2.

ELEVATION RECORDS

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

GAGE.--Water-stage recorder. Datum of gage is NGVD of 1929.

REMARKS.--Prior to October 2002 published as maximum, minimum, and mean elevation. Elevations are not corrected for changes in water density. Blanks in tables are the result of only one high or low tide during a day or interruption of record. Satellite and telephone elevation, temperature, and specific conductance telemeter at station.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation (water years 1992-99, 2001-03), 7.27 ft, Dec. 11, 1992; minimum elevation (water years 1992-99, 2001-03), -4.01 ft, Mar. 4, 1996.

EXTREMES FOR CURRENT YEAR.--Maximum elevation, 5.33 ft, Dec. 25; minimum, -2.96 ft, Jan. 22.

ELEVATION ABOVE NGVD 1929, FEET
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.20	1.11	0.39	1.48	1.23	1.28	0.83	1.41	1.86	1.13	1.39	1.29
2	0.95	0.61	0.29	2.02	0.61	1.51	1.08	1.45	1.09	1.26	1.36	1.71
3	1.28	0.93	0.20	2.66	0.21	0.38	1.40	1.30	1.05	1.42	1.28	1.90
4	2.07	1.36	0.41	2.03	1.01	0.49	1.70	1.34	1.42	1.38	1.40	1.72
5	1.66	1.40	0.95	1.55	-0.40	0.81	2.03	1.25	1.49	1.24	1.44	1.57
6	1.26	1.90	1.43	1.59	-0.19	1.09	0.73	1.30	1.15	1.17	1.54	1.49
7	1.72	1.05	0.90	1.18	0.40	1.13	0.95	1.31	1.21	1.38	1.45	1.45
8	1.34	1.31	0.18	1.17	0.27	0.81	1.79	1.39	1.50	1.44	1.46	1.49
9	1.36	0.71	0.17	1.27	-0.14	0.85	1.53	1.31	1.85	1.42	1.44	1.80
10	1.48	1.37	0.68	1.42	0.53	0.44	1.60	1.24	1.37	1.65	1.49	1.53
11	1.79	1.33	1.30	0.35	0.24	0.60	1.92	1.54	1.43	1.82	1.50	1.19
12	2.59	1.05	1.39	-0.17	0.16	0.63	1.78	1.84	1.41	1.64	1.42	1.80
13	2.19	1.38	1.53	0.30	-0.53	0.80	1.30	1.44	1.67	1.34	---	1.60
14	1.23	1.30	2.02	-0.07	-0.44	0.90	1.04	1.40	1.68	1.20	1.15	1.43
15	1.91	1.01	0.68	0.69	0.04	0.95	1.01	1.37	1.54	1.30	1.33	1.47
16	2.90	1.39	1.09	0.41	0.09	1.08	0.96	1.69	1.50	1.41	1.54	1.35
17	1.72	2.45	1.36	0.80	1.76	1.54	2.01	1.57	1.24	1.14	1.56	1.32
18	1.54	0.53	1.34	1.08	1.66	1.89	1.89	1.12	1.32	1.24	1.61	2.08
19	1.53	0.26	1.13	1.11	1.05	2.13	1.37	0.96	1.53	1.29	1.41	2.56
20	0.99	1.16	1.72	0.23	0.64	1.98	1.33	0.98	1.66	1.31	1.05	1.53
21	1.29	1.43	1.11	-0.20	0.67	1.93	1.51	1.01	1.78	1.49	1.25	1.40
22	1.29	1.86	0.91	-0.73	1.18	1.86	1.71	1.12	1.63	1.43	1.41	1.70
23	0.92	0.02	0.78	-0.52	1.48	1.72	1.16	1.27	1.70	1.35	1.26	2.09
24	0.89	-0.15	0.70	0.36	-0.27	1.63	0.75	1.56	1.61	1.24	1.23	1.51
25	1.13	0.33	2.28	0.61	-0.09	1.59	1.37	1.34	1.54	0.99	1.23	1.74
26	2.14	1.06	0.33	0.62	0.53	1.51	1.94	1.68	1.54	0.93	1.33	1.62
27	1.10	1.16	0.95	0.27	0.94	1.33	1.44	1.49	1.63	1.02	1.46	1.86
28	0.98	0.84	1.04	0.54	1.52	1.26	1.27	1.54	1.37	1.05	1.24	2.13
29	1.13	0.91	1.09	0.54	---	1.47	1.15	1.51	1.32	1.38	1.31	1.87
30	1.49	1.11	1.09	0.69	---	1.22	1.17	1.59	1.22	1.22	1.25	1.23
31	1.57	---	1.49	0.99	---	0.89	---	1.70	---	1.29	1.17	---
MEAN	1.50	1.07	1.00	0.78	0.51	1.22	1.39	1.39	1.48	1.31	---	1.65
MAX	2.90	2.45	2.28	2.66	1.76	2.13	2.03	1.84	1.86	1.82	---	2.56
MIN	0.89	-0.15	0.17	-0.73	-0.53	0.38	0.73	0.96	1.05	0.93	---	1.19

01376304 HUDSON RIVER SOUTH OF HASTINGS-ON-HUDSON, NY—Continued

ELEVATION ABOVE NGVD 1929, FEET
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY TIDAL HIGH-HIGH VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.06	3.06	2.98	3.77	3.44	3.22	3.09	3.65	3.47	3.58	3.28	3.59
2	2.88	2.80	2.73	4.67	3.01	3.41	3.43	3.63	3.37	3.76	3.55	3.97
3	3.29	3.21	2.51	5.26	2.22	2.14	3.62	3.74	3.41	3.11	3.38	3.98
4	4.27	3.80	3.26	4.75	3.29	2.58	4.15	3.39	2.80	3.56	3.61	3.67
5	3.97	3.86	3.51	4.04	1.19	2.70	3.75	2.64	3.71	3.39	3.55	3.62
6	3.83	4.87	4.19	3.99	1.32	2.84	1.86	3.33	3.35	3.06	3.82	3.67
7	4.36	3.71	3.35	3.12	1.70	2.65	2.32	3.26	3.04	3.27	3.72	3.63
8	3.89	3.66	2.54	2.87	1.67	2.65	3.28	3.15	3.31	3.43	3.72	3.94
9	3.84	2.92	2.38	2.93	1.59	2.69	3.32	3.32	3.83	3.50	3.88	4.19
10	3.81	3.41	2.37	3.05	1.56	1.74	3.31	3.01	3.53	4.16	3.93	3.54
11	4.03	3.18	2.82	2.05	2.09	1.77	3.76	3.42	3.89	4.27	4.01	3.46
12	4.66	2.56	3.71	1.02	2.49	2.14	3.79	3.74	4.00	4.12	3.87	3.79
13	3.94	2.84	3.14	1.94	1.05	2.01	3.23	3.58	4.57	3.79	3.67	3.62
14	3.02	2.96	3.94	1.58	1.29	2.20	3.19	3.96	4.51	3.78	3.41	3.29
15	3.64	2.59	2.28	2.69	2.13	2.74	3.42	4.14	4.29	3.76	3.48	3.24
16	5.03	3.45	3.23	2.11	2.15	2.99	3.82	4.90	4.13	3.57	3.42	3.03
17	3.71	4.37	3.37	2.90	4.21	3.71	5.29	4.24	3.09	2.94	3.38	2.98
18	3.27	3.00	3.59	3.15	4.06	4.43	4.41	3.88	3.74	3.27	3.24	3.59
19	3.35	2.61	3.25	3.45	3.14	4.74	4.08	2.84	3.69	3.15	2.91	4.19
20	2.87	3.34	4.10	2.69	2.60	4.92	3.24	3.63	3.69	2.91	2.63	3.11
21	3.29	3.61	3.63	2.17	2.65	4.02	3.97	3.33	3.51	3.09	2.98	3.28
22	3.32	4.23	3.16	1.53	2.80	4.32	4.03	2.88	3.11	3.14	3.24	3.76
23	3.16	2.02	2.89	1.65	3.86	4.09	3.61	2.99	3.26	2.95	3.12	4.05
24	3.00	2.01	2.77	2.49	1.20	3.70	2.34	3.13	3.27	3.02	3.22	3.81
25	3.17	2.52	5.33	2.66	1.91	3.53	3.03	2.87	3.37	2.96	3.52	4.12
26	4.43	3.16	2.76	2.46	2.14	3.45	3.57	3.36	3.53	3.08	3.91	3.92
27	2.80	2.76	2.59	2.52	2.74	3.17	3.27	3.32	3.72	3.42	3.80	4.36
28	2.79	2.65	2.95	2.57	3.39	2.96	3.18	3.49	3.53	3.65	3.59	4.76
29	3.09	3.08	3.27	2.69	---	3.50	3.16	3.77	3.72	3.81	3.72	4.65
30	3.40	3.25	3.18	2.76	---	3.15	3.51	3.83	3.45	3.61	3.47	3.73
31	3.47	---	3.82	3.18	---	2.95	---	4.15	---	3.69	3.51	---
MEAN	3.57	3.18	3.21	2.86	2.39	3.13	3.47	3.50	3.60	3.45	3.50	3.75
MAX	5.03	4.87	5.33	5.26	4.21	4.92	5.29	4.90	4.57	4.27	4.01	4.76
MIN	2.79	2.01	2.28	1.02	1.05	1.74	1.86	2.64	2.80	2.91	2.63	2.98

WTR YR 2003 MEAN 3.31 MAX 5.33 MIN 1.02

01376304 HUDSON RIVER SOUTH OF HASTINGS-ON-HUDSON, NY—Continued

ELEVATION ABOVE NGVD 1929, FEET
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY TIDAL LOW-HIGH VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.33	2.99	1.72	3.59	2.80	2.76	2.71	3.03	3.44	2.50	---	3.26
2	2.13	2.43	2.48	3.73	1.54	3.30	2.97	2.95	2.28	2.70	3.24	3.21
3	2.72	3.18	2.10	4.56	2.09	1.70	3.27	2.82	2.28	---	3.25	3.49
4	4.02	3.54	2.35	3.14	1.86	2.11	3.27	2.73	---	2.98	3.26	3.21
5	3.62	3.67	3.42	3.22	---	2.60	3.48	---	2.81	2.91	3.03	2.76
6	3.42	2.81	2.72	---	0.89	---	---	2.45	2.38	2.94	2.99	2.56
7	3.54	3.13	2.14	2.93	1.68	2.61	2.08	2.40	2.69	3.09	2.74	2.85
8	3.39	---	---	2.86	1.32	1.88	2.91	2.45	3.08	3.13	2.75	2.88
9	---	2.29	0.94	2.44	0.58	1.81	2.24	2.40	3.50	2.91	2.93	3.43
10	3.32	2.49	2.14	2.68	1.32	1.36	2.45	2.65	2.97	2.96	3.09	3.42
11	3.11	2.92	1.90	1.34	0.90	1.32	2.88	3.11	3.05	3.54	3.23	2.96
12	3.82	2.18	2.33	0.80	0.11	1.30	3.23	3.69	3.25	3.39	3.25	3.78
13	3.75	2.61	2.54	1.07	0.53	1.78	3.04	3.40	3.49	3.09	3.27	3.09
14	2.24	2.66	3.00	0.95	0.92	2.06	3.05	3.43	3.64	3.09	3.06	---
15	3.02	2.53	2.08	1.52	1.19	2.42	3.17	3.43	3.45	3.13	3.25	3.02
16	3.96	2.55	2.10	1.99	2.04	2.94	3.03	3.74	3.56	3.40	---	2.93
17	3.22	3.83	2.71	1.84	4.00	3.66	4.15	3.72	---	---	3.32	2.32
18	3.07	1.02	2.69	2.91	3.03	4.11	4.12	3.21	3.08	2.92	3.04	2.73
19	3.15	2.14	2.74	2.16	2.95	4.56	3.43	---	3.13	2.83	2.90	3.79
20	2.80	2.80	3.04	1.18	---	4.20	---	2.66	3.07	2.77	2.20	2.34
21	3.01	3.11	2.19	---	2.54	---	3.25	2.53	3.28	2.81	2.00	2.08
22	2.96	2.84	---	1.28	2.77	3.62	3.11	2.54	3.03	2.54	2.15	2.61
23	2.26	---	2.78	0.46	3.11	3.24	2.24	2.55	3.06	2.40	2.09	3.79
24	2.43	---	2.47	2.12	1.13	2.93	1.99	2.90	2.85	2.12	2.45	3.16
25	---	1.18	3.02	1.96	0.65	2.89	2.76	2.87	2.67	1.92	2.43	3.73
26	2.94	1.83	1.61	1.84	1.73	2.87	3.31	3.08	2.57	1.84	2.69	3.85
27	2.63	2.68	2.55	1.24	2.14	2.61	2.96	3.01	2.82	2.05	3.30	4.23
28	2.18	2.30	2.51	1.83	2.92	2.79	2.88	2.89	2.57	2.30	3.13	4.07
29	2.07	2.12	2.47	1.91	---	3.37	2.84	2.80	2.54	2.87	3.41	3.25
30	2.59	2.67	2.94	2.21	---	3.10	2.66	3.00	2.54	2.80	3.16	---
31	2.99	---	3.26	2.73	---	2.60	---	2.99	---	3.01	---	---
MEAN	---	---	---	---	---	---	---	---	---	---	---	---
MAX	---	---	---	---	---	---	---	---	---	---	---	---
MIN	---	---	---	---	---	---	---	---	---	---	---	---

01376304 HUDSON RIVER SOUTH OF HASTINGS-ON-HUDSON, NY—Continued

ELEVATION ABOVE NGVD 1929, FEET
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY TIDAL HIGH-LOW VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	-0.52	-0.68	-1.12	-0.96	-0.84	-0.35	-1.15	-0.65	0.11	-0.77	-0.69	-0.62
2	---	-1.67	-2.15	-0.30	-0.92	-0.29	-1.10	-0.45	-0.56	-0.62	-0.58	0.13
3	-0.81	-1.46	-2.08	0.70	-1.66	-0.69	-0.58	-0.42	-0.63	-0.50	-0.39	0.09
4	-0.15	-0.99	-2.07	0.39	-0.83	-1.24	-0.24	-0.45	-0.17	-0.43	-0.44	-0.22
5	-0.27	-0.91	-1.01	-0.55	-1.87	-1.09	0.58	-0.47	-0.09	-0.51	-0.20	---
6	-1.16	-0.21	-0.71	-0.49	-1.60	-0.73	-1.00	-0.23	-0.43	-0.43	-0.41	-0.37
7	-0.53	-1.02	-1.20	-0.47	-0.90	-0.49	-0.22	-0.05	-0.16	-0.25	-0.43	-0.53
8	-0.95	-0.63	-1.62	-0.07	-0.80	-0.73	0.49	0.10	-0.13	-0.40	---	-0.66
9	-0.73	-0.88	-1.00	0.10	-1.40	-0.04	0.40	-0.10	-0.15	---	-0.75	-0.21
10	-0.41	-0.23	-0.63	0.59	-0.26	-0.43	0.54	-0.39	---	-0.60	-0.61	-0.43
11	0.29	-0.01	0.47	-0.42	-0.28	-0.28	0.40	0.17	-0.77	-0.28	-0.75	-0.98
12	1.16	-0.43	0.31	-1.36	---	-0.22	---	---	-0.79	-0.54	-0.74	-0.04
13	0.57	0.23	0.31	---	-1.92	-0.24	-0.51	-0.63	-0.89	-0.69	---	-0.28
14	-0.28	---	---	-1.42	-2.25	---	-1.05	-1.03	-0.67	-1.04	-0.93	-0.28
15	0.42	-0.61	-0.94	-0.95	-1.71	-0.62	-1.26	-1.13	-0.83	-0.86	-0.50	-0.08
16	---	-0.47	-0.74	-1.29	-2.03	-1.06	-1.59	-0.91	-0.73	-0.55	0.00	-0.13
17	-0.08	1.01	-0.45	-0.99	0.18	-0.76	-0.40	-0.72	-0.95	-0.68	0.12	0.28
18	0.01	0.04	-0.40	-0.73	-0.22	-0.43	-0.30	-1.23	-0.48	-0.42	0.44	1.45
19	-0.13	-1.38	-0.90	-0.66	-1.04	-0.23	-0.89	-1.23	-0.01	-0.12	0.09	0.96
20	-0.92	-0.70	0.08	-1.46	-1.28	-0.29	-0.90	-0.94	0.42	0.15	-0.19	0.01
21	-0.63	-0.56	-0.70	-2.12	-1.30	-0.18	-0.35	-0.61	0.29	0.35	0.13	---
22	-0.72	0.13	-0.90	-2.67	-0.14	-0.08	-0.01	-0.05	0.31	0.04	-0.11	-0.05
23	-0.80	-1.20	-1.13	-2.08	0.35	0.03	-0.59	0.01	0.31	0.02	---	0.21
24	-0.86	-1.85	-1.20	-1.70	-1.55	0.07	-0.49	-0.01	---	---	-0.48	-0.55
25	-0.54	-0.98	0.13	-0.98	-1.73	0.21	-0.10	---	0.09	-0.46	-0.65	-0.55
26	0.79	-0.48	-1.35	-1.15	---	-0.21	---	-0.23	0.00	-0.74	-0.82	-0.73
27	-0.20	-0.08	-0.72	---	-0.87	---	0.14	0.12	-0.03	-0.79	-0.60	-0.51
28	-0.30	-0.69	-0.67	-1.45	-0.41	-0.57	-0.49	-0.23	-0.42	-0.87	-1.00	-0.12
29	-0.35	-0.80	---	-1.60	---	-0.62	-0.63	-0.38	-0.58	-0.65	-0.96	-0.28
30	-0.07	---	-1.06	-1.44	---	-0.68	-0.97	-0.37	-0.64	-0.80	-1.02	-0.66
31	---	---	-0.80	-1.14	---	-0.69	---	-0.19	---	-0.73	-0.80	---
MEAN	---	---	---	---	---	---	---	---	---	---	---	---
MAX	---	---	---	---	---	---	---	---	---	---	---	---
MIN	---	---	---	---	---	---	---	---	---	---	---	---

01376304 HUDSON RIVER SOUTH OF HASTINGS-ON-HUDSON, NY—Continued

ELEVATION ABOVE NGVD 1929, FEET
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY TIDAL LOW-LOW VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	-0.75	-0.88	-2.06	-0.99	-0.89	-0.72	-1.56	-0.79	0.05	-0.92	-0.73	-0.95
2	-1.04	-1.88	-2.39	-0.30	-1.68	-0.64	-1.12	-0.81	-0.88	-0.80	-0.88	-0.56
3	-0.86	-1.70	-2.11	-0.07	-1.90	-2.09	-0.92	-0.91	-0.89	-0.56	-0.94	-0.19
4	-0.45	-1.31	-2.34	-0.59	-0.95	-1.45	-0.56	-0.58	-0.48	-0.58	-0.77	-0.23
5	-0.77	-1.25	-2.22	-0.78	-2.46	-1.35	0.00	-0.53	-0.29	-0.76	-0.89	-0.40
6	-1.48	-0.29	-0.85	-0.53	-1.88	-0.77	-1.02	-0.31	-0.58	-0.98	-0.61	-0.48
7	-0.67	-1.44	-1.21	-0.66	-1.02	-0.68	-1.02	-0.26	-0.79	-0.82	-0.79	-0.61
8	-1.10	-0.73	-1.69	-0.84	-1.00	-0.74	0.44	-0.15	-0.54	-0.80	-0.74	-0.70
9	-1.00	-1.40	-1.86	-0.46	-1.44	-0.88	0.22	-0.38	-0.26	-0.82	-0.90	-0.44
10	-0.76	-0.49	-1.04	-0.46	-0.66	-0.88	0.08	-0.71	-1.16	-0.88	-0.88	-0.75
11	-0.42	-0.64	-0.44	-1.62	-1.35	-0.47	0.28	-0.71	-1.14	-0.58	-0.86	-1.03
12	0.75	-0.44	-1.15	-1.49	-1.98	-0.66	-0.12	-0.45	-1.28	-0.80	-0.88	-0.42
13	0.28	-0.74	0.12	-0.68	-2.29	-0.66	-1.04	-1.04	-1.03	-1.17	-0.98	-0.30
14	-0.30	-0.05	1.04	-2.46	-2.38	-0.77	-1.55	-1.21	-0.93	-1.19	-1.14	-0.73
15	0.37	-0.74	-1.18	-0.97	-1.99	-1.06	-1.62	-1.40	-0.95	-0.96	-1.09	-0.48
16	1.97	-0.97	-0.85	-1.70	-2.14	-1.09	-1.71	-1.13	-0.94	-0.81	-0.71	-0.20
17	-0.27	0.48	-0.90	-1.22	-1.33	-0.90	-1.00	-1.10	-0.97	-1.11	-0.45	-0.27
18	-0.50	-1.93	-0.82	-1.32	-0.63	-0.63	-0.86	-1.34	-0.86	-0.86	-0.34	0.55
19	-0.46	-2.55	-0.99	-0.85	-1.09	-0.43	-1.09	-1.33	-0.65	-0.75	-0.29	0.64
20	-0.98	-1.18	-0.61	-2.07	-1.57	-0.51	-0.91	-1.23	-0.54	-0.66	-0.56	-0.11
21	-0.84	-0.63	-1.19	-2.45	-1.32	-0.41	-0.80	-1.03	-0.10	-0.42	-0.41	-0.05
22	-0.73	-0.24	-1.39	-2.96	-0.97	-0.12	-0.39	-0.89	-0.26	-0.35	-0.12	-0.24
23	-1.30	-2.13	-1.28	-2.86	-1.49	-0.07	-0.77	-0.62	-0.14	-0.46	-0.22	0.17
24	-1.09	-1.87	-1.54	-1.80	-2.11	-0.08	-1.13	-0.24	-0.23	-0.57	-0.70	-0.76
25	-0.74	-1.64	0.05	-1.38	-1.95	-0.09	-0.53	-0.51	-0.27	-0.69	-0.80	-0.63
26	0.30	-0.61	-1.74	-1.22	-1.19	-0.43	0.23	-0.24	-0.34	-0.77	-0.88	-0.89
27	-0.70	-0.86	-1.15	-1.68	-0.99	-0.65	-0.73	-0.68	-0.22	-0.89	-0.92	-0.85
28	-0.49	-1.35	-1.21	-2.05	-0.47	-0.93	-0.91	-0.45	-0.55	-1.00	-1.24	-0.26
29	-0.49	-1.38	-0.68	-1.71	---	-0.84	-1.21	-0.44	-0.64	-0.78	-1.14	-0.34
30	-0.28	-1.01	-1.64	-1.66	---	-0.92	-1.03	-0.48	-0.81	-0.94	-1.05	-1.02
31	-0.31	---	-1.00	-1.22	---	-1.54	---	-0.34	---	-0.91	-1.31	---
MEAN	-0.49	-1.06	-1.17	-1.32	-1.47	-0.76	-0.74	-0.72	-0.62	-0.79	-0.78	-0.42
MAX	1.97	0.48	1.04	-0.07	-0.47	-0.07	0.44	-0.15	0.05	-0.35	-0.12	0.64
MIN	-1.48	-2.55	-2.39	-2.96	-2.46	-2.09	-1.71	-1.40	-1.28	-1.19	-1.31	-1.03

WTR YR 2003 MEAN -0.86 MAX 1.97 MIN -2.96

Figure 14. U.S. Geological Survey gage continuously monitoring the stage of the Rockaway River below resevoir at Boonton, NJ. Photo taken by Richard W. Edwards, 2003.

01376800 HACKENSACK RIVER AT WEST NYACK, NY

LOCATION.--Lat 41°05'44", long 73°57'52", Rockland County, Hydrologic Unit 02030103, on right bank 20 ft downstream from Penn Central Transportation Co. railroad bridge at West Nyack, 1,000 ft upstream from State Highway 59, and 1.0 mi downstream from DeForest Lake.

DRAINAGE AREA.--30.7 mi^2.

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

REVISIONS.--WDR NY-90-1: Drainage area.

GAGE.--Water-stage recorder, stop-log control, and crest-stage gage. Datum of gage is 53.50 ft above NGVD of 1929 (levels by Hackensack Water Co.).

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Flow regulated by DeForest Lake (see Reservoirs in Hackensack River Basin). Diversion from gaging station pool for municipal supply for village of Nyack (see Diversions in Hackensack River Basin). Discharge given for this station represents the flow of Hackensack River downstream from this diversion.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,740 ft^3/s, Sept. 16, 1999, gage height, 11.21 ft, from floodmarks in gage house, from rating curve extended above 840 ft^3/s; minimum discharge not determined.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 868 ft^3/s, Jan. 2, gage height, 8.84 ft; minimum discharge, 4.5 ft^3/s, Nov. 16, gage height, 2.29 ft.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.6	12	13	152	17	37	73	18	402	23	18	22
2	8.9	13	e15	611	18	100	67	23	153	19	22	29
3	8.4	12	16	198	19	166	59	31	77	16	26	15
4	10	12	17	147	21	78	52	20	202	15	55	18
5	8.6	10	16	e100	19	75	51	18	327	16	70	18
6	8.3	16	13	90	17	106	51	16	127	15	79	17
7	8.8	14	13	76	e19	76	44	17	105	16	64	17
8	8.3	14	12	66	18	60	51	32	149	17	104	17
9	8.4	14	12	70	17	e60	63	31	82	17	69	17
10	9.3	17	13	78	e19	e58	70	26	61	26	52	17
11	33	19	27	68	19	53	78	24	50	26	45	18
12	105	26	38	56	18	48	112	24	58	15	97	18
13	22	21	25	49	16	52	79	20	339	18	62	19
14	8.4	12	55	42	16	50	54	17	210	18	43	19
15	10	8.8	17	36	16	47	46	15	137	18	30	13
16	22	11	12	32	15	69	45	14	73	18	23	24
17	14	e80	12	31	18	136	37	13	54	18	20	46
18	8.5	31	11	28	23	175	28	12	60	17	16	77
19	7.6	11	14	24	21	128	26	12	59	17	15	59
20	7.3	9.7	38	23	19	97	24	14	62	17	14	15
21	7.6	8.7	26	21	18	374	22	18	158	20	17	15
22	7.6	18	29	20	60	237	25	18	347	57	18	15
23	7.6	15	32	18	307	130	27	18	123	61	18	21
24	7.1	9.2	37	18	204	90	24	18	74	44	17	13
25	7.1	8.5	72	19	87	68	19	14	56	34	17	15
26	24	8.2	102	18	62	67	23	64	46	24	17	17
27	9.4	11	86	17	52	77	25	75	38	19	17	23
28	8.8	10	76	15	43	65	22	74	30	17	17	55
29	11	12	73	15	---	82	21	75	23	13	17	44
30	13	e13	70	e17	---	235	20	54	23	12	17	39
31	12	---	73	e17	---	110	---	48	---	16	16	---
TOTAL	440.6	477.1	1,065	2,172	1,198	3,206	1,338	873	3,705	679	1,112	752
MEAN	14.2	15.9	34.4	70.1	42.8	103	44.6	28.2	124	21.9	35.9	25.1
MAX	105	80	102	611	307	374	112	75	402	61	104	77
MIN	7.1	8.2	11	15	15	37	19	12	23	12	14	13

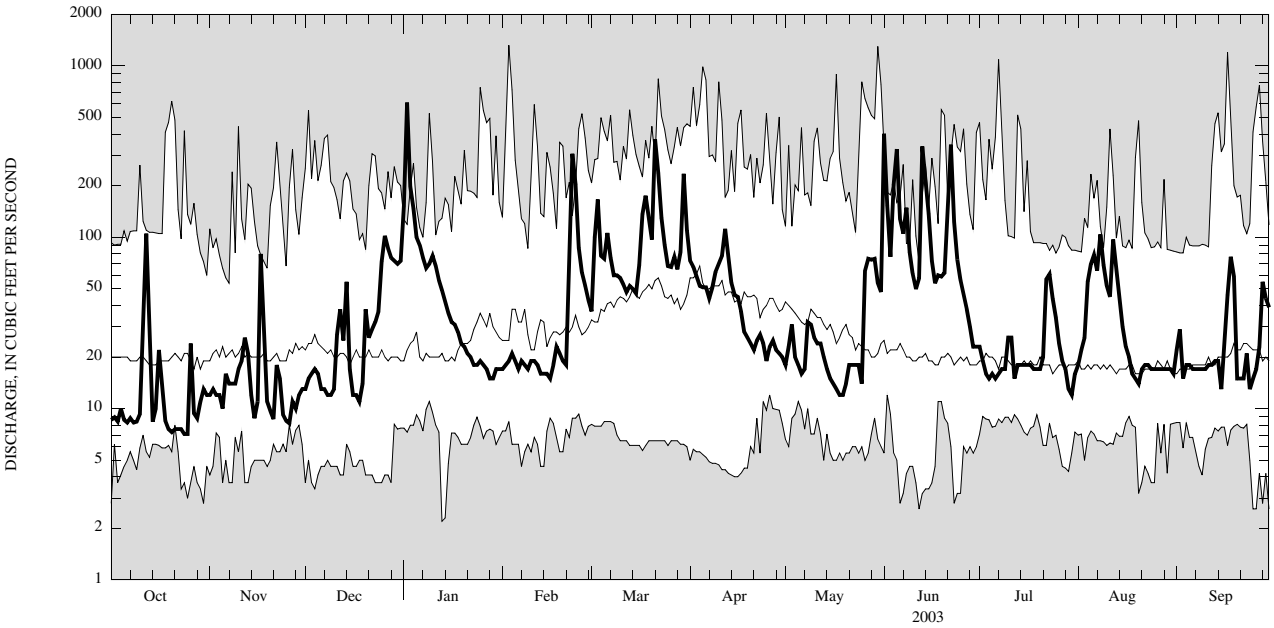
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1959 - 2003, BY WATER YEAR (WY)

MEAN	29.8	29.4	36.6	41.5	46.4	68.0	69.2	49.0	36.5	31.4	26.9	33.6
MAX	84.2	88.6	135	125	152	151	204	162	162	127	83.3	105
(WY)	(1990)	(1976)	(1997)	(1978)	(1973)	(1961)	(1983)	(1989)	(1972)	(1984)	(1966)	(1999)
MIN	7.27	7.59	5.63	8.95	9.59	6.95	9.61	7.04	12.7	10.1	8.69	8.22
(WY)	(1967)	(1967)	(1967)	(1967)	(2002)	(1981)	(1966)	(1965)	(1981)	(1999)	(2002)	(2002)

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1959 - 2003	
ANNUAL TOTAL	5,409.1		17,017.7			
ANNUAL MEAN	14.8		46.6		41.7	
HIGHEST ANNUAL MEAN					74.1	1984
LOWEST ANNUAL MEAN					12.4	2002
HIGHEST DAILY MEAN	105	Oct 12	611	Jan 2	1,320	Feb 3, 1973
LOWEST DAILY MEAN	4.3	Jul 29	7.1	Oct 24	2.2	Jan 13, 1996
ANNUAL SEVEN-DAY MINIMUM	5.5	Jul 24	7.4	Oct 19	3.1	Sep 25, 1966
10 PERCENT EXCEEDS	25		97		84	
50 PERCENT EXCEEDS	12		22		23	
90 PERCENT EXCEEDS	7.1		12		12	

01376800 HACKENSACK RIVER AT WEST NYACK, NY—Continued

e Estimated



CURRENT WATER YEAR DAILY MEAN DISCHARGE (BOLD) WITH DAILY MEDIAN FOR PERIOD OF RECORD.
SHADED AREAS SHOW HIGHEST AND LOWEST DAILY MEAN FOR PERIOD OF RECORD THROUGH PREVIOUS WATER YEAR.

01377000 HACKENSACK RIVER AT RIVERVALE, NJ

LOCATION.--Lat 40°59'57", long 73°59'21", Bergen County, Hydrologic Unit 02030103, on upstream right bank at bridge on Westwood Avenue in Rivervale, 1.5 mi upstream from Pascack Brook, 4.1 mi downstream of Lake Tappan, and 4.6 mi upstream from Oradell Dam.

DRAINAGE AREA.--58.0 mi^2.

PERIOD OF RECORD.--October 1941 to current year.

REVISED RECORDS.--WDR-NJ-80-1: 1968-79(M).

GAGE.--Water-stage recorder, crest-stage gages, and concrete control. Datum of gage is 22.51 ft above NGVD of 1929.

REMARKS.--Records fair. Flow regulated by De Forest Lake (since 1956) and Lake Tappan (since 1965), see Hackensack River basin, reservoirs in. Diversions from De Forest Lake and West Nyack, NY, for municipal water supply (see Hackensack River basin, diversions). Several measurements of water temperature were made during the year. Satellite gage-height telemetry at station.

COOPERATION.--Gage-height record collected in cooperation with United Water New Jersey.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	22	39	16	133	84	88	176	21	494	61	110	64
2	22	40	13	1,340	84	123	145	24	536	58	110	87
3	21	39	13	682	84	133	123	26	175	54	105	66
4	22	43	15	322	85	150	111	21	269	40	155	65
5	22	50	17	188	86	148	106	19	e625	39	141	68
6	22	57	16	149	84	180	101	18	e340	39	131	84
7	22	50	16	135	84	169	98	18	e200	42	110	84
8	22	49	16	117	84	135	100	28	e280	39	138	84
9	21	50	17	114	84	128	111	20	191	39	110	84
10	21	49	16	126	84	129	120	20	138	41	112	84
11	64	48	26	116	84	112	137	20	108	45	108	84
12	108	55	59	102	84	103	185	20	126	44	86	83
13	37	62	22	89	84	106	175	25	487	42	68	82
14	25	52	54	79	84	106	138	45	532	46	68	90
15	21	50	24	70	84	105	116	45	356	67	66	84
16	23	51	19	63	82	126	106	46	179	82	67	129
17	18	129	18	60	83	170	101	45	126	81	67	208
18	8.7	65	19	61	84	233	97	45	126	86	66	165
19	7.1	31	20	51	82	248	94	51	118	101	66	131
20	6.5	27	50	48	82	202	94	58	155	101	65	116
21	5.8	26	36	43	82	610	94	59	148	102	65	116
22	5.5	38	37	41	125	553	97	60	719	135	65	108
23	5.5	37	41	39	168	285	96	61	354	124	65	99
24	8.7	27	43	35	110	185	94	63	166	111	64	79
25	19	25	60	32	95	146	94	59	127	106	63	76
26	42	21	97	32	91	128	97	114	102	106	63	76
27	19	25	91	41	90	135	96	64	86	106	62	102
28	17	23	84	55	89	121	64	67	75	106	61	120
29	17	21	77	65	---	126	23	90	64	106	59	82
30	17	21	73	84	---	259	23	90	62	104	59	78
31	25	---	73	84	---	267	---	88	---	103	59	---
TOTAL	716.8	1,300	1,178	4,596	2,526	5,709	3,212	1,430	7,464	2,356	2,634	2,878
MEAN	23.1	43.3	38.0	148	90.2	184	107	46.1	249	76.0	85.0	95.9
MAX	108	129	97	1,340	168	610	185	114	719	135	155	208
MIN	5.5	21	13	32	82	88	23	18	62	39	59	64

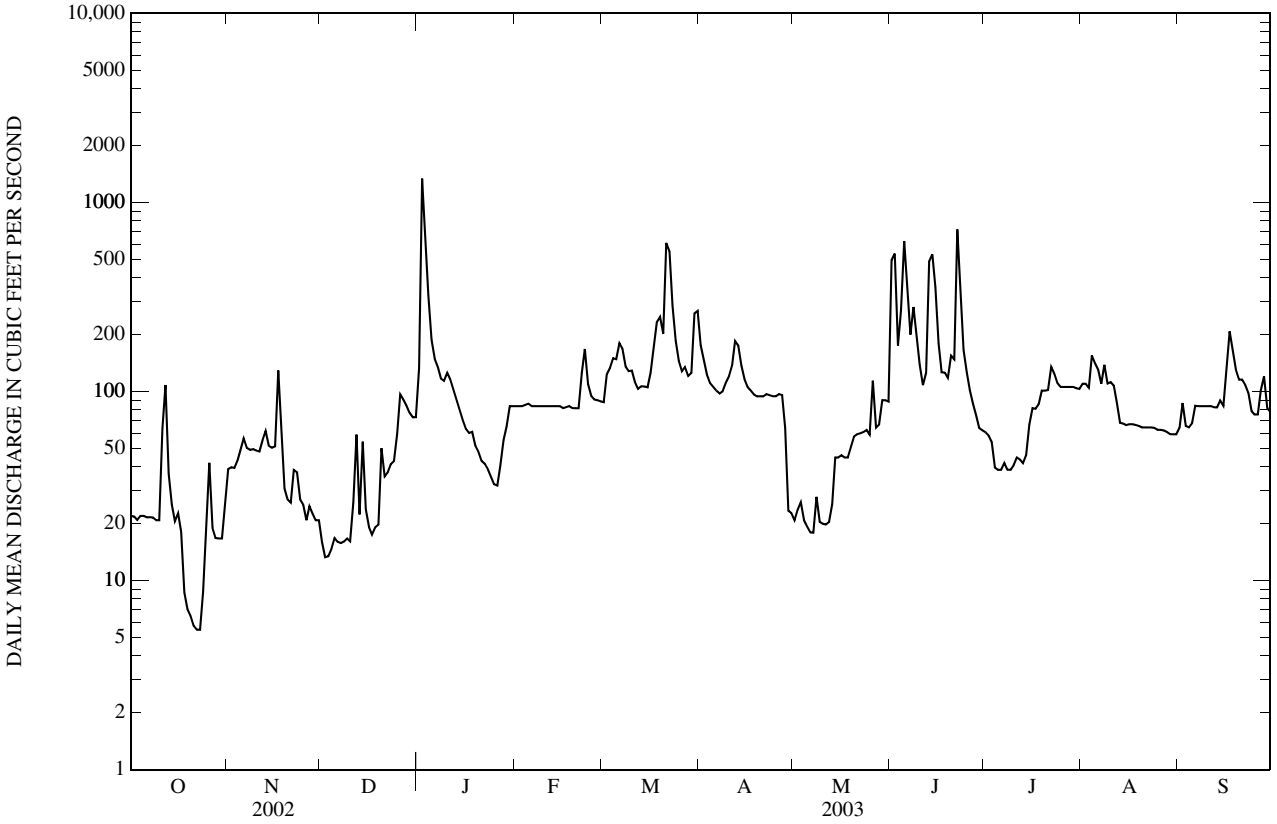
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1942 - 2003, BY WATER YEAR (WY)

MEAN	58.7	68.2	76.6	86.7	88.9	133	135	98.4	77.5	77.4	69.6	65.2
MAX	312	240	248	251	221	379	438	310	319	339	197	177
(WY)	(1956)	(1956)	(1997)	(1949)	(1951)	(1953)	(1983)	(1989)	(1972)	(1945)	(1955)	(1975)
MIN	12.1	16.6	12.6	22.6	19.9	11.2	14.5	20.4	13.4	11.6	11.4	7.87
(WY)	(1942)	(1996)	(1981)	(1982)	(2002)	(1981)	(1981)	(1981)	(1957)	(1954)	(1944)	(1953)

01377000 HACKENSACK RIVER AT RIVERVALE, NJ—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1942 - 2003	
ANNUAL TOTAL	12,614.8		35,999.8			
ANNUAL MEAN	34.6		98.6		86.2	
HIGHEST ANNUAL MEAN					156	1952
LOWEST ANNUAL MEAN					30.9	1981
HIGHEST DAILY MEAN	129	Nov 17	1,340	Jan 2	2,190	May 31, 1984
LOWEST DAILY MEAN	5.5	Oct 22, 23	5.5	Oct 22, 23	4.4	Oct 10, 1995
ANNUAL SEVEN-DAY MINIMUM	6.8	Oct 18	6.8	Oct 18	5.0	Oct 7, 1995
MAXIMUM PEAK FLOW			1,600	Jan 2	2,530	May 17, 1989
MAXIMUM PEAK STAGE			5.71	Jan 2	8.08	May 17, 1989
INSTANTANEOUS LOW FLOW			5.1	Oct 23	0.00	Jan 16, 1970
10 PERCENT EXCEEDS	73		167		165	
50 PERCENT EXCEEDS	25		82		59	
90 PERCENT EXCEEDS	16		21		21	

e Estimated



01377500 PASCACK BROOK AT WESTWOOD, NJ

LOCATION.--Lat 40°59'34", long 74°01'16", Bergen County, Hydrologic Unit 02030103, on right bank 75 ft upstream from Harrington Avenue in Westwood, 500 ft downstream from Musquapsink Brook, and 2.3 mi upstream from mouth.

DRAINAGE AREA.--29.6 mi^2.

PERIOD OF RECORD.--October 1934 to current year.

REVISED RECORDS.--WDR NJ-87-1: 1984 (P).

GAGE.--Water-stage recorder, crest-stage gage, and concrete control. Datum of gage is 28.62 ft above NGVD of 1929.

REMARKS.--Records good, except for estimated discharges, which are poor. Flow regulated by Woodcliff Lake 3.0 mi above station (see Hackensack River basin, reservoirs in). Water diverted for municipal supply by United Water New York (formerly Spring Valley Water Company), by pumpage from well fields in headwater area of Pascack Brook in vicinity of Spring Valley, NY, and by Park Ridge Water Department by pumping from wells above Woodcliff Lake probably reduces flow past this station. Water is diverted from Saddle River to Musquapsink Brook which then enters Pascack Brook 500 feet upstream of gage (see Diversions Into and From Hackensack River Basin). Several measurements of water temperature were made during the year. United Water New Jersey gage-height telemetry at station. Satellite/radio gage-height telemetry at station.

COOPERATION.--Gage-height record collected in cooperation with United Water New Jersey.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 400 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Oct 12	1445	475	3.47	Aug 4	1715	532	3.61
Jan 2	---	*e1,110d	*4.73	Sep 28	0815	840	4.26
Jun 22	0230	713	4.01				

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20	27	29	107	35	51	60	34	184	52	41	32
2	18	24	27	e610	35	65	58	35	124	39	56	73
3	20	24	27	119	35	141	52	33	103	37	47	35
4	22	25	25	135	37	83	49	30	129	36	156	32
5	23	27	27	91	36	87	51	29	211	34	177	30
6	18	36	30	72	35	113	49	28	110	33	153	29
7	20	67	28	65	33	80	47	30	111	34	107	28
8	26	97	27	57	24	70	54	46	111	34	152	28
9	20	91	27	58	24	70	72	38	82	32	107	28
10	20	38	27	69	24	71	74	37	63	52	90	27
11	107	19	52	56	23	63	82	36	46	73	68	27
12	304	33	200	48	23	57	120	36	56	72	74	27
13	129	68	83	44	23	62	78	35	254	70	92	28
14	55	74	199	43	22	65	56	37	159	69	64	35
15	145	28	85	41	22	64	50	39	134	68	44	58
16	154	32	52	41	22	66	48	40	60	30	44	93
17	40	234	42	41	20	89	45	39	49	28	43	95
18	30	216	36	40	30	e106	43	38	88	28	43	90
19	28	71	35	40	35	93	43	38	67	28	43	120
20	27	62	110	37	54	77	42	38	98	27	42	96
21	26	48	92	30	34	e230	41	42	156	31	42	88
22	25	88	49	30	e80	e140	42	40	313	55	34	53
23	24	95	41	30	e220	104	41	40	92	171	28	61
24	29	46	37	29	e147	79	37	41	49	60	27	36
25	27	37	47	28	96	66	34	39	51	31	27	34
26	57	33	52	27	67	60	43	98	48	29	26	32
27	32	39	43	27	56	68	46	56	46	35	26	152
28	31	36	40	29	53	55	40	44	50	73	26	503
29	30	32	38	35	---	77	38	42	35	55	25	122
30	31	31	36	35	---	163	38	40	40	38	25	57
31	36	---	38	35	---	81	---	47	---	28	25	---
TOTAL	1,574	1,778	1,681	2,149	1,345	2,696	1,573	1,245	3,119	1,482	1,954	2,149
MEAN	50.8	59.3	54.2	69.3	48.0	87.0	52.4	40.2	104	47.8	63.0	71.6
MAX	304	234	200	610	220	230	120	98	313	171	177	503
MIN	18	19	25	27	20	51	34	28	35	27	25	27

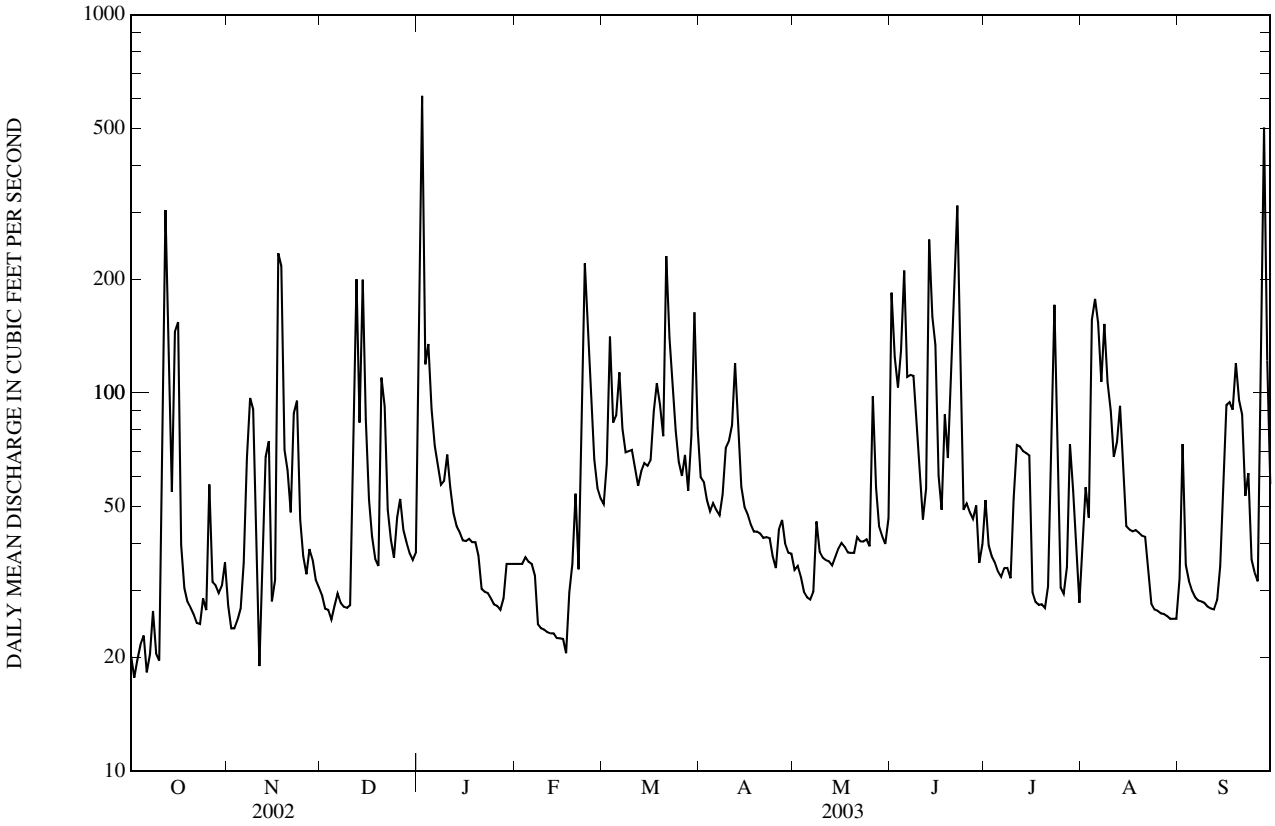
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1935 - 2003, BY WATER YEAR (WY)

MEAN	38.8	48.0	51.4	53.9	57.4	78.2	76.9	61.3	50.8	45.3	42.3	42.1
MAX	143	131	129	151	135	197	198	155	175	180	127	196
(WY)	(1956)	(1978)	(1984)	(1979)	(1973)	(1953)	(1983)	(1989)	(1972)	(1945)	(1971)	(1999)
MIN	10.2	9.83	15.8	10.8	15.7	31.1	28.9	21.2	18.2	14.2	10.0	9.45
(WY)	(1942)	(1950)	(1940)	(1954)	(1954)	(2002)	(1991)	(1992)	(1939)	(1944)	(1935)	(1939)

01377500 PASCACK BROOK AT WESTWOOD, NJ—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1935 - 2003	
ANNUAL TOTAL	14,006.9		22,745			
ANNUAL MEAN	38.4		62.3		53.8	
HIGHEST ANNUAL MEAN					88.6	1952
LOWEST ANNUAL MEAN					27.6	1965
HIGHEST DAILY MEAN	304	Oct 12	610d	Jan 2	1,770	Aug 28, 1971
LOWEST DAILY MEAN	8.2	Feb 24	18	Oct 2	0.45	Apr 26, 1991
ANNUAL SEVEN-DAY MINIMUM	15	Feb 22	20	Oct 1	6.3	Oct 19, 1949
MAXIMUM PEAK FLOW			e1,110d	Jan 2	9,630a	Sep 16, 1999
MAXIMUM PEAK STAGE			4.73	Jan 2	12.22b	Sep 16, 1999
INSTANTANEOUS LOW FLOW			17	Oct 2	0.05c	Apr 23, 1991
10 PERCENT EXCEEDS	72		115		95	
50 PERCENT EXCEEDS	28		43		39	
90 PERCENT EXCEEDS	18		27		19	

a From rating curve extended above 2,400 ft^3/s on basis of contracted-opening computation of peak flow
b From floodmark
c Also occurred Sept. 28, 1993.
d Discharges estimated using crest-stage gage and hydrographic comparison.
e Estimated



01378500 HACKENSACK RIVER AT NEW MILFORD, NJ

LOCATION.--Lat 40°56'54", long 74°01'36", Bergen County, Hydrologic Unit 02030103, on right bank upstream from two masonry dams and two lift gates at former pumping plant of United Water New Jersey (formerly known as Hackensack Water Co.), in New Milford, 300 feet upstream of the Elm Street bridge, 0.6 mi downstream from Oradell Reservoir Dam, and 4.0 mi downstream from the mouth of Pascack Brook.

DRAINAGE AREA.--113 mi^2.

PERIOD OF RECORD.--October 1921 to current year. Monthly discharge only for October 1921, published in WSP 1302.
REVISED RECORDS: WSP 601: Drainage area. WSP 711: 1927-28(M). WRD-NJ 1970: 1969. WDR-NJ 1977: 1975(M). WDR-NJ 1984: 1983. WDR-NJ 1991: 1990.

GAGE.--Water-stage recorder, crest-stage gage above south dam. Datum of gage is 6.25 ft above NGVD of 1929. October 1921 to November 23, 1923, nonrecording gage and Nov. 23, 1923, to Sept. 25, 1934, water-stage recorder at same site at datum 0.05 ft lower.

REMARKS.-- Records fair, except those below 1 ft^3/s and estimated records, which are poor. Flow regulated by DeForest Lake, Lake Tappan, Woodcliff Lake 9.0 mi upstream from station, and Oradell Reservoir 0.6 mi upstream from station (see Hackensack River basin, reservoirs in). Water pumped into basin above gage from Sparkill Creek (Hudson River basin), Saddle River and Ramapo River (Passaic River basin) by United Water New Jersey for municipal supply (see Hackensack River basin, diversions). Water diverted from Oradell Reservoir at Haworth Plant, De Forest Lake, and West Nyack, NY, for municipal supply (see Hackensack River basin, diversions). Diversion at gage was discontinued on May 30, 1990. Satellite gage-height telemetry at station.

COOPERATION.--Gage-height record collected in cooperation with United Water New Jersey.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,190 ft^3/s, Jan. 2, gage height, 4.93 ft; minimum discharge, 0.40 ft^3/s, July 5, 6, 7, 8, gage height, 1.32 ft.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.69	2.4	13	183	12	125	266	10	374	12	12	14
2	0.80	2.5	12	1,610	11	158	89	11	792	11	9.2	14
3	0.80	2.8	13	1,120	12	187	109	6.9	584	12	8.8	18
4	0.84	2.8	9.1	882	10	222	47	6.7	277	3.1	69	8.6
5	0.91	2.9	3.0	423	7.8	251	95	8.3	627	0.59	521	14
6	0.81	6.7	2.1	98	11	264	116	9.9	691	4.6	568	14
7	0.88	5.0	1.8	122	11	279	95	12	287	0.60	229	14
8	0.81	4.7	2.7	119	13	197	32	13	367	0.46	239	11
9	0.80	4.8	3.0	79	12	106	171	12	303	12	60	7.7
10	0.82	4.3	8.3	e100	15	162	277	12	95	12	211	7.3
11	6.5	4.2	16	e57	15	121	126	14	26	14	274	8.4
12	6.9	8.1	13	e45	12	31	181	12	83	14	31	10
13	59	12	40	e30	12	36	146	9.6	657	14	14	10
14	11	8.7	69	e21	12	115	234	11	845	14	11	21
15	799	8.2	8.4	e16	11	174	125	11	553	14	10	12
16	158	9.9	9.9	e14	11	124	104	12	174	14	10	281
17	1.0	12	5.6	e12	11	152	52	13	184	13	9.6	242
18	0.95	5.1	4.5	e11	9.5	364	15	13	213	12	9.0	161
19	1.0	5.8	71	e9.5	13	390	17	7.9	128	12	12	35
20	1.1	12	164	e9.0	16	442	17	9.1	357	12	15	10
21	1.1	12	225	e7.5	18	563	13	11	308	13	15	12
22	1.1	14	89	e7.5	22	752	5.7	9.0	779	12	15	22
23	1.1	16	25	e6.5	90	524	1.2	12	629	8.2	15	19
24	1.1	17	24	e6.0	311	260	17	11	95	12	15	6.7
25	1.1	12	16	e6.0	189	144	204	14	43	12	15	6.7
26	3.8	13	147	e6.0	132	162	29	15	56	12	14	6.7
27	1.4	16	130	e7.0	127	128	8.8	e12	32	12	14	9.8
28	1.4	15	17	e9.5	125	141	12	e12	13	12	14	519
29	1.6	12	13	e12	---	159	13	12	12	11	14	283
30	1.7	9.4	106	12	---	477	12	e10	13	12	14	4.8
31	2.1	---	152	12	---	342	---	11	---	12	14	---
TOTAL	1,070.11	261.3	1,413.4	5,052.5	1,251.3	7,552	2,629.7	343.4	9,597	329.55	2,481.6	1,802.7
MEAN	34.5	8.71	45.6	163	44.7	244	87.7	11.1	320	10.6	80.1	60.1
MAX	799	17	225	1,610	311	752	277	15	845	14	568	519
MIN	0.69	2.4	1.8	6.0	7.8	31	1.2	6.7	12	0.46	8.8	4.8

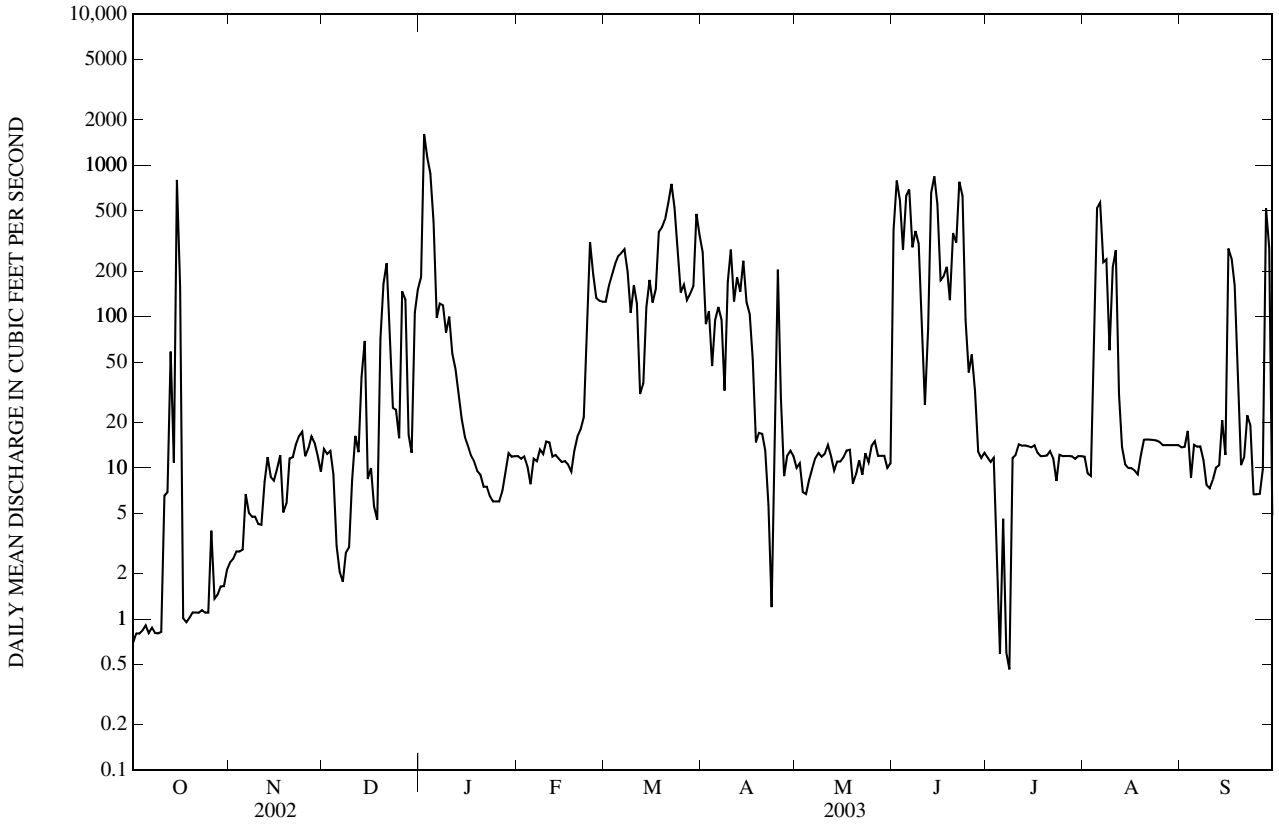
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1922 - 2003, BY WATER YEAR (WY)

MEAN	33.8	59.9	82.8	98.8	118	201	189	116	62.3	43.1	37.8	43.4
MAX	480	356	339	359	396	651	774	528	612	543	373	385
(WY)	(1956)	(1928)	(1997)	(1937)	(1939)	(1936)	(1983)	(1989)	(1972)	(1945)	(1927)	(1927)
MIN	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.39	0.000	0.000	0.000	0.000
(WY)	(1922)	(1924)	(1932)	(1971)	(1977)	(1981)	(1981)	(1985)	(1977)	(1954)	(1924)	(1923)

01378500 HACKENSACK RIVER AT NEW MILFORD, NJ—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1922 - 2003	
ANNUAL TOTAL	2,980.66		33,784.56			
ANNUAL MEAN	8.17		92.6		90.4	
HIGHEST ANNUAL MEAN					263	1928
LOWEST ANNUAL MEAN					0.40	1981
HIGHEST DAILY MEAN	799	Oct 15	1,610	Jan 2	5,580	Sep 17, 1999
LOWEST DAILY MEAN	0.00	Many days	0.46	Jul 8	0.00	Oct 1, 1921
ANNUAL SEVEN-DAY MINIMUM	0.04	Apr 6	0.82	Oct 1	0.00	Oct 1, 1921
MAXIMUM PEAK FLOW			2,190	Jan 2	9,760a	Sep 17, 1999
MAXIMUM PEAK STAGE			4.93	Jan 2	11.45b	Sep 17, 1999
INSTANTANEOUS LOW FLOW			0.40	Jul 5	0.00	Many days
10 PERCENT EXCEEDS	10		277		264	
50 PERCENT EXCEEDS	0.66		13		15	
90 PERCENT EXCEEDS	0.20		3.0		0.00	

a From rating curve extended above 1,700 ft^3/s on basis of flow-over-dam computation of peak flow
b From high-water mark in gage house
e Estimated



HACKENSACK RIVER BASIN

01378570 HACKENSACK RIVER AT HACKENSACK, NJ

LOCATION.--Lat 40°52'45", long 74°02'23", Bergen County, Hydrologic Unit 02030103, on upstream ice breaker on Dillard Memorial Bridge carrying Fort Lee Road (Court Street) between Hackensack and Bogota, 1100 ft east of Bergen County Courthouse, and 16 mi upstream from the mouth and Newark Bay.

PERIOD OF RECORD.--June 1997 to Apr. 21, 2000 (unpublished fragmentary gage-height record), Apr.21, 2000 to current year.

GAGE.--Water-stage recorder. Datum of gage is at 0.00 ft North American Vertical Datum of 1988 (NAVD of 1988). To determine approximate elevations to National Geodetic Vertical Datum of 1929 (NGVD of 1929) elevation, add 1.01 ft. To determine approximate elevations to Mean Lower Low Water Datum, add 3.35 ft (revised to tidal Epoch 1983-2001).

REMARKS.--No gage record Nov. 11-29, July 11-15, and short portions of numerous other days. Ice effect was apparent Jan. 13 to Feb. 28. Fouling of sensor tube caused some inaccurate low tide readings Feb. 5 to May 19. Summaries for months with short periods of no gage-height record have been estimated with little or no loss of accuracy unless otherwise noted. Some periods cannot be estimated and are noted by dashed (---) lines. Satellite stage telemetry at station.

EXTREMES FOR PERIOD OF PUBLISHED RECORD.--Maximum elevation recorded, 5.29 ft (NAVD of 1988), Dec. 25, 2002; minimum elevation recorded, -7.32 ft (NAVD of 1988), Dec. 12, 2000.

EXTREMES FOR WATER YEAR 2003.--Maximum elevation recorded, 5.29 ft (NAVD of 1988), Dec. 25; minimum elevation recorded, -5.68 ft (NAVD of 1988), Dec. 1, although a lower tide elevation likely occurred during January.

Summaries of tide elevations during the 2003 water year are as follows:

TIDE ELEVATIONS, IN FEET, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

		OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
Maximum	Elevation	4.71	4.75	5.29	5.24	---	4.87	5.13	4.84	4.65	---	3.92	4.81
high tide	Date	7	6	25	3	---	21	18	17	13	---	6	28
Minimum	Elevation	-5.08	-5.18	-5.68	---	---	---	-5.15	-4.43	-3.93	---	-4.22	-3.88
low tide	Date	6	2	1	---	---	---	16	15	16	---	30	26
Mean high tide		3.18	---	2.71	---	1.9e	2.84	2.96	2.96	3.12	2.8e	3.06	3.28
Mean water level		.49	---	-.05	---	---	.1e	.3e	.33	.50	.3e	.34	.65
Mean low tide		-2.88	---	-3.60	---	---	---	-2.7e	-2.82	-2.69	-2.9e	-3.03	-2.67

e - estimated.

HACKENSACK RIVER BASIN

RESERVOIRS IN HACKENSACK RIVER BASIN

01376700 DE FOREST LAKE.--Lat 41°06'22", long 73°57'59", Rockland County, NY, Hydrologic Unit 02030103, at dam on Hackensack River, 0.8 mi north of West Nyack, NY.
DRAINAGE AREA.-- 27.5 mi^2.
PERIOD OF RECORD.-- February 1956 to current year.
REVISED RECORDS.-- WDR NJ-84-1: Drainage area, WDR NJ-99-1: 1998 (elevation, contents).
GAGE.-- Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929.
REMARKS.--Reservoir is formed by earthfill dam with sheet piling cutoff and concrete spillway; dam completed and storage began in February 1956. Crest of dam topped by two 50 ft Bascule Gates, 5 ft high. Capacity 5,670,000,000 gal, elevation, 85.00 ft, top of Bascule gates. Flow regulated by 12-inch Howell-Bunger valve at elevation, 59.25 ft and 24-inch Howell-Bunger valve at elevation, 61.25 ft. Reservoir used for storage and water released by United Water New Jersey, for municipal water supply.
COOPERATION.--Records provided by United Water New Jersey (formerly Hackensack Water Company).

01376950 LAKE TAPPAN.--Lat 41°01'06", long 74°00'04", Bergen County, NJ, Hydrologic Unit 02030103, at dam on Hackensack River, 0.5 mi north of Old Tappan.
DRAINAGE AREA.-- 49.0 mi^2.
PERIOD OF RECORD.--October 1966 to current year.
REVISED RECORDS.-- WDR NJ-89-1: Capacity, WDR NJ-99-1: 1998 (elevation, contents).
GAGE.-- Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929.
REMARKS.--Reservoir is formed by earthfill dam, completed in 1966. Capacity, 3,853,000,000 gal, elevation, 55.00 ft at top of Bascule gates. Flow regulated by four Bascule gates and one sluice gate. Water is released for diversion at New Milford (diversion discontinued May 1990) and Haworth by United Water New Jersey, for municipal water supply.
COOPERATION.--Records provided by United Water New Jersey (formerly Hackensack Water Company).

01377450 WOODCLIFF LAKE.--Lat 41°00'46", long 74°02'57", Bergen County, NJ, Hydrologic Unit 02030103, at dam on Pascack Brook, 0.7 mi north of Hillsdale.
DRAINAGE AREA.-- 19.4 mi^2.
PERIOD OF RECORD.-- December 1929 to current year. Monthend contents only, prior to September 1953, published in WSP 1302, 1722.
REVISED RECORDS.-- WDR NJ-89-1: Capacity, WDR NJ-99-1: 1998 (elevation, contents).
GAGE.-- Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929.
REMARKS.--Reservoir is formed by earthfill dam, completed about 1905. The dam was modified in 1984, which increased capacity, 871,000,000 gal, elevation, 95.00 ft at top of Bascule gates. Flow is regulated by two Bascule gates 85 ft long and 6 ft high each and one 24-inch Ball valve. Water is released for diversion at New Milford (diversion discontinued May 1990) and Haworth by United Water New Jersey, for municipal supply.
COOPERATION.--Records provided by United Water New Jersey (formerly Hackensack Water Company).

01378480 ORADELL RESERVOIR.--Lat 40°57'23", long 74°01'46", Bergen County, NJ, Hydrologic Unit 02030103, at dam on Hackensack River at Oradell.
DRAINAGE AREA.-- 113 mi^2.
PERIOD OF RECORD.-- December 1922 to current year. Monthend contents only, prior to September 1953, published in WSP 1302, 1722.
REVISED RECORDS.--WDR NJ-84-1: Spillway elevation, WDR NJ-89-1: Capacity, WDR NJ-99-1: 1998 (elevation, contents).
GAGE.-- Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929.
REMARKS.--Reservoir is formed by hollow concrete dam, completed in 1922. Capacity at spillway level, 3,507,000,000 gal, elevation, 23.16 ft. Flow regulated by seven sluice gates (7 by 9 ft). Prior to May 1990, water was released for diversion by United Water New Jersey, 1 mi downstream from dam for municipal supply. Water is diverted from reservoir at Haworth by United Water New Jersey, for municipal supply.
COOPERATION.--Records provided by United Water New Jersey (formerly Hackensack Water Company).

HACKENSACK RIVER BASIN

RESERVOIRS IN HACKENSACK RIVER BASIN--Continued

MONTHEND ELEVATION AND CONTENTS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Elevation (feet)†	Contents (million gallons)	Change in contents (equivalent in ft^3/s)	Elevation (feet)†	Contents (million gallons)	Change in contents (equivalent in ft^3/s)
	01376700 DE FOREST LAKE			01376950 LAKE TAPPAN		
Sept.30.....	76.56	3,115		48.75	1,850	
Oct. 31.....	79.02	3,829	+35.6	52.12	2,865	+50.7
Nov. 30.....	82.44	4,856	+53.0	53.48	3,316	+23.3
Dec. 31.....	85.06	5,691	+41.7	55.44	4,011	+34.7
CAL YR 2002			+11.2			+10.3
Jan. 31.....	84.84	5,616	-3.7	54.92	3,822	-9.4
Feb. 28.....	85.08	5,697	+4.5	54.77	3,771	-2.8
Mar. 31.....	85.22	5,743	+2.3	55.34	3,976	+10.2
Apr .30.....	85.00	5,669	-3.8	54.34	3,617	-18.6
May 31.....	85.11	5,707	+1.9	55.25	3,941	+16.2
June 30.....	85.02	5,676	-1.6	55.04	3,868	-3.8
July 31.....	84.85	5,621	-2.7	53.55	3,341	-26.3
Aug. 31.....	84.32	5,451	-8.5	52.71	3,059	-14.1
Sept.30.....	85.06	5,690	+12.3	51.22	2,576	-24.9
WTR YR 2003			+10.9			+3.1

Date	Elevation (feet)†	Contents (million gallons)	Change in contents (equivalent in ft^3/s)	Elevation (feet)†	Contents (million gallons)	Change in contents (equivalent in ft^3/s)
	01377450 WOODCLIFF LAKE			01378480 ORADELL RESERVOIR		
Sept.30.....	92.58	737		21.20	2,996	
Oct. 31.....	92.89	754	+.8	19.16	2,503	-24.6
Nov. 30.....	91.24	665	-4.6	22.57	3,346	+43.5
Dec. 31.....	91.34	671	+.3	21.77	3,138	-10.4
CAL YR 2002			+1.1			+4.0
Jan. 31.....	90.52	627	-2.2	20.20	2,748	-19.5
Feb. 28.....	91.10	658	+1.7	22.59	3,352	+33.4
Mar. 31.....	91.30	669	+.5	22.58	3,350	-.1
Apr. 30.....	91.17	661	-.4	22.52	3,335	-.8
May 31.....	93.28	776	+5.7	21.99	3,197	-6.9
June 30.....	95.37	892	+6.0	23.01	3,466	+13.9
July 31.....	93.61	794	-4.9	21.56	3,085	-19.0
Aug. 31.....	91.64	686	-5.4	20.32	2,779	-15.3
Sept.30.....	93.26	774	+4.5	22.19	3,248	+24.2
WTR YR 2003			+.2			+1.1

† Elevation at 2400 of the last day of each month.

HACKENSACK RIVER BASIN

DIVERSIONS INTO AND FROM HACKENSACK RIVER BASIN

01376272 United Water New Jersey, diverts water from Sparkill Creek (Hudson River basin) at foot of Danny Lane in Northvale, 300 ft south of New York-New Jersey state line and 0.6 mi upstream from Sparkill Brook. Water is diverted into Oradell Reservoir on the Hackensack River, for municipal supply. Records provided by United Water New Jersey (formerly Hackensack Water Company).

01376699 United Water New York (formerly Spring Valley Water Company), diverts water from De Forest Lake for municipal supply in Rockland County, NY. Records provided by United Water New York (formerly Spring Valley Water Company).

01376810 Village of Nyack, NY, diverts water from Hackensack River 100 ft downstream from gaging station on Hackensack River at West Nyack, NY (station 01376800, measured flow includes diversions) for municipal supply. Records provided by Board of Water Commissioners of Nyack, NY.

01378490 United Water New Jersey, diverts water for municipal supply from Oradell Reservoir at Haworth pumping station (station 01378478) 2.0 mi upstream from gaging station on Hackensack River at New Milford and prior to May 1990 from Hackensack River, at New Milford pumping station just upstream from gaging station on Hackensack River at New Milford, NJ (station 01378500). Diversion from the New Milford pumping station was discontinued in May 1990. Records provided by United Water New Jersey (formerly Hackensack Water Company).

01378521 (revised) United Water New Jersey, diverts water from Hirshfeld Brook, a tributary of the Hackensack River, below the gaging station on Hackensack River at New Milford, NJ, for municipal supply. Records provided by United Water New Jersey (formerly Hackensack Water Company).

01390520 (revised) United Water New Jersey, diverts water from Saddle River (Passaic River basin) 0.3 mi downstream from Grove Street in Paramus, and 0.3 mi upstream from Hohokus Brook. Water is diverted into Oradell Reservoir on the Hackensack River via Musquapsink and Pascack Brooks for municipal supply. Records provided by United Water New Jersey (formerly Hackensack Water Company).

DIVERSIONS, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

MONTH	01376699 UNITED WATER NEW YORK.	01376810 WEST NYACK, NY	01378490 UNITED WATER NEW JERSEY
October	10.8	2.79	140
November	7.07	2.82	131
December	10.2	2.82	128
CAL YR 2002	11.2	3.02	141
January	12.3	2.83	134
February	12.2	2.85	133
March	13.4	2.86	132
April	13.8	2.87	135
May	13.9	3.18	143
June	13.9	3.11	148
July	16.3	3.38	181
August	14.7	3.24	165
September	13.5	3.02	151
WTR YR 2003	12.7	2.98	144

The following are diversions by pumpage from sources other than the Hackensack River into Oradell Reservoir. These figures are included in diversions from Hackensack River as noted above (station 01378490)

MONTH	01376272 SPARKILL CREEK (HUDSON RIVER BASIN)	01378521 HIRSHFELD BROOK (HACKENSACK RIVER BASIN)	01388981 POMPTON RIVER (PASSAIC RIVER BASIN)	01390520 SADDLE RIVER (PASSAIC RIVER BASIN)	WELLS TO SURFACE SUPPLY
October	1.40	2.16	17.0	2.93	1.68
November	1.29	3.11	0	5.64	.36
December	0	.28	0	.83	.17
CAL YR 2002	1.11	2.31	31.9	6.51	2.56
January	0	0	0	0	.16
February	0	0	0	0	.15
March	0	0	0	0	0
April	0	0	0	0	0
May	0	0	8.92	0	.03
June	0	0	10.8	0	.25
July	0	0	10.8	0	.39
August	0	0	10.8	0	.37
September	0	0	8.07	0	.36
WTR YR 2003	.22	.46	5.59	.78	.33

01379000 PASSAIC RIVER NEAR MILLINGTON, NJ

LOCATION.--Lat 40°40'48", long 74°31'44", Somerset County, Hydrologic Unit 02030103, on right bank 200 ft downstream from Davis Bridge on Maple Avenue, 0.7 mi northwest of Millington, and 1.8 mi downstream from Black Brook.

DRAINAGE AREA.--55.4 mi^2.

PERIOD OF RECORD.--November 1903 to June 1906 (published as "at Millington"), October 1921 to current year. Monthly discharges only for some periods published in WSP 1302.

REVISED RECORDS.--WSP 781: Drainage area. WSP 1552: 1905(M). WDR NJ-96-1: 1936 (M), 1949 (M), 1971 (M), 1975 (M), 1979 (M), 1984(M).

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 215.60 ft above NGVD of 1929 (levels from New Jersey Geological Survey bench mark). Nov. 25, 1903 to July 15, 1906, nonrecording gage at bridge 0.8 mi downstream at different datum. Nov. 10, 1921 to Sept. 1, 1923, nonrecording gage at site 200 ft downstream at present datum. Oct. 31, 1923 to July 3, 1925, nonrecording gage and concrete control at present site and datum.

REMARKS.--Records fair. Diversion from Osborn Pond by Commonwealth Water Co., Bernards Division, was discontinued in April 1979 and the installation dismantled. Several measurements of water temperature were made during the year. Satellite gage-height telemetry at station.

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

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar 21	1945	585	7.01	Jun 4	2300	*808	*7.51

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

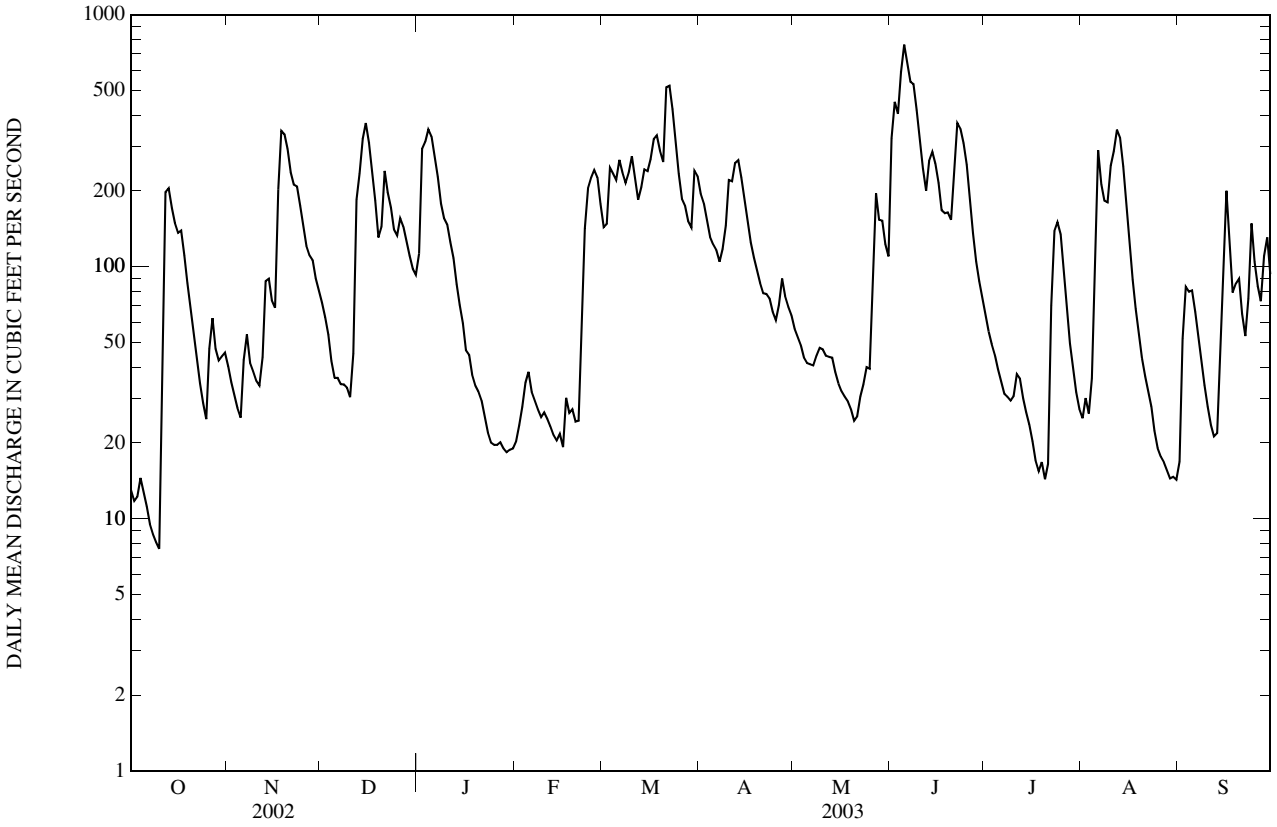
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13	40	72	113	20	144	195	57	324	64	25	17
2	12	35	63	293	24	148	178	53	451	55	30	52
3	12	31	54	314	28	248	153	49	404	49	26	83
4	15	28	42	351	35	234	131	44	592	45	36	80
5	13	25	36	328	38	221	123	42	760	39	139	81
6	11	43	36	272	32	265	116	41	644	35	290	66
7	9.5	54	34	227	29	237	105	41	541	31	213	53
8	8.7	42	34	178	27	215	118	44	531	31	183	43
9	8.1	38	33	156	25	235	145	48	418	29	180	34
10	7.6	35	30	147	26	275	221	47	321	31	252	28
11	48	34	45	126	25	227	218	44	246	38	287	24
12	198	44	184	108	23	185	258	44	200	36	350	21
13	205	88	234	85	21	207	265	44	263	30	326	22
14	171	90	322	71	20	244	226	38	286	27	250	38
15	149	74	372	60	22	240	185	34	256	24	181	81
16	136	69	310	47	19	268	151	32	215	20	126	200
17	139	203	239	45	30	321	125	31	168	17	89	132
18	111	346	183	37	26	332	109	29	163	15	68	79
19	86	335	131	34	27	288	97	27	164	17	54	86
20	69	294	144	32	24	261	86	25	154	14	43	90
21	55	237	240	29	25	515	79	25	242	17	37	65
22	43	212	197	25	53	522	78	31	372	70	32	53
23	34	208	172	22	142	421	75	34	352	139	28	75
24	29	175	141	20	205	309	66	40	310	150	22	149
25	25	145	133	20	226	234	61	39	254	135	19	104
26	47	121	156	20	242	186	70	97	189	93	18	84
27	63	111	144	20	226	175	90	196	136	66	17	73
28	47	106	126	19	177	152	76	154	105	50	16	110
29	43	90	111	18	---	143	69	152	88	39	14	131
30	44	81	98	19	---	240	64	123	75	32	15	94
31	46	---	93	19	---	228	---	110	---	27	14	---
TOTAL	1,897.9	3,434	4,209	3,255	1,817	7,920	3,933	1,815	9,224	1,465	3,380	2,248
MEAN	61.2	114	136	105	64.9	255	131	58.5	307	47.3	109	74.9
MAX	205	346	372	351	242	522	265	196	760	150	350	200
MIN	7.6	25	30	18	19	143	61	25	75	14	14	17
CFSM	1.11	2.07	2.45	1.90	1.17	4.61	2.37	1.06	5.55	0.85	1.97	1.35
IN.	1.27	2.31	2.83	2.19	1.22	5.32	2.64	1.22	6.19	0.98	2.27	1.51

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1904 - 2003, BY WATER YEAR (WY)

MEAN	47.9	84.4	104	113	127	185	142	93.1	60.5	44.0	48.7	51.4
MAX	345	340	335	463	380	439	420	365	307	307	398	380
(WY)	(1997)	(1933)	(1984)	(1905)	(1904)	(1994)	(1983)	(1989)	(2003)	(1975)	(1942)	(1971)
MIN	3.56	7.47	8.18	6.78	24.5	61.7	25.9	20.3	3.95	1.25	1.37	0.73
(WY)	(1964)	(1966)	(1966)	(1981)	(2002)	(2002)	(1985)	(1965)	(1965)	(1965)	(1966)	(1964)

01379000 PASSAIC RIVER NEAR MILLINGTON, NJ—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1904 - 2003	
ANNUAL TOTAL	19,864.83		44,597.9			
ANNUAL MEAN	54.4		122		90.7	
HIGHEST ANNUAL MEAN					163	1984
LOWEST ANNUAL MEAN					31.5	2002
HIGHEST DAILY MEAN	430	May 14	760	Jun 5	2,230	Oct 20, 1996
LOWEST DAILY MEAN	0.90	Aug 14	7.6	Oct 10	0.30	Sep 13, 1966
ANNUAL SEVEN-DAY MINIMUM	1.0	Aug 13	10	Oct 4	0.47	Sep 11, 1964
MAXIMUM PEAK FLOW			808	Jun 4	2,290	Oct 20, 1996
MAXIMUM PEAK STAGE			7.51	Jun 4	9.89	Oct 20, 1996
INSTANTANEOUS LOW FLOW			7.5	Oct 9	0.20	Sep 12, 1966
ANNUAL RUNOFF (CFSM)	0.98		2.21		1.64	
ANNUAL RUNOFF (INCHES)	13.34		29.95		22.25	
10 PERCENT EXCEEDS	153		273		220	
50 PERCENT EXCEEDS	29		79		47	
90 PERCENT EXCEEDS	4.0		21		8.7	



01379500 PASSAIC RIVER NEAR CHATHAM, NJ

LOCATION.--Lat 40°43'34", long 74°23'23", Morris County, Hydrologic Unit 02030103, on left bank 150 ft downstream from bridge on Stanley Avenue in Chatham, and 3.0 mi upstream from Canoe Brook.

DRAINAGE AREA.--100 mi^2.

PERIOD OF RECORD.--February 1903 to December 1911, October 1937 to current year. Monthly discharge only for some periods, published in WSP 1302.

REVISED RECORDS.--WDR NJ-86-1: 1984 (M).

GAGE.--Water-stage recorder. Concrete control since Sept. 19, 1938. Datum of gage is 193.51 ft above NGVD of 1929. Prior to Dec 31, 1911, nonrecording gage at bridge 150 ft upstream at different datum.

REMARKS.--Records good except for estimated discharges, which are fair. Diversion from Osborn Pond by Commonwealth Water Co., Bernards Division, during water years 1903-79. Several measurements of water temperature were made during the year. Satellite gage-height telemetry at station.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 800 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Feb 24	0730	*1,400	*e6.35	Aug 5	1945	886	5.50
Jun 7	1715	1,170	5.95				

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	36	97	135	257	e50	293	367	107	594	114	60	43
2	31	81	117	517	e49	336	323	107	595	100	94	114
3	29	70	104	531	e52	e420	286	108	595	88	70	155
4	29	62	e90	591	e60	e430	248	93	901	80	57	148
5	37	56	64	554	e70	e415	222	81	1,060	72	345	131
6	32	120	e75	510	e65	e470	204	77	1,070	65	428	114
7	28	136	e75	445	e57	e435	186	76	1,030	59	454	95
8	25	110	72	375	e55	424	196	89	977	56	423	79
9	23	87	e80	322	e52	409	276	88	875	55	397	68
10	22	74	e80	284	e50	446	369	88	738	62	400	59
11	204	66	114	246	e49	418	430	82	591	73	380	51
12	543	103	328	200	e48	357	512	78	471	87	381	46
13	468	228	419	e160	e44	360	476	75	474	71	383	56
14	407	243	543	e135	e41	413	418	74	577	56	371	84
15	329	212	580	e115	e42	422	350	67	530	51	327	192
16	304	175	558	e97	e41	432	292	62	464	47	260	319
17	292	405	481	e92	e60	474	243	57	374	43	180	440
18	252	546	387	e78	e55	493	202	55	352	39	135	339
19	189	593	305	e72	e57	468	176	53	332	38	105	249
20	140	538	315	e67	e51	462	156	50	314	38	82	187
21	113	458	346	e62	e55	677	143	52	422	41	69	140
22	91	452	357	e56	e120	775	137	52	522	154	62	106
23	74	418	318	e51	e275	733	135	55	557	244	57	190
24	61	360	270	e48	e385	630	126	72	507	263	50	261
25	53	305	262	e47	e410	510	114	73	433	251	44	240
26	151	253	282	e46	e450	399	142	258	359	196	40	171
27	180	230	282	e48	e420	335	165	357	290	137	38	127
28	133	208	258	e45	342	286	151	343	212	104	37	258
29	98	177	225	e45	---	283	129	276	155	82	36	245
30	97	152	192	e46	---	361	115	237	130	67	40	204
31	107	---	173	e47	---	407	---	224	---	57	37	---
TOTAL	4,578	7,015	7,887	6,189	3,505	13,773	7,289	3,566	16,501	2,890	5,842	4,911
MEAN	148	234	254	200	125	444	243	115	550	93.2	188	164
MAX	543	593	580	591	450	775	512	357	1,070	263	454	440
MIN	22	56	64	45	41	283	114	50	130	38	36	43
CFSM	1.48	2.34	2.54	2.00	1.25	4.44	2.43	1.15	5.50	0.93	1.88	1.64
IN.	1.70	2.61	2.93	2.30	1.30	5.12	2.71	1.33	6.14	1.08	2.17	1.83

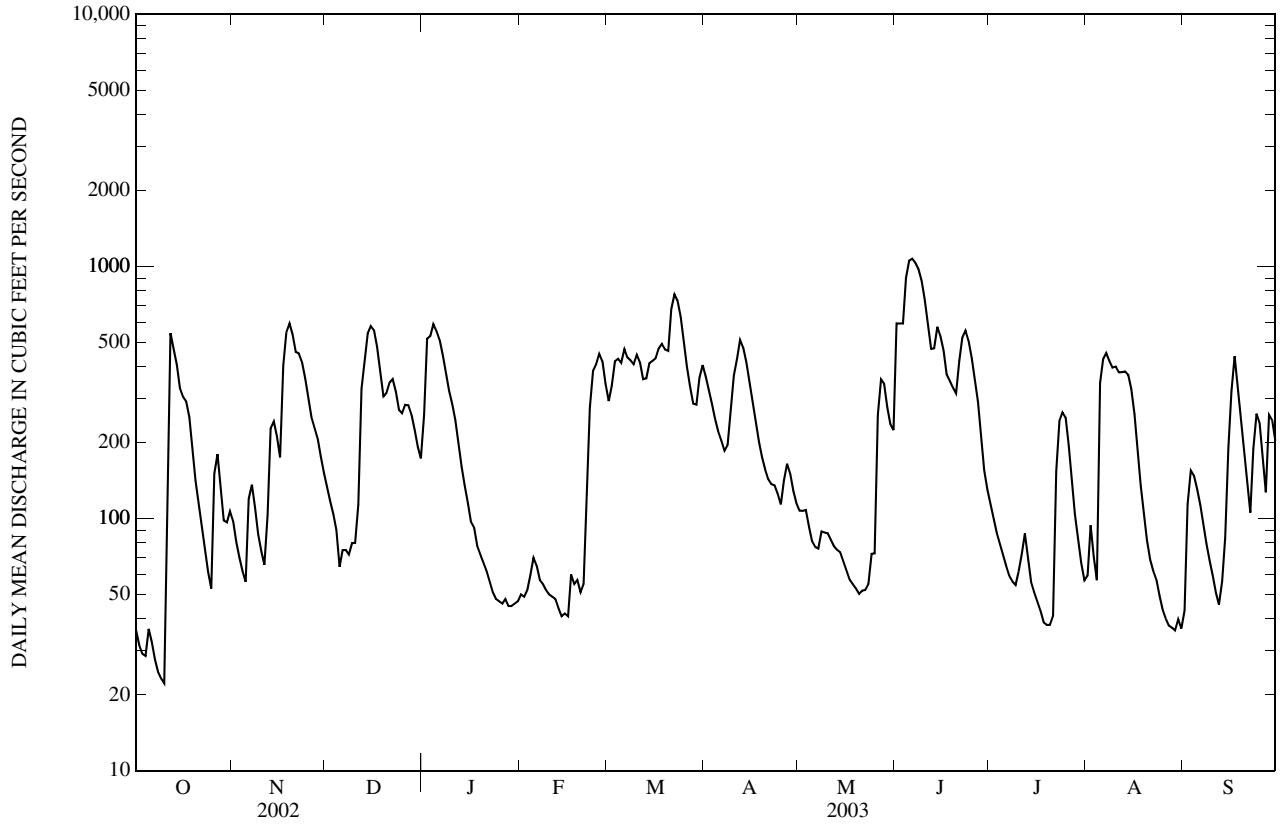
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1903 - 2003, BY WATER YEAR (WY)

MEAN	92.7	154	200	224	235	337	260	175	121	83.3	93.9	96.0
MAX	576	590	655	735	493	719	711	637	550	539	664	713
(WY)	(1904)	(1973)	(1984)	(1979)	(1908)	(1994)	(1983)	(1989)	(2003)	(1975)	(1942)	(1971)
MIN	8.05	13.7	27.5	21.5	44.5	94.5	54.3	7.52	13.6	7.74	7.35	4.70
(WY)	(1965)	(1950)	(1999)	(1981)	(2002)	(1911)	(1985)	(1903)	(1965)	(1966)	(1957)	(1906)

01379500 PASSAIC RIVER NEAR CHATHAM, NJ—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1903 - 2003	
ANNUAL TOTAL	42,433		83,946			
ANNUAL MEAN	116		230		171	
HIGHEST ANNUAL MEAN					305	1984
LOWEST ANNUAL MEAN					67.7	1965
HIGHEST DAILY MEAN	593	Nov 19	1,070	Jun 6	2,990	Jan 9, 1905
LOWEST DAILY MEAN	11	Aug 12	22	Oct 10	2.0	May 15, 1903
ANNUAL SEVEN-DAY MINIMUM	11	Aug 12	28	Oct 4	2.0	May 15, 1903
MAXIMUM PEAK FLOW			1,400	Feb 24	3,380	Aug 2, 1973
MAXIMUM PEAK STAGE			e6.35	Feb 24	9.36a	Aug 2, 1973
INSTANTANEOUS LOW FLOW			21	Oct 10	10	Aug 17, 2002
ANNUAL RUNOFF (CFSM)	1.16		2.30		1.71	
ANNUAL RUNOFF (INCHES)	15.79		31.23		23.30	
10 PERCENT EXCEEDS	324		478		452	
50 PERCENT EXCEEDS	65		155		84	
90 PERCENT EXCEEDS	17		48		17	

a From floodmark.
e Estimated.



PASSAIC RIVER BASIN

01379530 CANOE BROOK NEAR SUMMIT, NJ

LOCATION.--Lat 40°44'41", long 74°21'13", Essex County, Hydrologic Unit 02030103, on left bank just upstream of pumping station intake, 100 ft upstream of bridge on private driveway within New Jersey-American Water Company property, 0.5 mi upstream of mouth, 1.6 mi east of Chatham, and 2.0 mi north of Summit.

DRAINAGE AREA.--11.0 mi^2.

PERIOD OF RECORD.--1933-60, published in Special Reports of predecessors of the New Jersey Department of Environmental Protection. Fragmentary records for water years 1961-2001 are unpublished but available in the files of the New Jersey District office.

GAGE.--Water-stage recorder upstream and downstream of concrete control, crest-stage gage downstream of control. Datum of gage is 159.64 ft NGVD of 1929.

REMARKS.-- Records fair, except for discharges below 2 ft^3/s and estimated daily discharges, which are poor. Diversion above weir by New Jersey-American Water Company for municipal supply. During extreme back-water conditions from the Passaic River, reverse flow may occur during periods of high flow, due to pumping from the gage pool for municipal supply by New Jersey-American Water Company. Reverse flows are reported as zero flows presently.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.8	3.2	5.7	151	e4.0	e4.0	19	3.8	320	1.8	0.81	0.31
2	1.4	2.0	4.5	317	e4.0	e30	18	3.6	27	1.8	3.9	58
3	1.1	1.9	4.2	50	e4.0	37	15	5.6	13	1.3	3.5	15
4	0.92	1.8	3.2	97	4.6	e12	12	0.20	399	0.17	27	7.1
5	2.1	1.6	4.8	30	5.8	e33	1.7	2.8	145	0.18	152	4.2
6	2.2	11	3.4	22	e4.5	54	0.12	4.2	38	0.18	51	0.33
7	1.2	9.9	3.8	19	e4.0	e24	7.6	2.5	96	0.85	7.6	0.33
8	0.91	5.0	3.6	16	e3.5	e21	18	13	65	0.75	40	1.4
9	0.76	3.6	3.8	19	e3.5	42	49	5.0	30	0.76	7.1	1.2
10	0.64	2.9	3.0	20	e3.5	37	46	0.18	15	1.8	4.3	1.1
11	70	2.6	34	13	e3.5	33	41	0.26	8.5	2.9	9.1	0.86
12	204	11	110	e9.0	e3.5	32	73	3.3	12	0.09	6.2	1.2
13	9.4	17	29	e7.0	e3.5	36	8.4	3.0	86	0.17	3.1	1.2
14	5.2	14	85	e6.0	e3.5	33	13	2.4	53	0.83	2.7	5.7
15	8.6	8.8	14	e5.0	e3.0	26	15	1.9	21	0.90	2.0	3.6
16	24	6.4	13	e5.0	e3.0	33	11	1.8	14	0.78	0.34	23
17	23	120	13	e5.0	e3.0	49	8.0	0.37	9.9	0.56	0.40	2.9
18	13	67	8.5	e5.0	e4.5	31	6.6	0.38	30	0.66	1.4	1.5
19	7.1	6.2	7.4	e4.0	e4.5	15	8.9	1.7	12	0.19	1.2	71
20	4.2	11	68	e4.0	e4.5	56	6.6	1.6	11	0.23	0.94	5.9
21	3.2	10	22	e4.0	4.4	256	3.3	3.1	368	1.3	1.1	4.2
22	2.5	38	17	e4.0	146	71	3.7	2.8	135	38	1.1	1.9
23	2.5	29	11	e4.0	239	28	3.2	3.0	28	15	0.54	60
24	2.1	11	9.4	e4.0	57	18	2.9	0.14	11	6.4	0.61	14
25	1.8	9.6	22	e4.0	24	11	2.5	0.26	7.0	2.6	1.00	4.1
26	17	8.3	24	e3.0	e12	13	20	105	5.1	0.16	1.3	2.8
27	7.5	14	16	e4.0	e8.0	17	7.8	20	3.3	0.15	1.1	1.1
28	5.2	13	13	e4.0	e5.0	14	4.9	12	0.13	1.9	1.1	59
29	3.6	8.1	11	e4.0	---	53	4.0	8.5	0.15	1.8	0.88	14
30	3.6	6.5	9.5	e4.0	---	44	4.0	6.9	2.0	1.0	0.92	6.8
31	4.2	---	11	e4.0	---	21	---	3.2	---	0.51	0.54	---
TOTAL	434.73	454.4	587.8	847.0	573.3	1,184.0	434.22	222.49	1,965.08	85.72	334.78	373.73
MEAN	14.0	15.1	19.0	27.3	20.5	38.2	14.5	7.18	65.5	2.77	10.8	12.5
MAX	204	120	110	317	239	256	73	105	399	38	152	71
MIN	0.64	1.6	3.0	3.0	3.0	4.0	0.12	0.14	0.13	0.09	0.34	0.31

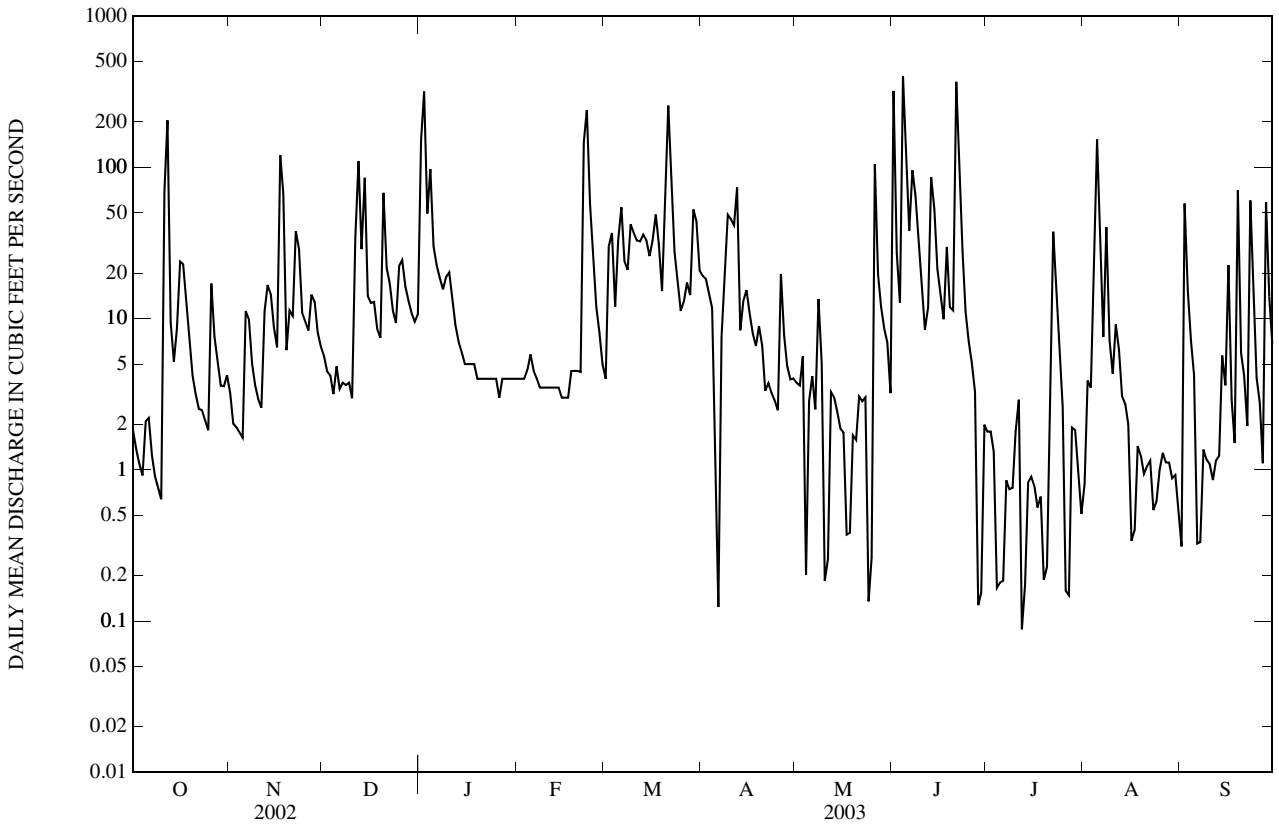
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1966 - 2003, BY WATER YEAR (WY)

MEAN	7.33	8.06	9.19	16.5	14.0	25.2	14.4	11.4	8.27	5.71	3.85	6.34
MAX	91.5	32.3	29.9	57.1	43.5	84.1	42.1	44.0	65.5	47.0	10.8	61.2
(WY)	(1997)	(1986)	(1997)	(1996)	(1998)	(1994)	(1998)	(1972)	(2003)	(1997)	(2003)	(1999)
MIN	0.10	0.65	0.24	0.61	1.15	2.91	0.56	0.60	0.23	0.010	0.35	0.25
(WY)	(1987)	(2002)	(1981)	(1981)	(2002)	(1985)	(1985)	(1987)	(1987)	(1966)	(1995)	(1983)

01379530 CANOE BROOK NEAR SUMMIT, NJ—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1966 - 2003a	
ANNUAL TOTAL	2,807.71		7,497.25			
ANNUAL MEAN	7.69		20.5		13.0	
HIGHEST ANNUAL MEAN					24.0	1997
LOWEST ANNUAL MEAN					3.91	2002
HIGHEST DAILY MEAN	280	May 14	399	Jun 4	1,900	Oct 19, 1996
LOWEST DAILY MEAN	0.00	Apr 27	0.09	Jul 12	0.00	Oct 26, 1965
ANNUAL SEVEN-DAY MINIMUM	0.00	Jun 30	0.57	Jul 12	0.00	Oct 26, 1965
MAXIMUM PEAK STAGE			15.54	Jun 21	---	
10 PERCENT EXCEEDS	15		49		23	
50 PERCENT EXCEEDS	1.1		5.0		2.6	
90 PERCENT EXCEEDS	0.12		0.82		0.00	

a Statistics based on records with short gaps
e Estimated



01379773 GREEN POND BROOK AT PICATINNY ARSENAL, NJ

LOCATION.--Lat 40°57'34", long 74°32'23", Morris County, Hydrologic Unit 02030103, on left bank at Picatinny Arsenal, 500 ft upstream from Picatinny Lake, and 0.55 mi downstream from Burnt Meadow Brook.

DRAINAGE AREA.--7.65 mi^2.

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

GAGE.--Water-stage recorder and concrete control. Datum of gage is 712.54 ft above NGVD of 1929 (U.S. Army, Picatinny Arsenal, bench mark).

REMARKS.--Records fair except for discharges below 1.0 cfs and estimated daily discharges, which are poor. Discharges given herein includes flow through sluice gates when open. Some regulation by Lake Denmark and Green Pond. Satellite gage-height telemetry at station.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 75 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar 21	2215	77	2.43	Jun 21	2130	*119	*2.68
Jun 14	1745	86	2.49				

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.4	4.4	16	24	4.5	20	37	8.2	49	16	4.0	3.6
2	0.95	4.3	14	41	4.5	25	36	8.4	65	12	4.0	4.5
3	0.87	4.2	12	40	4.5	27	40	8.5	60	9.6	5.6	5.1
4	0.77	3.9	10	41	5.3	25	37	7.1	71	7.9	7.5	5.0
5	0.83	3.7	10	38	5.5	26	34	6.8	65	6.7	11	4.5
6	0.77	4.5	10	35	5.1	29	31	6.7	57	5.9	19	4.1
7	0.77	4.1	9.7	32	5.8	28	30	6.5	59	5.4	22	3.9
8	0.72	3.8	9.1	29	6.1	26	29	9.2	63	5.0	23	3.7
9	0.66	3.6	8.3	27	5.8	24	28	8.9	56	4.7	21	3.4
10	0.64	3.6	7.8	24	5.7	23	27	8.5	48	4.5	21	3.3
11	7.1	3.6	10	22	5.8	21	28	8.6	40	4.4	19	3.1
12	14	4.5	19	19	5.7	19	34	8.3	49	4.3	20	3.0
13	8.8	5.7	20	17	5.4	18	33	7.4	72	4.1	17	3.2
14	6.0	5.3	33	16	5.3	17	31	6.9	76	4.0	14	3.6
15	4.5	5.1	36	14	5.1	16	27	6.6	76	3.9	13	3.9
16	6.6	6.2	36	13	5.0	19	23	6.8	65	3.7	11	4.0
17	8.8	32	32	e12	5.8	26	21	5.5	53	3.5	9.1	3.7
18	6.8	42	27	e11	9.1	35	18	5.3	49	3.4	7.2	3.5
19	5.6	42	24	e9.9	8.6	40	16	4.9	44	3.4	5.9	9.7
20	4.9	38	30	e9.0	7.6	46	14	4.4	41	3.2	5.3	8.0
21	6.4	34	33	e8.3	7.0	74	13	4.8	63	3.6	4.8	6.9
22	6.5	33	30	e7.6	e11	75	13	5.1	101	5.1	4.5	6.2
23	5.1	31	26	e6.8	e22	66	11	4.8	88	5.7	4.2	15
24	4.4	27	23	e6.2	e24	54	9.8	5.8	70	6.0	4.0	17
25	4.1	26	22	e5.6	e24	47	8.9	5.5	57	5.2	3.7	16
26	6.4	24	22	e5.3	e22	42	11	12	46	4.7	3.7	16
27	5.4	24	20	e5.1	e20	38	11	12	36	4.6	3.7	18
28	4.8	21	19	e4.9	21	34	9.2	13	30	4.5	3.5	26
29	4.3	18	17	e4.6	---	36	8.8	12	24	4.2	3.4	19
30	4.3	17	16	4.4	---	43	8.4	12	19	4.0	3.4	15
31	4.3	---	18	4.3	---	40	---	13	---	3.9	3.2	---
TOTAL	137.48	479.5	619.9	537.0	267.2	1,059	678.1	243.5	1,692	167.1	301.7	241.9
MEAN	4.43	16.0	20.0	17.3	9.54	34.2	22.6	7.85	56.4	5.39	9.73	8.06
MAX	14	42	36	41	24	75	40	13	101	16	23	26
MIN	0.64	3.6	7.8	4.3	4.5	16	8.4	4.4	19	3.2	3.2	3.0
CFSM	0.58	2.09	2.61	2.26	1.25	4.47	2.95	1.03	7.37	0.70	1.27	1.05
IN.	0.67	2.33	3.01	2.61	1.30	5.15	3.30	1.18	8.23	0.81	1.47	1.18

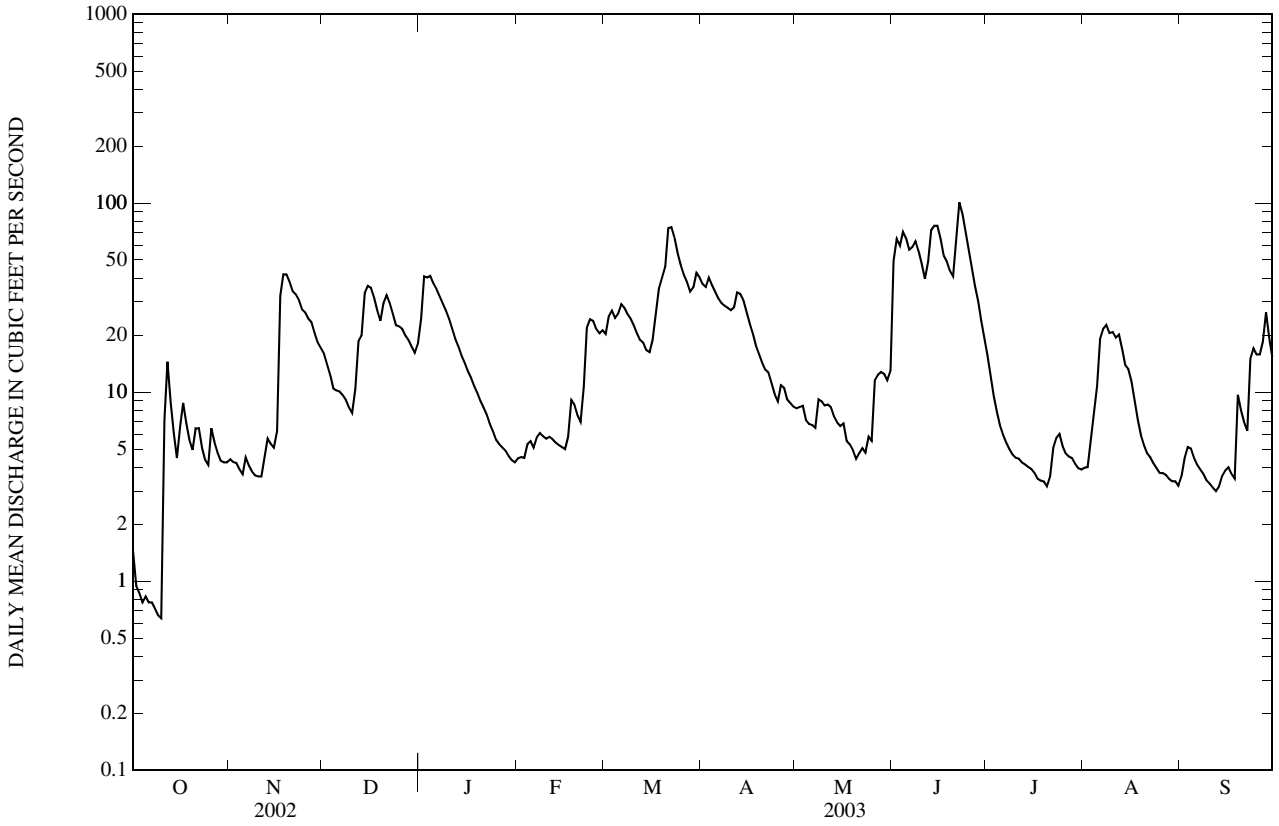
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1983 - 2003, BY WATER YEAR (WY)

MEAN	6.53	10.2	16.3	15.0	15.6	23.4	24.2	16.9	13.0	6.96	6.64	5.54
MAX	26.1	22.4	49.5	45.5	32.0	49.5	64.1	50.6	56.4	32.6	31.9	24.7
(WY)	(1990)	(1996)	(1997)	(1996)	(1996)	(1983)	(1983)	(1989)	(2003)	(1984)	(2000)	(1987)
MIN	0.68	0.53	0.55	1.31	1.87	3.66	3.84	4.49	2.55	1.71	1.49	1.36
(WY)	(1998)	(1999)	(1999)	(2002)	(2002)	(2002)	(1985)	(1999)	(1999)	(1999)	(1999)	(1998)

01379773 GREEN POND BROOK AT PICATINNY ARSENAL, NJ—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1983 - 2003	
ANNUAL TOTAL	3,001.47		6,424.38			
ANNUAL MEAN	8.22		17.6		13.3	
HIGHEST ANNUAL MEAN					21.4	1984
LOWEST ANNUAL MEAN					5.10	2002
HIGHEST DAILY MEAN	50	May 18	101	Jun 22	248	Apr 5, 1984
LOWEST DAILY MEAN	0.64	Oct 10	0.64	Oct 10	0.22	Nov 23, 1998
ANNUAL SEVEN-DAY MINIMUM	0.74	Oct 4	0.74	Oct 4	0.25	Nov 19, 1998
MAXIMUM PEAK FLOW			119	Jun 21	333	Apr 5, 1984
MAXIMUM PEAK STAGE			2.68	Jun 21	3.51	Apr 5, 1984
INSTANTANEOUS LOW FLOW			0.56	Oct 10	0.19	Nov 23, 1998
ANNUAL RUNOFF (CFSM)	1.07		2.30		1.74	
ANNUAL RUNOFF (INCHES)	14.60		31.24		23.69	
10 PERCENT EXCEEDS	26		41		30	
50 PERCENT EXCEEDS	3.8		9.8		8.2	
90 PERCENT EXCEEDS	1.4		3.7		2.2	

e Estimated



01379780 GREEN POND BROOK BELOW PICATINNY LAKE, AT PICATINNY ARSENAL, NJ

LOCATION.--Lat 40°56'56", long 74°33'28", Morris County, Hydrologic Unit 02030103, on left bank 100 ft upstream from bridge on Whitmore Avenue at Picatinny Arsenal, and 200 ft downstream from dam on Picatinny Lake.

DRAINAGE AREA.--9.16 mi^2.

PERIOD OF RECORD.--October 1984 to current year.

REVISED RECORDS.--WDR NJ-90-1: 1987 (M).

GAGE.--Water-stage recorder and concrete control. Datum of gage is 694.91 ft above NGVD of 1929 (U.S. Army, Picatinny Arsenal, benchmark).

REMARKS.--Records fair, except for estimated daily discharges which are poor. Occasional regulation at Picatinny Lake. Several measurements of water temperature were made during the year.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of April 5, 1984 reached an elevation of 699.0 ft above NGVD of 1929, 200 ft upstream from bridge on Whitmore Avenue.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 70 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Nov 19	1330	*212	*3.58	Jun 12	0730	87	3.09
Dec 16	0900	115	3.19	Jun 14	1215	127	3.24
Mar 21	1830	109	3.17	Jun 18	1400	85	3.08
Jun 4	1315	103	3.15	Jun 22	0245	172	3.43
Jun 7	2115	95	3.12				

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.1	4.4	18	26	e4.7	23	46	8.6	62	12	2.6	3.7
2	0.81	4.4	16	55	e4.9	30	44	9.1	81	13	3.5	6.9
3	1.2	4.3	14	55	e4.8	33	45	9.0	77	11	5.7	6.9
4	1.1	4.2	12	53	e5.5	28	45	7.7	96	8.8	11	6.0
5	0.92	4.0	12	46	e5.8	30	41	7.1	90	7.4	13	5.1
6	0.76	6.0	12	41	e5.3	37	35	7.2	77	6.5	21	4.4
7	2.0	4.9	11	36	e5.6	33	35	7.0	74	5.6	21	3.9
8	3.0	4.2	10	32	e5.9	29	33	9.9	86	4.7	23	3.5
9	2.8	4.1	9.5	29	e5.6	27	31	10	75	4.4	21	3.2
10	2.7	3.9	8.9	27	e5.3	25	31	9.3	60	4.1	22	2.7
11	5.3	4.3	9.9	23	e5.1	23	32	9.0	49	4.1	20	2.6
12	23	5.3	19	20	e4.9	22	40	8.7	69	3.8	22	2.4
13	15	6.8	21	18	e4.6	22	39	7.7	100	3.4	19	3.2
14	9.0	6.2	36	16	e4.5	20	36	7.2	112	4.6	15	5.2
15	6.4	5.8	44	e14	e4.4	19	31	7.3	112	3.0	13	6.5
16	8.8	7.5	62	e13	e4.2	21	27	7.4	87	1.7	12	6.5
17	11	23	41	e13	e5.0	29	23	5.7	69	1.8	10	4.7
18	8.9	35	32	e12	e6.9	42	20	5.2	66	1.8	7.6	4.3
19	7.1	85	27	e10	e7.7	47	18	4.7	57	2.1	6.1	14
20	6.2	56	35	e9.7	e7.9	55	16	4.2	50	1.8	5.2	11
21	6.1	42	41	e9.0	e8.1	103	16	4.9	83	2.4	4.9	8.2
22	6.5	38	35	e8.2	e12	104	15	5.3	159	7.2	4.8	7.0
23	5.9	34	30	e7.4	e24	89	13	5.1	129	8.1	4.2	17
24	5.0	30	26	e6.7	e28	71	11	6.4	102	7.2	3.1	19
25	4.6	28	28	e6.0	e28	57	10	6.2	76	5.7	2.5	17
26	8.4	25	27	e5.7	e27	50	12	13	58	4.5	2.6	17
27	7.2	25	22	e5.5	e24	47	12	15	45	3.9	2.6	21
28	5.9	23	21	e5.1	24	40	11	14	36	4.2	2.5	40
29	5.3	21	19	e4.8	---	41	9.8	13	27	3.5	2.3	25
30	5.0	19	18	e4.7	---	56	9.3	12	21	3.0	2.7	19
31	4.6	---	18	e4.6	---	50	---	14	---	2.6	2.4	---
TOTAL	181.59	564.3	735.3	616.4	283.7	1,303	787.1	260.9	2,285	157.9	308.3	296.9
MEAN	5.86	18.8	23.7	19.9	10.1	42.0	26.2	8.42	76.2	5.09	9.95	9.90
MAX	23	85	62	55	28	104	46	15	159	13	23	40
MIN	0.76	3.9	8.9	4.6	4.2	19	9.3	4.2	21	1.7	2.3	2.4
CFSM	0.64	2.05	2.59	2.17	1.11	4.59	2.86	0.92	8.32	0.56	1.09	1.08
IN.	0.74	2.29	2.99	2.50	1.15	5.29	3.20	1.06	9.28	0.64	1.25	1.21

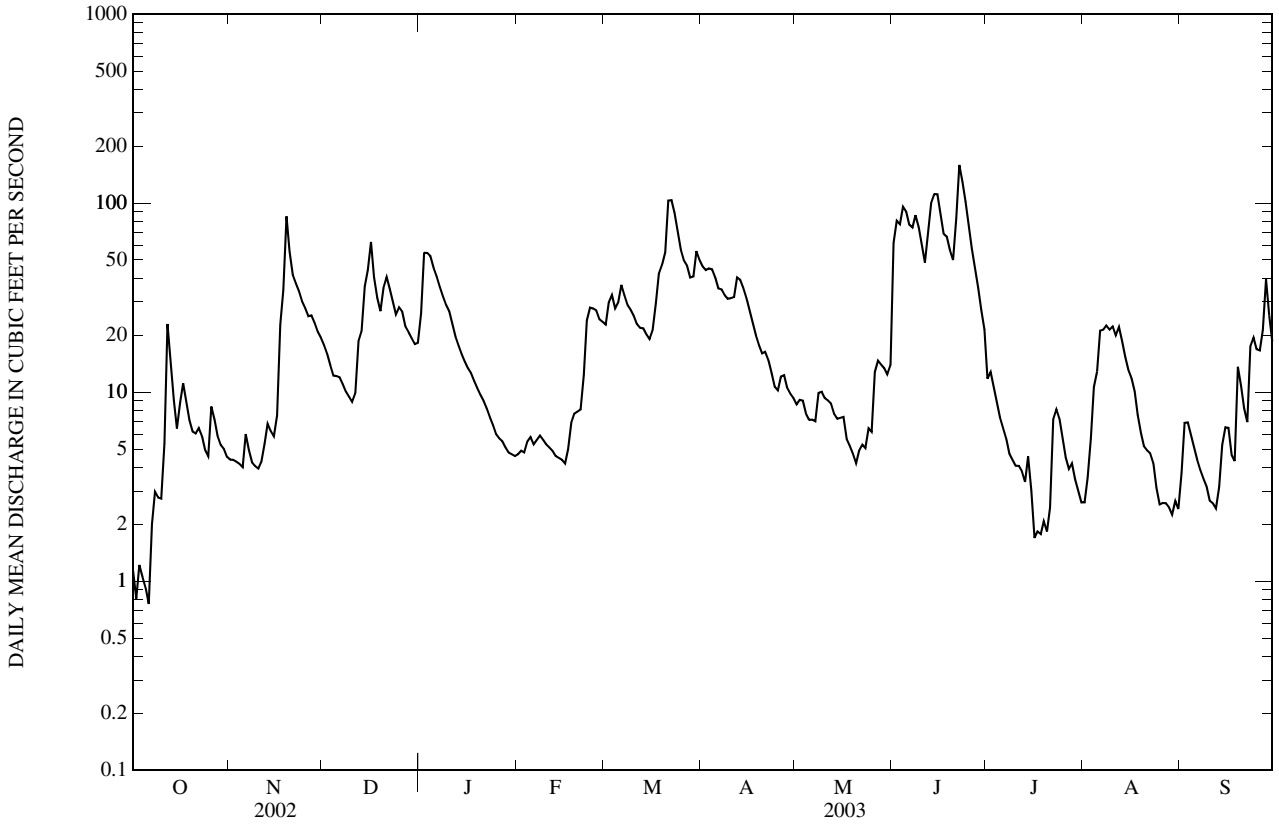
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1985 - 2003, BY WATER YEAR (WY)

MEAN	7.37	12.5	18.9	17.4	16.7	25.1	24.2	19.0	15.1	5.83	7.35	6.66
MAX	33.3	29.5	60.7	51.2	31.8	42.0	51.1	66.7	76.2	18.4	38.5	36.7
(WY)	(1990)	(1996)	(1997)	(1996)	(1998)	(2003)	(1993)	(1989)	(2003)	(1990)	(2000)	(1987)
MIN	0.71	0.18	0.19	0.20	1.24	3.96	2.48	4.77	2.23	1.48	0.45	1.06
(WY)	(1985)	(2002)	(2002)	(2002)	(2002)	(2002)	(1985)	(1999)	(1987)	(1993)	(1999)	(2001)

01379780 GREEN POND BROOK BELOW PICATINNY LAKE, AT PICATINNY ARSENAL, NJ—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1985 - 2003	
ANNUAL TOTAL	3,269.19		7,780.39			
ANNUAL MEAN	8.96		21.3		14.6	
HIGHEST ANNUAL MEAN					22.1	1990
LOWEST ANNUAL MEAN					5.04	2002
HIGHEST DAILY MEAN	85	Nov 19	159	Jun 22	206	May 17, 1990
LOWEST DAILY MEAN	0.16	Jan 1	0.76	Oct 6	0.09	Nov 29, 2001
ANNUAL SEVEN-DAY MINIMUM	0.19	Jan 1	1.1	Oct 1	0.11	Nov 26, 2001
MAXIMUM PEAK FLOW			212	Nov 19	290	Aug 12, 2000
MAXIMUM PEAK STAGE			3.58	Nov 19	3.83	Aug 12, 2000
INSTANTANEOUS LOW FLOW			0.46	Oct 3	0.00	Dec 31, 2001
ANNUAL RUNOFF (CFSM)	0.98		2.33		1.60	
ANNUAL RUNOFF (INCHES)	13.28		31.60		21.73	
10 PERCENT EXCEEDS	28		54		34	
50 PERCENT EXCEEDS	3.9		11		8.6	
90 PERCENT EXCEEDS	0.23		3.5		1.3	

e Estimated.



01379790 GREEN POND BROOK AT WHARTON, NJ

LOCATION.--Lat 40°55'04", long 74°35'01", Morris County, Hydrologic Unit 02030103, on left bank 600 ft upstream from bridge on northbound lane of State Route 15, 0.2 mi northwest of Wharton, and 1.7 mi upstream from mouth.

DRAINAGE AREA.--12.6 mi^2.

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

GAGE.--Water-stage recorder and concrete control. Datum of gage is 680.26 ft above NGVD of 1929 (U.S. Army, Picatinny Arsenal, bench mark).

REMARKS.--Records good. Some regulation from Lake Picatinny, Picatinny Arsenal sewage treatment plant, and flood gates located about 800 ft upstream from gage. Several measurements of water temperature were made during the year.

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

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar 21	0530	143	3.58	Jun 13	1415	143	3.58
Jun 12	0615	136	3.55	Jun 22	0515	*216	*3.85

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

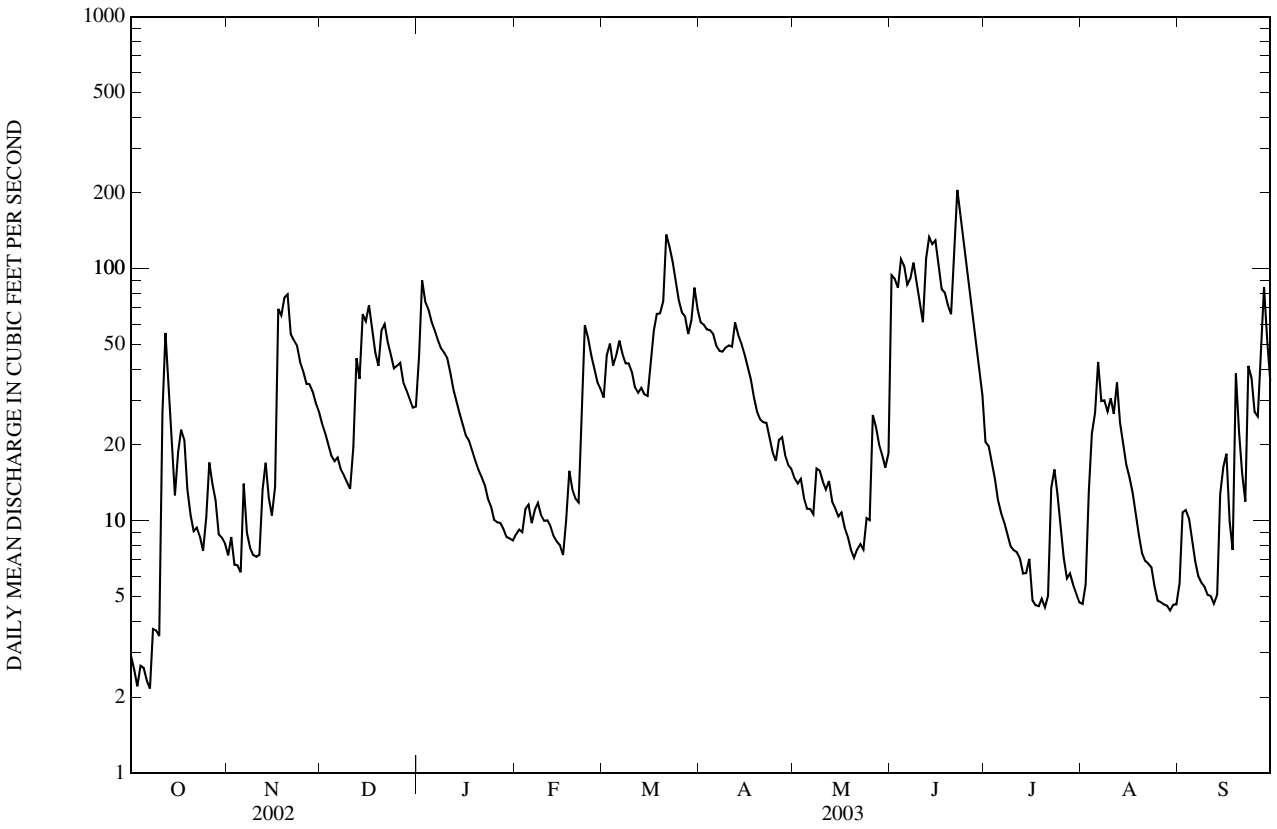
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.9	7.3	24	45	8.8	31	61	15	94	21	4.7	5.6
2	2.6	8.6	22	90	9.2	45	60	14	91	20	5.6	11
3	2.2	6.7	20	74	9.0	50	57	15	84	17	13	11
4	2.7	6.7	18	69	11	41	57	12	109	15	22	10
5	2.6	6.3	17	62	12	45	55	11	103	12	27	8.5
6	2.3	14	18	57	9.8	52	49	11	86	11	43	6.9
7	2.2	9.0	16	52	11	46	47	11	92	9.8	30	6.0
8	3.7	7.8	15	48	12	42	47	16	106	8.8	30	5.7
9	3.7	7.3	14	47	11	42	49	16	88	7.9	27	5.5
10	3.5	7.2	13	44	10	39	50	14	74	7.7	31	5.1
11	27	7.3	20	39	10	34	49	13	61	7.5	27	5.0
12	56	13	44	33	9.5	32	61	14	110	7.1	35	4.7
13	31	17	37	30	8.7	34	55	12	134	6.2	24	5.1
14	19	12	66	27	8.3	32	51	11	125	6.2	20	13
15	13	11	62	24	8.0	31	46	10	130	7.1	17	16
16	19	14	72	22	7.3	42	41	11	102	4.8	15	18
17	23	69	58	21	10	57	37	9.4	83	4.6	13	10
18	21	65	47	19	16	66	31	8.6	80	4.6	11	7.7
19	13	77	41	17	13	66	27	7.7	72	4.9	8.8	38
20	11	79	57	16	12	74	25	7.1	66	4.5	7.5	22
21	9.1	55	60	15	12	137	25	7.7	111	5.1	7.0	15
22	9.4	52	51	14	23	122	24	8.1	206	14	6.8	12
23	8.6	50	45	12	60	108	21	7.7	162	16	6.6	41
24	7.6	43	40	11	53	90	19	10	122	13	5.5	37
25	10	39	41	10	45	75	17	10	93	9.3	4.8	27
26	17	35	42	9.9	40	67	21	26	73	7.1	4.8	26
27	14	35	35	9.8	35	65	21	23	59	5.9	4.7	43
28	12	33	33	9.3	33	55	18	20	48	6.2	4.6	85
29	8.8	29	31	8.6	---	63	17	18	39	5.6	4.4	52
30	8.6	27	28	8.5	---	84	16	16	31	5.2	4.7	36
31	8.1	---	28	8.4	---	69	---	19	---	4.8	4.7	---
TOTAL	374.6	843.2	1,115	952.5	507.6	1,836	1,154	404.3	2,834	279.9	470.2	588.8
MEAN	12.1	28.1	36.0	30.7	18.1	59.2	38.5	13.0	94.5	9.03	15.2	19.6
MAX	56	79	72	90	60	137	61	26	206	21	43	85
MIN	2.2	6.3	13	8.4	7.3	31	16	7.1	31	4.5	4.4	4.7
CFSM	0.96	2.23	2.85	2.44	1.44	4.70	3.05	1.04	7.50	0.72	1.20	1.56
IN.	1.11	2.49	3.29	2.81	1.50	5.42	3.41	1.19	8.37	0.83	1.39	1.74

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1983 - 2003, BY WATER YEAR (WY)

MEAN	12.0	19.1	29.1	26.9	27.8	41.7	43.5	30.3	23.3	12.5	11.6	11.2
MAX	46.7	46.3	79.4	80.2	49.7	89.2	112	87.0	94.5	61.4	59.7	54.0
(WY)	(1990)	(1996)	(1997)	(1996)	(1996)	(1983)	(1983)	(1989)	(2003)	(1984)	(2000)	(1987)
MIN	2.18	2.10	2.29	2.74	3.42	8.05	8.96	9.44	4.90	2.97	2.01	2.70
(WY)	(1999)	(2002)	(1999)	(2002)	(2002)	(2002)	(1985)	(1999)	(1999)	(1999)	(1999)	(1998)

01379790 GREEN POND BROOK AT WHARTON, NJ—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1983 - 2003	
ANNUAL TOTAL	5,589.1		11,360.1			
ANNUAL MEAN	15.3		31.1		24.1	
HIGHEST ANNUAL MEAN					40.6	1984
LOWEST ANNUAL MEAN					9.61	2002
HIGHEST DAILY MEAN	99	Jun 7	206	Jun 22	512	Apr 6, 1984
LOWEST DAILY MEAN	1.2	Sep 11	2.2	Oct 3,7	0.54	Sep 5, 1999
ANNUAL SEVEN-DAY MINIMUM	1.4	Sep 6	2.5	Oct 1	0.70	Aug 30, 1999
MAXIMUM PEAK FLOW			216	Jun 22	572	Apr 5, 1984
MAXIMUM PEAK STAGE			3.85	Jun 22	5.11	Apr 5, 1984
INSTANTANEOUS LOW FLOW			1.9	Oct 3,7	0.53	Aug 19, 1999
ANNUAL RUNOFF (CFSM)	1.22		2.47		1.91	
ANNUAL RUNOFF (INCHES)	16.50		33.54		25.94	
10 PERCENT EXCEEDS	46		72		52	
50 PERCENT EXCEEDS	7.1		19		15	
90 PERCENT EXCEEDS	2.1		5.8		3.7	



01380500 ROCKAWAY RIVER ABOVE RESERVOIR, AT BOONTON, NJ

LOCATION.--Lat 40°54'10", long 74°24'35", Morris County, Hydrologic Unit 02030103, on right bank, under New Jersey Transit railroad bridge, just downstream from bridge on Morris Avenue in Boonton, 1.8 mi upstream from dam at Boonton Reservoir.

DRAINAGE AREA.--116 mi^2.

PERIOD OF RECORD.--October 1937 to current year. Monthly discharge only for October 1937, published in WSP 1302.

REVISED RECORDS.--WRD-NJ 1974: 1938(M). WDR NJ-78-1: 1949(M), 1952(M), 1968(M), 1971(M), 1973(P), 1974(M), 1977(M).

GAGE.--Water-stage recorder, crest-stage gage, and concrete control. Datum of gage is 364.47 ft above NGVD of 1929 (levels from New Jersey Geological Survey bench mark).

REMARKS.--Records good except for estimated discharges which are poor. Flow regulated by Splitrock Reservoir on Beaver Brook, 14.5 mi upstream from station (see Passaic River basin, reservoirs in). Town of Boonton diverts water for municipal supply from Taylortown Reservoir on Stony Brook, capacity, 75,000,000 gal and by pumping from wells in vicinity of Boonton. For diversion from Taylortown Reservoir, see Passaic River Basin diversions. Rockaway Valley trunk sewer bypasses the station (see station 01381000). Several measurements of water temperature were made during the year. Satellite gage-height telemetry at station.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 950 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Oct 12	1215	1,060	3.44	Jun 1	1730	1,650	4.21
Jan 2	1230	953	3.36	Jun 5	0830	1,290	3.90
Feb 23	2230	1,100	3.54	Jun 8	0400	1,020	3.61
Mar 21	1300	1,630	4.09	Jun 13	1415	1,330	3.94
Mar 27	0900	1,210	3.67	Jun 22	0730	*2,100	*4.55
Mar 30	0530	1,010	3.43				

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	36	88	178	347	e100	245	566	173	1,190	232	77	90
2	33	76	160	864	e105	406	536	166	1,070	212	109	298
3	32	73	158	708	e105	596	482	165	673	193	112	216
4	32	68	166	609	e125	392	430	148	844	164	347	219
5	41	67	139	540	e130	384	419	134	1,160	138	505	179
6	31	156	161	470	e115	505	385	136	770	127	627	124
7	24	150	166	419	e120	395	342	133	620	125	466	105
8	23	100	136	379	e120	361	365	186	936	123	381	76
9	26	83	140	377	e120	363	385	197	678	115	323	64
10	25	80	133	395	113	364	448	185	538	113	419	59
11	332	78	163	347	e105	303	442	153	464	119	331	59
12	884	111	569	288	e100	290	544	166	684	111	737	46
13	513	242	429	260	e90	326	525	151	1,190	97	441	72
14	310	176	644	234	e85	347	440	143	1,000	90	283	150
15	202	132	607	220	e90	322	364	132	830	94	213	248
16	221	121	485	e180	e80	427	337	129	673	90	168	320
17	335	669	400	e180	e50	607	314	128	550	86	140	188
18	248	873	327	e145	e150	698	286	115	517	78	117	143
19	185	631	293	e160	e150	687	277	89	506	78	112	439
20	144	512	429	e150	e125	654	263	83	478	72	117	377
21	116	382	603	e130	e105	1,430	243	100	706	68	98	224
22	96	394	483	e125	241	1,210	246	107	1,950	291	80	173
23	78	465	388	e115	835	951	232	108	1,350	511	78	414
24	68	348	338	e110	800	761	210	163	914	344	68	539
25	61	286	339	e100	521	652	192	148	643	248	58	351
26	224	246	364	e95	358	590	231	328	528	143	59	282
27	200	240	333	e100	312	611	252	402	447	91	66	260
28	131	218	298	e100	272	543	211	283	353	89	57	577
29	102	195	271	e95	---	526	195	234	306	79	53	603
30	92	186	251	e95	---	921	189	196	273	74	50	477
31	92	---	248	e95	---	686	---	223	---	70	50	---
TOTAL	4,937	7,446	9,799	8,432	5,622	17,553	10,351	5,204	22,841	4,465	6,742	7,372
MEAN	159	248	316	272	201	566	345	168	761	144	217	246
MAX	884	873	644	864	835	1,430	566	402	1,950	511	737	603
MIN	23	67	133	95	50	245	189	83	273	68	50	46

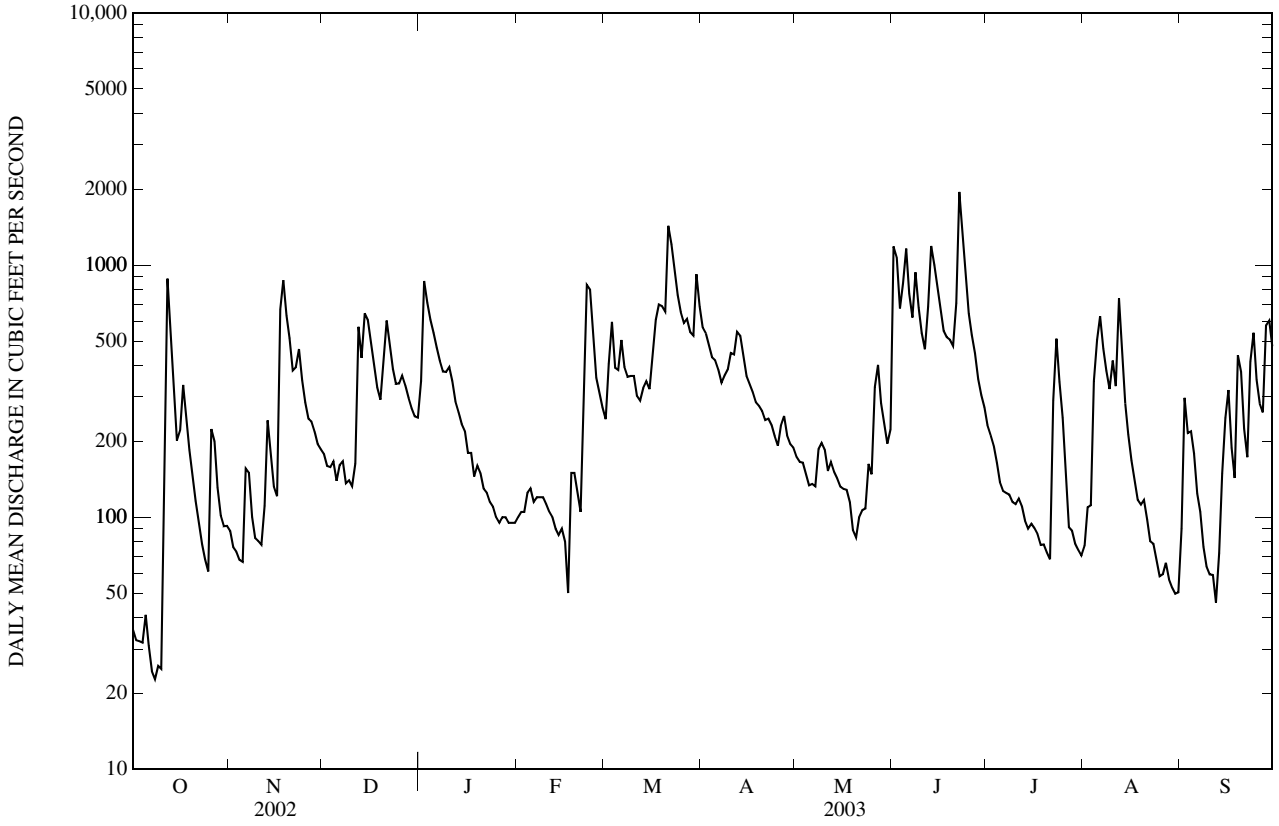
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1938 - 2003, BY WATER YEAR (WY)

MEAN	124	215	269	261	272	393	386	274	192	125	118	121
MAX	523	694	718	855	590	798	979	836	847	553	447	484
(WY)	(1956)	(1973)	(1997)	(1979)	(1973)	(1977)	(1983)	(1989)	(1972)	(1975)	(1955)	(1971)
MIN	23.7	27.9	49.5	64.2	53.8	112	87.0	90.5	35.3	18.1	16.6	16.8
(WY)	(1965)	(2002)	(1999)	(2002)	(2002)	(2002)	(1985)	(1965)	(1965)	(1966)	(1957)	(1964)

01380500 ROCKAWAY RIVER ABOVE RESERVOIR, AT BOONTON, NJ—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1938 - 2003	
ANNUAL TOTAL	52,011.1		110,764			
ANNUAL MEAN	142		303		229	
HIGHEST ANNUAL MEAN					396	1952
LOWEST ANNUAL MEAN					88.3	1965
HIGHEST DAILY MEAN	884	Oct 12	1,950	Jun 22	4,220	Jan 25, 1979
LOWEST DAILY MEAN	8.2	Aug 19	23	Oct 8	5.7	Aug 10, 1999
ANNUAL SEVEN-DAY MINIMUM	9.0	Aug 17	29	Oct 4	6.1	Aug 7, 1999
MAXIMUM PEAK FLOW			2,100	Jun 22	5,590	Apr 5, 1984
MAXIMUM PEAK STAGE			4.55	Jun 22	7.23	Apr 5, 1984
10 PERCENT EXCEEDS	341		643		495	
50 PERCENT EXCEEDS	81		220		153	
90 PERCENT EXCEEDS	22		78		42	

e Estimated



01381000 ROCKAWAY RIVER BELOW RESERVOIR, AT BOONTON, NJ

LOCATION.--Lat 40°53'49", long 74°23'41", Morris County, Hydrologic Unit 02030103, on right bank 2,000 ft downstream from Boonton Reservoir Dam at Boonton, and 0.4 mi upstream at bridge on Greenback Road.

DRAINAGE AREA.--119 mi^2.

PERIOD OF RECORD.--Gage-height only, March 1903 to February 1904. Monthly discharges only, November 1911 to May 1912 and November 1912 to December 1912. Daily discharges, January 1906 to October 1911, June 1912 to October 1912, and January 1913 to current year. Published as "near Boonton" 1903-4, and as "at Boonton" 1906-37.

REVISED RECORDS.--WSP 1902: 1951-54. WDR NJ-79-1: 1949(M), 1952(M), 1968(M), 1970-74(M), 1977(M).

GAGE.--Water-stage recorder. Concrete control since Nov. 5, 1936. Datum of gage is 195.68 ft above NGVD of 1929 (levels from New Jersey Geological Survey bench mark). Mar. 15, 1903 to Feb. 2, 1904, nonrecording gage at site 1.9 mi downstream at different datum. Jan. 1, 1906 to Mar. 3, 1918, nonrecording gage on Boonton Reservoir Dam 2,000 ft upstream at datum 305.25 ft above NGVD of 1929 (levels from New Jersey Geological Survey bench mark).

REMARKS.--Records good. Records represent flow in river only. Sewage effluent enters river about 600 ft below station (records given herein). Flow regulated by Boonton Reservoir (see Passaic River basin, reservoirs in) 2,000 ft upstream from station, and by Splitrock Reservoir (see Passaic River basin, reservoirs in) 16.5 mi above station. Water diverted from Boonton Reservoir for municipal supply of Jersey City (see Passaic River basin, diversions). Several measurements of water temperature were made during the year. Satellite gage-height telemetry at station.

COOPERATION.--Gage-height record collected in cooperation with United Water Jersey City, and record of sewage effluent furnished by Rockaway Valley Regional Sewerage Authority.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10	11	111	208	33	160	492	119	878	158	13	14
2	9.9	11	94	637	37	224	431	104	1,280	138	13	15
3	9.7	11	85	703	34	465	390	99	797	114	13	20
4	9.7	11	73	548	54	334	351	90	825	102	109	95
5	9.9	11	86	428	74	280	334	75	1,210	78	400	109
6	9.8	11	82	358	60	354	324	73	930	54	557	76
7	9.6	10	83	314	66	309	297	76	667	46	460	49
8	9.8	10	67	278	57	270	304	99	928	41	328	28
9	9.7	10	57	263	47	250	317	131	793	33	284	15
10	9.8	10	48	276	45	260	375	125	574	33	327	13
11	17	10	72	258	40	216	387	103	441	43	278	13
12	16	11	334	200	33	190	489	107	576	44	581	13
13	13	11	371	168	24	208	534	89	1,150	23	473	13
14	12	10	471	151	19	240	413	79	1,150	17	254	13
15	12	10	558	140	e25	219	328	72	900	16	157	43
16	14	10	397	107	e25	264	287	64	731	18	100	184
17	12	18	315	112	e30	427	259	62	560	13	64	151
18	12	13	255	e95	e35	565	232	59	485	13	45	91
19	11	14	219	e80	e50	595	221	38	456	13	36	270
20	11	223	260	e80	e60	566	210	25	415	13	33	352
21	11	291	500	e60	e70	1,170	190	25	585	14	27	199
22	11	295	408	e60	e185	1,290	191	34	1,800	44	18	122
23	11	358	315	e50	574	975	177	41	1,540	339	14	235
24	11	279	255	e40	809	740	149	77	1,060	314	13	505
25	11	216	258	e35	481	573	130	93	716	197	13	330
26	13	175	276	e30	298	476	149	186	516	110	13	226
27	12	166	245	e35	231	461	184	352	388	55	13	177
28	11	150	216	e30	187	413	162	263	298	20	13	396
29	11	131	187	25	---	384	132	196	239	13	13	574
30	11	112	168	26	---	745	127	145	207	13	13	446
31	11	---	156	28	---	696	---	150	---	13	13	---
TOTAL	351.9	2,609	7,022	5,823	3,683	14,319	8,566	3,251	23,095	2,142	4,688	4,787
MEAN	11.4	87.0	227	188	132	462	286	105	770	69.1	151	160
MAX	17	358	558	703	809	1,290	534	352	1,800	339	581	574
MIN	9.6	10	48	25	19	160	127	25	207	13	13	13
(I)	15.0	15.9	16.6	17.0	15.4	19.8	18.4	15.8	22.6	15.9	16.5	16.8

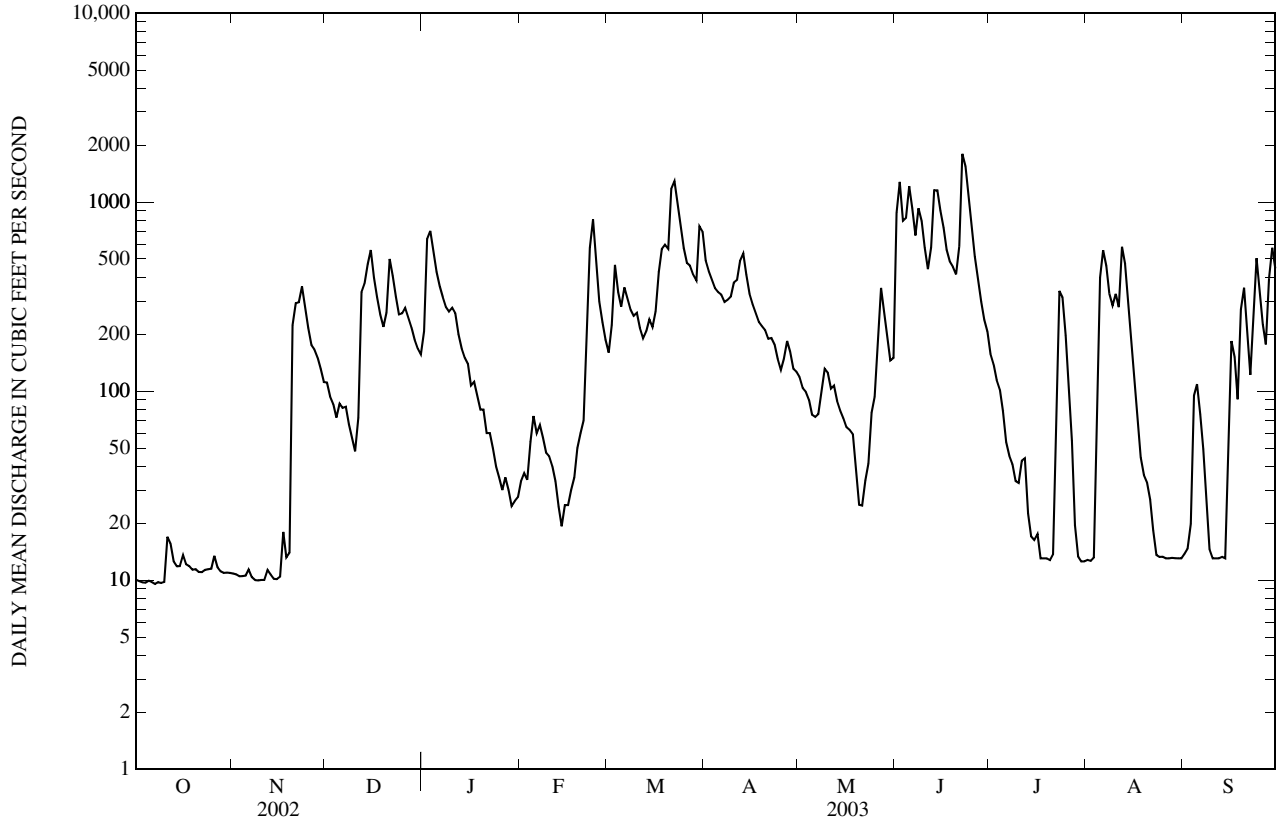
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1906 - 2003, BY WATER YEAR (WY)

MEAN	48.3	105	147	169	177	306	295	184	101	58.5	51.9	47.4
MAX	459	743	802	692	598	1,001	978	873	770	445	358	346
(WY)	(1908)	(1908)	(1997)	(1979)	(1908)	(1936)	(1983)	(1989)	(2003)	(1984)	(2000)	(1960)
MIN	0.000	0.000	0.000	0.000	0.62	1.94	8.83	6.01	0.000	0.000	0.000	0.000
(WY)	(1915)	(1917)	(1917)	(1918)	(1954)	(1931)	(2002)	(1941)	(1912)	(1912)	(1912)	(1912)

01381000 ROCKAWAY RIVER BELOW RESERVOIR, AT BOONTON, NJ—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1906 - 2003	
ANNUAL TOTAL	20,854.1		80,336.9			
ANNUAL MEAN	57.1		220		140	
(I)	14.4		17.1			
HIGHEST ANNUAL MEAN					399	1908
LOWEST ANNUAL MEAN					7.19	1965
HIGHEST DAILY MEAN	622	Jun 8	1,800	Jun 22	3,850	Apr 6, 1984
LOWEST DAILY MEAN	7.4	Apr 27	9.6	Oct 7	0.00	Many days
ANNUAL SEVEN-DAY MINIMUM	8.2	Mar 28	9.7	Oct 3	0.00	Many days
MAXIMUM PEAK FLOW			2,080	Jun 22	7,560ab	Oct 10, 1903
MAXIMUM PEAK STAGE			5.97	Jun 22	8.30c	Jan 25, 1979
INSTANTANEOUS LOW FLOW			8.4	Oct 21	0.00a	Many days
10 PERCENT EXCEEDS	199		562		376	
50 PERCENT EXCEEDS	11		114		48	
90 PERCENT EXCEEDS	8.8		11		0.50	

a Since 1903; see period of record section.
b Maximum daily.
c Maximum peak stage since 1906
(I) Sewage effluent, in cubic feet per second, from plant at Rockaway Valley Regional Sewerage Authority
e Estimated



01381400 WHIPPANY RIVER NEAR MORRISTOWN, NJ

LOCATION.--Lat 40°48'44", long 74°30'43", Morris County, Hydrologic Unit 02030103, on left downstream side of bridge on Sussex Avenue, 1.9 mi northwest of Morristown, and 2.7 mi upstream from Lake Pocahontas Dam.

DRAINAGE AREA.--14.0 mi^2.

PERIOD OF RECORD.--Low-flow partial-record site 1964-72. August 1995 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 310 ft above NGVD of 1929 (from topographic map).

REMARKS.--Records good. Water diverted upstream at Clyde Potts Reservoir on Harmony Brook for municipal supply by the Southeast Morris County Municipal Utilities Authority. Several measurements of water temperature were made during the year.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 180 ft^3/s (revised) and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Oct 12	0815	239	5.28	Jun 4	1330	227	5.13
Nov 17	1145	218	5.19	Jun 7	2345	199	5.03
Feb 23	1600	342	*5.53	Jun 13	0615	199	5.03
Mar 2	1945	225	5.12	Jun 22	0045	*359	5.52
Mar 21	0645	302	5.38	Aug 12	0545	265	5.24
Jun 1	1115	302	5.36				

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.9	9.3	15	53	e13	20	45	24	233	27	12	20
2	3.7	8.9	13	139	e14	96	49	24	77	25	14	54
3	3.7	8.5	12	55	e15	e94	42	23	39	24	11	31
4	4.9	8.2	15	61	20	e34	40	21	151	23	22	30
5	5.9	8.0	12	43	17	49	44	20	134	21	51	21
6	4.0	34	13	38	e13	60	39	21	62	19	71	17
7	3.7	14	15	35	e14	35	38	20	82	18	21	16
8	3.5	11	12	33	e12	33	42	30	123	19	29	15
9	3.5	9.9	12	41	e12	49	60	24	60	17	27	15
10	4.3	9.4	14	40	e12	42	68	22	48	17	33	14
11	82	10	28	30	e12	30	61	21	43	19	27	14
12	173	24	130	26	e12	35	94	21	69	17	144	13
13	32	47	46	24	e12	48	60	19	151	15	28	17
14	14	19	128	23	e12	48	46	17	74	14	20	32
15	9.6	14	58	e20	14	49	46	16	50	13	16	28
16	26	15	33	e18	13	72	42	16	41	13	15	67
17	24	148	25	e18	22	90	38	16	38	12	14	19
18	12	112	22	e17	e37	73	36	15	49	12	13	17
19	9.8	34	22	e16	e23	51	35	15	41	13	12	60
20	8.8	23	64	e15	e18	60	33	14	50	11	11	27
21	8.4	19	62	e13	e18	223	32	18	159	13	10	19
22	9.2	39	30	e13	e118	94	38	16	196	54	11	18
23	8.2	37	25	e12	308	66	32	17	70	107	10	76
24	6.8	20	23	e12	156	57	29	28	52	46	8.8	34
25	6.8	17	35	e11	42	50	28	20	44	21	8.5	21
26	40	16	36	e11	30	48	43	93	40	16	8.4	20
27	15	23	27	e12	23	59	34	49	37	14	8.4	26
28	11	18	25	e12	22	42	28	29	33	15	8.7	60
29	9.3	16	23	e12	---	52	27	22	31	12	12	26
30	11	15	22	e12	---	98	25	25	29	10	15	21
31	11	---	27	e12	---	55	---	35	---	9.9	13	---
TOTAL	569.0	787.2	1,024	877	1,034	1,912	1,274	751	2,306	666.9	704.8	848
MEAN	18.4	26.2	33.0	28.3	36.9	61.7	42.5	24.2	76.9	21.5	22.7	28.3
MAX	173	148	130	139	308	223	94	93	233	107	144	76
MIN	3.5	8.0	12	11	12	20	25	14	29	9.9	8.4	13
CFSM	1.31	1.87	2.36	2.02	2.64	4.41	3.03	1.73	5.49	1.54	1.62	2.02
IN.	1.51	2.09	2.72	2.33	2.75	5.08	3.39	2.00	6.13	1.77	1.87	2.25

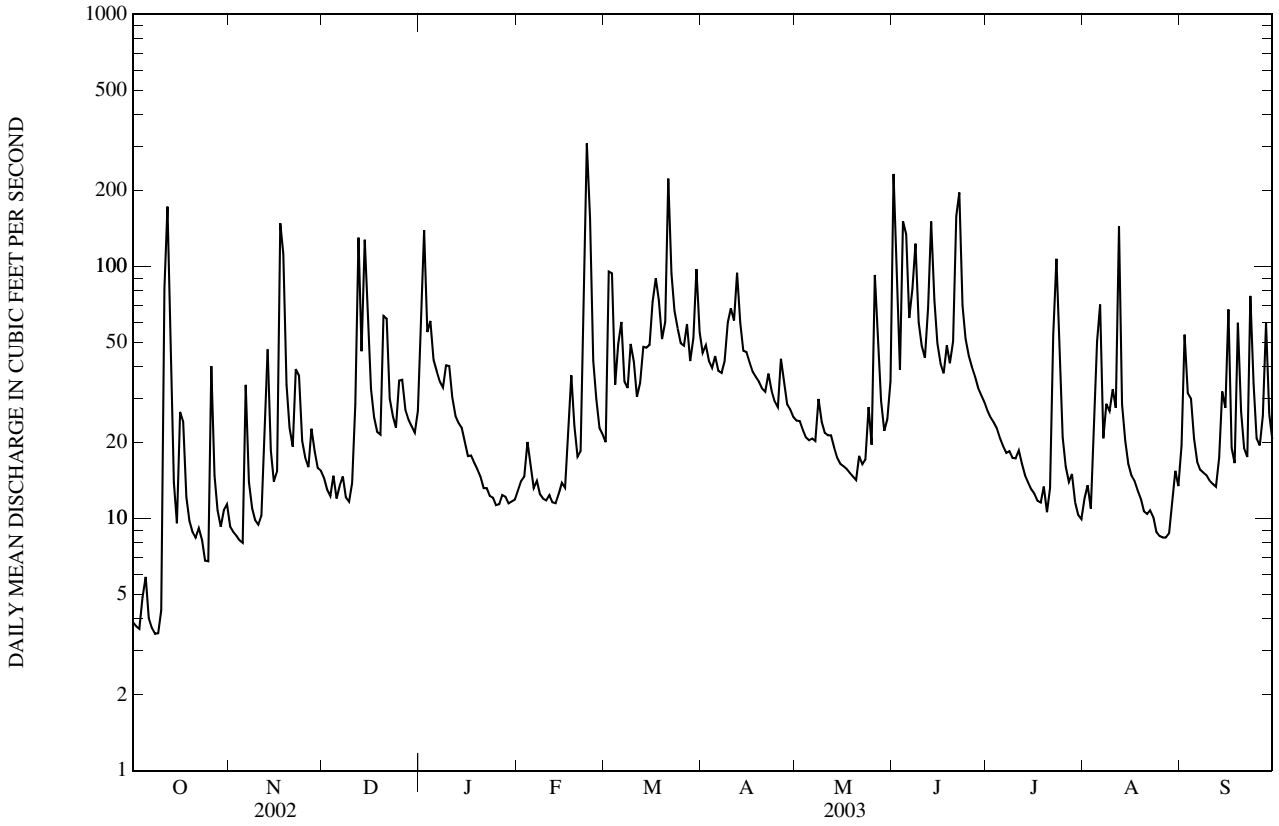
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1995 - 2003, BY WATER YEAR (WY)

MEAN	29.3	20.5	34.6	33.9	33.8	43.9	40.0	33.0	29.2	14.4	11.2	15.8
MAX	145	40.4	154	73.8	52.3	61.7	60.6	63.4	76.9	31.3	22.7	51.4
(WY)	(1997)	(1996)	(1997)	(1996)	(1996)	(2003)	(1996)	(1998)	(2003)	(1996)	(2003)	(1999)
MIN	4.94	5.23	6.03	6.18	5.98	15.3	19.6	17.8	7.17	3.76	4.70	4.87
(WY)	(2002)	(2002)	(1999)	(2002)	(2002)	(2002)	(2002)	(1999)	(1999)	(1999)	(2002)	(1998)

01381400 WHIPPANY RIVER NEAR MORRISTOWN, NJ—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1995 - 2003	
ANNUAL TOTAL	5,786.5		12,753.9			
ANNUAL MEAN	15.9		34.9		28.4	
HIGHEST ANNUAL MEAN					50.9	1997
LOWEST ANNUAL MEAN					10.7	2002
HIGHEST DAILY MEAN	173	Oct 12	308	Feb 23	2,000	Oct 20, 1996
LOWEST DAILY MEAN	2.3	Aug 19	3.5	Oct 8, 9	1.9	Aug 3, 1999
ANNUAL SEVEN-DAY MINIMUM	2.5	Aug 13	4.2	Oct 3	2.1	Aug 2, 1999
MAXIMUM PEAK FLOW			359	Jun 22	2,950a	Oct 20, 1996
MAXIMUM PEAK STAGE			5.53	Feb 23	9.31	Sep 16, 1999
INSTANTANEOUS LOW FLOW			3.4	Oct 8, 9	1.7	Aug 7, 1999
ANNUAL RUNOFF (CFSM)	1.13		2.50		2.03	
ANNUAL RUNOFF (INCHES)	15.38		33.89		27.54	
10 PERCENT EXCEEDS	33		68		54	
50 PERCENT EXCEEDS	8.7		23		16	
90 PERCENT EXCEEDS	3.4		11		4.9	

a From rating curve extended above 530 ft^3/s
e Estimated



01381500 WHIPPANY RIVER AT MORRISTOWN, NJ

LOCATION.--Lat 40°48'26", long 74°27'25", Morris County, Hydrologic Unit 02030103, on left bank at Morristown sewage-treatment plant, 0.8 mi northeast of Morristown, and 9.0 mi upstream from mouth.

DRAINAGE AREA.--29.4 mi^2.

PERIOD OF RECORD.--August 1921 to current year.

REVISED RECORDS.--WSP 781: Drainage area. WSP 1552: 1922-23(M), 1924, 1925-27(M) 1928-29, 1930-32(M), 1933-34. WRD-NJ 1974: 1965. WDR NJ-84-1: 1971(M).

GAGE.--Water-stage recorder and crest-stage gage. Concrete control since July 1, 1936. Datum of gage is 260.01 ft above NGVD of 1929 (levels from New Jersey Geological Survey bench mark). Prior to July 16, 1930, nonrecording gage at same site and datum.

REMARKS.--Records good, except for estimated daily discharges which are poor. Flow occasionally regulated by operation of gates in Pocahontas Dam, 2.5 mi above station. Diurnal fluctuations from unknown source at low flow. Several measurements of water temperature were made during the year. Satellite gage-height telemetry at station.

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

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Oct 12	0115	661	4.65	Jun 13	0530	607	4.53
Jun 1	0900	*728	*4.79	Jun 21	2130	625	4.57

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13	23	30	100	33	44	82	53	493	63	36	52
2	13	21	28	240	35	153	86	55	161	60	42	148
3	14	20	26	105	34	162	77	56	83	58	34	78
4	17	20	26	105	42	65	73	46	302	55	60	76
5	21	21	26	78	39	94	80	45	252	52	112	53
6	14	67	28	71	32	114	72	45	129	48	149	40
7	13	33	26	66	e35	70	71	45	158	46	55	36
8	12	25	27	63	32	67	78	67	227	46	70	35
9	12	23	26	71	31	91	106	54	119	44	98	35
10	14	22	24	74	e30	86	117	47	98	46	94	33
11	236	23	72	60	e31	62	110	45	87	49	80	32
12	407	50	197	51	29	65	159	46	143	42	307	31
13	82	86	89	49	e28	88	114	42	312	38	74	47
14	36	40	195	46	e28	90	84	40	157	37	54	66
15	26	30	103	43	28	83	83	37	104	36	43	71
16	59	34	63	40	e27	114	77	36	87	35	40	119
17	60	275	51	42	e26	142	72	35	79	34	38	44
18	30	183	45	e41	65	122	69	34	101	34	36	50
19	25	70	45	e39	44	93	67	33	87	37	34	140
20	22	46	109	37	34	127	65	32	93	32	32	65
21	21	39	108	35	34	376	63	41	304	48	31	43
22	21	74	58	e35	161	153	74	36	397	161	32	38
23	21	71	50	e33	331	111	64	38	153	234	31	146
24	18	42	45	e33	183	98	60	63	111	113	28	91
25	18	36	66	31	79	90	57	42	96	55	27	46
26	90	33	67	31	58	92	83	182	88	41	27	42
27	38	45	53	e33	51	105	70	111	81	37	27	51
28	25	38	48	e33	46	81	59	64	73	42	26	156
29	22	33	45	31	---	101	56	52	69	34	31	66
30	25	32	43	31	---	161	53	64	68	31	38	46
31	26	---	48	31	---	98	---	104	---	31	33	---
TOTAL	1,451	1,555	1,867	1,778	1,626	3,398	2,381	1,690	4,712	1,719	1,819	1,976
MEAN	46.8	51.8	60.2	57.4	58.1	110	79.4	54.5	157	55.5	58.7	65.9
MAX	407	275	197	240	331	376	159	182	493	234	307	156
MIN	12	20	24	31	26	44	53	32	68	31	26	31
CFSM	1.59	1.76	2.05	1.95	1.98	3.73	2.70	1.85	5.34	1.89	2.00	2.24
IN.	1.84	1.97	2.36	2.25	2.06	4.30	3.01	2.14	5.96	2.18	2.30	2.50

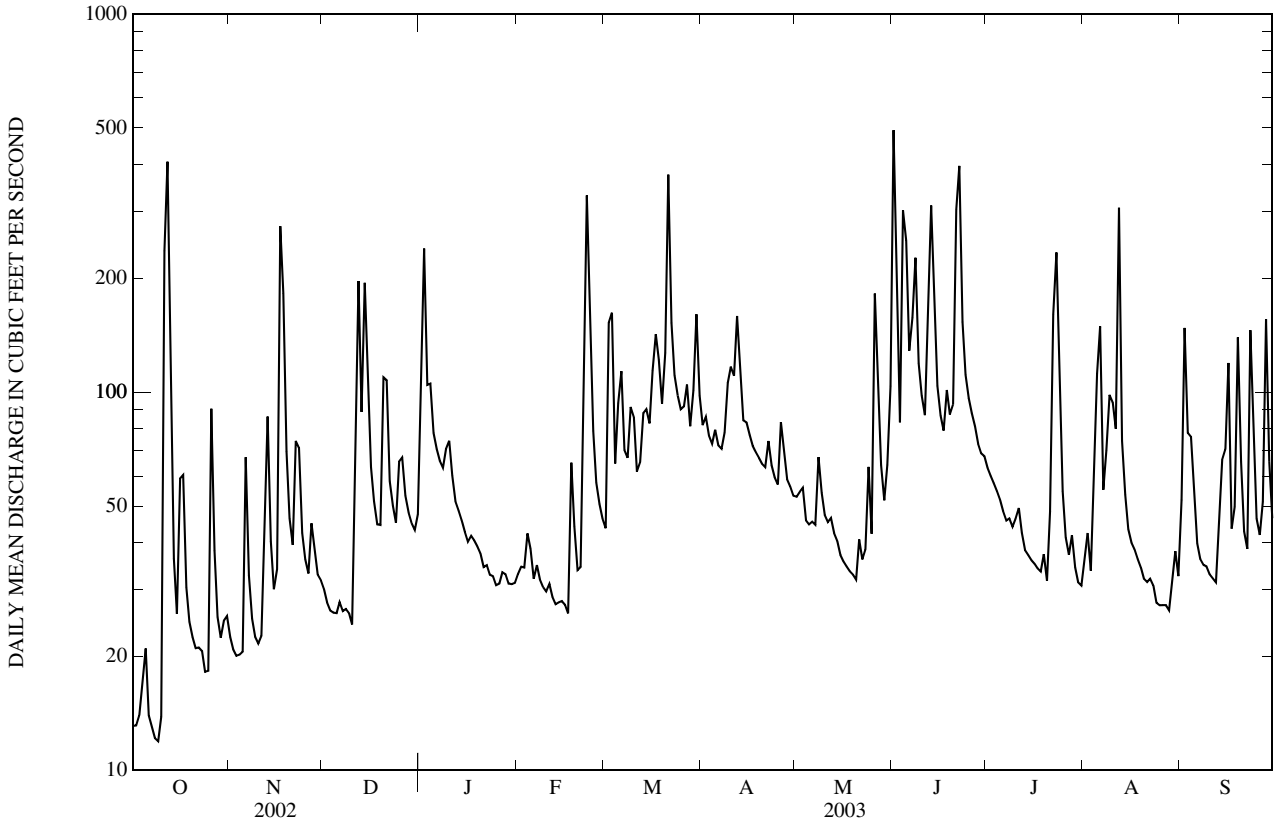
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1922 - 2003, BY WATER YEAR (WY)

MEAN	32.7	45.2	54.1	58.8	64.1	87.1	86.7	66.5	48.9	38.4	35.3	34.9
MAX	133	132	185	211	147	215	231	237	214	186	158	123
(WY)	(1997)	(1933)	(1997)	(1979)	(1973)	(1936)	(1983)	(1989)	(1972)	(1975)	(1942)	(1971)
MIN	8.72	13.4	14.2	16.9	20.3	28.1	30.2	24.4	14.6	10.3	8.02	7.25
(WY)	(1931)	(1937)	(1940)	(1922)	(2002)	(1981)	(1985)	(1941)	(1965)	(1965)	(1932)	(1932)

01381500 WHIPPANY RIVER AT MORRISTOWN, NJ—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1922 - 2003	
ANNUAL TOTAL	13,273.5		25,972			
ANNUAL MEAN	36.4		71.2		54.3	
HIGHEST ANNUAL MEAN					98.5	1984
LOWEST ANNUAL MEAN					23.3	1965
HIGHEST DAILY MEAN	407	Oct 12	493	Jun 1	1,510	Aug 28, 1971
LOWEST DAILY MEAN	8.6	Sep 12	12	Oct 8,9	4.2	Sep 10, 1932
ANNUAL SEVEN-DAY MINIMUM	9.6	Aug 13	15	Oct 3	4.7	Sep 9, 1932
MAXIMUM PEAK FLOW			728	Jun 1	2,800	Aug 28, 1971
MAXIMUM PEAK STAGE			4.79	Jun 1	8.60	Aug 28, 1971
INSTANTANEOUS LOW FLOW			11	Oct 8-10	2.8	Aug 27, 1932
ANNUAL RUNOFF (CFSM)	1.24		2.42		1.85	
ANNUAL RUNOFF (INCHES)	16.80		32.86		25.10	
10 PERCENT EXCEEDS	70		142		104	
50 PERCENT EXCEEDS	23		50		36	
90 PERCENT EXCEEDS	12		26		15	

e Estimated



01381800 WHIPPANY RIVER NEAR PINE BROOK, NJ

LOCATION.--Lat 40°50'43", long 74°20'50", Morris County, Hydrologic Unit 02030103, on left upstream abutment of former bridge on Edwards Road, 200 ft downstream from bridges of Interstate 280, 0.4 mi upstream from Rockaway River, and 1.2 mi southwest of Pine Brook.

DRAINAGE AREA.--68.5 mi^2

PERIOD OF RECORD.--Low-flow partial-record station water years 1963-69, 1973, 1979-96. November 1992 to September 1996 (gage height and discharge measurements only), October 1996 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 162 ft above NGVD of 1929 (from topographic map).

REMARKS.--Records fair, except periods of backwater and estimated daily discharges, which are poor. Flow includes sewage effluent from several treatment plants upstream of gage. Discharges may be effected by backwater from the Passaic River when it reaches high stages. Several measurements of water temperature were made during the year.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	36	50	e110	e150	e50	e125	e267	124	e520	e150	48	65
2	31	43	e100	e375	e41	e160	e231	135	e670	e130	72	225
3	28	40	87	e390	e33	e290	e217	203	e360	e120	62	258
4	29	39	69	e410	e43	e240	e204	129	e600	e105	129	247
5	38	37	73	e360	e56	e250	e196	100	e745	94	337	217
6	29	135	75	e305	e38	e320	e190	91	e570	75	516	134
7	24	107	73	e260	e40	e285	e179	90	e520	64	e360	84
8	23	68	66	e210	e39	e230	e180	140	e727	64	e295	63
9	22	55	60	e215	e34	e255	e220	152	e530	59	e310	53
10	22	48	52	e220	e33	e240	e280	133	e380	59	e340	48
11	220	46	87	e210	e31	e180	e300	111	e315	69	e245	46
12	472	80	391	e170	e28	e130	e425	107	e350	64	e564	44
13	534	248	495	e155	e33	e200	e425	95	e639	52	e410	62
14	e315	208	529	e140	e42	e230	e350	79	e692	46	e265	113
15	e170	131	e540	e130	e28	e225	e315	72	e475	45	e210	106
16	e200	97	e410	117	e36	e270	e275	67	e360	44	e155	274
17	e220	370	e280	95	e63	e330	e240	63	e275	43	e155	258
18	e130	520	e180	94	e109	e385	e210	60	e240	41	e120	164
19	e100	e375	e155	75	e99	e345	e200	55	e200	45	119	327
20	e70	e260	e195	e64	e75	e315	e185	51	e180	41	71	e245
21	e60	e170	e300	e57	e68	e374	e180	62	e506	43	54	e200
22	51	e220	e225	e50	e155	e465	e190	65	e679	207	51	e115
23	45	e240	e195	e46	e348	e504	e185	62	e620	355	47	e270
24	40	e180	e150	e45	e580	e402	174	124	e475	451	40	e270
25	36	e140	e170	e47	e315	e346	145	110	e380	404	37	e190
26	168	e110	e180	e48	e295	e289	181	239	e305	292	38	e175
27	184	e130	e165	e47	e200	e264	238	441	e250	169	38	e145
28	97	e130	e140	e44	e185	e234	189	e300	e190	104	36	e310
29	66	e110	e120	e49	---	e217	156	e215	e170	63	37	e275
30	58	e105	e110	e48	---	e263	140	e190	e160	50	51	e205
31	59	---	e110	e48	---	e301	---	e190	---	45	42	---
TOTAL	3,577	4,492	5,892	4,674	3,097	8,664	6,867	4,055	13,083	3,593	5,254	5,188
MEAN	115	150	190	151	111	279	229	131	436	116	169	173
MAX	534	520	540	410	580	504	425	441	745	451	564	327
MIN	22	37	52	44	28	125	140	51	160	41	36	44

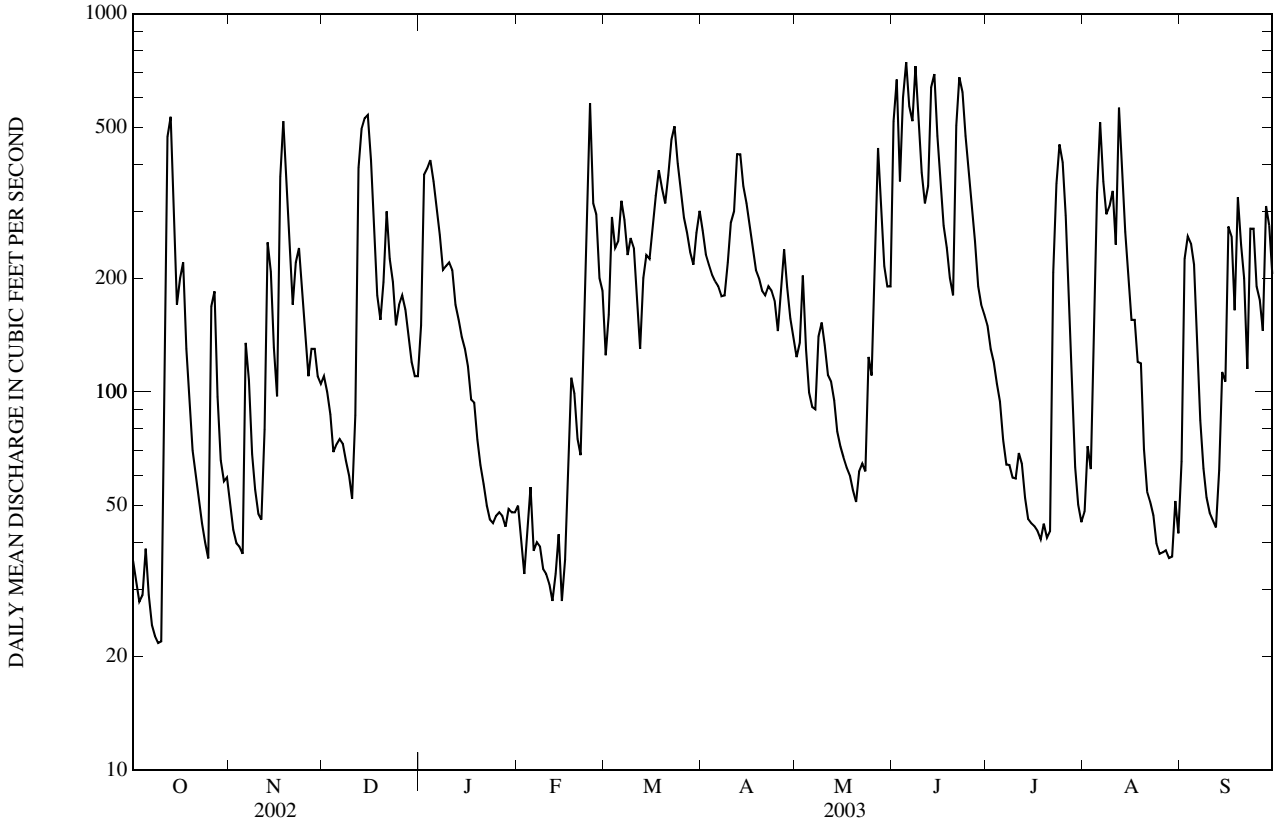
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1997 - 2003, BY WATER YEAR (WY)

MEAN	96.4	99.2	193	162	168	220	209	176	179	71.6	92.3	99.6
MAX	323	161	696	260	274	291	331	274	436	131	255	258
(WY)	(1997)	(1997)	(1997)	(1997)	(1997)	(1999)	(1997)	(1998)	(2003)	(2000)	(2000)	(1999)
MIN	28.7	32.8	33.6	43.3	39.7	90.4	97.6	92.6	37.7	23.7	32.5	35.2
(WY)	(2002)	(2002)	(1999)	(2002)	(2002)	(2002)	(2002)	(1999)	(1999)	(1999)	(2002)	(1998)

01381800 WHIPPANY RIVER NEAR PINE BROOK, NJ—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1997 - 2003	
ANNUAL TOTAL	35,760		68,436			
ANNUAL MEAN	98.0		187		147	
HIGHEST ANNUAL MEAN					236	1997
LOWEST ANNUAL MEAN					68.7	2002
HIGHEST DAILY MEAN	556	May 15	745e	Jun 5	1,820	Oct 20, 1996
LOWEST DAILY MEAN	17	Aug 15	22	Oct 9-10	17	Aug 2, 1999
ANNUAL SEVEN-DAY MINIMUM	18	Aug 13	27	Oct 4	17	Aug 2, 1999
MAXIMUM PEAK FLOW			760e	Jun 5	2,080	Oct 20, 1996
MAXIMUM PEAK STAGE			7.67	Jun 5	9.22a	Oct 22, 1996
INSTANTANEOUS LOW FLOW			21	Oct 9-10	16	Sep 13, 2002
10 PERCENT EXCEEDS	238		390		348	
50 PERCENT EXCEEDS	51		155		83	
90 PERCENT EXCEEDS	22		42		29	

a Stage on Oct.20,1996 was higher (unknown).
e Estimated



01381900 PASSAIC RIVER AT PINE BROOK, NJ

LOCATION.--Lat 40°51'45", long 74°19'17", Morris County, Hydrologic Unit 02030103, on left bank 20 ft downstream from bridge on U.S. Route 46, 0.5 mi east of Pine Brook, and 1.3 mi downstream from Rockaway River.

DRAINAGE AREA.--349 mi^2.

PERIOD OF RECORD.--Occasional low-flow measurements, water years 1963-69, 1973, and annual maximum, water years 1966-75, 1978-79. October 1979 to current year. Feb. 19 to Aug. 24, 1939 in files of U.S. Army Corps of Engineers, New York District.

REVISED RECORDS.--WDR NJ-77-1: 1967(M).

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 149.26 ft above NGVD of 1929. December 1965 to September 1979, crest-stage gage at same site at datum 10.00 ft higher. Feb. 19 to Aug. 24, 1939, water-stage recorder at present State Route 506 bridge, 1,600 ft upstream from gage, operated by U.S. Army Corps of Engineers, New York District at datum 13.05 ft higher.

REMARKS.--Records good except those above 1,000 ft^3/s, which are fair, and estimated daily discharges which are poor. Flow regulated by Boonton and Splitrock Reservoir (see Passaic River basin reservoirs in) and many small lakes. Water diverted from Boonton Reservoir for municipal supply of Jersey City (see Passaic River basin, diversions). Several measurements of water temperature were made during the year. Satellite gage-height telemetry at station.

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

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jan 4	2215	2,300	18.31	Jun 6	0230	*3,200	*19.43
Feb 25	2000	2,130	18.04	Jun 14	2100	e2,150	18.96
Mar 22	2215	2,710	18.88	Jun 23	1230	e2,200	19.13

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	167	201	581	767	184	1,470	1,620	403	1,380	e685	186	177
2	132	186	456	1,340	196	1,350	1,510	391	2,240	e595	235	425
3	115	172	374	1,960	201	1,540	1,430	473	2,510	e520	249	565
4	111	161	324	2,270	219	1,710	1,340	413	2,660	466	374	574
5	123	151	303	2,270	271	1,690	1,250	342	3,050	371	673	560
6	124	256	297	2,160	258	1,740	1,170	306	3,180	304	1,360	468
7	112	327	294	2,010	246	1,750	1,110	297	e2,900	260	1,800	359
8	103	289	282	1,840	242	1,700	1,080	345	e2,780	242	1,950	282
9	97	253	260	1,690	220	1,630	1,110	401	e2,600	226	1,850	230
10	95	218	236	1,570	215	1,590	1,230	386	e2,420	216	e1,750	199
11	372	202	267	1,450	209	1,520	1,390	354	e2,210	241	e1,660	183
12	973	227	723	1,290	194	1,400	1,650	330	e2,030	262	e1,770	170
13	1,290	496	1,100	1,090	179	1,330	1,890	320	e1,990	240	e1,700	190
14	1,450	547	1,510	859	172	1,330	1,920	291	e2,080	205	e1,600	281
15	1,420	497	1,840	671	168	1,340	1,790	269	e2,080	186	e1,480	303
16	1,330	437	1,980	527	154	1,370	1,630	247	e1,870	176	e1,290	559
17	1,270	796	1,910	438	180	1,490	1,450	230	e1,640	169	e1,060	653
18	1,110	1,260	1,760	361	269	1,670	1,270	220	e1,450	157	854	624
19	883	1,510	1,590	322	297	1,800	1,090	205	e1,320	158	613	796
20	653	1,600	1,490	307	279	1,850	901	188	e1,230	149	423	1,060
21	453	1,650	1,580	281	255	2,200	741	195	e1,330	153	301	1,130
22	292	1,690	1,670	258	386	2,620	655	216	e1,700	407	239	923
23	207	1,750	1,620	247	1,070	2,680	602	216	e1,940	714	207	809
24	164	1,750	1,490	230	1,640	2,510	524	279	e1,990	964	182	1,040
25	153	1,620	1,360	206	2,070	2,250	456	312	e1,830	1,050	168	1,230
26	327	1,430	1,300	197	2,060	1,960	460	484	e1,620	910	161	1,180
27	459	1,270	1,240	194	1,890	1,720	551	893	e1,420	673	156	1,000
28	372	1,110	1,150	190	1,680	1,530	527	1,130	e1,180	477	150	1,020
29	279	922	1,030	183	---	1,430	480	1,140	e950	317	145	1,250
30	221	730	899	180	---	1,480	440	1,000	e785	231	158	1,400
31	210	---	775	179	---	1,630	---	864	---	196	155	---
TOTAL	15,067	23,708	31,691	27,537	15,404	53,280	33,267	13,140	58,365	11,920	24,899	19,640
MEAN	486	790	1,022	888	550	1,719	1,109	424	1,946	385	803	655
MAX	1,450	1,750	1,980	2,270	2,070	2,680	1,920	1,140	3,180	1,050	1,950	1,400
MIN	95	151	236	179	154	1,330	440	188	785	149	145	170

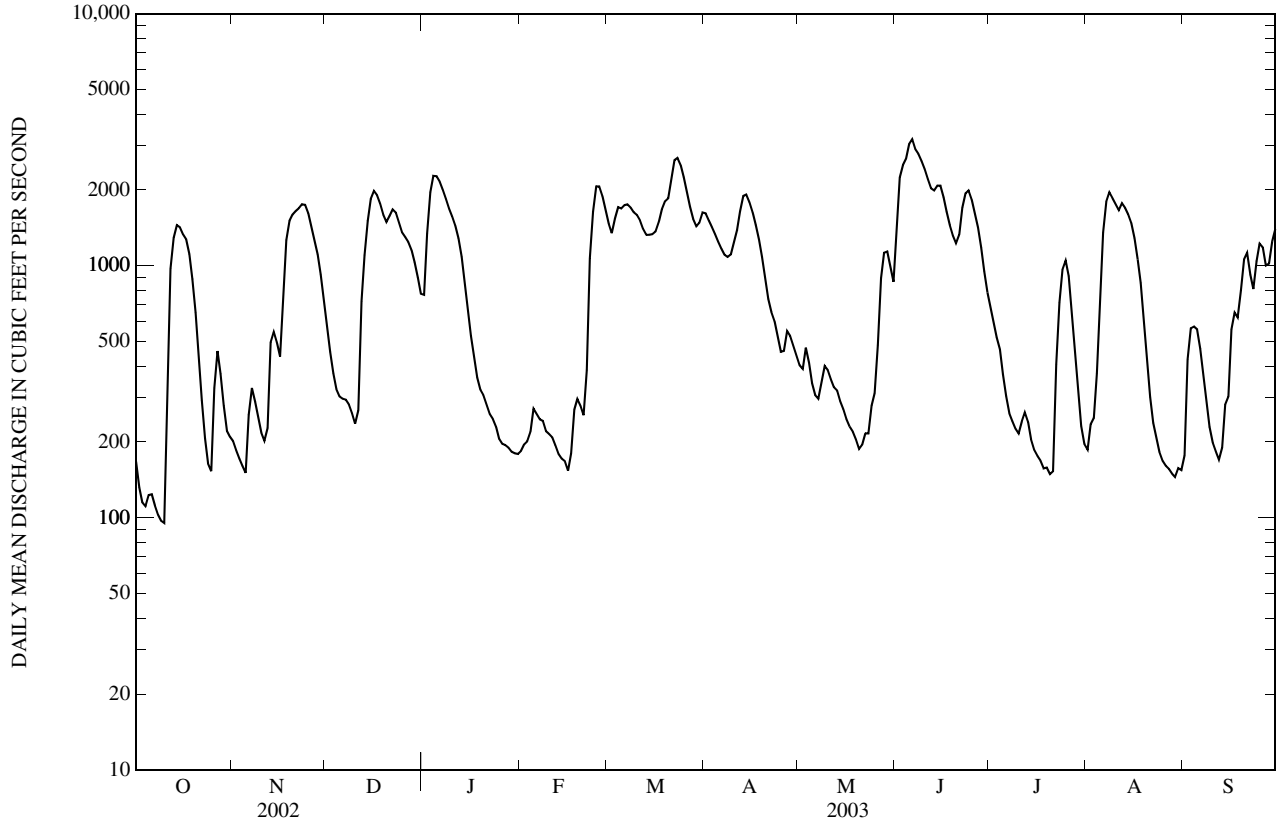
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1980 - 2003, BY WATER YEAR (WY)

MEAN	377	530	742	658	758	1,029	1,110	765	593	341	300	301
MAX	1,566	1,355	2,286	1,516	1,268	2,204	2,842	2,537	1,946	1,485	1,079	1,204
(WY)	(1997)	(1996)	(1984)	(1996)	(1996)	(1994)	(1983)	(1989)	(2003)	(1984)	(2000)	(1999)
MIN	114	127	107	105	148	272	161	289	146	98.1	117	91.0
(WY)	(2002)	(2002)	(1981)	(1981)	(2002)	(1981)	(1985)	(1995)	(1999)	(1999)	(1981)	(1980)

01381900 PASSAIC RIVER AT PINE BROOK, NJ—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1980 - 2003	
ANNUAL TOTAL	151,768		327,918			
ANNUAL MEAN	416		898		624	
HIGHEST ANNUAL MEAN					1,125	1984
LOWEST ANNUAL MEAN					257	2002
HIGHEST DAILY MEAN	1,980	Dec 16	3,180	Jun 6	7,910	Apr 7, 1984
LOWEST DAILY MEAN	77	Sep 14	95	Oct 10	72	Sep 29, 1980
ANNUAL SEVEN-DAY MINIMUM	81	Aug 13	109	Oct 4	78	Oct 12, 1980
MAXIMUM PEAK FLOW			3,200	Jun 6	8,000e	Apr 7, 1984
MAXIMUM PEAK STAGE			19.43	Jun 6	22.90a	Apr 7, 1984
INSTANTANEOUS LOW FLOW			93	Oct 10	70	Sep 29, 1980
10 PERCENT EXCEEDS	1,260		1,860		1,500	
50 PERCENT EXCEEDS	201		655		353	
90 PERCENT EXCEEDS	98		180		122	

a Effected by backwater.
e Estimated



01382500 PEQUANNOCK RIVER AT MACOPIN INTAKE DAM, NJ

LOCATION.--Lat 41°01'06", long 74°24'02", Morris County, Hydrologic Unit 02030103, on left bank 15 ft downstream from culvert at crossover between northbound and southbound lanes on State Route 23, 1,000 ft downstream from Macopin Intake Dam, 0.6 mi downstream from Macopin River, and 2.8 mi northwest of Butler.

DRAINAGE AREA.--63.7 mi^2.

PERIOD OF RECORD.--January 1898 to March 1990, September 1992 to current year. Monthly discharge only for some periods, published in WSP 1302. Records for January 1892 to December 1897, published in WSP 541, have been found to be unreliable and should not be used.

GAGE.--Water-stage recorder. Datum of gage is 549.17 ft above NGVD of 1929. Prior to May 22, 1970, at site just upstream from Macopin Intake Dam, at datum 36.35 ft higher. May 22, 1970 to March 5, 1990, at site just upstream from Macopin Intake Dam, at datum 20.83 ft higher.

REMARKS.--Records fair, except those below 1.0 cfs and estimated daily values which are poor. Flow regulated by Canistear, Oak Ridge, Clinton, Charlotteburg Reservoirs, and Echo Lake (see Passaic River basin, reservoirs in). Water diverted at Charlotteburg Reservoir for municipal supply of city of Newark (see Passaic River basin, diversions). During peak flows, frequent variations in flow due to automatic gate operations upstream. Several measurements of water temperature were made during the year. Satellite gage-height telemetry at station.

COOPERATION.--Gage-height record collected in cooperation with the Department of Public Affairs, Division of Water Supply, city of Newark. Prior to May 22, 1970, discharge figures provided by city of Newark.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.65	2.7	4.7	15	12	21	168	19	742	62	3.7	4.3
2	0.42	2.6	4.3	56	11	30	160	17	700	61	4.9	13
3	0.35	2.4	3.7	48	9.6	36	147	19	393	41	12	20
4	0.47	2.2	3.6	41	9.2	80	128	14	436	28	34	21
5	0.65	2.1	3.5	30	9.8	98	119	12	396	23	51	19
6	0.46	5.2	3.5	26	e9.3	148	117	12	285	16	66	14
7	0.34	4.6	3.2	23	e8.4	132	92	12	287	11	151	9.9
8	0.33	3.5	3.0	21	e8.5	100	100	15	431	9.7	125	8.1
9	0.33	3.1	2.8	20	e7.6	91	102	14	320	8.7	84	6.7
10	0.37	2.8	2.7	21	e8.1	82	115	20	211	8.1	115	5.6
11	9.2	2.7	4.2	19	e5.6	67	128	21	163	7.6	115	5.0
12	19	4.1	15	19	e5.9	59	225	34	181	6.8	140	4.3
13	7.6	8.6	7.8	18	e5.8	63	205	32	344	5.6	93	4.5
14	4.5	6.1	22	16	e6.0	63	158	23	345	5.0	60	7.5
15	2.6	5.0	14	e14	5.5	56	124	13	350	4.4	36	11
16	8.1	5.0	11	e13	5.1	85	104	10	243	4.4	21	28
17	11	31	9.2	e15	e4.6	199	84	9.9	167	4.5	14	24
18	5.5	23	7.9	e13	e6.2	380	63	9.0	160	4.4	12	14
19	4.1	16	7.2	e13	e8.0	530	54	8.3	163	4.2	10	73
20	3.6	11	14	e12	e10	525	48	8.0	151	4.0	9.3	122
21	3.0	8.8	12	e11	10	898	40	7.5	316	3.9	8.8	74
22	2.5	10	8.7	e11	33	954	41	7.6	757	13	7.8	37
23	2.3	12	7.6	e10	145	773	48	8.1	579	27	7.6	144
24	2.1	8.8	6.9	e10	74	524	46	11	352	27	7.2	337
25	2.0	7.1	7.0	e10	30	353	25	11	231	19	6.5	251
26	8.1	6.4	7.3	e11	26	258	21	21	170	12	5.5	179
27	5.4	6.2	6.5	e11	24	249	34	46	133	8.5	4.9	141
28	3.7	6.0	6.0	e10	22	199	33	142	107	7.1	4.4	204
29	3.2	5.2	5.6	e12	---	206	22	159	81	5.9	4.1	213
30	3.0	4.8	5.4	e12	---	283	23	101	72	4.6	3.9	139
31	2.8	---	6.2	12	---	232	---	87	---	3.8	3.8	---
TOTAL	117.67	219.0	226.5	573	520.2	7,774	2,774	923.4	9,266	451.2	1,221.4	2,133.9
MEAN	3.80	7.30	7.31	18.5	18.6	251	92.5	29.8	309	14.6	39.4	71.1
MAX	19	31	22	56	145	954	225	159	757	62	151	337
MIN	0.33	2.1	2.7	10	4.6	21	21	7.5	72	3.8	3.7	4.3

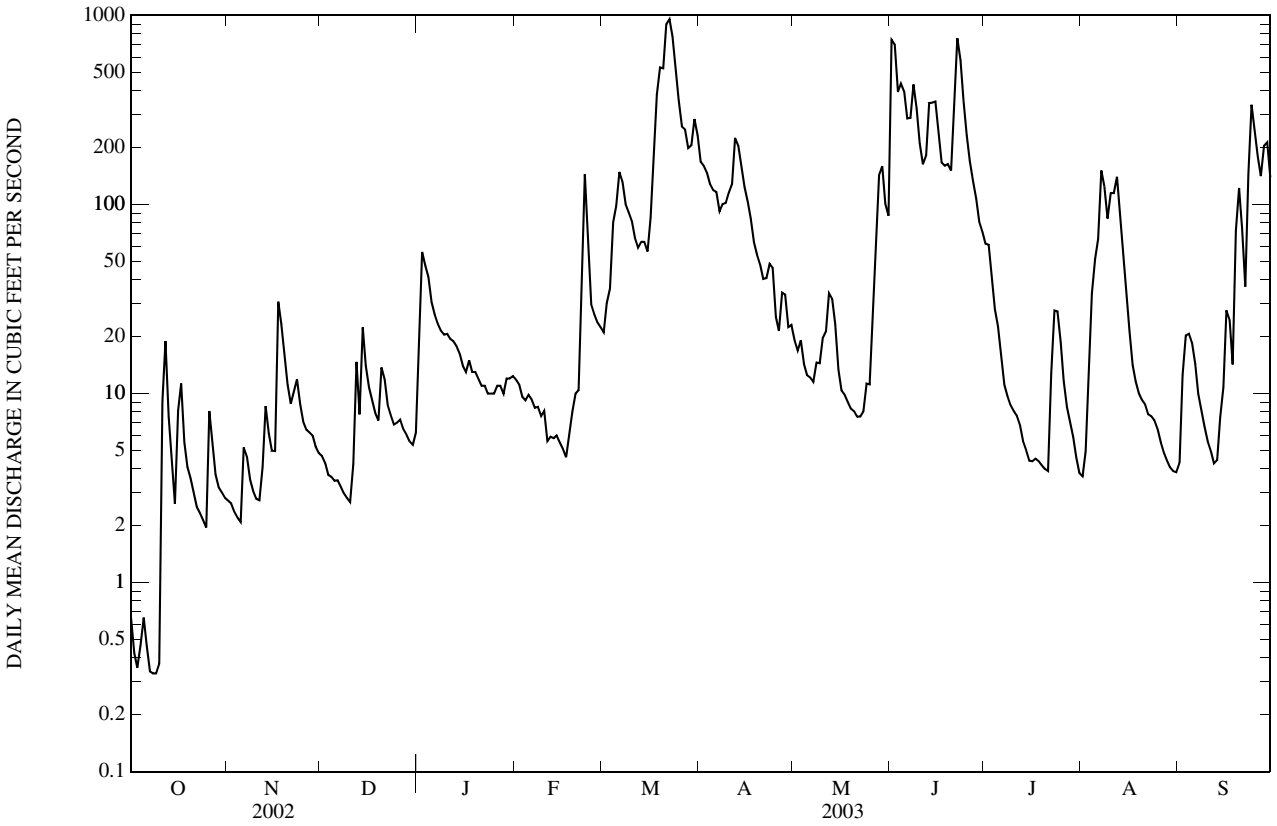
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1923 - 2003, BY WATER YEAR (WY)

MEAN	15.9	31.6	39.4	40.5	49.9	102	129	65.4	35.0	18.6	15.1	18.8
MAX	288	309	357	308	270	572	506	263	360	238	228	211
(WY)	(1956)	(1928)	(1997)	(1996)	(1939)	(1936)	(1983)	(1989)	(1972)	(1938)	(1955)	(1960)
MIN	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
(WY)	(1929)	(1929)	(1929)	(1931)	(1930)	(1965)	(1950)	(1954)	(1944)	(1923)	(1923)	(1929)

01382500 PEQUANNOCK RIVER AT MACOPIN INTAKE DAM, NJ—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1923 - 2003	
ANNUAL TOTAL	1,378.17		26,200.27			
ANNUAL MEAN	3.78		71.8		46.6	
HIGHEST ANNUAL MEAN					109	1952
LOWEST ANNUAL MEAN					0.12	1954
HIGHEST DAILY MEAN	31	Nov 17	954	Mar 22	3,170	Apr 6, 1984
LOWEST DAILY MEAN	0.25	Aug 19	0.33	Oct 8, 9	0.00	Oct 1, 1922
ANNUAL SEVEN-DAY MINIMUM	0.28	Aug 13	0.42	Oct 3	0.00	Oct 18, 1922
MAXIMUM PEAK FLOW			1,940	Mar 25	6,100a	Oct 10, 1903
MAXIMUM PEAK STAGE			6.31	Mar 25	17.40a	Oct 10, 1903
10 PERCENT EXCEEDS	9.1		205		141	
50 PERCENT EXCEEDS	2.4		13		5.4	
90 PERCENT EXCEEDS	0.33		3.7		0.00	

a Since 1898, site and datum then in use.
e Estimated



01383500 WANAQUE RIVER AT AWOSTING, NJ

LOCATION.--Lat 41°09'37", long 74°20'01", Passaic County, Hydrologic Unit 02030103, on right bank 700 ft downstream from dam at outlet of Greenwood Lake at Awosting.

DRAINAGE AREA.--27.1 mi^2.

PERIOD OF RECORD.--May 1919 to current year. Prior to October 1940, published as "at Greenwood Lake".

REVISED RECORDS.--WSP 781: Drainage area. WSP 1552: 1922(M), 1928(M), 1936. WDR NJ-79-1: 1933(M), 1936(M), 1945(M), 1948(P), 1951(P), 1952(P), 1953(M), 1955(P), 1956(M), 1957(M), 1958(M), 1960(P), 1961(M), 1968(P), 1969(P). WDR NJ-80-1: 1960(P).

GAGE.--Water-stage recorder. Concrete control since Oct. 31, 1938. Datum of gage is 601.32 ft above NGVD of 1929 (levels from New Jersey Geological Survey bench mark). Prior to Apr. 1, 1926, nonrecording gage and Apr. 1, 1926, to Oct. 31, 1938, water-stage recorder at site 100 ft upstream at same datum.

REMARKS.--Records fair. Flow completely regulated by Greenwood Lake (see Passaic River basin, reservoirs in). Water diverted into basin above gage from Upper Greenwood Lake (Hudson River basin) by North Jersey District Water Supply Commission since 1968. Several measurements of water temperature were made during the year.

COOPERATION.--Gage-height record collected in cooperation with North Jersey District Water Supply Commission.

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

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Nov 18	0615	294	3.33	Jun 1	2030	278	3.29
Jan 4	0100	234	3.17	Jun 22	1515	230	3.16
Mar 22	0715	*526	*3.81				

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.8	45	70	88	22	74	105	32	208	70	8.8	7.4
2	4.8	41	59	188	22	83	100	35	271	59	13	16
3	4.8	39	56	207	19	103	93	40	231	50	26	25
4	4.8	33	43	212	20	99	85	30	241	43	54	36
5	4.8	30	44	175	20	101	82	28	234	38	69	36
6	4.8	42	43	153	19	117	78	27	201	34	114	30
7	4.8	37	38	135	22	119	71	27	179	29	107	26
8	4.8	29	35	118	22	109	73	43	195	27	97	23
9	4.8	28	32	107	20	103	73	45	173	25	86	19
10	4.8	27	29	100	20	92	71	43	155	20	94	16
11	5.1	29	35	90	20	81	77	40	131	18	92	15
12	6.5	35	68	79	20	75	99	50	122	16	107	12
13	23	47	74	68	20	72	101	50	129	16	98	13
14	46	44	114	59	19	69	93	47	126	14	e85	16
15	44	43	136	52	18	64	94	41	112	14	68	19
16	72	50	138	46	18	67	95	39	93	10	54	41
17	126	176	129	43	33	96	86	35	82	5.2	45	38
18	129	285	118	38	42	162	75	31	81	6.9	35	39
19	110	260	107	34	36	214	67	28	77	9.8	29	69
20	99	218	122	32	32	227	60	25	75	9.7	25	73
21	86	182	144	29	29	386	53	29	91	9.7	24	61
22	73	171	138	27	38	511	54	29	214	13	22	50
23	66	173	126	25	74	439	53	27	221	22	21	113
24	57	147	115	23	98	339	47	31	195	24	15	178
25	52	130	126	23	102	259	37	32	165	25	9.3	151
26	74	116	136	24	98	211	41	48	140	21	8.1	140
27	77	112	112	26	91	183	44	64	118	17	7.5	119
28	69	95	99	26	83	146	39	74	96	18	7.2	153
29	63	83	89	26	---	126	38	90	79	15	6.5	157
30	56	74	79	24	---	133	36	85	73	12	6.8	134
31	50	---	75	22	---	122	---	85	---	10	6.6	---
TOTAL	1,431.6	2,821	2,729	2,299	1,077	4,982	2,120	1,330	4,508	701.3	1,440.8	1,825.4
MEAN	46.2	94.0	88.0	74.2	38.5	161	70.7	42.9	150	22.6	46.5	60.8
MAX	129	285	144	212	102	511	105	90	271	70	114	178
MIN	4.8	27	29	22	18	64	36	25	73	5.2	6.5	7.4

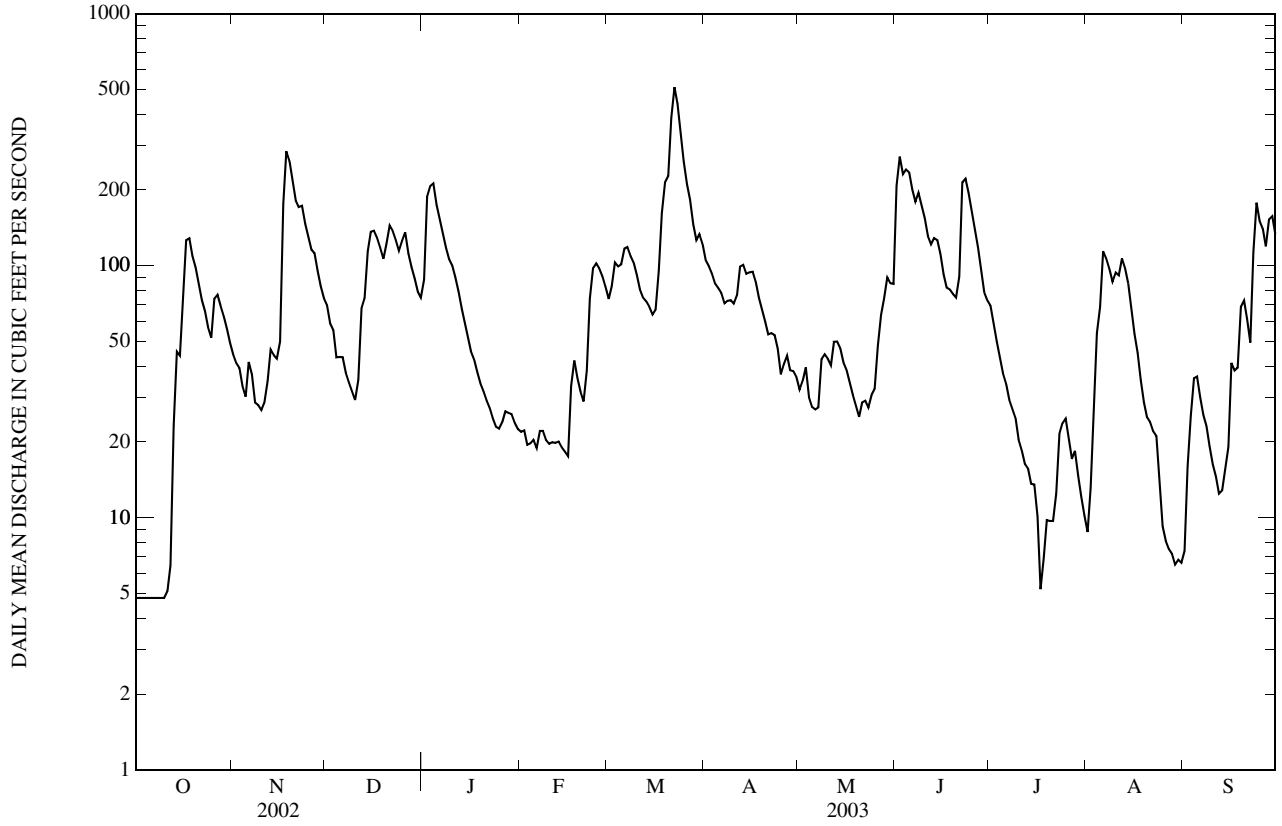
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1919 - 2003, BY WATER YEAR (WY)

MEAN	28.9	56.2	65.2	63.3	62.2	102	93.9	59.7	38.6	25.9	25.8	29.2
MAX	210	210	197	221	168	271	333	233	178	132	208	231
(WY)	(1956)	(1984)	(1974)	(1979)	(1981)	(1980)	(1984)	(1989)	(1972)	(1938)	(1955)	(1927)
MIN	0.20	0.18	1.88	3.00	3.04	6.08	6.02	13.4	4.37	2.76	0.006	0.057
(WY)	(1932)	(1932)	(1985)	(1922)	(1922)	(2002)	(2002)	(1941)	(1957)	(1981)	(1929)	(1929)

01383500 WANAQUE RIVER AT AWOSTING, NJ—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1919 - 2003	
ANNUAL TOTAL	10,311.2		27,265.1			
ANNUAL MEAN	28.2		74.7		54.1	
HIGHEST ANNUAL MEAN					105	1984
LOWEST ANNUAL MEAN					19.2	2002
HIGHEST DAILY MEAN	285	Nov 18	511	Mar 22	2,350	Apr 6, 1984
LOWEST DAILY MEAN	2.7	Sep 2, 3	4.8	Oct 1-10	0.00	Oct 15, 1928
ANNUAL SEVEN-DAY MINIMUM	3.0	Sep 2	4.8	Oct 1	0.00	Jul 27, 1929
MAXIMUM PEAK FLOW			526	Mar 22	2,800a	Apr 5, 1984
MAXIMUM PEAK STAGE			3.81	Mar 22	6.65	Apr 5, 1984
INSTANTANEOUS LOW FLOW			4.8	Oct 1-11	0.00	many days
10 PERCENT EXCEEDS	83		156		125	
50 PERCENT EXCEEDS	6.4		54		32	
90 PERCENT EXCEEDS	4.8		15		4.9	

a From rating curve extended above 750 ft^3/s based on theoretical weir formula
e Estimated



01384500 RINGWOOD CREEK NEAR WANAQUE, NJ

LOCATION.--Lat 41°07'39", long 74°15'56", Passaic County, Hydrologic Unit 02030103, on right bank 500 ft upstream from Wanaque Reservoir, 0.7 mi downstream from Ringwood Mill Pond dam, and 6.5 mi north of Wanaque.

DRAINAGE AREA.--19.1 mi^2.

PERIOD OF RECORD.--October 1934 to September 1978, October 1985 to current year. Monthly discharge only for some periods, published in WSP 1302.

REVISED RECORDS.--WDR NJ-82-1: 1935-77(P).

GAGE.--Water-stage recorder and concrete control. Datum of gage is 292.67 ft above NGVD of 1929 (levels by New Jersey Geological Survey). Prior to Sept. 30, 1978, at datum 10.0 ft higher.

REMARKS.--Records good except for those above 300 ft^3/s and estimated daily values, which are fair. Records given herein include flow over spillway and through ports in dam when open or through waste gate in dam. No flow through ports this year. Currently there is leakage through the waste gate and is included in flow. Flow slightly regulated by Ringwood Mill Pond, Sterling, and Sterling Forest Lakes, and several smaller lakes above station. Several measurements of water temperature were made during the year. Satellite gage-height telemetry at station.

COOPERATION.--Gage-height record collected in cooperation with North Jersey District Water Supply Commission.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 230 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Nov 17	0845	260	11.61	Mar 22	0215	*457	*12.06
Jan 2	0245	349	11.83	Jun 21	2215	264	11.62
Mar 18	1815	234	11.54				

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.8	12	38	82	14	40	79	26	e160	34	6.4	11
2	1.8	11	35	250	15	66	76	29	130	29	9.2	18
3	1.7	10	31	144	15	75	69	33	99	25	18	18
4	2.1	9.8	28	123	18	64	61	27	140	21	45	18
5	2.3	11	28	99	18	61	60	25	156	20	48	15
6	1.8	17	28	88	16	72	55	25	113	17	75	12
7	1.6	15	25	77	16	70	51	23	119	16	44	10
8	1.4	12	24	69	16	58	51	31	130	15	37	9.5
9	1.4	11	22	65	16	58	55	30	100	13	46	8.7
10	1.6	10	21	63	14	55	55	27	82	12	79	7.7
11	16	11	30	55	14	50	63	26	70	12	55	7.0
12	48	14	88	49	14	47	89	33	71	12	51	6.6
13	33	25	63	43	e12	48	76	30	99	11	39	6.7
14	20	21	120	40	e13	45	65	27	88	9.4	32	7.4
15	14	18	103	36	e11	46	60	25	76	9.1	26	7.8
16	29	19	87	33	e9.4	69	55	24	61	8.3	23	20
17	46	184	72	31	e7.5	127	51	22	53	7.5	20	12
18	30	167	62	e29	e17	192	47	20	57	7.0	17	9.9
19	22	110	57	e27	e16	189	44	18	52	6.9	14	28
20	17	105	80	27	e15	174	40	17	48	6.3	13	21
21	14	90	82	e24	e13	373	37	18	90	7.0	12	15
22	12	101	68	e23	e30	385	36	19	191	25	11	12
23	11	102	62	e22	e78	253	34	18	123	35	9.6	57
24	9.4	81	55	e18	71	180	31	21	93	18	8.6	58
25	9.4	70	60	e18	57	140	29	21	74	13	8.1	38
26	28	62	62	18	57	120	32	41	61	11	7.9	40
27	23	60	54	e17	49	111	34	43	52	9.2	8.1	35
28	17	53	50	e18	43	91	30	43	43	8.5	7.6	92
29	15	47	46	e16	---	100	28	51	37	7.5	7.0	89
30	13	43	42	15	---	117	27	41	37	6.3	7.0	68
31	13	---	43	14	---	92	---	45	---	5.8	6.5	---
TOTAL	457.3	1,501.8	1,666	1,633	684.9	3,568	1,520	879	2,705	437.8	791.0	758.3
MEAN	14.8	50.1	53.7	52.7	24.5	115	50.7	28.4	90.2	14.1	25.5	25.3
MAX	48	184	120	250	78	385	89	51	191	35	79	92
MIN	1.4	9.8	21	14	7.5	40	27	17	37	5.8	6.4	6.6
CFSM	0.77	2.62	2.81	2.76	1.28	6.03	2.65	1.48	4.72	0.74	1.34	1.32
IN.	0.89	2.92	3.24	3.18	1.33	6.95	2.96	1.71	5.27	0.85	1.54	1.48

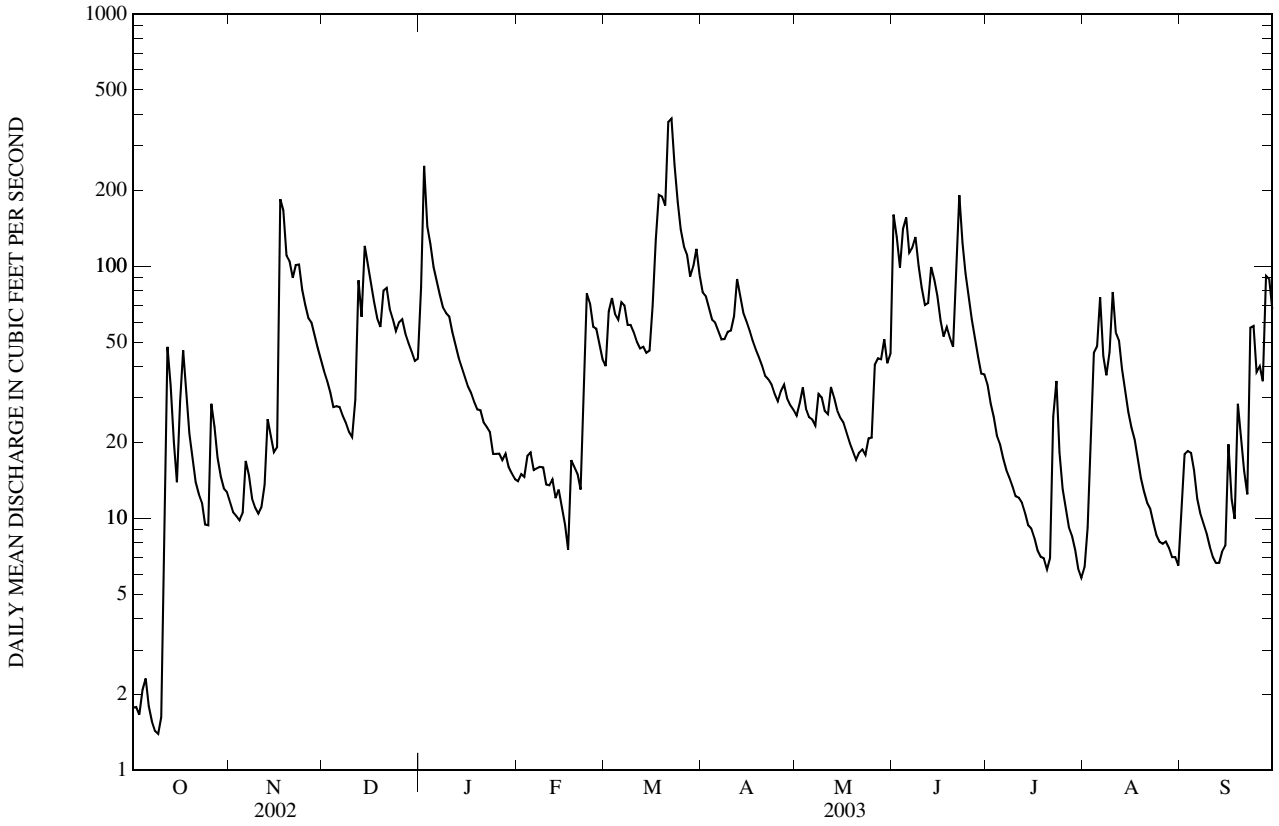
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1935 - 2003, BY WATER YEAR (WY)

MEAN	15.6	31.5	42.2	41.2	40.6	66.7	58.0	39.1	24.1	14.1	12.5	12.2
MAX	131	88.8	124	149	109	157	123	131	121	86.1	107	62.4
(WY)	(1956)	(1973)	(1997)	(1979)	(1970)	(1936)	(1940)	(1989)	(1972)	(1945)	(1955)	(1999)
MIN	1.07	1.42	2.71	2.82	3.93	14.1	18.3	10.9	3.78	1.31	0.70	0.28
(WY)	(1945)	(2002)	(1999)	(2002)	(2002)	(2002)	(1966)	(1941)	(1957)	(1966)	(1966)	(1964)

01384500 RINGWOOD CREEK NEAR WANAQUE, NJ—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1935 - 2003	
ANNUAL TOTAL	7,743.33		16,602.1			
ANNUAL MEAN	21.2		45.5		33.1	
HIGHEST ANNUAL MEAN					54.4	1952
LOWEST ANNUAL MEAN					11.8	2002
HIGHEST DAILY MEAN	184	Nov 17	385	Mar 22	756	Aug 19, 1955
LOWEST DAILY MEAN	0.35	Jan 13	1.4	Oct 8, 9	0.00	Sep 11, 1963
ANNUAL SEVEN-DAY MINIMUM	1.1	Sep 20	1.7	Oct 4	0.16	Sep 5, 1944
MAXIMUM PEAK FLOW			457	Mar 22	2,300	Sep 16, 1999
MAXIMUM PEAK STAGE			12.06	Mar 22	13.92	Sep 16, 1999
INSTANTANEOUS LOW FLOW			1.4	Oct 8, 9	0.00	Many days
ANNUAL RUNOFF (CFSM)	1.11		2.38		1.73	
ANNUAL RUNOFF (INCHES)	15.08		32.33		23.53	
10 PERCENT EXCEEDS	60		99		76	
50 PERCENT EXCEEDS	11		30		20	
90 PERCENT EXCEEDS	1.7		8.7		2.1	

e Estimated



PASSAIC RIVER BASIN

01386000 WEST BROOK NEAR WANAQUE, NJ

LOCATION.--Lat 41°04'25", long 74°18'42"(revised), Passaic County, Hydrologic Unit 02030103, on right bank 500 ft upstream from Wanaque Reservoir, 0.3 mi downstream from Burnt Meadow Brook, and 2.5 mi northwest of Wanaque.

DRAINAGE AREA.--11.8 mi^2.

PERIOD OF RECORD.--October 1934 to September 1978, May 2002 to current year. Monthly discharge only for October to December 1934, published in WSP 1302.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 326.79 ft above NGVD of 1929(levels from New Jersey Geological Survey bench mark).

REMARKS.--Records good, except for estimated discharges, which are poor. Records herein include flow over spillway and through ports in dam or through waste gate in dam. No flow through ports or waste gates this year. Several measurements of water temperature were made during the year. Satellite telemetry at station.

EXTREME OUTSIDE OF PERIOD OF RECORD.--The flood of Sep. 19, 1999, reached a stage of 7.1 ft, based on floodmarks, discharge, 2,500 ft^3/s, from rating curve extended above 630 ft^3/s.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 400 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jun 1	0930	*417	*2.53	No other peak greater than base discharge.			

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.0	16	24	60	e8.5	e29	48	13	239	17	3.7	15
2	e2.0	13	21	168	e8.5	e65	47	14	108	12	7.3	36
3	2.0	14	19	85	e9.0	e61	42	15	63	11	35	31
4	2.7	13	18	64	e10	e46	36	13	105	9.4	63	29
5	3.1	12	16	50	e10	e42	35	11	114	7.9	72	18
6	2.7	23	16	44	e9.0	e47	33	12	71	6.8	117	11
7	2.6	20	16	39	e9.0	e42	30	12	91	6.3	51	8.4
8	2.8	16	13	35	e9.0	e37	30	23	109	6.4	43	7.5
9	2.4	13	13	36	e8.5	e42	37	21	67	6.3	47	7.5
10	e3.0	12	14	35	e8.0	e47	39	17	52	6.4	83	6.2
11	e48	13	19	30	e8.0	e41	54	15	39	6.5	59	5.2
12	e155	16	66	25	e8.0	e37	92	20	43	6.3	120	4.8
13	e87	30	49	23	e7.5	e44	64	17	81	5.3	57	5.8
14	e39	26	123	21	e7.5	e40	46	15	68	4.4	37	12
15	e24	21	90	19	e6.5	e40	40	13	57	4.2	25	15
16	e54	21	64	20	e5.5	e65	34	12	39	3.8	20	42
17	88	229	46	17	e4.5	e120	28	11	30	3.6	18	20
18	42	156	36	16	e18	166	27	10	39	3.3	14	14
19	28	84	34	e15	e16	127	25	8.9	33	3.0	12	50
20	21	58	62	e14	e15	114	23	8.4	29	2.7	11	35
21	16	45	64	e13	e12	263	20	10	78	3.8	9.4	21
22	14	60	46	e12	e37	149	20	10	154	25	9.3	15
23	12	66	38	e11	e91	94	18	10	78	45	9.5	116
24	10	46	33	e10	e82	69	16	19	48	16	7.7	79
25	9.1	37	33	e10	e58	55	15	17	34	9.5	6.8	40
26	37	33	33	e10	e48	50	21	54	26	5.7	5.9	42
27	29	31	29	e10	e39	51	23	52	21	4.3	5.3	34
28	23	27	27	e9.5	e31	41	18	51	17	4.7	4.8	181
29	20	23	25	e9.0	---	55	16	53	15	4.3	4.5	92
30	17	23	24	e8.5	---	82	14	33	17	3.6	4.2	53
31	15	---	24	e8.0	---	61	---	37	---	3.5	3.9	---
TOTAL	814.4	1,197	1,135	927.0	584.0	2,222	991	627.3	1,965	258.0	966.3	1,046.4
MEAN	26.3	39.9	36.6	29.9	20.9	71.7	33.0	20.2	65.5	8.32	31.2	34.9
MAX	155	229	123	168	91	263	92	54	239	45	120	181
MIN	2.0	12	13	8.0	4.5	29	14	8.4	15	2.7	3.7	4.8

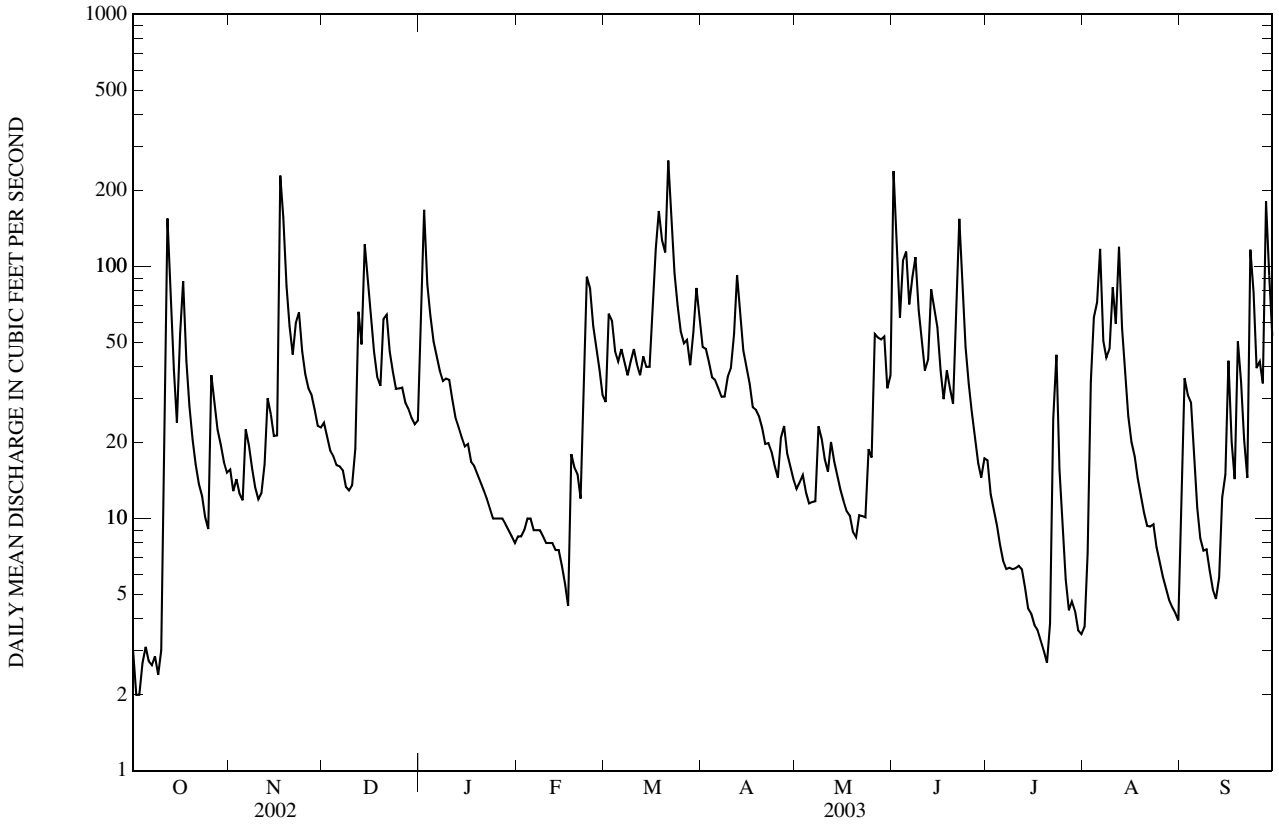
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1935 - 2003, BY WATER YEAR (WY)

MEAN	13.7	27.1	31.6	28.3	30.2	49.2	38.6	25.9	16.7	9.73	10.5	10.9
MAX	89.6	68.9	70.7	63.1	70.4	119	76.7	62.1	76.8	48.9	56.2	49.0
(WY)	(1956)	(1978)	(1958)	(1978)	(1970)	(1936)	(1952)	(1978)	(1972)	(1945)	(1955)	(1960)
MIN	1.73	2.54	4.25	5.90	8.65	19.8	14.0	5.59	2.22	1.48	0.60	0.78
(WY)	(1945)	(1965)	(1940)	(1977)	(1940)	(1938)	(1946)	(1941)	(1957)	(1957)	(1966)	(1953)

01386000 West Brook near Wanaque, NJ—Continued

SUMMARY STATISTICS	MAY 10 - DECEMBER 2002	2003 WATER YEAR	WATER YEARS 1935 - 2003
ANNUAL TOTAL		12733.4	
ANNUAL MEAN		34.9	24.4
HIGHEST ANNUAL MEAN			40.0 1952
LOWEST ANNUAL MEAN			10.3 1965
HIGHEST DAILY MEAN	229 Nov 17	263 Mar 21	662 Mar 12, 1936
LOWEST DAILY MEAN	1.1 Many days	2.0 Oct 2, 3	0.20 Aug 8, 1966
ANNUAL SEVEN-DAY MINIMUM		2.6 Oct 2	0.20 Aug 8, 1966
MAXIMUM PEAK FLOW	360 Nov 17	417 Jun 1	1,900a Mar 30, 1951
MAXIMUM PEAK STAGE	2.28 Nov 17	2.53 Jun 1	6.60b Mar 30, 1951
INSTANTANEOUS LOW FLOW	1.1 Many days	1.7 Oct 3	0.00c Many days
10 PERCENT EXCEEDS		78	54
50 PERCENT EXCEEDS		23	14
90 PERCENT EXCEEDS		5.9	2.1

a From rating curve extended above 630 ft^3/s.
b From floodmark.
c No flow part of day in most years just after waste gate was closed and water was below ports.
e Estimated



01387000 WANAQUE RIVER AT WANAQUE, NJ

LOCATION.--Lat 41°02'39", long 74°17'35", Passaic County, Hydrologic Unit 02030103, on left bank 750 ft downstream from Raymond Dam in Wanaque, and 50 ft upstream from bridge on County Route 511.

DRAINAGE AREA.--90.4 mi^2, considered as 94 mi^2 Oct. 1, 1928 to Sept. 30, 1934.

PERIOD OF RECORD.--December 1903 to December 1905 (gage heights only), September 1912 to April 1915, May 1919 to current year.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 210.00 ft above NGVD of 1929(levels from New Jersey Geological Survey bench mark). Dec. 16, 1903, to Dec. 31, 1905, nonrecording gage on highway bridge at site 50 ft downstream at different datum. Sept. 15, 1912, to Apr. 1, 1922, nonrecording gage at site 200 ft downstream from present concrete control at different datum. Apr. 1, 1922 to Mar. 14, 1931, water-stage recorder at site 400 ft downstream from present concrete control at present datum.

REMARKS.--Records good. Flow regulated by Greenwood Lake 11 mi above station, since October 1987 by Monksville Reservoir just upstream from Wanaque Reservoir, and since 1928 by Wanaque Reservoir (see Passaic River basin, reservoirs in). North Jersey District Water Supply Commission diverts water for municipal supply from Wanaque Reservoir. Water is diverted to Wanaque Reservoir from Posts Brook at Wanaque and from Ramapo River at Pompton Lakes (see Passaic River basin, diversions). Water diverted into basin above gage from Upper Greenwood Lake (Hudson River basin) by North Jersey District Water Supply Commission since 1968). National Weather Service raingage and U. S. Geological Survey satellite gage-height telemetry at station. Several measurements of water temperature were made during the year.

COOPERATION.--Gage-height record collected in cooperation with North Jersey District Water Supply Commission.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

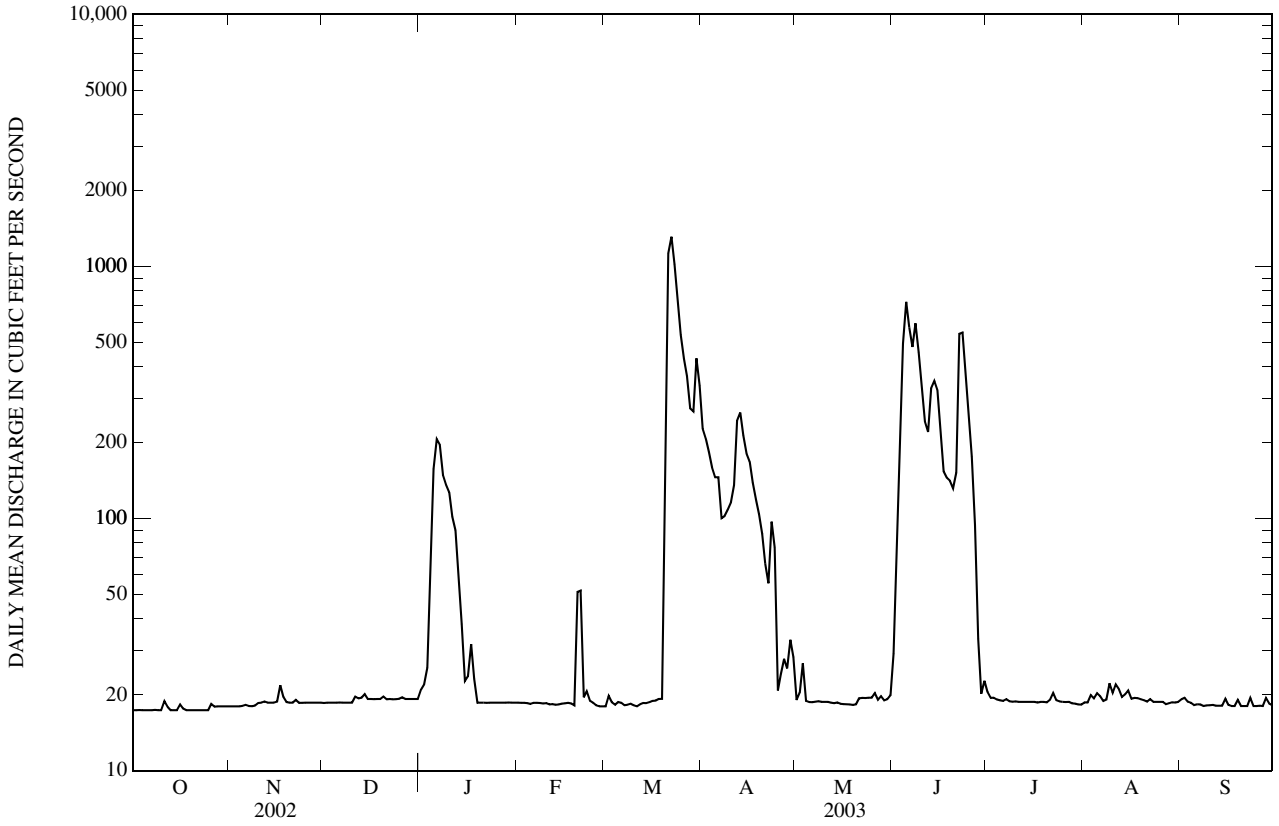
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17	18	19	21	19	18	228	19	29	21	19	19
2	17	18	19	22	19	20	207	20	73	19	19	19
3	17	18	19	26	19	19	184	27	235	19	20	19
4	17	18	19	74	19	18	159	19	495	19	19	19
5	17	18	19	157	18	19	146	19	723	19	20	18
6	17	18	19	207	19	19	146	19	574	19	20	18
7	17	18	19	196	19	18	100	19	479	19	19	18
8	17	18	19	149	19	18	102	19	595	19	19	18
9	17	18	19	136	18	18	108	19	456	19	22	18
10	17	19	19	127	19	18	115	19	336	19	20	18
11	19	19	20	102	18	18	136	19	243	19	22	18
12	18	19	19	90	18	18	244	19	221	19	21	18
13	17	19	19	55	18	19	263	19	329	19	20	18
14	17	19	20	38	18	19	214	19	352	19	20	18
15	17	19	19	23	18	19	181	18	324	19	21	19
16	18	19	19	24	19	19	168	18	216	19	19	18
17	18	22	19	32	19	19	139	18	154	19	19	18
18	17	20	19	23	18	19	119	18	145	19	19	18
19	17	19	19	19	18	19	104	18	142	19	19	19
20	17	19	20	19	51	199	87	18	132	19	19	18
21	17	19	19	19	52	1,130	66	19	152	19	19	18
22	17	19	19	19	20	1,310	55	19	541	20	19	18
23	17	19	19	19	21	1,020	97	19	547	19	19	19
24	17	19	19	19	19	728	77	19	388	19	19	18
25	17	19	19	19	19	535	21	19	261	19	19	18
26	18	19	20	19	18	430	24	20	176	19	19	18
27	18	19	19	19	18	367	28	19	94	19	18	18
28	18	19	19	19	18	273	25	20	33	19	18	19
29	18	19	19	19	---	266	33	19	20	18	19	18
30	18	19	19	19	---	432	28	19	23	18	19	18
31	18	---	19	19	---	337	---	20	---	18	19	---
TOTAL	538	565	593	1,749	588	7,381	3,604	595	8,488	589	603	548
MEAN	17.4	18.8	19.1	56.4	21.0	238	120	19.2	283	19.0	19.5	18.3
MAX	19	22	20	207	52	1,310	263	27	723	21	22	19
MIN	17	18	19	19	18	18	21	18	20	18	18	18

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1912 - 2003, BY WATER YEAR (WY)

MEAN	35.0	45.3	61.4	66.6	73.2	155	176	96.5	60.7	38.3	27.7	33.7
MAX	258	435	434	453	471	758	806	545	416	247	258	477
(WY)	(1956)	(1928)	(1921)	(1915)	(1915)	(1920)	(1984)	(1989)	(1972)	(1938)	(1927)	(1927)
MIN	1.82	1.70	1.48	0.76	2.05	1.91	1.54	1.72	2.17	1.73	1.53	1.51
(WY)	(1966)	(1966)	(1950)	(1950)	(1966)	(1966)	(1966)	(1966)	(1966)	(1965)	(1965)	(1965)

01387000 WANAQUE RIVER AT WANAQUE, NJ—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1912 - 2003	
ANNUAL TOTAL	5,754.0		25,841			
ANNUAL MEAN	15.8		70.8		71.0	
HIGHEST ANNUAL MEAN					231	1920
LOWEST ANNUAL MEAN					1.93	1966
HIGHEST DAILY MEAN	190	Jun 17	1,310	Mar 22	5,470	Apr 6, 1984
LOWEST DAILY MEAN	4.2	many days	17	many days	0.06	Oct 11, 1984
ANNUAL SEVEN-DAY MINIMUM	4.3	Apr 21	17	Oct 1	0.50	Dec 14, 1949
MAXIMUM PEAK FLOW			1,380	Mar 22	10,500	Apr 5, 1984
MAXIMUM PEAK STAGE			5.70	Mar 22	10.82	Apr 5, 1984
INSTANTANEOUS LOW FLOW			12	many days		
10 PERCENT EXCEEDS	19		197		188	
50 PERCENT EXCEEDS	17		19		18	
90 PERCENT EXCEEDS	4.5		18		15	



01387420 RAMAPO RIVER AT SUFFERN, NY

LOCATION.--Lat 41°07'06", long 74°09'38", Rockland County, Hydrologic Unit 02030103, on left bank, 145 ft downstream from highway bridge on New York State Thruway at Suffern, and 1.1 mi upstream from Mahwah River.

DRAINAGE AREA.--93.0 mi^2.

PERIOD OF RECORD.--June 1979 to current year.

REVISED RECORDS.--WDR NY-00-1: 1999 (M).

GAGE.--Water-stage recorder, crest-stage gage, and concrete control. Datum of gage is 264.44 ft above NGVD of 1929.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Flow affected by diversion from United Water New York well field upstream from station and by occasional regulation by Lake Sebago. Satellite gage-height telemeter at station.

COOPERATION.--Figures of pumpage from well field provided by United Water New York.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 12,300 ft^3/s, Apr. 5, 1984, gage height, 15.38 ft, from rating curve extended above 5,400 ft^3/s; minimum discharge, 1.7 ft^3/s, Sept. 7, 1995, gage height, 1.04 ft.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge, 6,600 ft^3/s, Mar. 12, 1936, by computation of flow over dam at site 0.65 mi upstream, drainage area, 90.6 mi^2.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,100 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Nov 18	0230	1,550	6.60	Mar 22	0115	*2,170	*7.80
Jan 2	1330	1,500	6.51	Jun 1	2330	1,480	6.46
Mar 19	0200	1,260	5.98				

Minimum discharge, 7.6 ft^3/s, Oct. 9, gage height, 1.36 ft.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13	41	134	353	e58	202	411	110	1,040	109	18	25
2	12	37	112	1,400	e60	305	372	142	1,130	92	23	72
3	9.2	33	96	962	65	475	330	228	609	83	36	96
4	10	31	79	674	73	366	296	156	680	76	124	78
5	12	29	78	509	88	338	287	134	754	64	144	67
6	12	55	86	422	74	416	272	123	563	51	365	49
7	12	67	77	369	75	366	240	116	501	44	260	38
8	12	50	72	328	74	317	249	188	602	47	178	31
9	7.9	44	66	311	69	315	261	207	466	40	145	27
10	8.6	39	60	309	63	305	288	165	387	35	278	23
11	38	37	80	273	e60	260	315	149	324	32	240	22
12	152	43	380	227	e56	236	513	168	324	29	237	20
13	155	92	377	195	e54	238	503	147	614	25	162	18
14	100	101	626	170	e50	223	386	128	550	23	122	19
15	68	85	756	150	e47	215	328	115	419	22	92	22
16	133	81	562	e130	45	313	290	104	318	21	75	65
17	447	891	425	e120	e44	651	239	95	257	20	65	80
18	262	1,340	322	e110	e44	1,090	193	87	272	19	55	68
19	137	761	271	e100	e44	1,140	174	82	250	20	46	141
20	94	479	360	e90	e47	859	158	76	218	19	37	149
21	73	358	556	e86	e60	1,640	141	82	347	22	32	95
22	59	399	414	e80	e100	2,000	152	87	845	117	29	77
23	49	495	329	e76	e400	1,270	169	84	691	181	38	238
24	40	381	275	e72	e490	813	140	91	452	97	29	457
25	34	310	270	e68	399	609	120	91	331	65	24	246
26	89	260	305	e64	331	504	134	191	258	46	22	196
27	102	235	253	e64	280	495	164	269	197	34	21	176
28	78	201	212	e60	238	404	138	256	153	31	19	418
29	65	167	185	e60	---	435	126	301	126	28	22	512
30	55	148	161	e58	---	e600	119	230	122	21	22	336
31	47	---	167	e58	---	509	---	209	---	18	18	---
TOTAL	2,385.7	7,290	8,146	7,948	3,488	17,909	7,508	4,611	13,800	1,531	2,978	3,861
MEAN	77.0	243	263	256	125	578	250	149	460	49.4	96.1	129
MAX	447	1,340	756	1,400	490	2,000	513	301	1,130	181	365	512
MIN	7.9	29	60	58	44	202	119	76	122	18	18	18
†	6.8	11.0	14.0	14.5	13.8	14.0	14.0	13.6	13.9	12.3	12.4	12.4

† Diversion, in cubic feet per second, by pumpage from well field upstream of station.

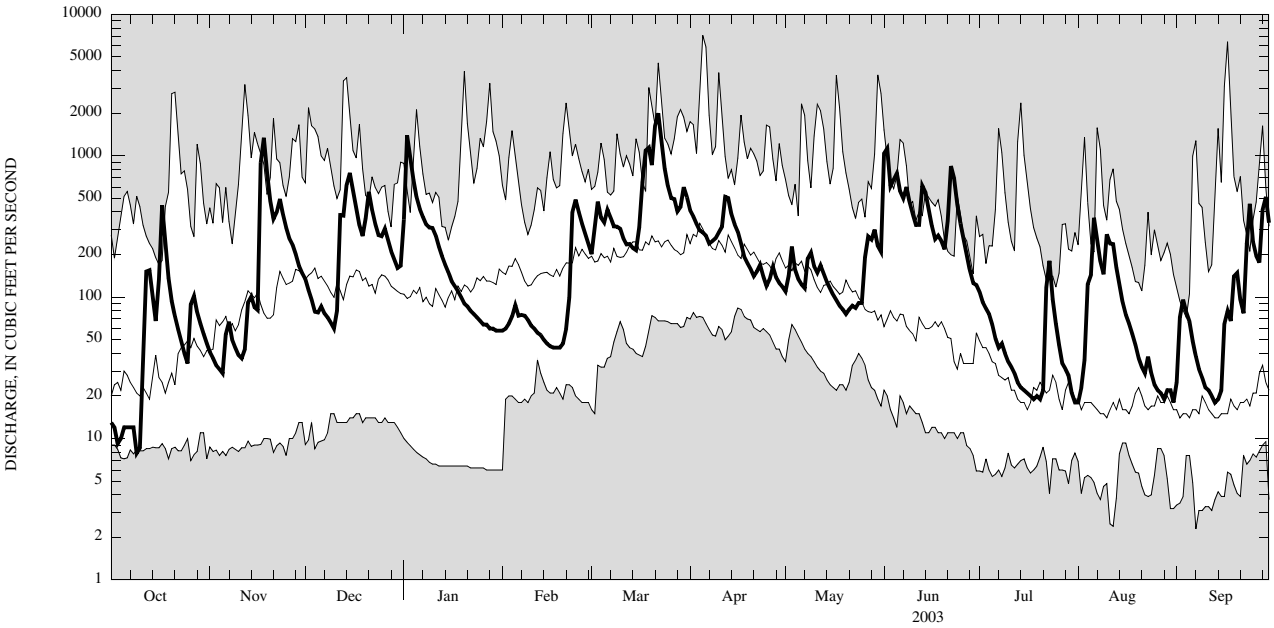
01387420 RAMAPO RIVER AT SUFFERN, NY—Continued

DISCHARGE, CUBIC FEET PER SECOND—CONTINUED
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1979 - 2003, BY WATER YEAR (WY)												
MEAN	93.5	169	207	192	207	332	324	210	126	58.1	49.5	73.2
MAX	389	496	693	654	475	816	862	777	460	308	305	508
(WY)	(1990)	(1996)	(1984)	(1996)	(1981)	(1983)	(1984)	(1989)	(2003)	(1996)	(1990)	(1999)
MIN	9.41	10.3	14.8	6.84	25.4	87.7	77.1	58.2	18.5	8.03	7.40	8.17
(WY)	(2002)	(2002)	(1999)	(1981)	(2002)	(2002)	(1985)	(2001)	(1999)	(1993)	(1993)	(1995)

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1979 - 2003	
ANNUAL TOTAL	38,471.7		81,455.7			
ANNUAL MEAN	105		223		170	
HIGHEST ANNUAL MEAN					295	1984
LOWEST ANNUAL MEAN					59.5	2002
HIGHEST DAILY MEAN	1,340	Nov 18	2,000	Mar 22	7,110	Apr 5, 1984
LOWEST DAILY MEAN	7.4	Sep 26	7.9	Oct 9	2.3	Sep 7, 1995
ANNUAL SEVEN-DAY MINIMUM	11	Oct 4	11	Oct 4	3.1	Sep 7, 1995
10 PERCENT EXCEEDS	307		503		373	
50 PERCENT EXCEEDS	43		134		88	
90 PERCENT EXCEEDS	13		25		13	

e Estimated



CURRENT WATER YEAR DAILY MEAN DISCHARGE (BOLD) WITH DAILY MEDIAN FOR PERIOD OF RECORD.
SHADED AREAS SHOW HIGHEST AND LOWEST DAILY MEAN FOR PERIOD OF RECORD THROUGH PREVIOUS WATER YEAR.

01387500 RAMAPO RIVER NEAR MAHWAH, NJ

LOCATION.--Lat 41°05'53", long 74°09'46", Bergen County, Hydrologic Unit 02030103, on left bank 350 ft downstream from State Highway 17, 0.6 mi downstream from Mahwah River, 1.0 mi west of Mahwah, and 1.2 mi downstream of New York-New Jersey state line.

DRAINAGE AREA.--120 mi^2.

PERIOD OF RECORD.--October 1902 to December 1906, September 1922 to current year. October 1902 to February 1905 monthly discharge only, published in WSP 1302. Figures of daily discharge Feb. 10, 1903, to Dec. 31, 1904, published in WSP 97, 125,are unreliable and should not be used. Gage-height records for 1903-14 are contained in reports of the National Weather Service.

REVISED RECORDS.--WSP 781: 1904(M). WSP 1031: 1938, 1940. WSP 1552: 1923(M), 1924, 1925-26(M), 1927-28, 1933, 1937. WRD- NJ 1971: 1968(M). WDR NJ-82-1: Drainage area. WDR-NJ-87-1: 1986.

GAGE.--Water-stage recorder. Datum of gage is 253.10 ft above NGVD of 1929. Prior to Dec. 31, 1906, nonrecording gage on former bridge at site 250 ft downstream at different datum. Sept. 1, 1922 to Dec. 23, 1936, water-stage recorder just below former bridge at present datum.

REMARKS.--Records good. Flow affected by diversion from United Water-New York well field upstream from station (see station 01387420). Occasional regulation from lakes and ponds upstream from the station. Several measurements of water temperature were made during the year. Satellite gage-height telemetry at station.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,400 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Nov 18	0245	1,900	6.91	Mar 22	0300	*2,560	*7.64
Jan 2	0930	1,980	7.01	Jun 1	2200	1,940	6.96
Mar 19	0300	1,560	6.41	Jun 5	0045	1,420	6.19

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14	69	203	490	93	242	476	165	1,390	173	39	82
2	14	65	182	1,850	98	402	428	196	1,530	144	58	171
3	12	59	166	1,230	98	541	378	285	741	131	83	148
4	16	55	144	837	117	390	339	215	909	123	204	120
5	17	53	141	589	133	380	330	190	1,120	107	256	98
6	17	103	151	479	112	455	311	179	709	89	497	74
7	15	110	139	415	112	388	283	173	615	81	316	59
8	15	82	134	370	108	345	293	246	755	81	276	50
9	10	75	124	355	97	347	308	258	543	74	205	43
10	10	72	113	353	95	336	332	220	439	70	298	39
11	135	70	170	311	92	289	359	201	369	67	290	35
12	298	93	508	272	86	274	602	221	377	60	376	32
13	235	151	452	246	76	280	583	200	948	50	247	33
14	154	151	801	225	84	266	435	181	776	46	186	39
15	105	131	921	206	73	260	371	166	538	44	148	47
16	177	130	653	188	60	351	331	152	388	43	122	126
17	473	1,150	487	183	46	740	285	140	319	41	106	112
18	296	1,660	379	169	126	1,330	248	131	340	39	92	91
19	183	915	328	152	122	1,410	231	124	316	39	81	203
20	136	544	445	149	105	1,040	216	116	286	38	68	193
21	109	410	647	136	97	2,050	200	125	477	58	59	133
22	89	476	475	134	219	2,380	222	128	1,190	271	54	107
23	76	563	385	132	629	1,600	227	125	874	314	61	365
24	65	430	330	106	609	990	197	141	523	157	50	514
25	57	355	329	104	436	697	176	136	382	105	43	284
26	167	306	362	101	355	561	199	275	307	77	40	232
27	154	290	312	99	303	551	227	322	255	62	37	243
28	119	264	282	109	270	440	196	305	213	56	34	847
29	99	235	259	95	---	546	182	351	184	50	35	760
30	86	218	240	92	---	819	175	276	203	40	37	421
31	77	---	246	90	---	615	---	264	---	36	31	---
TOTAL	3,430	9,285	10,508	10,267	4,851	21,315	9,140	6,207	18,016	2,766	4,429	5,701
MEAN	111	310	339	331	173	688	305	200	601	89.2	143	190
MAX	473	1,660	921	1,850	629	2,380	602	351	1,530	314	497	847
MIN	10	53	113	90	46	242	175	116	184	36	31	32
CFSM	0.92	2.58	2.82	2.76	1.44	5.73	2.54	1.67	5.00	0.74	1.19	1.58
IN.	1.06	2.88	3.26	3.18	1.50	6.61	2.83	1.92	5.58	0.86	1.37	1.77

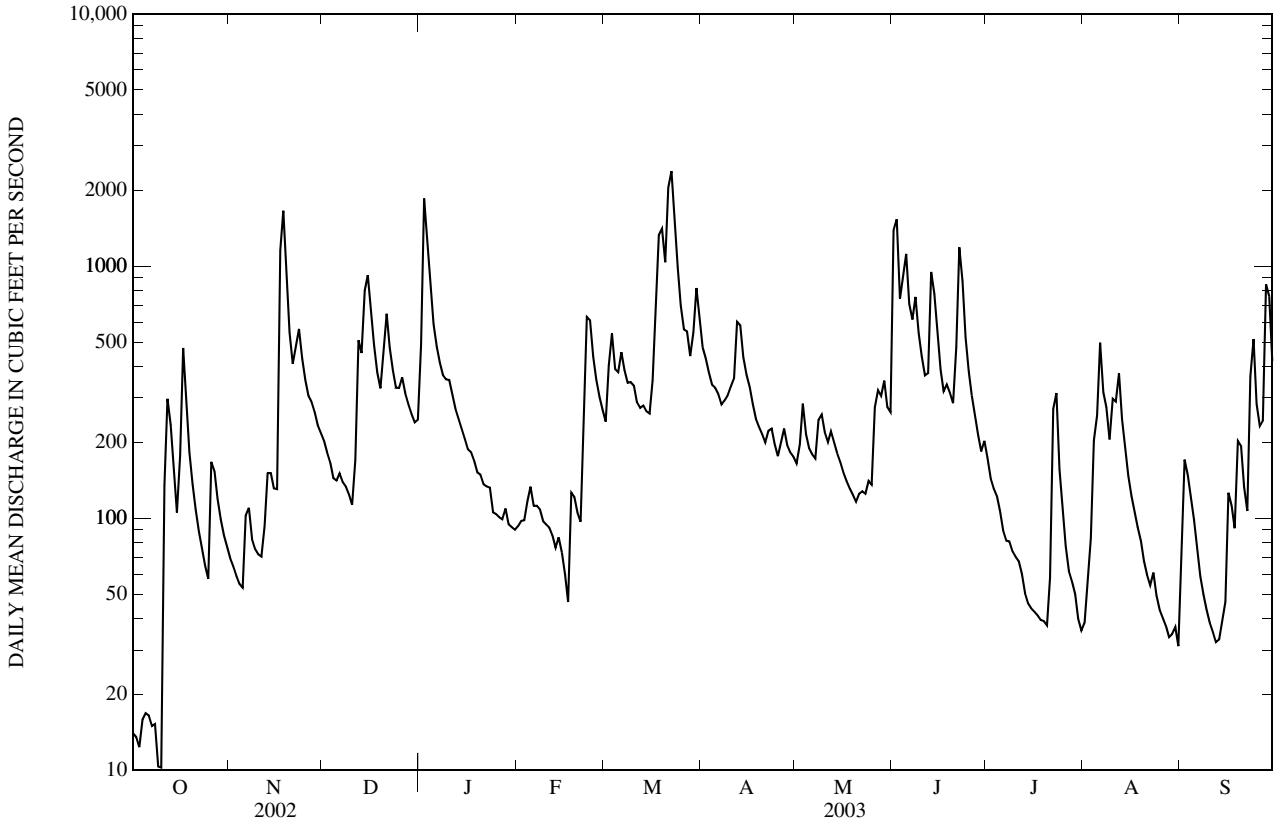
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1903 - 2003, BY WATER YEAR (WY)

MEAN	140	221	271	265	277	442	396	256	159	97.7	98.0	111
MAX	954	736	873	877	701	1,151	1,055	994	735	602	755	641
(WY)	(1904)	(1978)	(1984)	(1979)	(1970)	(1936)	(1984)	(1989)	(1972)	(1945)	(1955)	(1999)
MIN	13.8	17.9	19.8	16.5	42.7	120	88.4	79.5	29.6	15.8	11.3	11.1
(WY)	(1942)	(2002)	(1999)	(1981)	(2002)	(2002)	(1985)	(1905)	(1999)	(1993)	(1993)	(1964)

01387500 RAMAPO RIVER NEAR MAHWAH, NJ—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1903 - 2003	
ANNUAL TOTAL	50,514		105,915			
ANNUAL MEAN	138		290		227	
HIGHEST ANNUAL MEAN					461	1903
LOWEST ANNUAL MEAN					80.0	2002
HIGHEST DAILY MEAN	1,660	Nov 18	2,380	Mar 22	8,920	Oct 9, 1903
LOWEST DAILY MEAN	10	Oct 9,10	10	Oct 9, 10	1.2	Aug 12, 1993
ANNUAL SEVEN-DAY MINIMUM	14	Oct 4	14	Oct 4	3.7	Sep 7, 1995
MAXIMUM PEAK FLOW			2,560	Mar 22	15,500a	Apr 5, 1984
MAXIMUM PEAK STAGE			7.64	Mar 22	13.35	Apr 5, 1984
INSTANTANEOUS LOW FLOW			9.0	Oct 9, 10	0.20	Aug 11, 1993
ANNUAL RUNOFF (CFSM)	1.15		2.42		1.90	
ANNUAL RUNOFF (INCHES)	15.66		32.83		25.75	
10 PERCENT EXCEEDS	343		611		503	
50 PERCENT EXCEEDS	75		196		136	
90 PERCENT EXCEEDS	17		50		26	

a From rating curve extended above 6,500 ft^3/s.



01388000 RAMAPO RIVER AT POMPTON LAKES, NJ

LOCATION.--Lat 40°59'33", long 74°16'43", Passaic County, Hydrologic Unit 02030103, on right end of dam at pumping station in Pompton Lakes, 450 ft upstream from bridge on Paterson-Hamburg Turnpike, and 2.0 mi upstream from mouth. Water samples collected upstream from dam at water-supply intake, on right bank. Water-quality monitor is 450 ft downstream from dam.

DRAINAGE AREA.--160 mi^2.

PERIOD OF RECORD.--October 1921 to current year.

REVISED RECORDS.--WSP 1552: 1922(M), 1924-25, 1929-31(M), 1934-35(M). WRD-NJ 1970: 1968-69. WRD-NJ 1988: 1984(M).

GAGE.--Water-stage recorder and concrete dam. Datum of gage is 190.96 ft above NGVD of 1929. Prior to October 1, 1981, at datum 10.00 ft higher.

REMARKS.--Records good. Diversion by North Jersey District Water Supply Commission to Wanaque Reservoir since December 1953 (see Passaic River basin, diversions) and to Oradell Reservoir by United Water New Jersey since February 1985 (see Hackensack River basin, diversions) for municipal supply. Slight regulation by Pompton Lake, capacity, 300,000,000 gal. Several measurements of water temperature, other than those published, were made during the year. National Weather Service telephone telemetry at station. Satellite telemetry also at station. Satellite gage-height telemetry at auxiliary station 450 ft below station.

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

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Nov 18	1130	2,030	11.49	Mar 22	1030	*2,690	*11.77
Jan 2	1445	2,160	11.55	Jun 2	0345	2,070	11.51
Mar 19	0530	1,670	11.32	Jun 5	0400	1,810	11.39

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	57	80	289	508	121	338	750	223	1,320	275	63	86
2	51	72	251	1,950	126	508	660	231	1,920	213	75	273
3	50	66	217	1,720	126	821	580	368	1,160	186	119	238
4	48	64	194	1,210	136	597	513	316	1,170	171	268	195
5	46	83	189	902	165	540	492	255	1,620	156	418	156
6	33	70	191	716	149	661	467	236	1,110	133	766	121
7	33	78	179	607	143	573	422	220	893	121	546	97
8	30	57	172	530	137	499	431	278	1,090	113	481	82
9	30	64	161	497	127	492	446	353	856	109	392	74
10	30	74	144	504	126	487	493	296	670	103	492	66
11	124	74	173	446	120	416	512	254	558	105	475	61
12	387	78	698	387	113	386	865	263	596	93	687	58
13	218	118	672	345	105	398	899	256	1,400	82	446	65
14	80	106	1,010	317	101	385	690	225	1,220	73	318	71
15	46	75	1,180	287	103	367	570	197	965	71	249	76
16	87	64	928	259	83	480	504	174	658	69	200	226
17	353	937	694	247	77	907	431	156	520	64	172	165
18	285	1,870	552	216	84	1,430	369	145	520	62	150	137
19	109	1,350	460	203	141	1,630	338	137	504	63	131	291
20	55	832	548	196	141	1,340	315	129	440	59	111	303
21	112	607	828	175	128	2,100	286	130	575	70	102	207
22	91	641	690	157	245	2,580	326	141	1,500	341	97	167
23	69	802	545	140	848	2,060	328	138	1,250	601	101	472
24	70	653	460	136	969	1,360	290	149	836	275	84	674
25	82	529	447	135	679	1,000	255	172	604	175	73	468
26	149	461	492	134	523	810	267	290	477	129	68	333
27	101	425	432	129	438	797	322	515	394	102	64	330
28	91	390	388	116	377	662	278	427	326	91	59	754
29	94	341	354	128	---	666	248	475	278	78	56	1,010
30	92	314	327	121	---	1,230	242	457	264	68	57	642
31	81	---	315	119	---	965	---	387	---	62	56	---
TOTAL	3,184	11,375	14,180	13,537	6,631	27,485	13,589	7,993	25,694	4,313	7,376	7,898
MEAN	103	379	457	437	237	887	453	258	856	139	238	263
MAX	387	1,870	1,180	1,950	969	2,580	899	515	1,920	601	766	1,010
MIN	30	57	144	116	77	338	242	129	264	59	56	58

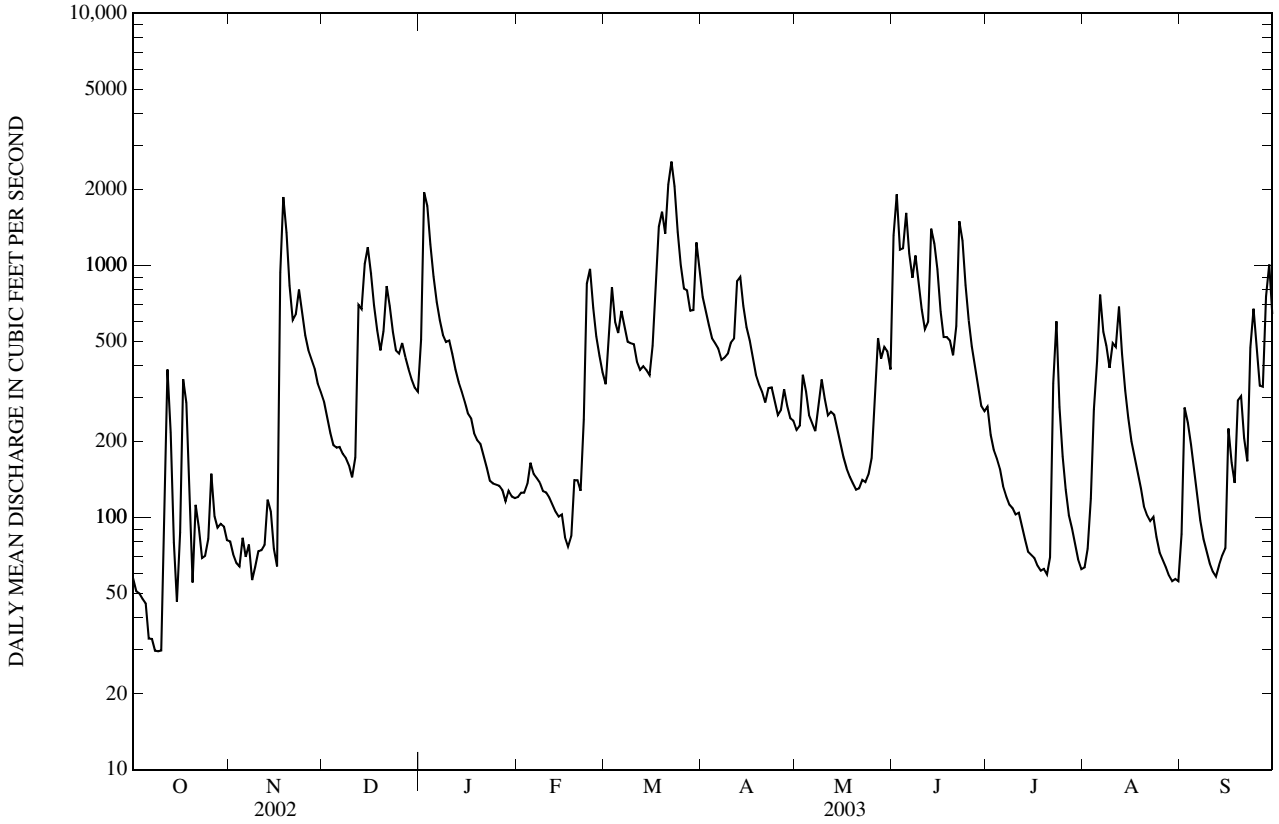
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1922 - 2003, BY WATER YEAR (WY)

MEAN	147	264	320	320	347	551	507	342	215	135	132	146
MAX	1,154	954	1,181	1,035	838	1,670	1,465	1,195	973	895	889	811
(WY)	(1956)	(1933)	(1997)	(1979)	(1970)	(1936)	(1983)	(1989)	(1972)	(1945)	(1955)	(1999)
MIN	13.6	20.5	12.8	24.7	12.9	31.9	24.9	72.0	39.9	5.89	6.17	10.8
(WY)	(1981)	(2002)	(1981)	(2002)	(2002)	(2002)	(1985)	(1965)	(1965)	(1985)	(1985)	(1964)

01388000 RAMAPO RIVER AT POMPTON LAKES, NJ—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1922 - 2003	
ANNUAL TOTAL	49,120.5		143,255			
ANNUAL MEAN	135		392		285	
HIGHEST ANNUAL MEAN					512	1984
LOWEST ANNUAL MEAN					61.9	2002
HIGHEST DAILY MEAN	1,870	Nov 18	2,580	Mar 22	10,700	Sep 17, 1999
LOWEST DAILY MEAN	4.9	Apr 5	30	Oct 8-10	0.00	Oct 1, 1922
ANNUAL SEVEN-DAY MINIMUM	9.0	Feb 24	36	Oct 4	0.00	Dec 1, 1980
MAXIMUM PEAK FLOW			2,690	Mar 22	15,400	Apr 5, 1984
MAXIMUM PEAK STAGE			11.77	Mar 22	15.21a	Apr 5, 1984
INSTANTANEOUS LOW FLOW			30	Oct 6-10, 20	0.00	Many days
10 PERCENT EXCEEDS	428		895		641	
50 PERCENT EXCEEDS	38		267		161	
90 PERCENT EXCEEDS	12		70		35	

a From gage well, outside high-water marks at 15.33 ft.



01388500 POMPTON RIVER AT POMPTON PLAINS, NJ

LOCATION.--Lat 40°58'09", long 74°16'55", Passaic County, Hydrologic Unit 02030103, on left bank just upstream of the Passaic Valley Water Commission pumping station, 800 ft below confluence of Pequannock and Ramapo Rivers, 140 ft upstream from bridge on Jackson Avenue (Pompton Plains Cross Road), and 0.7 mi east of Pompton Plains.

DRAINAGE AREA.--355 mi^2.

PERIOD OF RECORD.--March 1903 to December 1904, May 1940 to current year. Monthly discharge only for some periods, published in WSP 1302.

REVISED RECORDS.--WSP 1202: 1945(M).

GAGE.--Water-stage recorder, crest-stage gage, and concrete control. Datum of gage is 160.00 ft above NGVD of 1929. March 1903 to December 1904, nonrecording gage on main spillway of dam 2,000 ft upstream at different datum. May 1940 to September 1964 two water-stage recorders, each above a concrete dam about 2,000 ft upstream at datum 14.46 ft higher.

REMARKS.--Records good except for discharges over 2,000 ft^3/s and estimated daily values, which are fair. Water diverted from reservoirs on Pequannock and Wanaque Rivers, from Pompton River to Point View Reservoir, and from Ramapo River to Wanaque Reservoir and Oradell Reservoir (from February 1985) for municipal supply (see Hackensack River basin, diversions into and from and Passaic River basin, diversions). Published discharges for water years 1965-69 include flow over the weir and pumpage to Point View Reservoir from Jackson Avenue Pumping Station. Since water year 1969, the published discharges have included only flow over the weir. Flow regulated by Canistear, Oak Ridge, Clinton, Charlotteburg and Echo Lake Reservoirs on Pequannock River and by Greenwood Lake, Monksville, and Wanaque Reservoirs on Wanaque River (see Passaic River basin, reservoirs in). Several measurements of water temperature were made during the year. Satellite gage-height telemetry at station.

COOPERATION.--Gage-height record collected in cooperation with Passaic Valley Water Commission.

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

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar 22	1345	*6,610	*14.69	Jun 13	1315	3,270	11.79
Jun 2	0145	4,140	12.50	Jun 22	1400	3,870	12.29
Jun 5	0515	4,130	12.49				

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	99	141	388	780	184	493	1,590	332	3,020	440	120	153
2	89	131	335	2,840	186	831	1,420	346	3,720	357	140	415
3	84	123	291	2,470	189	1,240	1,260	514	2,400	306	221	355
4	82	123	264	1,880	208	895	1,100	427	2,730	274	451	306
5	81	145	264	1,510	235	903	1,010	352	3,780	245	698	245
6	62	157	263	1,330	209	1,160	977	329	2,730	217	1,260	196
7	59	150	249	1,180	209	1,010	808	311	2,260	200	955	164
8	56	121	239	981	201	844	830	423	2,860	188	873	144
9	55	128	226	913	187	825	866	494	2,260	181	806	131
10	56	138	212	904	185	801	965	422	1,730	173	1,090	121
11	321	135	278	776	177	677	1,040	380	1,370	173	912	114
12	726	152	1,050	669	168	617	1,820	416	1,470	160	1,530	109
13	320	207	956	558	156	650	1,870	400	2,870	143	875	130
14	167	187	1,580	501	147	630	1,470	346	2,680	130	579	141
15	117	160	1,710	429	156	599	1,210	294	2,360	125	426	160
16	201	156	1,330	e395	129	809	1,050	263	1,650	123	327	450
17	487	1,570	1,000	e380	114	1,540	882	241	1,230	117	279	288
18	363	2,700	795	e330	156	2,410	733	229	1,170	114	240	238
19	189	1,970	663	e310	221	2,790	649	213	1,130	115	215	540
20	131	1,230	855	e300	237	2,610	590	201	986	108	191	579
21	176	877	1,220	e270	247	5,130	526	213	1,350	127	177	392
22	157	953	995	236	433	6,390	557	220	3,750	520	171	286
23	135	1,150	784	212	1,400	5,370	586	216	3,260	860	185	866
24	128	913	661	e215	1,470	3,560	537	258	2,210	389	151	1,370
25	138	733	657	e210	1,010	2,550	405	270	1,570	257	136	1,000
26	271	630	710	e210	768	2,040	414	613	1,150	194	129	691
27	197	591	608	201	640	1,930	491	751	835	165	123	644
28	170	534	542	179	554	1,560	434	738	622	151	115	1,370
29	171	463	492	197	---	1,550	390	932	483	136	110	1,680
30	165	420	455	185	---	2,570	375	716	440	123	111	1,080
31	148	---	447	181	---	2,120	---	634	---	115	108	---
TOTAL	5,601	17,088	20,519	21,732	10,176	57,104	26,855	12,494	60,076	6,926	13,704	14,358
MEAN	181	570	662	701	363	1,842	895	403	2,003	223	442	479
MAX	726	2,700	1,710	2,840	1,470	6,390	1,870	932	3,780	860	1,530	1,680
MIN	55	121	212	179	114	493	375	201	440	108	108	109

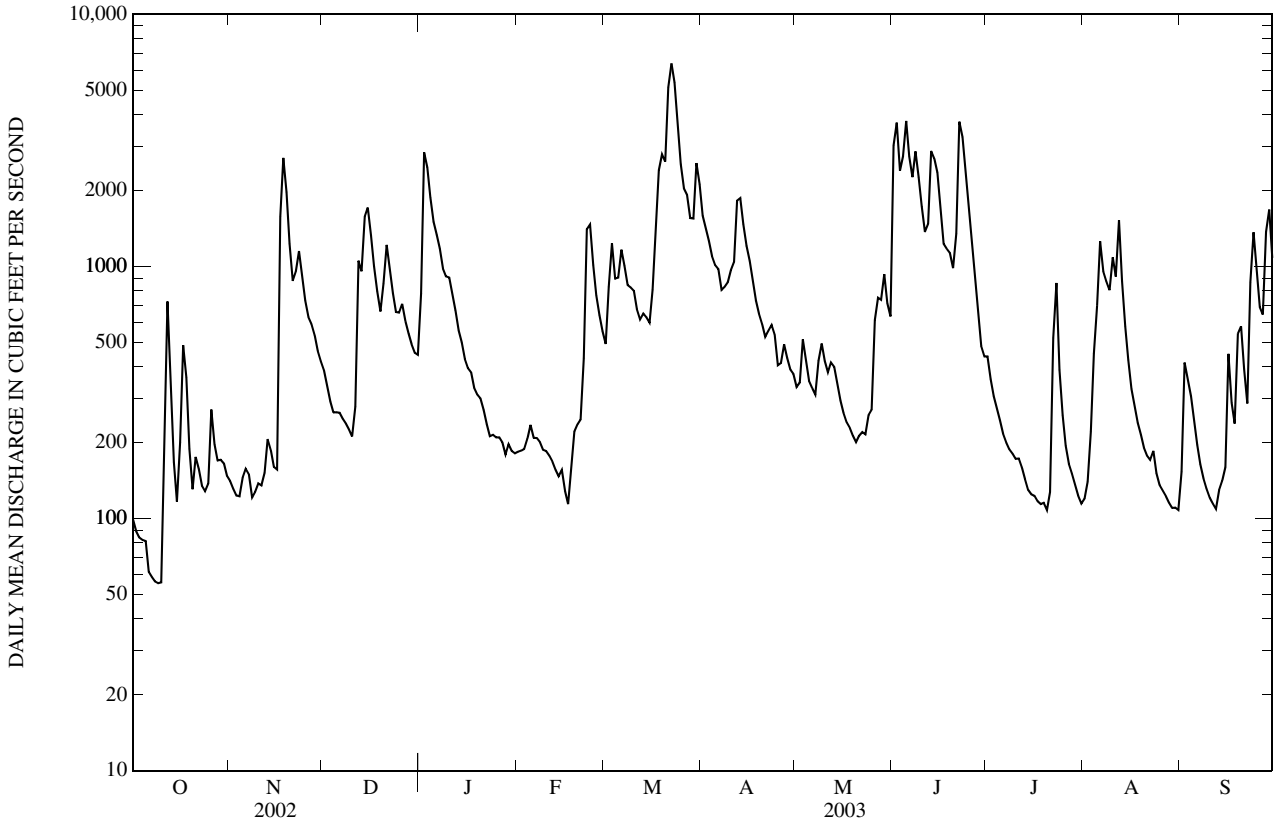
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1903 - 2003, BY WATER YEAR (WY)

MEAN	282	410	524	510	558	944	951	611	407	236	215	230
MAX	2,369	1,417	2,245	1,777	1,654	2,477	2,995	2,778	2,177	1,530	1,520	1,067
(WY)	(1904)	(1956)	(1997)	(1996)	(1973)	(1983)	(1983)	(1989)	(1972)	(1945)	(1955)	(1999)
MIN	40.2	52.3	34.8	39.2	43.1	79.9	62.7	110	62.9	34.2	34.2	46.7
(WY)	(1981)	(1981)	(1981)	(1981)	(2002)	(2002)	(1985)	(1965)	(1965)	(1965)	(1966)	(1980)

01388500 POMPTON RIVER AT POMPTON PLAINS, NJ—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1903 - 2003	
ANNUAL TOTAL	80,927		266,633			
ANNUAL MEAN	222		731		488	
HIGHEST ANNUAL MEAN					906	1952
LOWEST ANNUAL MEAN					117	1965
HIGHEST DAILY MEAN	2,700	Nov 18	6,390	Mar 22	28,300	Oct 10, 1903
LOWEST DAILY MEAN	32	Mar 2	55	Oct 9	0.00	Aug 18, 1904
ANNUAL SEVEN-DAY MINIMUM	36	Feb 24	64	Oct 4	1.7	Aug 14, 1904
MAXIMUM PEAK FLOW			6,610	Mar 22	28,300a	Oct 10, 1903
MAXIMUM PEAK STAGE			14.69	Mar 22	14.30bc	Oct 10, 1903
INSTANTANEOUS LOW FLOW			53	Oct 10	0.00	Aug 18, 1904
10 PERCENT EXCEEDS	613		1,690		1,140	
50 PERCENT EXCEEDS	87		416		242	
90 PERCENT EXCEEDS	45		129		70	

a By computation of peak flow over dam, maximum observed.
b Site and datum then in use.
c Maximum stage at present site and datum was 24.47 ft, Apr. 6, 1984.
e Estimated



01389500 PASSAIC RIVER AT LITTLE FALLS, NJ

LOCATION.--Lat 40°53'05", long 74°13'34", Passaic County, Hydrologic Unit 02030103, on left bank 0.6 mi downstream from Beatties Dam in Little Falls, and 1.0 mi upstream from Peckman River.

DRAINAGE AREA.--762 mi^2. Area at site used prior to Oct. 1, 1955, 799 mi^2.

PERIOD OF RECORD.--September 1897 to current year. Monthly discharge only for September 1897, published in WSP 1302. Published as "at Paterson", September 1897 to September 1955.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 120.00 ft above NGVD of 1929 (levels by Passaic Valley Water Commission). Prior to Jan. 8, 1933, nonrecording gage and Jan. 8, 1933, to Sept. 30, 1955, water-stage recorder, at site 3.7 mi downstream at NGVD of 1929 (levels from New Jersey Geological Survey bench mark).

REMARKS.--Records good, except for estimated daily discharges which are fair. Diurnal fluctuation at medium and low flow caused by hydroelectric plant at Beatties Dam. Flow regulated by reservoirs in Rockaway, Pequannock, Wanaque, and Ramapo River subbasins (see Passaic River basin, reservoirs in). Large diversions for municipal supply from Passaic River above Beatties Dam, and from Rockaway, Pequannock, Pompton, Ramapo, and Wanaque Rivers (see Passaic River basin, diversions and Hackensack River basin, diversions). In addition, the New Jersey-American Water Company (formerly Commonwealth Water Co.) diverts from Canoe Brook near Summit and from Passaic River (see Passaic River basin, diversions); that company, the city of East Orange, and others also divert water for municipal supply by pumping wells in the basin. Several measurements of water temperature, other than those published, were made during the year. National Weather Service rain-gage and gage-height telephone telemetry and USGS satellite gage-height telemetry at station.

COOPERATION.--Gage-height record collected in cooperation with the Passaic Valley Water Commission.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 4,400 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar 23	1615	*6,950	*7.34	Jun 14	0130	4,930	5.99
Jun 6	0330	5,820	6.60	Jun 23	2145	5,090	6.10

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	69	113	1,100	1,570	337	1,870	3,200	776	2,980	1,490	283	281
2	34	118	926	3,130	373	2,020	2,950	796	4,050	1,230	349	904
3	e25	111	783	3,550	404	2,390	2,700	935	4,190	982	432	980
4	41	98	711	3,620	433	2,220	2,440	927	4,710	800	975	957
5	40	150	676	3,470	492	2,230	2,260	744	5,580	658	1,500	875
6	33	290	637	3,300	479	2,430	2,100	658	5,740	545	2,240	734
7	38	337	620	3,070	458	2,380	1,920	621	5,450	456	2,200	591
8	45	285	604	2,760	447	2,260	1,840	753	5,560	423	2,590	500
9	30	216	572	2,510	405	2,240	1,860	894	5,310	390	2,380	471
10	37	228	525	2,340	396	2,160	1,950	849	4,760	368	2,850	320
11	587	250	647	2,100	382	1,990	2,030	772	4,090	388	2,670	278
12	1,610	368	1,630	1,880	354	1,910	2,650	747	3,830	391	2,890	254
13	1,310	797	1,880	1,670	327	1,850	2,970	731	4,580	369	2,670	337
14	1,040	898	2,490	1,460	292	1,810	2,930	663	4,880	317	2,320	436
15	1,000	749	2,720	1,240	167	1,760	2,740	612	4,860	278	2,110	466
16	1,090	677	2,720	1,040	120	1,910	2,510	532	4,360	269	1,770	1,040
17	1,250	1,970	2,550	902	80	2,320	2,220	469	3,700	250	1,490	1,010
18	1,160	3,030	2,330	781	242	2,910	1,940	430	3,310	229	1,210	909
19	846	3,100	2,110	670	425	3,460	1,710	433	3,020	237	948	1,280
20	579	2,590	2,180	655	475	3,750	1,520	401	2,720	216	698	1,410
21	389	2,190	2,340	581	526	4,890	1,350	378	2,790	236	526	1,380
22	290	2,240	2,270	494	873	6,180	1,280	415	4,090	809	422	1,230
23	91	2,360	2,120	462	2,130	6,840	1,200	421	4,910	1,580	386	1,520
24	47	2,260	1,980	437	2,510	6,460	1,100	496	4,950	1,380	329	1,990
25	48	2,080	1,910	454	2,350	5,560	943	600	4,360	1,220	289	2,010
26	368	1,900	1,870	430	2,200	4,570	923	1,100	3,690	1,100	263	1,760
27	466	1,790	1,770	394	2,170	3,950	1,030	1,530	3,050	913	247	1,570
28	367	1,620	1,640	340	2,040	3,410	1,050	1,580	2,510	710	227	2,000
29	240	1,450	1,540	368	---	3,060	965	1,740	2,060	493	215	2,430
30	123	1,280	1,420	360	---	3,460	863	1,660	1,720	353	218	2,240
31	69	---	1,330	375	---	3,470	---	1,520	---	291	221	---
TOTAL	13,362	35,545	48,601	46,413	21,887	97,720	57,144	25,183	121,810	19,371	37,918	32,163
MEAN	431	1,185	1,568	1,497	782	3,152	1,905	812	4,060	625	1,223	1,072
MAX	1,610	3,100	2,720	3,620	2,510	6,840	3,200	1,740	5,740	1,580	2,890	2,430
MIN	25	98	525	340	80	1,760	863	378	1,720	216	215	254

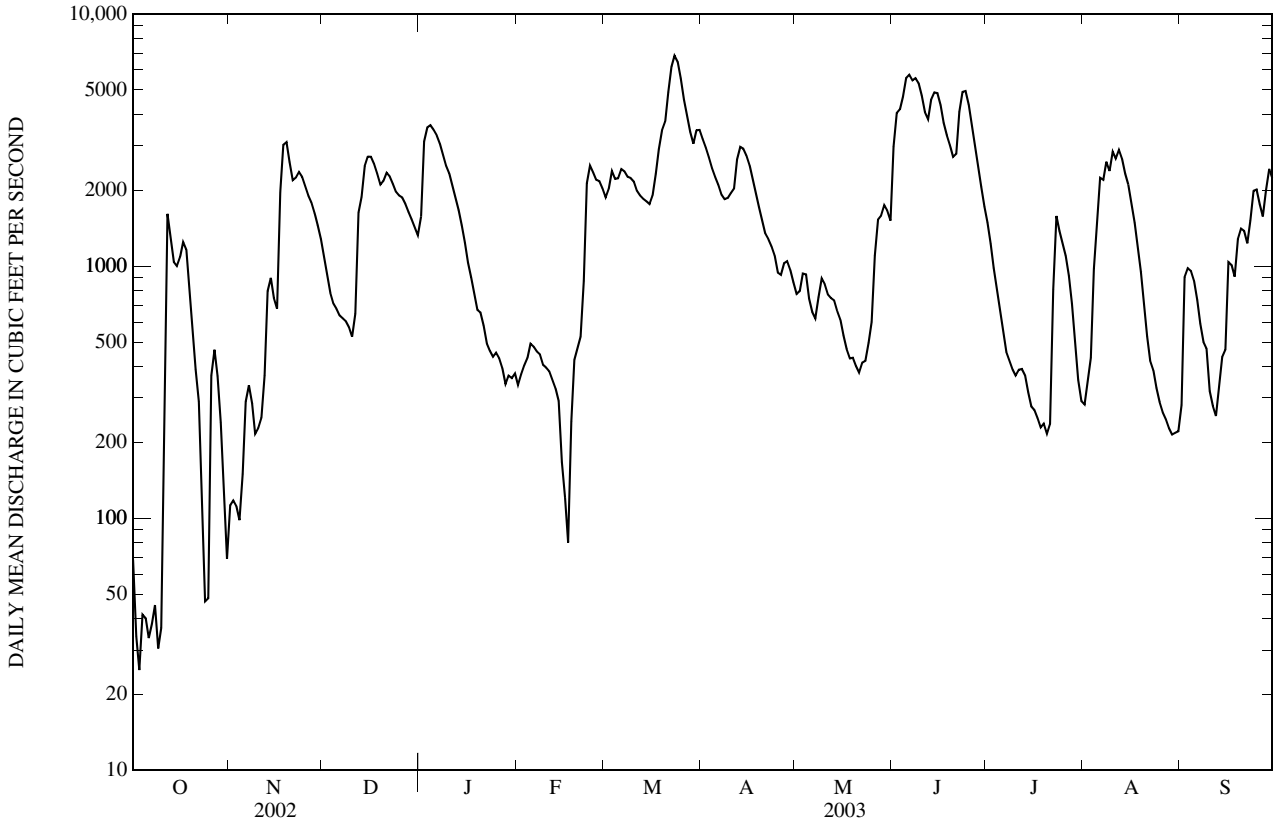
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1898 - 2003, BY WATER YEAR (WY)

MEAN	610	922	1,245	1,323	1,410	2,337	2,052	1,294	802	527	542	533
MAX	5,613	4,757	4,497	4,039	3,787	6,755	5,761	4,554	4,290	3,124	2,859	3,561
(WY)	(1904)	(1908)	(1903)	(1979)	(1973)	(1936)	(1983)	(1989)	(1972)	(1945)	(1942)	(1971)
MIN	44.5	56.5	44.8	42.3	31.0	131	167	227	64.5	60.3	30.4	28.9
(WY)	(1931)	(1999)	(1999)	(2002)	(2002)	(2002)	(2002)	(1965)	(1999)	(1954)	(1923)	(1964)

01389500 PASSAIC RIVER AT LITTLE FALLS, NJ—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1898 - 2003	
ANNUAL TOTAL	162,650.3		557,117			
ANNUAL MEAN	446		1,526		1,132	
HIGHEST ANNUAL MEAN					2,394	1903
LOWEST ANNUAL MEAN					199	2002
HIGHEST DAILY MEAN	3,100	Nov 19	6,840	Mar 23	28,000	Oct 10, 1903
LOWEST DAILY MEAN	6.2	Jan 30	25e	Oct 3	0.00	Jul 3, 1904
ANNUAL SEVEN-DAY MINIMUM	20	Jan 29	36	Oct 3	13	Sep 19, 1932
MAXIMUM PEAK FLOW			6,950	Mar 23	31,700a	Oct 10, 1903
MAXIMUM PEAK STAGE			7.34	Mar 23	12.91b	Apr 7, 1984
INSTANTANEOUS LOW FLOW			12	Oct 2	0.00	Jul 3, 1904
10 PERCENT EXCEEDS	1,600		3,350		2,740	
50 PERCENT EXCEEDS	118		1,100		625	
90 PERCENT EXCEEDS	30		249		118	

a Maximum discharge recorded at present site, no peak stage available
b Maximum stage recorded since 1956, at present site
e Estimated



01390500 SADDLE RIVER AT RIDGEWOOD, NJ

LOCATION.--Lat 40°59'06", long 74°05'26", Bergen County, Hydrologic Unit 02030103, on left bank 15 ft upstream from bridge on State Highway 17 in Ridgewood and 2.8 mi upstream from Hohokus Brook.

DRAINAGE AREA.--21.6 mi^2.

PERIOD OF RECORD.--October 1954 to September 1974, October 1977 to current year. Operated as a maximum-stage gage water years 1975- 77.

REVISED RECORDS.--WRD-NJ 1974: 1971.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 71.74 ft above NGVD of 1929 (levels from New Jersey Geological Survey bench mark).

REMARKS.--Records fair, except for estimated daily discharges which are poor. The flow past this station is effected by pumpage from wells by United Water New Jersey and others. Several measurements of water temperature were made during the year. Satellite gage-height telemetry at station.

EXTREMES OUTSIDE OF PERIOD OF RECORD.--Flood of July 23, 1945, reached a discharge of 6,400 ft^3/s, at site 1.6 mi upstream, drainage area, 19.1 mi^2, by slope-area measurement.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 380 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Nov 17	0800	679	4.78	Jun 21	2330	631	4.63
Dec 12	0000	435	3.99	Jul 22	2045	511	4.25
Jan 2	0300	830	5.21	Jul 23	0215	392	3.83
Feb 22	1815	421	3.94	Aug 4	1615	478	4.14
Mar 21	0300	469	4.11	Aug 5	2200	438	4.00
Jun 1	0945	673	4.76	Aug 12	0145	*1,030	*5.73
Jun 5	0230	427	3.93	Sep 28	0600	913	5.43
Jun 13	0345	508	4.22				

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	10	17	154	17	27	61	23	283	42	17	33
2	11	9.6	16	290	17	132	61	38	84	35	28	93
3	9.9	9.5	15	86	18	81	55	39	59	33	22	40
4	11	9.2	14	107	26	46	50	27	154	31	88	31
5	9.5	9.8	15	69	24	63	54	25	182	28	118	24
6	6.3	24	16	63	18	67	46	25	80	26	96	17
7	5.4	13	14	57	19	45	46	24	109	37	43	15
8	5.6	11	13	55	18	41	52	45	101	27	106	14
9	5.5	11	12	62	17	53	69	30	71	25	44	13
10	6.4	9.5	12	58	17	46	60	25	61	25	42	12
11	115	9.5	60	47	17	37	72	23	54	26	97	11
12	215	27	148	41	16	38	93	27	91	23	211	10
13	59	41	49	37	e15	46	60	22	264	20	49	15
14	24	19	160	35	e14	40	51	20	137	17	37	23
15	13	13	57	33	13	46	47	19	106	14	32	24
16	53	13	40	30	e12	82	44	19	74	14	31	65
17	40	277	31	30	16	92	40	19	65	13	30	22
18	16	124	27	e25	35	79	40	18	86	11	25	19
19	11	41	26	e23	28	58	38	17	69	12	21	72
20	10	28	95	24	22	76	37	15	77	10	19	26
21	8.0	22	59	e23	17	217	36	19	161	20	17	20
22	7.9	70	40	e22	136	108	44	19	162	160	17	18
23	7.2	58	33	e21	229	73	37	18	79	138	16	74
24	7.5	32	28	e21	90	63	35	25	63	43	15	39
25	7.7	25	40	21	48	59	33	23	55	31	14	28
26	72	21	38	19	36	59	45	138	47	23	13	24
27	22	27	31	e20	31	69	35	67	44	21	13	60
28	14	22	27	e17	29	53	26	56	41	21	12	359
29	12	20	24	18	---	98	26	54	38	17	11	57
30	11	19	23	17	---	115	25	39	46	15	11	34
31	11	---	27	16	---	70	---	46	---	14	10	---
TOTAL	818.9	1,025.1	1,207	1,541	995	2,179	1,418	1,004	2,943	972	1,305	1,292
MEAN	26.4	34.2	38.9	49.7	35.5	70.3	47.3	32.4	98.1	31.4	42.1	43.1
MAX	215	277	160	290	229	217	93	138	283	160	211	359
MIN	5.4	9.2	12	16	12	27	25	15	38	10	10	10
CFSM	1.22	1.58	1.80	2.30	1.65	3.25	2.19	1.50	4.54	1.45	1.95	1.99
IN.	1.41	1.77	2.08	2.65	1.71	3.75	2.44	1.73	5.07	1.67	2.25	2.23

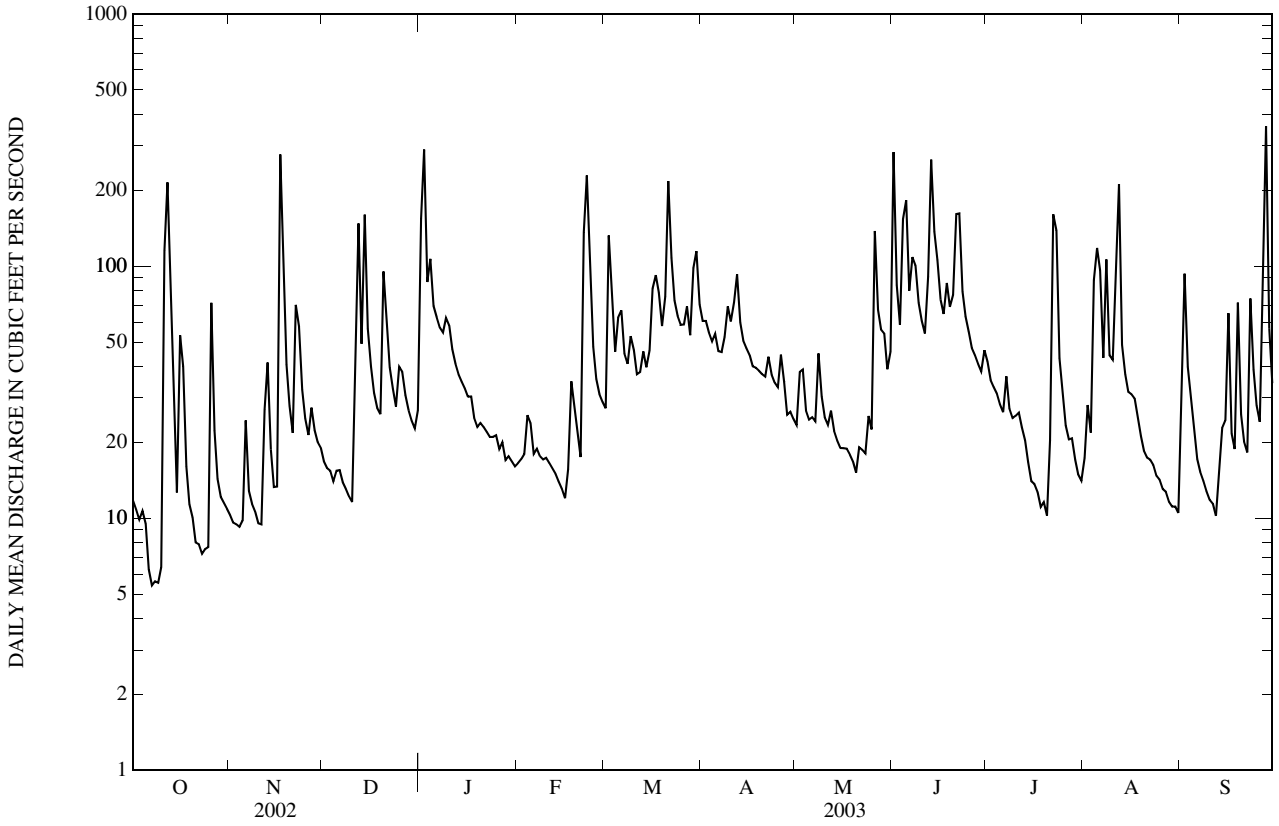
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1955 - 2003, BY WATER YEAR (WY)

MEAN	21.2	32.6	34.9	35.9	39.1	54.3	56.6	41.4	29.3	20.2	19.3	19.3
MAX	104	109	109	115	86.9	104	152	118	121	87.6	77.1	87.4
(WY)	(1956)	(1978)	(1973)	(1979)	(1961)	(1983)	(1983)	(1989)	(1972)	(1984)	(1955)	(1999)
MIN	5.79	6.06	5.86	6.10	6.43	15.6	11.0	12.4	6.08	2.27	2.69	2.34
(WY)	(1983)	(2002)	(1999)	(2002)	(2002)	(1985)	(1985)	(1995)	(1999)	(1999)	(1995)	(1980)

01390500 SADDLE RIVER AT RIDGEWOOD, NJ—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1955 - 2003	
ANNUAL TOTAL	7,632.9		16,700.0			
ANNUAL MEAN	20.9		45.8		33.6	
HIGHEST ANNUAL MEAN					58.7	1984
LOWEST ANNUAL MEAN					14.5	2002
HIGHEST DAILY MEAN	277	Nov 17	359	Sep 28	1,610	Sep 16, 1999
LOWEST DAILY MEAN	3.1	Sep 11	5.4	Oct 7	0.20	Sep 17, 1966
ANNUAL SEVEN-DAY MINIMUM	3.9	Sep 7	7.1	Oct 4	0.75	Sep 10, 1995
MAXIMUM PEAK FLOW			1,030	Aug 12	5,380	Sep 16, 1999
MAXIMUM PEAK STAGE			5.73	Aug 12	13.40	Sep 16, 1999
INSTANTANEOUS LOW FLOW			5.1	Oct 6, 7, 9	0.00	Jul 27, 1999
ANNUAL RUNOFF (CFSM)	0.97		2.12		1.56	
ANNUAL RUNOFF (INCHES)	13.15		28.76		21.16	
10 PERCENT EXCEEDS	42		94		67	
50 PERCENT EXCEEDS	11		30		21	
90 PERCENT EXCEEDS	5.5		12		6.4	

e Estimated



01391500 SADDLE RIVER AT LODI, NJ

LOCATION.--Lat 40°53'25", long 74°04'50", Bergen County, Hydrologic Unit 02030103, on left bank 560 ft upstream from bridge on Outwater Lane in Lodi, 1.3 mi south of Rochelle Park, and 3.2 mi upstream from mouth.

DRAINAGE AREA.--54.6 mi^2.

PERIOD OF RECORD.--September 1923 to current year.

REVISED RECORDS.--WSP 781: Drainage area. WSP 1031: 1940(M). WSP 1552: 1929(M), 1936(M), 1938. WRD-NJ 1969: 1967. WRD- NJ 1970: 1968, 1969.

GAGE.--Water-stage recorder. Concrete control since Nov. 2, 1938. Datum of gage is 25.00 ft above NGVD of 1929. Prior to Nov. 2, 1938, at site 560 ft downstream at datum 2.54 ft lower.

REMARKS.--Records good. Occasional regulation at low flow. Diversion upstream from station at Paramus by United Water New Jersey, for municipal supply (see Hackensack River Basin, diversions). The flow past this station is affected by pumpage from wells by United Water New Jersey and others. Several measurements of water temperature were made during the year. Satellite gage height telemetry at station.

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

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jan 2	0330	1,730	5.62	Jun 22	0130	1,320	5.08
Jun 1	1145	1,380	5.19	Aug 4	1845	*1,770	*5.95

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	35	43	70	342	72	88	149	84	802	115	80	91
2	36	43	66	964	72	306	149	104	232	94	102	297
3	32	44	64	293	72	256	130	127	137	90	70	122
4	33	43	61	378	84	125	123	85	449	88	524	93
5	36	38	62	229	89	177	134	81	479	83	400	74
6	32	100	66	195	71	197	120	81	194	79	431	63
7	30	58	60	172	74	126	120	80	258	106	147	59
8	29	43	60	160	71	120	145	151	279	89	413	58
9	28	41	59	166	67	144	200	99	165	76	151	56
10	27	38	55	177	70	138	178	83	139	82	143	52
11	387	41	153	149	69	106	228	78	128	89	121	50
12	678	102	452	132	64	105	332	90	225	77	395	48
13	196	154	178	123	61	133	200	81	712	66	133	65
14	101	76	434	116	61	122	149	76	350	62	107	83
15	75	58	205	111	62	117	137	72	265	61	94	85
16	184	60	139	105	55	176	133	69	175	60	87	149
17	167	699	113	104	25	212	120	66	147	59	89	69
18	82	400	99	99	69	192	112	64	213	56	78	55
19	65	145	94	94	85	149	110	64	160	56	75	190
20	58	89	275	92	79	172	107	60	198	52	70	77
21	54	82	207	89	76	617	104	74	336	68	66	57
22	50	189	126	83	439	285	123	71	620	296	64	54
23	49	199	110	78	667	170	109	71	228	510	64	227
24	41	108	101	77	319	136	98	91	169	145	58	120
25	42	91	132	75	154	124	92	83	145	98	55	70
26	237	82	140	76	114	125	127	422	128	80	54	61
27	93	104	114	74	99	157	115	177	119	71	52	176
28	58	88	107	67	92	115	94	108	108	74	51	698
29	49	78	101	72	---	187	90	120	101	62	49	190
30	42	75	97	71	---	323	88	87	102	58	49	117
31	35	---	106	69	---	179	---	110	---	56	47	---
TOTAL	3,061	3,411	4,106	5,032	3,332	5,579	4,116	3,109	7,763	3,058	4,319	3,606
MEAN	98.7	114	132	162	119	180	137	100	259	98.6	139	120
MAX	678	699	452	964	667	617	332	422	802	510	524	698
MIN	27	38	55	67	25	88	88	60	101	52	47	48

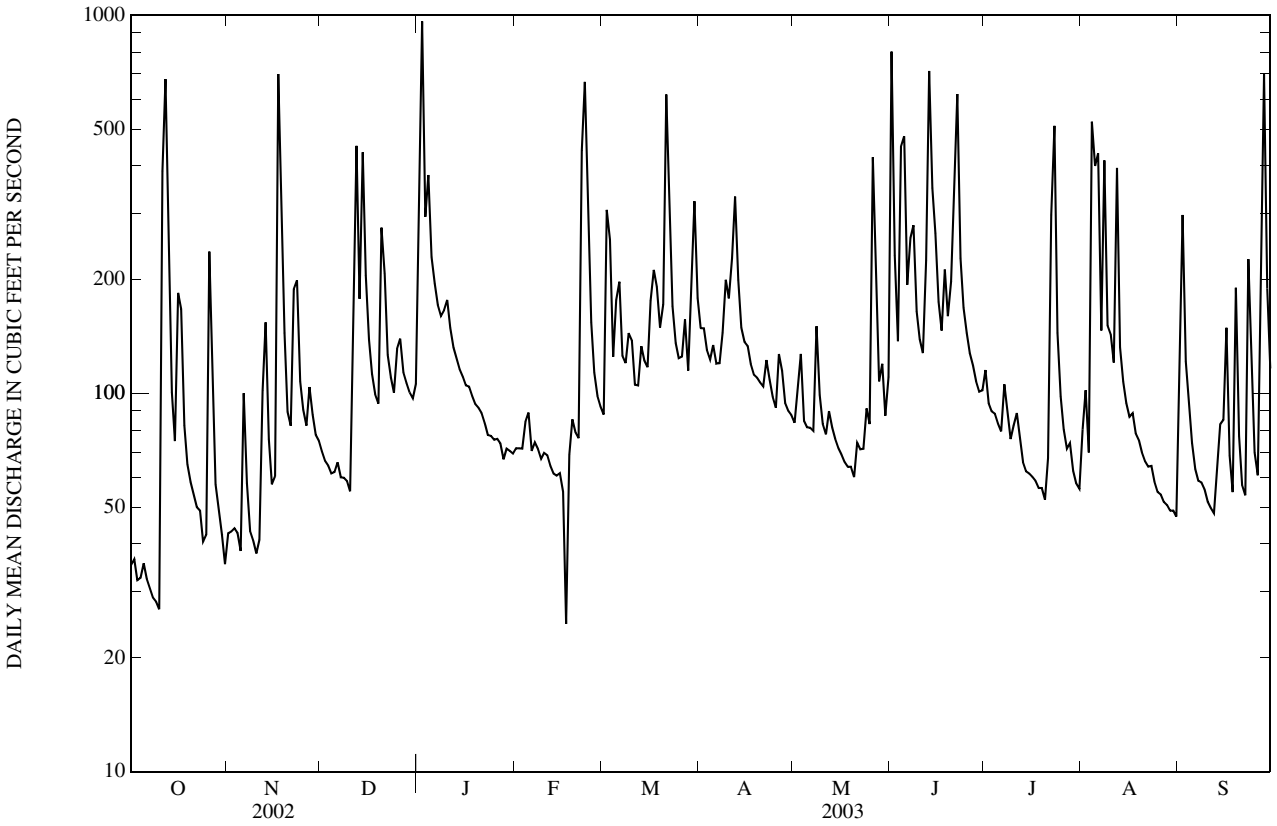
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1924 - 2003, BY WATER YEAR (WY)

MEAN	65.1	88.1	99.4	106	117	154	154	117	88.0	72.1	68.7	69.5
MAX	257	284	301	331	258	333	457	315	336	371	225	256
(WY)	(1956)	(1978)	(1984)	(1979)	(1973)	(1953)	(1983)	(1984)	(1972)	(1945)	(1955)	(1971)
MIN	16.5	25.5	17.0	12.1	26.0	40.1	32.9	44.9	25.5	12.9	15.1	11.4
(WY)	(1936)	(1982)	(1981)	(1981)	(2002)	(1981)	(1985)	(1941)	(1999)	(1999)	(1966)	(1932)

01391500 SADDLE RIVER AT LODI, NJ—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1924 - 2003	
ANNUAL TOTAL	27,286		50,492			
ANNUAL MEAN	74.8		138		99.7	
HIGHEST ANNUAL MEAN					187	1984
LOWEST ANNUAL MEAN					45.2	1981
HIGHEST DAILY MEAN	699	Nov 17	964	Jan 2	2,970	Apr 5, 1984
LOWEST DAILY MEAN	13	Aug 21	25	Feb 17	4.9	Sep 15, 1995
ANNUAL SEVEN-DAY MINIMUM	19	Feb 14	31	Oct 4	7.1	Sep 10, 1995
MAXIMUM PEAK FLOW			1,770	Aug 4	5,330	Sep 17, 1999
MAXIMUM PEAK STAGE			5.95	Aug 4	13.94a	Sep 17, 1999
INSTANTANEOUS LOW FLOW			17	Feb 17	1.0	May 25, 1935
10 PERCENT EXCEEDS	163		277		190	
50 PERCENT EXCEEDS	43		98		69	
90 PERCENT EXCEEDS	23		53		26	

a From high-water mark in gage house.



PASSAIC RIVER BASIN

01392590 PASSAIC RIVER AT NEWARK, NJ

LOCATION.--Lat 40°44'00", long 74°09'31", Essex County, Hydrologic Unit 02030103, on right bank at Newark Fire Training Academy in Newark, 800 ft upstream from bridge on Jackson Avenue (South Fourth Street), 0.3 mi downstream from railroad bridges on AMTRAK mainline, and 4.2 mi upstream from Newark Bay

DRAINAGE AREA.-- 923 mi^2.

PERIOD OF RECORD.--June 1993 to September 1999, and March 2001 to August 22, 2003 (temporarily removed).

GAGE.--Water-stage recorder. Datum of gage is at 0.00 ft North American Vertical Datum of 1988 (NAVD of 1988). To determine approximate elevations to National Geodetic Vertical Datum of 1929 (NGVD of 1929) elevation, add 1.14 ft. To determine approximate elevations to Mean Lower Low Water Datum, add 2.95 ft (revised to tidal Epoch 1983-2001). Data published for water years 1993-1999 was referenced to National Geodetic Vertical Datum Of 1929 (NGVD of 1929). This past data can be adjusted to NAVD of 1988 by subtracting 1.14 ft.

REMARKS.--Missing record Oct. 18 - 22, Nov. 19 to Dec. 1, Apr. 1-2, Jun. 18 - 25, Aug. 17 - 18, Aug. 27 to Sept. 30, and short portions of numerous other days. Summaries for months with short periods of no gage-height record have been estimated with little or no loss of accuracy unless otherwise noted. Some periods cannot be estimated and are noted by dashed (---) lines. Satellite stage telemetry at station.

EXTREMES FOR PERIOD OF PUBLISHED RECORD.--Maximum elevation recorded, 7.54 ft (adjusted to NAVD of 1988), October 19, 1996; minimum elevation recorded, -5.58 ft (NAVD of 1988), January 14, 2002.

EXTREMES FOR CURRENT WATER YEAR.--Maximum elevation recorded, 5.55 ft (NAVD of 1988), Dec. 25; minimum elevation recorded, -5.46 ft (NAVD of 1988), Jan. 22.

Summaries of tide elevations during water year 2003 are as follows:

TIDE ELEVATIONS, IN FEET, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

		OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
Maximum	Elevation	4.86	4.90	5.55	5.19	5.03	4.69	5.41	5.17	4.62	4.24	3.81	---
high tide	Date	7	6	25	3	17	20	17	16	13	10	11	---
Minimum	Elevation	-4.30	---	---	-5.46	-4.72	-3.77	-4.43	-3.70	-3.02	-3.41	---	---
low tide	Date	6	---	---	22	5	4	16	15	12	14	---	---
Mean high tide		3.2e	---	2.49	2.20	1.98	2.61	2.95	2.95	---	2.85	---	---
Mean water level		.61	---	-.13	-.36	-.64	.06	.52	.38	---	.20	---	---
Mean low tide		-2.2e	---	-2.90	-3.09	-3.37	-2.65	-2.24	-2.34	---	-2.49	---	---

e - estimated

PASSAIC RIVER BASIN

RESERVOIRS IN PASSAIC RIVER BASIN

01379990 SPLITROCK RESERVOIR.--Lat 40°57'48", long 74°27'35", Morris County, Hydrologic Unit 02030103, at dam on Beaver Brook, 2 mi northeast of Hibernia.
DRAINAGE AREA.-- 5.50 mi^2.
PERIOD OF RECORD.-- September 1925 to September 1931, December 1948 to September 1950, October 1953 to current year. Monthend contents only 1925-31, 1948-50, published in WSP 1302. October 1950 to September 1953 in Special Report 16, New Jersey Department of Environmental Protection.
REVISED RECORDS.--WDR NJ-94-1: 1993.
GAGE.-- Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929.
REMARKS.--Reservoir is formed by a concrete gravity dam with earth embankment; present dam constructed 1946-48 and sluice gate first closed Dec. 22, 1948. Prior to 1946, reservoir was formed by earthfill dam with crest about 20 ft lower. Capacity of spillway level, 3,310,000,000 gal, elevation, 835 ft. Flow is regulated by two 30-inch sluice gates. Flow is released for diversion for municipal supply of United Water New Jersey.
COOPERATION.--Records provided by United Water New Jersey, Bureau of Water.
EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 3,652,500,000 gal, Apr. 5, 1973, elevation, 836.75 ft; minimum, 1,522,800,000 gal, Jan. 4, 1954, elevation, 824.20 ft.
EXTREMES FOR CURRENT YEAR.--Maximum contents, 3,414,000,000 gal, Mar. 21, elevation, 835.55 ft; minimum, 2,900,000,000 gal, Oct. 2-7, elevation, 832.55 ft.

01380900 BOONTON RESERVOIR.--Lat 40°53'45", long 74°23'52", Morris County, Hydrologic Unit 02030103, at dam on Rockaway River at Boonton.
DRAINAGE AREA.-- 119 mi^2.
PERIOD OF RECORD.-- April 1904 to September 1950, October 1953 to current year. Monthend contents only 1904-50, published in WSP 1302. October 1950 to September 1953 in Special Report 16, New Jersey Department of Environmental Protection.
REVISED RECORDS.--WDR NJ-85-1: 1984, WDR NJ-94-1: 1993.
GAGE.-- Hook gage. Datum of gage is National Geodetic Vertical Datum of 1929.
REMARKS.--Reservoir is formed by a cyclopean masonry dam with earth wings; dam completed and storage began in 1904. Total capacity at spillway level, 7,620,000,000 gal elevation, 305.25 ft of which 7,366,000,000 gal is usable contents above elevation 259.75 ft, sill of lowest outlet gate. Spillway is topped with two Bascule gates, 2 ft high; prior to 1952, flashboards were used. Flow regulated by Bascule gates, three outlets in gatehouse at head of conduit and by two 48-inch pipes (bottom of sluice pipes at elevation 205 ft). Water is diverted from reservoir for municipal supply of United Water New Jersey.
COOPERATION.--Records provided by United Water New Jersey.
EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 8,580,000,000 gal, May 12, 1998, elevation, 309.50 ft; minimum, 1,445,000,000 gal, Jan. 31, 1981, elevation 274.71 ft.
EXTREMES FOR CURRENT YEAR.--Maximum contents, 7,795,000,000 gal, Mar. 22, elevation, 306.50 ft; minimum, 3,902,000,000 gal, Oct. 11, elevation, 289.79 ft.

01382100 CANISTEAR RESERVOIR.--Lat 41°06'40", long 74°29'31", Sussex County, Hydrologic Unit 02030103, at dam on Pacock Brook, 1.8 mi northeast of Stockholm.
DRAINAGE AREA.-- 6.08 mi^2.
PERIOD OF RECORD.-- October 1923 to September 1950, October 1953 to current year. Monthend contents 1923-50, published in WSP 1302. October 1950 to September 1953 in Special Report 16, New Jersey Department of Environmental Protection.
REVISED RECORDS.--WDR NJ-94-1: 1993, WDR NJ-99-1: 1998 (elevation, contents).
GAGE.-- Staff gage. Datum of gage is National Geodetic Vertical Datum of 1929.
REMARKS.--Reservoir is formed by earth-embankment type dam, completed about 1896. Capacity at spillway level, 2,407,000,000 gal, elevation, 1,086.0 ft. Reservoir used for storage and water released for diversion at Macopin intake dam on Pequannock River prior to May 21, 1961, and for diversion at Charlotteburg Reservoir on Pequannock River since May 21, 1961, for municipal supply for City of Newark. Outflow is controlled mostly by operation of gates in pipes through dam.
COOPERATION.--Records provided by City of Newark, Division of Water Supply.

01382200 OAK RIDGE RESERVOIR.--Lat 41°02'27", long 74°30'09", Passaic County, Hydrologic Unit 02030103, at dam on Pequannock River, 0.9 mi southwest of Oak Ridge.
DRAINAGE AREA.-- 27.3 mi^2.
PERIOD OF RECORD.-- October 1923 to September 1950, October 1953 to current year. Monthend contents only 1924-50, published in WSP 1302. October 1950 to September 1953 in Special Report 16, New Jersey Department of Environmental Protection.
REVISED RECORDS.--WDR NJ-99-1: 1998 (elevation, contents).
GAGE.-- Staff gage. Datum of gage is National Geodetic Vertical Datum of 1929.
REMARKS.--Reservoir is formed by earthfill dam with concrete-core wall and ogee overflow section; dam constructed between 1880-92; dam raised 10 ft during 1917-19. Capacity at spillway level, 3,895,000,000 gal, elevation, 846.0 ft. Reservoir used for storage and water released for diversion at Macopin intake dam on Pequannock River prior to May 21, 1961, and diversion at Charlotteburg Reservoir on Pequannock River since May 21, 1961, for municipal supply of City of Newark. Outflow is controlled mostly by operation of gates in pipes through dam.
COOPERATION.--Records provided by City of Newark, Division of Water Supply.

01382300 CLINTON RESERVOIR.--Lat 41°04'28", long 74°26'51", Passaic County, Hydrologic Unit 02030103, at dam on Clinton Brook, 2.0 mi north of Newfoundland.
DRAINAGE AREA.-- 10.5 mi^2.
PERIOD OF RECORD.-- October 1923 to September 1950, October 1953 to current year. Monthend contents only 1923-50, published in WSP 1302. October 1950 to September 1953 in Special Report 16, New Jersey Department of Environmental Protection.
REVISED RECORDS.--WDR NJ-99-1: 1998 (elevation, contents).
GAGE.-- Staff gage. Datum of gage is National Geodetic Vertical Datum of 1929.
REMARKS.--Reservoir is formed by earthfill dam constructed between 1889-92. Capacity at spillway level, 3,518,000,000 gal, elevation, 992.0 ft. Reservoir used for storage and water released for diversion at Macopin intake dam on Pequannock River prior to May 21, 1961, and for diversion at Charlotteburg Reservoir since May 21, 1961, for municipal supply of City of Newark. Outflow is controlled mostly by operation of gates in pipes through dam.
COOPERATION.--Records provided by City of Newark, Division of Water Supply.

01382380 CHARLOTTEBURG RESERVOIR.--Lat 41°01'34", long 74°25'29", Passaic County, Hydrologic Unit 02030103, at dam on Pequannock River, 1.1 mi upstream from Macopin River, and 1.5 mi southeast of Newfoundland, NJ.
DRAINAGE AREA.-- 56.2 mi^2.
PERIOD OF RECORD.-- May 1961 to current year.
REVISED RECORDS.--WRD NJ-74: Station number, WDR NJ-99-1: 1998 (elevation, contents).
GAGE.-- Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929.
REMARKS.--Reservoir is formed by concrete-masonry dam and earth embankment, with concrete spillway at elevation 738.00 ft; storage began May 19, 1961. Spillway equipped with automatic Bascule gate 5 ft high. Capacity, 2,964,000,000 gal, elevation, 743.00 ft, top of Bascule gate. No dead storage. Outflow is controlled by sluice and automatic Bascule gates. Water diverted from reservoir since May 21, 1961, for municipal supply of City of Newark.
COOPERATION.--Records provided by City of Newark, Division of Water Supply.

01382400 ECHO LAKE.--Lat 41°02'58", long 74°24'25", Passaic County, Hydrologic Unit 02030103, at Echo Lake Dam on Macopin River, 1.6 mi north of Charlotteburg, and 1.9 mi upstream from mouth.
DRAINAGE AREA.-- 4.35 mi^2.
PERIOD OF RECORD.-- October 1927 to September 1950, October 1953 to current year. Monthend contents only 1928-50, published in WSP 1302. October 1950 to September 1953 in Special Report 16, New Jersey Department of Environmental Protection.
REVISED RECORDS.-- WDR NJ-99-1: 1998 (elevation, contents).
GAGE.-- Staff gage. Datum of gage is National Geodetic Vertical Datum of 1929.
REMARKS.--Lake is formed by earth-embankment type dam completed about 1925. Capacity at spillway level, 1,583,000,000 gal, elevation, 893.0 ft, with provision for additional storage of 180,000,000 gal at elevation 894.9 ft with flashboards. Usable contents, 1,045,000,000 gal above elevation 880.0 ft. Lake used for storage and water released for diversion at Macopin intake dam on Pequannock River prior to May 21, 1961, and water diverted to Charlotteburg Reservoir on Pequannock River since May 21, 1961, for municipal supply of City of Newark. Outflow to Macopin River controlled by operation of gates in gatehouse at dam and water released through pipe and canal to Charlotteburg Reservoir.
COOPERATION.--Records provided by City of Newark, Division of Water Supply.

01383000 GREENWOOD LAKE.--Lat 41°09'42", long 74°20'00", Passaic County, Hydrologic Unit 02030103, in gatehouse near right end of Greenwood Lake Dam on Wanaque River at Awosting.
DRAINAGE AREA.-- 27.1 mi^2.
PERIOD OF RECORD.-- June 1898 to November 1903, June 1907 to current year (gage heights only prior to October 1953).
REVISED RECORDS.-- WDR NJ-94-1: 1993, WDR NJ-97-1: 1995-96.
GAGE.-- Water-stage recorder. Datum of gage is 608.86 ft above National Geodetic Vertical Datum of 1929 (levels from New Jersey Geological Survey bench mark). Prior to Oct. 1, 1931, staff gage on former railroad bridge at site 100 ft upstream at datum 89.75 ft lower.
REMARKS.--Reservoir is formed by earthfill dam with concrete spillway; dam completed about 1837 and reconstruction completed in 1928 with crest of spillway 0.25 ft lower. Usable capacity, 6,860,000,000 gal between gage heights -4.00 ft, sill of gate, and 10.00 ft, crest of spillway. Dead storage, 7,140,000,000 gal. Outflow mostly regulated by two gates, 3.5 by 5.0 ft. Records given herein represent usable capacity. Lake used for recreation. Diversions by NJDWSC from Upper Greenwood Lake enter via Green Brook.
EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 9,528,000,000 gal, Oct. 9-14, 1903, gage height, 14.25 ft, present datum; minimum, 3,160,000,000 gal, several days in November 1900, gage height, 3.50 ft, present datum.
EXTREMES FOR CURRENT YEAR.--Maximum contents, 7,530,000,000 gal, Mar. 22, gage height, 11.08 ft; minimum, 6,433,000,000 gal, Oct. 9 & 10, gage height, 9.30 ft.

01384002 MONKSVILLE RESERVOIR.--Lat 41°07'21", long 74°17'48", Passaic County, Hydrologic Unit 02030103, at dam on Wanaque River at Monks.
DRAINAGE AREA.-- 40.4 mi^2.
PERIOD OF RECORD.-- September 1988 to current year.
GAGE.-- Measurement from reference point. Datum of gage is National Geodetic Vertical Datum of 1929.
REMARKS.-- Reservoir is formed by a roller compacted concrete dam constructed in 1988. Total capacity at spillway level, 7,000,000,000 gal, elevation 400.0 ft. Reservoir used for storage and water released to Wanaque Reservoir. Outflow is controlled by a 60-inch fixed-cone valve in a 72-inch pipe and 10-inch cone valve which can discharge directly into Wanaque Reservoir or into the 72-inch pipe.
COOPERATION.--Records provided by North Jersey District Water Supply Commission.
EXTREMES FOR PERIOD OF RECORD.--Maximum contents revised, 7,400,000,000 gal, Sep 17-19, 1999, elevation 403.3 ft; minimum, 860,000,000, Sept. 28, 1988 (first filling), elevation 339.0 ft.
EXTREMES FOR CURRENT YEAR.--Maximum contents, 7,350,000,000 gal, Feb 17 & 18, elevation 401.9 ft; minimum, 6,750,000,000 gal, Oct. 1 & 2, elevation 398.6 ft.

01386990 WANAQUE RESERVOIR.--Lat 41°02'42", long 74°17'43", Passaic County, Hydrologic Unit 02030103, at Raymond Dam on Wanaque River at Wanaque.
DRAINAGE AREA, 90.4 mi^2.
PERIOD OF RECORD, February 1928 to September 1950, October 1953 to current year. Monthend contents only 1928-50, published in WSP 1302. October 1950 to September 1953 in Special Report 16, New Jersey Department of Environmental Protection.
REVISED RECORDS.--WDR NJ-85-1: 1984 (M).
GAGE, water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by North Jersey District Water Supply Commission).
REMARKS.--Reservoir is formed by earthfill with concrete-core wall main dam and seven secondary dams; dams completed in 1927 and storage began in March 1928. Total capacity at spillway level, 29,630,000,000 gal, revised, elevation, 302.4 ft, prior to 1986, 300.3 ft. Capacity available by gravity at spillway level, 27,850,000,000 gal. Outflow mostly controlled by sluice gates in intake conduits in gage house. Water is diverted from reservoir for municipal supply. Diversion to reservoir from Posts Brook, Pompton River, and Ramapo River (see Passaic River basin, diversions). Records given herein represent total capacity.
EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 31,280,000,000 gal, Apr. 5, 1984, elevation, 304.52 ft; minimum, 5,110,000,000 gal, Dec. 26, 1964, elevation, 256.06 ft.
EXTREMES FOR CURRENT YEAR.--Maximum contents, 30,275,000,000 gal, Mar. 22, elevation, 303.23 ft; minimum, 17,458,000,000 gal, Oct. 10, elevation, 284.48 ft.

MONTHEND ELEVATION AND CONTENTS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Elevation (feet)*	Contents (million gallons)	Change in contents (equivalent in ft^3/s)	Elevation (feet)*	Contents (million gallons)	Change in contents (equivalent in ft^3/s)	Elevation (feet)**	Contents (million gallons)	Change in contents (equivalent in ft^3/s)
	01379990	SPLITROCK RESERVOIR		01380900	BOONTON RESERVOIR		01382100	CANISTEAR RESERVOIR	
Sept.30.....	833.00	2,910		291.37	4,235		1078.80	1,700	
Oct. 31.....	833.85	3,078	+8.4	298.44	5,791	+77.6	1079.80	1,793	+4.6
Nov. 30.....	834.40	3,187	+5.6	305.46	7,530	+89.7	1080.00	1,812	+1.0
Dec. 31.....	835.05	3,315	+6.4	305.52	7,546	+.8	1085.20	2,323	+25.5
CAL YR 2002			+1.9			+19.7			+5.3
Jan. 31.....	834.95	3,295	-1.0	305.35	7,502	-2.2	1086.00	2,407	+4.2
Feb. 28.....	835.15	3,336	+2.3	305.58	7,561	+3.3	1086.20	2,427	+1.1
Mar. 31.....	835.20	3,346	+.5	306.04	7,678	+5.8	1086.20	2,427	0
Apr. 30.....	835.05	3,316	-1.5	305.46	7,530	-7.6	1086.10	2,417	-.5
May 31.....	835.10	3,326	+.5	305.48	7,535	+.2	1086.10	2,417	0
June 30.....	835.15	3,335	+.5	305.60	7,566	+1.6	1086.20	2,427	+.5
July 31.....	835.00	3,306	-1.4	305.10	7,439	-6.3	1086.00	2,407	-1.0
Aug. 31.....	834.90	3,286	-1.0	304.46	7,278	-8.0	1086.00	2,407	0
Sept.30.....	835.25	3,355	+3.6	305.83	7,624	+17.8	1086.00	2,407	0
WTR YR 2003			+1.9			+14.4			+3.0

PASSAIC RIVER BASIN

RESERVOIRS IN PASSAIC RIVER BASIN--Continued

MONTHEND ELEVATION AND CONTENTS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Elevation (feet)**	Contents (million gallons)	Change in contents (equivalent in ft^3/s)	Elevation (feet)**	Contents (million gallons)	Change in contents (equivalent in ft^3/s)	Elevation (feet)**	Contents (million gallons)	Change in contents (equivalent in ft^3/s)
	01382200 OAK RIDGE RESERVOIR			01382300 CLINTON RESERVOIR			01382380 CHARLOTTEBURG RESERVOIR		
Sept.30.....	825.3	1,374		980.2	2,080		731.70	1,811	
Oct. 31.....	826.5	1,486	+5.6	980.6	2,123	+2.2	731.00	1,750	-3.0
Nov. 30.....	833.1	2,199	+36.8	980.7	2,134	+.6	737.70	2,376	+32.3
Dec. 31.....	841.2	3,231	+51.5	984.8	2,584	+22.5	735.60	2,167	-10.4
CAL YR 2002			+11.1			+6.7			+.5
Jan. 31.....	846.0	3,895	+33.1	992.0	3,518	+46.6	741.90	2,836	+33.4
Feb. 28.....	846.2	3,924	+1.6	992.1	3,531	+.7	741.15	2,748	-4.9
Mar. 31.....	846.2	3,924	0	992.2	3,544	+.6	743.40	3,014	+13.3
Apr. 30.....	846.1	3,909	-.8	992.0	3,518	-1.3	743.00	2,964	-2.6
May 31.....	846.2	3,924	+.7	992.1	3,531	+.6	743.15	2,983	+.9
June 30.....	846.2	3,924	0	992.0	3,518	-.7	743.20	2,989	+.3
July 31.....	845.9	3,881	-2.1	991.9	3,505	-.6	741.10	2,742	-12.3
Aug. 31.....	846.0	3,895	+.7	992.0	3,518	+.6	739.75	2,595	-7.3
Sept.30.....	846.2	3,924	+1.5	992.2	3,544	+1.3	738.60	2,471	-6.4
WTR YR 2003			+10.8			+6.2			+2.8

Date	Elevation (feet)**	Contents (million gallons)	Change in contents (equivalent in ft^3/s)	Elevation (feet)†	Contents (million gallons)	Change in contents (equivalent in ft^3/s)	Elevation (feet)**	Contents (million gallons)	Change in contents (equivalent in ft^3/s)
	01382400 ECHO LAKE			01383000 GREENWOOD LAKE			01384002 MONKSVILLE RESERVOIR		
Sept.30.....	887.1	1,080		9.34	6,464		398.6	6,750	
Oct. 31.....	887.6	1,120	+2.0	10.21	6,990	+26.2	400.1	7,020	+13.5
Nov. 30.....	890.6	1,368	+12.8	10.32	7,058	+3.5	400.5	7,090	+3.6
Dec. 31.....	893.7	1,648	+14.0	10.30	7,046	-.6	400.8	7,150	+3.0
CAL YR 2002			+.7			+12.3			+3.6
Jan. 31.....	893.7	1,648	0	10.11	6,928	-5.9	400.5	7,090	-3.0
Feb. 28.....	893.8	1,658	+.6	10.28	7,034	+5.9	400.8	7,150	+3.3
Mar. 31.....	893.8	1,658	0	10.43	7,127	+4.6	400.6	7,110	-2.0
Apr. 30.....	893.6	1,638	-1.0	10.16	6,959	-8.7	400.4	7,070	-2.1
May 31.....	893.6	1,638	0	10.44	7,133	+8.7	400.9	7,160	+4.5
June 30.....	893.6	1,638	0	10.27	7,027	-4.5	400.9	7,160	0
July 31.....	893.6	1,638	0	9.97	6,842	-9.2	401.1	7,200	+2.0
Aug. 31.....	893.5	1,629	-.4	9.93	6,817	-1.2	400.5	7,090	-5.5
Sept.30.....	893.6	1,638	+.5	10.47	7,189	+19.2	400.8	7,150	+3.1
WTR YR 2003			+2.4			+3.1			+1.7

Date	Elevation (feet)b	Contents (million gallons)	Change in contents (equivalent in ft^3/s)
	01386990 WANAQUE RESERVOIR		
Sept.30.....	285.47	18,033	
Oct. 31.....	293.40	23,075	+252
Nov. 30.....	298.70	26,812	+193
Dec. 31.....	300.74	28,350	+76.8
CAL YR 2002			+78.6
Jan. 31.....	300.72	28,334	-.8
Feb. 28.....	299.69	27,549	-43.4
Mar. 31.....	302.66	29,830	+114
Apr. 30.....	302.08	29,382	-23.1
May 31.....	301.32	28,796	-29.2
June 30.....	302.23	29,499	+36.3
July 31.....	297.94	26,247	-162
Aug. 31.....	296.80	25,438	-40.4
Sept.30.....	296.79	25,431	-.4
WTR YR 2003			+31.4

* Elevation at 0900 on the first day of the following month.
** Elevation at 0800 on the first day of the following month.
† Elevation at 2400 on the last day of each month.
b Previously reported data recorded at 0800 on first day of following month, beginning in 1999 water year data recorded at 2400 of the last day of each month.

PASSAIC RIVER BASIN

DIVERSIONS WITHIN PASSAIC RIVER BASIN

01368720 North Jersey District Water Supply Commission diverts water from Upper Greenwood Lake (Hudson River basin) near Moe, NJ to the Green Brook, a tributary of Greenwood Lake, for municipal supply. Consult North Jersey District Water Supply Commission for data available.

01379510 New Jersey-American Water Company diverts water from Passaic River, 1.2 mi upstream from Canoe Brook for municipal supply. Records provided by New Jersey-American Water Company.

01379530 New Jersey-American Water Company diverts water from Canoe Brook near Summit, 0.5 mi from mouth, for municipal supply. Records provided by New Jersey-American Water Company.

01380280 The Town of Boonton diverts water from a tributary of Stony Brook at Taylortown Reservoir for municipal water supply. Records furnished by Town of Boonton.

01380800 Jersey City diverts water from Boonton Reservoir on Rockaway River at Boonton for municipal supply. Records provided by United Water New Jersey.REVISED RECORDS.--WDR NJ-97-1: 1996.

01382370 City of Newark diverts water from Charlotteburg Reservoir on Pequannock River since May 21, 1961 for municipal supply. Prior to May 21, 1961 water was diverted from reservoir formed by Macopin intake dam on Pequannock River (former diversion 01382490). Records provided by City of Newark, Division of Water Supply. REVISED RECORDS.--WDR NJ-82-1: Station number.

01386980 North Jersey District Water Supply Commission diverts water for municipal supply from Wanaque Reservoir on Wanaque River. Records provided by North Jersey District Water Supply Commission.

01387020 North Jersey District Water Supply Commission diverts water from Posts Brook near Wanaque into Wanaque Reservoir for municipal supply. Records not available. See low-flow partial-record station 01387020.

01387959 Passaic Valley Water Commission diverts water from Point View Reservoir to the PVWC's intake canal at Little Falls for municipal supply. No diversion this year. REVISED RECORDS.--WDR NJ-00-1: 1999.

01387990 North Jersey District Water Supply Commission diverts water from Ramapo River by pumping from Pompton Lakes into Wanaque Reservoir. Records provided by North Jersey District Water Supply Commission.

01388490 Passaic Valley Water Commission supplements the dependable yield of its supply at Little Falls by diverting water at high flows at the Jackson Avenue Pumping Station into Point View Reservoir on Haycock Brook. Water can also be released from Point View Reservoir into the Pompton River at Jackson Avenue Pumping Station and are noted as negative discharges. Also water may be released into Haycock Brook for maintenance of flow in that stream. These diversions and releases occur upstream from Pompton Plains gaging station (01388500). Records provided by Passaic Valley Water Commission. REVISED RECORDS.--WDR NJ-82-1: Station number.

01388980 North Jersey District Water Supply Commission diverts water from the Wanaque South pumping station on the Pompton River at Two Bridges, 750 ft upstream from the Passaic River, to Wanaque Reservoir since January 1987. Records provided by the North Jersey District Water Supply Commission.

01388981 United Water New Jersey diverts water from the Wanaque South pumping station on the Pompton River at Two Bridges, 750 ft upstream from the Passaic River, to Oradell Reservoir. Water can also be diverted from Wanaque Reservoir to Oradell Reservoir in the Hackensack River basin. Figures given herein include diversion from both sources. Prior to water year 1989, diversion was from Ramapo River at Pompton Lakes. Records provided by the United Water New Jersey.

01388982 The Passaic Valley Water Commission (PVWC) diverts water from the Wanaque South pumping station on the Pompton River at Two Bridges, 750 ft upstream from the Passaic River,to the PVWC's intake canal just upstream of Beatties Dam at Little Falls. Previous to the 2001 water year diversions at this location were included with those made at Little Falls (01389490). Records provided by Passaic Valley Water Commission.

01389490 The Passaic Valley Water Commission diverts water from Passaic River above Beatties Dam at Little Falls for municipal supply. Diversions include those made at Wanaque South pumping station on the Pompton River at Two Bridges (01388982). Negative flows indicate excess water from Wanaque South pumping station (01388982) was returned to the Passaic River at Little Falls (01389500). Occasionally releases from Point View Reservoir (01387959) are included in this total. Records provided by Passaic Valley Water Commission.

DIVERSIONS, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

MONTH	01379510 New Jersey - American Water Company from Passaic River	01379530 New Jersey - American Water Company from Canoe Brook	01380280 Stony Brook tributary diversion at Taylortown	01380800 Jersey City	01382370 Newark
October	21.2	7.49	.64	66.3	64.7
November	36.5	0	.70	70.4	75.0
December	8.84	3.80	.38	73.1	65.1
CAL YR 2002	12.5	4.93	.66	64.9	55.6
January	0	.32	.64	77.5	63.8
February	5.61	0	.66	80.0	67.6
March	20.0	5.00	.67	78.7	69.3
April	4.11	6.53	.65	72.1	73.7
May	6.33	5.31	.67	74.9	71.5
June	4.37	13.7	.77	76.4	65.1
July	0	3.25	.86	83.1	66.5
August	0	6.91	.57	83.1	66.4
September	3.84	6.29	.72	76.3	64.3
WTR YR 2003	9.23	4.91	.66	76.0	67.7

PASSAIC RIVER BASIN

DIVERSIONS WITHIN PASSAIC RIVER BASIN--Continued

DIVERSIONS, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2002, Continued

MONTH	01386980 Wanaque Reservoir	01387959 Point View Reservoir to Little Falls	01387990 Ramapo River to Wanaque Reservoir	01388490 Pompton River to Point View Reservoir
October	134	0	84.8	0
November	155	0	37.3	0
December	173	0	0	0
CAL YR 2002	158	2.66	59.1	2.47
				0
January	179	0	0	0
February	168	0	0	0
March	164	0	0	0
April	141	0	0	0
May	143	0	0	0
June	145	0	0	0
July	171	0	0	0
August	169	0	0	0
September	168	0	0	0
WTR YR 2003	159	0	10.3	0

MONTH	01388980 Pompton River to Wanaque Reservoir	01388981* To Oradell Reservoir	01388982 Pompton River to Passaic Valley Water Commission at Little Falls	01389490 Passaic River to Passaic Valley Water Commission at Little Falls
October	251	17.0	11.5	41.9
November	61.5	0	53.1	-1.27
	0	0	45.9	-10.5
CAL YR 2002	128	31.9	35.8	42.3
January	0	0	43.6	-5.06
February	13.3	0	40.7	26.0
March	0	0	40.9	17.9
April	0	0	0	77.1
May	0	8.92	75.5	5.03
June	0	10.8	70.1	12.8
July	0	10.8	76.0	10.5
August	0	10.8	55.0	30.0
September	0	8.07	68.2	-5.48
WTR YR 2003	27.4	5.59	48.4	16.5

* Diversion is to the Hackensack River Basin from Pompton River or Wanaque Reservoir.

01393450 ELIZABETH RIVER AT URSINO LAKE, AT ELIZABETH, NJ

LOCATION.--Lat 40°40'30", long 74°13'19", Union County, Hydrologic Unit 02030104, on left bank at Ursino Lake Dam in Elizabeth, 75 ft upstream from bridge on Trotters Lane and 3.8 mi upstream from mouth.

DRAINAGE AREA.--16.9 mi^2.

PERIOD OF RECORD.--October 1921 to current year.

REVISED RECORDS.--WSP 1552: Drainage area, 1922-23, 1927-29(M), 1932, 1933-34(M), 1938(P), 1942(M) 1944(P), 1945(M), 1948(P), 1952-53(M). WDR NJ-84-1: 1974.

GAGE.--Water-stage recorder, two crest-stage gages, and two concrete weirs. The right concrete weir was lowered 5 ft on Dec. 18, 1985. Datum of gage is NGVD of 1929 (levels by Corps of Engineers). Prior to Oct. 1, 1922, nonrecording gage at site 2,800 ft downstream at datum 4.14 ft higher and Oct. 1, 1922 to May 18, 1923, at same site at datum 5.23 ft higher. May 19, 1923 to Dec. 27, 1972, at site 2,800 ft downstream at datum 5.23 ft higher and published as "Elizabeth River at Elizabeth" (station 01393500), drainage area 18.0 mi^2.

REMARKS.--Records good. Diversion by pumpage from Hammock Well Field in Union Township for municipal supply by Elizabethtown Water Company, probably reduces the flow past the station. Elizabethtown Water Co. diverted water for municipal supply from Ursino Lake in Elizabeth prior to 1929. Several measurements of water temperature were made during the year.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.6	8.7	9.7	250	10	14	23	13	284	14	21	36
2	6.0	7.3	9.4	185	10	130	16	17	35	13	45	94
3	5.6	6.9	9.0	137	9.6	33	15	13	25	13	13	74
4	7.7	7.1	9.1	79	19	22	14	12	593	13	51	25
5	16	7.8	9.6	33	10	82	19	12	118	12	168	14
6	5.3	87	13	28	9.5	49	13	12	41	12	47	11
7	5.2	12	10	21	14	32	21	13	140	12	24	9.5
8	5.0	9.4	13	20	13	31	40	33	39	12	91	9.5
9	4.8	8.2	10	18	11	30	65	15	26	11	50	8.8
10	5.8	7.4	9.0	16	12	21	28	12	21	17	196	8.2
11	377	7.5	121	14	11	18	70	11	18	27	60	8.4
12	314	88	47	13	9.1	17	85	12	54	13	28	7.6
13	47	29	46	13	8.6	32	28	11	122	9.7	19	66
14	21	14	80	13	8.6	20	21	11	63	9.3	16	18
15	13	11	23	12	8.2	17	19	10	23	9.8	13	29
16	132	30	18	12	7.5	16	17	9.9	19	10	12	29
17	25	239	15	12	7.8	17	16	9.2	17	9.3	13	12
18	16	73	13	12	12	16	15	9.0	85	10	11	9.4
19	12	24	12	e11	13	14	15	9.5	22	12	11	133
20	10	17	55	11	23	117	14	9.1	82	8.9	11	19
21	9.1	16	18	11	22	128	14	20	386	12	11	15
22	8.5	95	15	e9.5	308	39	15	9.9	64	146	10	12
23	8.0	24	13	e9.5	163	25	13	16	33	39	9.2	102
24	7.7	17	12	10	43	20	13	32	24	27	8.5	18
25	7.7	14	49	9.5	27	17	12	11	20	16	8.3	14
26	129	12	31	9.8	19	35	56	226	19	12	8.5	11
27	17	37	20	10	16	21	16	30	18	11	8.5	34
28	12	13	16	e9.0	15	16	14	38	16	14	8.1	193
29	10	12	14	9.6	---	49	14	18	15	10	8.1	22
30	15	11	13	9.3	---	26	13	21	14	9.6	16	15
31	13	---	13	9.5	---	18	---	49	---	9.3	8.3	---
TOTAL	1,272.0	945.3	745.8	1,016.7	839.9	1,122	734	724.6	2,436	553.9	1,004.5	1,057.4
MEAN	41.0	31.5	24.1	32.8	30.0	36.2	24.5	23.4	81.2	17.9	32.4	35.2
MAX	377	239	121	250	308	130	85	226	593	146	196	193
MIN	4.8	6.9	9.0	9.0	7.5	14	12	9.0	14	8.9	8.1	7.6

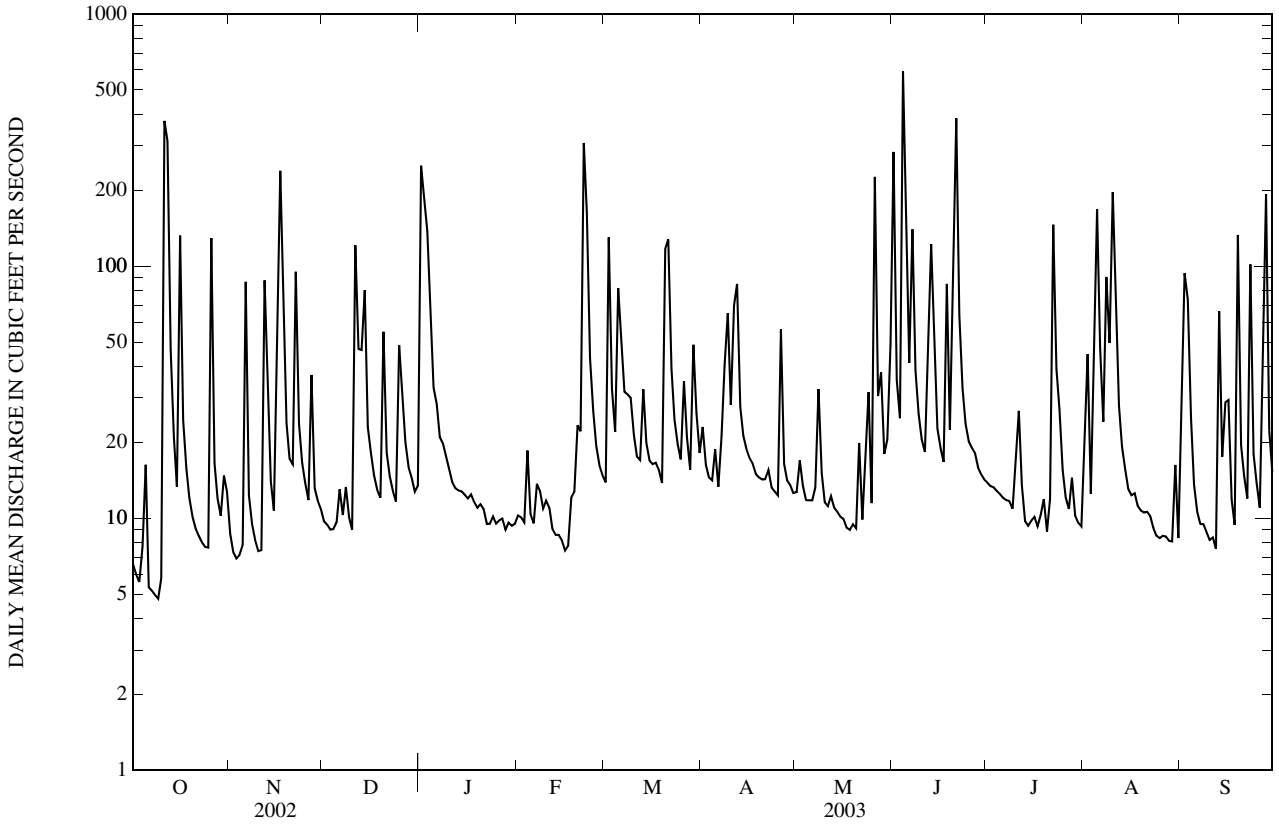
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1922 - 2003, BY WATER YEAR (WY)

MEAN	20.5	24.2	23.3	24.1	26.0	32.3	29.2	27.2	24.0	26.8	27.2	25.9
MAX	60.1	90.7	85.1	86.3	55.1	75.5	97.0	83.8	81.2	83.1	195	102
(WY)	(1928)	(1973)	(1984)	(1979)	(1971)	(1983)	(1983)	(1968)	(2003)	(1922)	(1971)	(1966)
MIN	1.58	5.05	6.25	3.71	6.56	6.03	10.3	5.97	3.94	3.24	0.068	1.99
(WY)	(1922)	(1923)	(1981)	(1925)	(1934)	(1981)	(1963)	(1923)	(1923)	(1923)	(1923)	(1923)

01393450 ELIZABETH RIVER AT URSINO LAKE, AT ELIZABETH, NJ—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1922 - 2003	
ANNUAL TOTAL	7,724.2		12,452.1			
ANNUAL MEAN	21.2		34.1		25.9	
HIGHEST ANNUAL MEAN					48.3	1971
LOWEST ANNUAL MEAN					10.2	1923
HIGHEST DAILY MEAN	377	Oct 11	593	Jun 4	1,900a	Aug 28, 1971
LOWEST DAILY MEAN	4.6	Aug 28	4.8	Oct 9	0.00	Jul 14, 1922
ANNUAL SEVEN-DAY MINIMUM	5.1	Sep 19	7.1	Oct 3	0.00	Aug 7, 1923
MAXIMUM PEAK FLOW			1,940a	Aug 10	4,510a	Sep 16, 1999
MAXIMUM PEAK STAGE			19.81	Aug 10	25.77b	Aug 2, 1973
INSTANTANEOUS LOW FLOW			4.8	Oct 7	0.00	Jul 14, 1922
10 PERCENT EXCEEDS	47		81		51	
50 PERCENT EXCEEDS	8.7		15		11	
90 PERCENT EXCEEDS	5.3		8.8		5.6	

a From rating curve extended above 1,100 ft^3/s on basis of contracted-opening measurement of peak flow.
b Recorded before right weir was lowered 5 ft.
e Estimated



01394500 RAHWAY RIVER NEAR SPRINGFIELD, NJ

LOCATION.--Lat 40°41'15", long 74°18'42", Union County, Hydrologic Unit 02030104, on left bank 50 ft downstream from bridge on eastbound U.S. Highway 22, 100 ft downstream from Pope Brook, and 1.5 mi south of Springfield.

DRAINAGE AREA.--25.5 mi^2.

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

REVISED RECORDS.--WSP 1622: 1945. WRD-NJ 1973: 1938(M), 1968(M), 1971(M).

GAGE.--Water-stage recorder. Former concrete control is no longer effective. Datum of gage is 66.17 ft above NGVD of 1929.

REMARKS.--Records good except for estimated daily discharges, which are fair. Water for municipal supply diverted from river by city of Orange at Orange Reservoir upstream on the West Branch Rahway River. The flow past this station is affected by diversions by pumpage from wells by Orange, South Orange, New Jersey-American Water Co., and Springfield station of Elizabethtown Water Co. (no longer active). Several measurements of water temperature were made during the year. Since 1980,the site may be affected during high flows by backwater from the Lenape Park flood control dam, about 1 mi downstream. Satellite gage-height telemetry at station.

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

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jan 2	0200	1,060	5.78	Jun 21	2145	*1,150	*6.02
Jun 4	0930	1,090	5.87				

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.9	8.4	13	259	10	19	39	18	507	18	26	33
2	6.7	10	12	466	9.6	202	33	37	68	17	56	96
3	7.1	9.4	12	134	9.5	84	29	26	39	16	29	66
4	8.8	9.2	12	185	17	34	27	17	673	16	18	27
5	19	11	13	59	11	135	36	17	251	15	242	13
6	6.3	78	13	49	9.9	113	27	16	70	14	118	10
7	7.2	14	12	39	12	52	28	15	184	14	31	10
8	6.8	14	12	34	11	51	52	42	115	15	100	9.5
9	7.2	14	11	34	10	78	118	23	55	14	42	9.4
10	8.3	15	9.8	e30	11	53	80	17	41	23	40	9.1
11	315	19	143	26	11	32	125	16	34	27	30	9.0
12	428	97	187	21	9.8	34	192	16	52	19	23	9.1
13	61	53	67	18	9.0	66	67	15	207	13	14	43
14	22	20	192	17	8.4	52	44	14	161	12	12	22
15	15	14	51	17	8.6	40	37	13	58	12	11	45
16	105	29	32	16	7.6	58	33	13	37	12	11	58
17	46	409	22	16	6.2	61	31	13	29	12	11	26
18	18	190	18	14	11	46	24	12	109	12	10	28
19	14	37	17	13	11	32	24	12	44	14	10	168
20	12	25	190	12	15	114	23	12	58	11	10	30
21	11	21	58	12	e19	349	23	19	359	14	9.8	27
22	10	133	28	11	349	129	23	13	290	134	10	26
23	10	62	21	10	348	54	22	16	68	45	9.8	124
24	9.9	26	18	9.9	95	40	20	39	42	26	9.2	32
25	9.8	19	87	10	43	33	20	14	33	13	9.5	16
26	106	15	48	9.8	28	44	85	273	28	12	9.2	14
27	16	42	31	9.5	22	45	35	50	25	12	9.3	15
28	10	21	24	9.0	20	28	23	42	22	15	8.9	130
29	10	16	21	9.7	---	81	19	26	20	11	8.9	19
30	15	15	19	10	---	96	19	48	19	11	17	15
31	12	---	21	10	---	45	---	48	---	11	10	---
TOTAL	1,340.0	1,446.0	1,414.8	1,569.9	1,132.6	2,300	1,358	952	3,698	610	955.6	1,139.1
MEAN	43.2	48.2	45.6	50.6	40.5	74.2	45.3	30.7	123	19.7	30.8	38.0
MAX	428	409	192	466	349	349	192	273	673	134	242	168
MIN	6.3	8.4	9.8	9.0	6.2	19	19	12	19	11	8.9	9.0

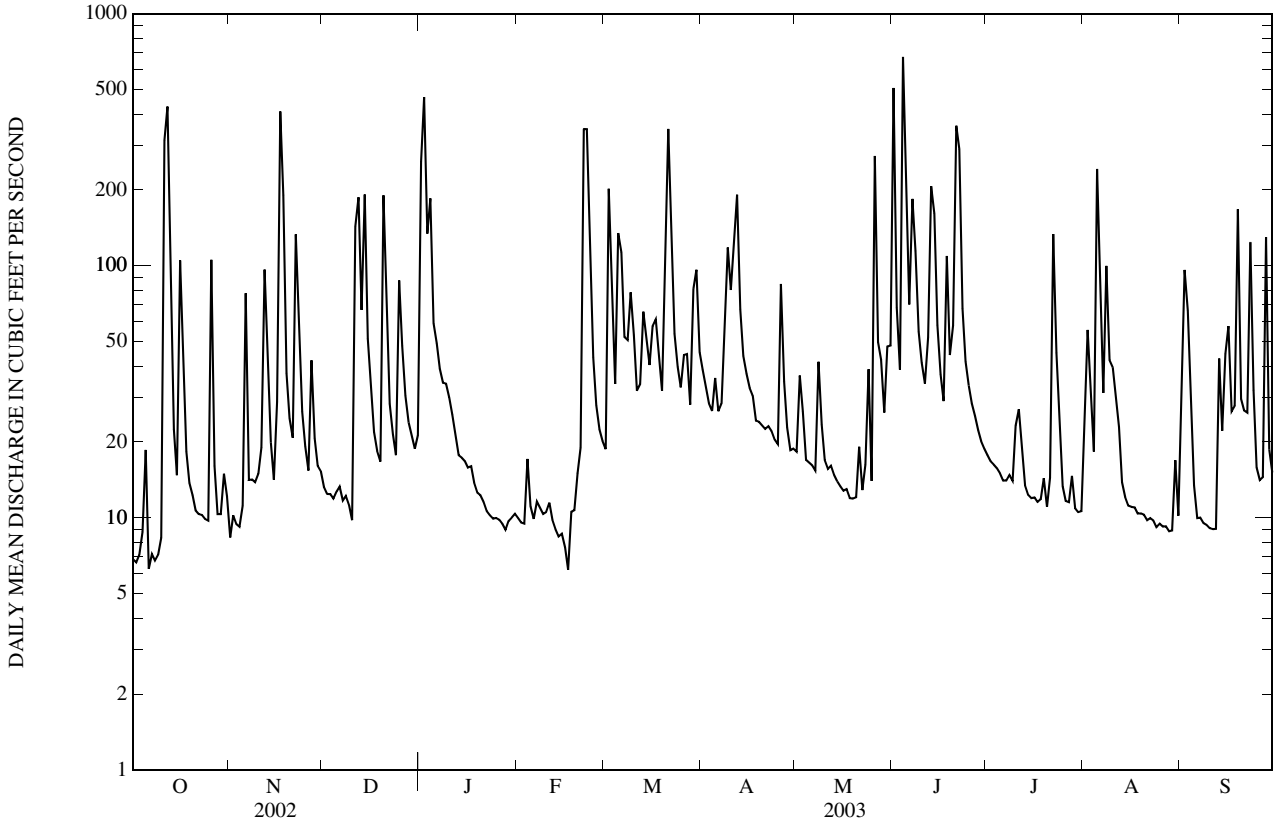
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1939 - 2003, BY WATER YEAR (WY)

MEAN	18.9	27.3	30.8	31.5	34.3	48.3	42.6	34.8	26.2	25.1	22.9	23.6
MAX	108	107	129	116	79.5	120	139	112	123	138	112	151
(WY)	(1997)	(1973)	(1984)	(1979)	(1998)	(1994)	(1983)	(1989)	(2003)	(1975)	(1942)	(1999)
MIN	2.17	2.73	4.02	4.26	6.86	8.08	7.37	6.31	4.14	2.23	2.10	2.97
(WY)	(1964)	(1950)	(1940)	(1966)	(2002)	(1981)	(1963)	(1965)	(1965)	(1966)	(1964)	(1964)

01394500 RAHWAY RIVER NEAR SPRINGFIELD, NJ—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1939 - 2003	
ANNUAL TOTAL	9,985.9		17,916.0			
ANNUAL MEAN	27.4		49.1		30.5	
HIGHEST ANNUAL MEAN					55.9	1973
LOWEST ANNUAL MEAN					10.0	1965
HIGHEST DAILY MEAN	428	Oct 12	673	Jun 4	2,270	Sep 16, 1999
LOWEST DAILY MEAN	3.8	Jan 1	6.2	Feb 17	0.40	Sep 11, 1966
ANNUAL SEVEN-DAY MINIMUM	4.9	Feb 13	8.7	Feb 11	0.71	Oct 8, 1970
MAXIMUM PEAK FLOW			1,150	Jun 21	7,990a	Sep 16, 1999
MAXIMUM PEAK STAGE			6.02	Jun 21	10.67	Sep 16, 1999
INSTANTANEOUS LOW FLOW			4.3	Feb 17	0.10	Sep 11, 1966
10 PERCENT EXCEEDS	60		118		60	
50 PERCENT EXCEEDS	10		21		11	
90 PERCENT EXCEEDS	5.3		9.8		3.5	

a From rating curve extend above 1,600 ft^3/s on basis of slope-area measurement of peak flow.
e Estimated



01395000 RAHWAY RIVER AT RAHWAY, NJ

LOCATION.--Lat 40°37'08", long 74°17'00", Union County, Hydrologic Unit 02030104, on left bank, 100 ft upstream from bridge on St. Georges Avenue in Rahway, and 0.9 mi upstream from Robinsons Branch.

DRAINAGE AREA.--40.9 mi^2.

PERIOD OF RECORD.--July 1908 to April 1915 (gage heights and discharge measurements only), October 1921 to current year.

REVISED RECORDS.--WSP 781: Drainage area. WSP 1552: 1922-23(M), 1924, 1930-31(M), 1937. WDR NJ-79-1: 1978.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 8.77 ft above NGVD of 1929. Prior to Aug. 25, 1934, nonrecording gage at site 40 ft downstream from Church Street and 1,500 ft downstream from present site at datum 2.77 ft lower.

REMARKS.--Records good, except for estimated daily values which are fair. Water for municipal supply diverted from river by Rahway and Orange. The flow past this station is affected by diversions by pumpage from wells by Orange, South Orange, New Jersey-American Water Co., Springfield station of Elizabethtown Water Co., by storage in the Lenape Park flood control reservoir (since 1980) and by gate operations at Hansels Dam 5.6 mi upstream from gage in Cranford, and Taylor Park Dam 11.6 mi upstream from gage on the West Branch Rahway River in Millburn. Several measurements of water temperature were made during the year. Satellite gage-height telemetry at station.

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

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Oct 12	0430	1,300	4.48	Jun 1	1030	914	3.93
Jan 2	0215	1,210	4.43	Jun 5	0030	*1,920	*5.43
Feb 22	1845	897	3.90	Jun 22	1015	857	3.83
Mar 21	0645	649	3.44	Aug 5	2200	774	3.68
May 26	1600	726	3.59				

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.4	13	21	218	19	32	54	28	645	26	26	29
2	6.1	10	20	840	18	239	62	48	232	24	111	170
3	5.3	11	18	271	18	220	41	77	64	24	23	117
4	7.3	11	17	339	28	67	37	30	908	24	38	51
5	17	11	19	120	27	169	47	25	808	21	194	29
6	7.7	124	20	70	18	223	38	26	130	20	419	16
7	4.6	23	19	57	21	102	38	25	201	19	56	16
8	4.4	14	19	55	20	81	87	63	268	20	175	13
9	3.8	12	22	52	18	116	173	38	93	27	64	13
10	4.3	12	17	50	18	117	153	31	64	22	135	13
11	408	13	93	40	18	46	195	26	53	40	59	12
12	869	69	347	34	16	35	299	25	94	46	55	12
13	191	138	97	30	14	86	126	22	303	19	26	56
14	21	36	266	25	14	109	73	20	215	17	21	54
15	21	21	95	27	15	59	57	21	99	16	18	26
16	143	27	52	25	14	72	52	20	58	16	17	163
17	106	457	39	25	14	92	46	20	48	16	24	32
18	29	346	29	24	16	70	41	20	177	18	25	33
19	19	70	27	24	20	50	36	19	79	34	16	205
20	16	42	141	22	23	104	35	18	107	15	13	48
21	13	32	149	20	55	517	34	29	275	15	13	35
22	12	131	48	e19	360	267	35	24	614	203	14	31
23	11	142	35	e16	715	92	33	22	127	139	15	174
24	10	46	30	e16	229	63	29	81	71	47	13	68
25	12	32	112	e15	88	52	28	27	53	22	10	28
26	202	24	98	e16	56	53	114	340	45	17	12	21
27	36	66	54	e16	40	91	72	171	39	17	13	23
28	18	39	41	e15	36	46	38	52	34	22	12	239
29	16	26	35	e16	---	51	31	58	30	16	10	48
30	32	23	31	e16	---	174	27	61	28	14	11	28
31	24	---	32	e19	---	77	---	79	---	14	20	---
TOTAL	2,275.9	2,021	2,043	2,532	1,948	3,572	2,131	1,546	5,962	990	1,658	1,803
MEAN	73.4	67.4	65.9	81.7	69.6	115	71.0	49.9	199	31.9	53.5	60.1
MAX	869	457	347	840	715	517	299	340	908	203	419	239
MIN	3.8	10	17	15	14	32	27	18	28	14	10	12

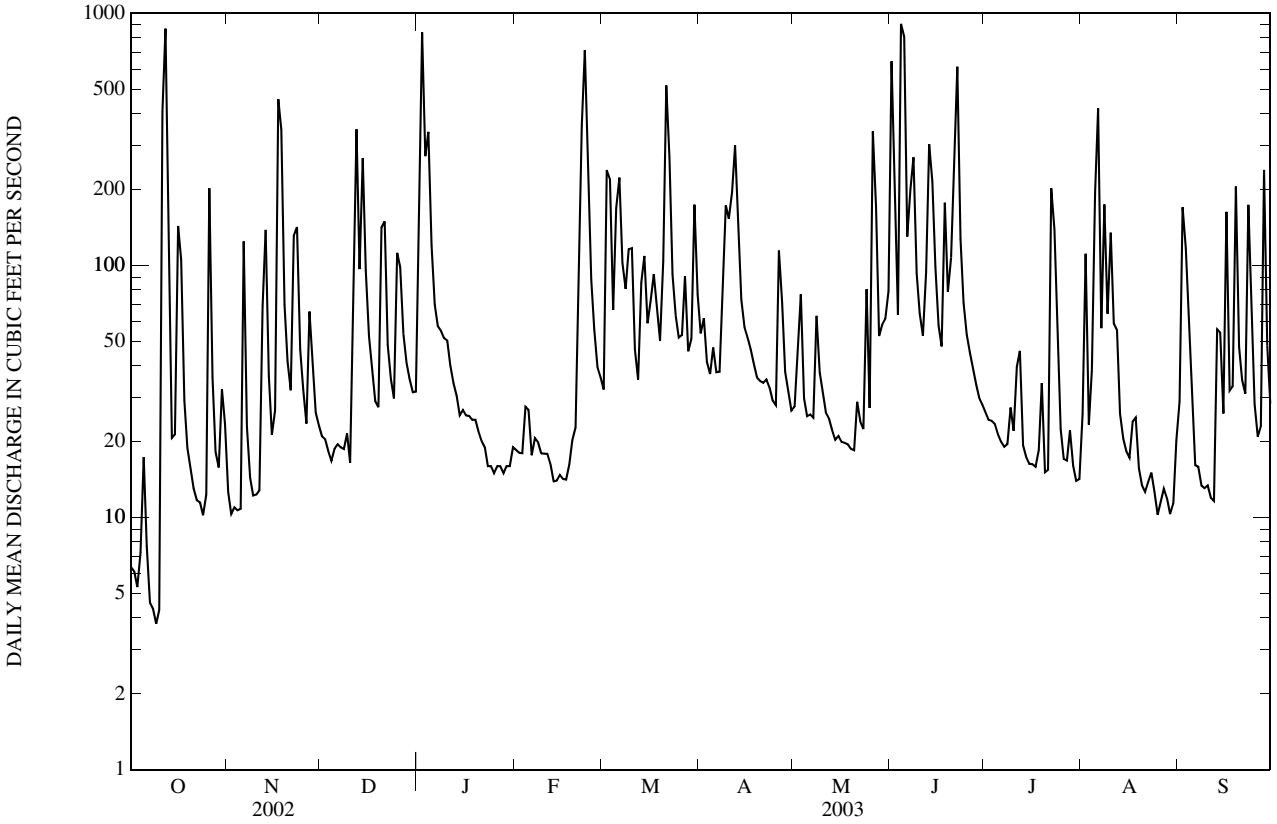
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1922 - 2003, BY WATER YEAR (WY)

MEAN	29.4	43.1	47.9	52.0	58.0	79.2	68.5	53.3	39.7	41.5	38.9	38.4
MAX	197	221	255	211	156	190	246	199	199	268	242	231
(WY)	(1997)	(1973)	(1984)	(1979)	(1925)	(1983)	(1983)	(1989)	(2003)	(1975)	(1971)	(1999)
MIN	1.48	3.05	3.27	1.41	8.15	12.6	7.80	6.20	3.32	0.33	0.43	2.26
(WY)	(1964)	(1966)	(1981)	(1981)	(2002)	(1981)	(1963)	(1965)	(1965)	(1966)	(1964)	(1964)

01395000 RAHWAY RIVER AT RAHWAY, NJ—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1922 - 2003	
ANNUAL TOTAL	14,182.6		28,481.9			
ANNUAL MEAN	38.9		78.0		49.1	
HIGHEST ANNUAL MEAN					105	1973
LOWEST ANNUAL MEAN					15.0	1965
HIGHEST DAILY MEAN	869	Oct 12	908	Jun 4	3,670	Sep 17, 1999
LOWEST DAILY MEAN	1.2	Aug 12	3.8	Oct 9	0.00	Oct 9, 1964
ANNUAL SEVEN-DAY MINIMUM	1.7	Aug 8	7.0	Oct 4	0.00	Jul 10, 1981
MAXIMUM PEAK FLOW			1,920	Jun 5	5,590	Sep 17, 1999
MAXIMUM PEAK STAGE			5.43	Jun 5	9.60	Sep 17, 1999
INSTANTANEOUS LOW FLOW			2.4	Aug 2	0.00	Many days
10 PERCENT EXCEEDS	98		194		100	
50 PERCENT EXCEEDS	14		32		19	
90 PERCENT EXCEEDS	3.8		14		3.6	

e Estimated



01396190 SOUTH BRANCH RARITAN RIVER AT FOUR BRIDGES, NJ

LOCATION.--Lat 40°48'21", long 74°44'27", Morris County, Hydrologic Unit 02030105, on right bank, just downstream of bridge on Elizabeth Avenue, 0.3 mi southwest of Four Bridges, 0.6 mi downstream of Drakes Brook, 0.7 mi northwest of Naughright, and 2.7 mi northwest of Chester.

DRAINAGE AREA.--31.0 mi^2.

PERIOD OF RECORD.--January 1999 to current year.

REVISED RECORDS.--WDR NJ-03-1: 1999 (M).

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 564.00 ft North American Vertical Datum of 1988 (revised, levels from New Jersey Geological Survey bench mark).

REMARKS.--Records fair, except for estimated daily discharges which are poor. Several measurements of water temperature were made during the year. Occasional fluctuations from sewage treatment plants upstream and possible regulation from ponds and lakes upstream.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 400 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Nov 17	0800	577	6.57	Jun 21	2145	598	6.62
Dec 20	1545	487	6.35	Aug 5	1845	503	6.39
Jan 2	0330	560	6.53	Aug 11	2130	586	6.59
Feb 23	1630	460	6.28	Sep 14	2245	729	6.94
Mar 21	0030	845	7.20	Sep 16	0045	418	6.17
Mar 29	2000	621	6.68	Sep 23	1115	*960	*7.44
Jun 7	1800	531	6.46	Sep 27	1815	422	6.18
Jun 12	0630	507	6.40	Sep 28	0715	598	6.62
Jun 20	2200	422	6.18				

REVISIONS.--The maximum discharge for the water year 1999 has been revised to 3,000 ft^3/s, Sep 16, 1999, gage height, 10.60 ft.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.9	20	30	152	27	44	104	44	191	45	24	39
2	4.4	20	28	285	28	123	110	44	85	42	29	107
3	4.3	17	25	117	28	105	93	43	52	40	30	65
4	4.9	15	23	100	39	64	83	39	185	39	61	53
5	6.5	14	25	85	34	93	90	37	115	35	181	40
6	5.0	36	27	76	27	100	79	37	73	34	175	34
7	4.6	23	28	71	27	66	75	36	183	33	64	31
8	4.7	18	27	66	25	60	78	51	153	33	49	29
9	6.4	15	24	74	e27	78	109	47	93	31	68	27
10	8.8	15	24	71	25	64	110	42	76	33	139	26
11	155	16	48	59	24	49	101	45	67	35	140	24
12	184	32	135	54	22	56	135	49	187	30	149	23
13	59	40	75	49	20	73	93	42	167	27	84	25
14	30	29	178	44	e20	68	77	39	110	26	65	173
15	26	30	93	40	e20	83	71	37	84	25	54	175
16	68	31	66	37	e18	150	67	34	70	23	49	177
17	62	262	54	e35	e21	167	67	33	62	22	46	67
18	36	151	47	e29	e42	157	65	31	78	22	43	47
19	27	69	47	32	24	118	62	29	68	29	40	117
20	22	52	175	32	25	189	58	27	140	22	36	79
21	18	46	107	29	25	430	57	36	282	26	34	52
22	14	e54	70	28	86	188	66	33	226	98	33	43
23	16	e59	60	e28	298	147	58	31	115	121	31	292
24	22	42	54	e26	147	128	52	42	86	71	30	122
25	20	38	61	27	87	113	50	38	75	41	27	81
26	55	36	65	27	60	112	65	146	66	33	27	72
27	37	38	58	26	52	121	59	75	60	29	27	132
28	26	35	54	e26	48	94	51	59	54	31	26	301
29	20	32	52	26	---	183	49	47	51	27	25	120
30	23	31	50	26	---	194	46	38	50	24	30	83
31	24	---	54	26	---	128	---	41	---	22	27	---
TOTAL	998.5	1,316	1,864	1,803	1,326	3,745	2,280	1,372	3,304	1,149	1,843	2,656
MEAN	32.2	43.9	60.1	58.2	47.4	121	76.0	44.3	110	37.1	59.5	88.5
MAX	184	262	178	285	298	430	135	146	282	121	181	301
MIN	4.3	14	23	26	18	44	46	27	50	22	24	23
CFSM	1.04	1.42	1.94	1.88	1.53	3.90	2.45	1.43	3.55	1.20	1.92	2.86
IN.	1.20	1.58	2.24	2.16	1.59	4.49	2.74	1.65	3.96	1.38	2.21	3.19

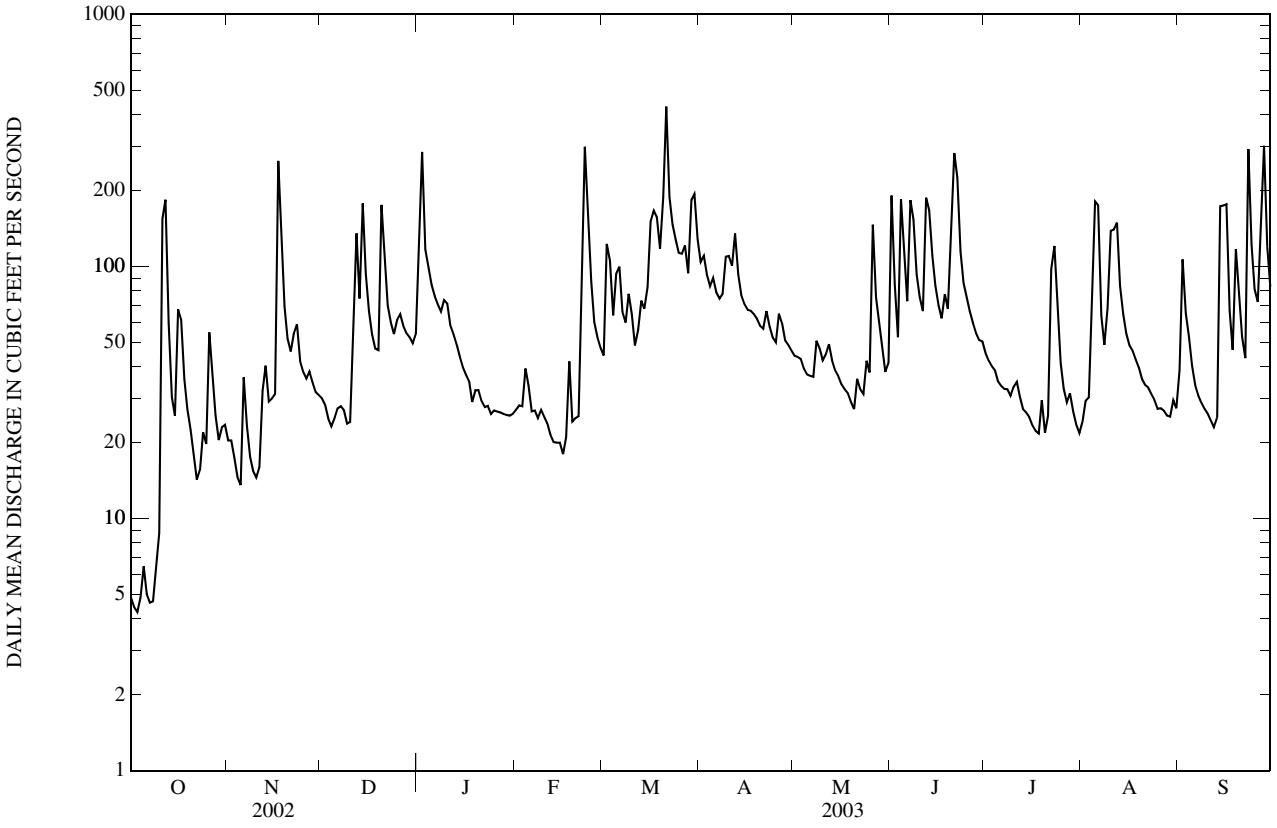
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1999 - 2003, BY WATER YEAR (WY)

MEAN	20.2	27.4	38.0	47.1	42.8	84.9	56.0	45.7	55.5	20.3	27.8	43.7
MAX	32.2	43.9	60.1	99.8	52.2	121	76.0	57.6	110	37.1	59.5	88.6
(WY)	(2003)	(2003)	(2003)	(1999)	(2000)	(2003)	(2003)	(2002)	(2003)	(2003)	(2003)	(1999)
MIN	7.92	9.02	11.7	14.1	11.6	27.8	29.0	34.5	13.7	6.30	6.92	7.43
(WY)	(2002)	(2002)	(2002)	(2002)	(2002)	(2002)	(2002)	(1999)	(1999)	(1999)	(2002)	(2002)

01396190 SOUTH BRANCH RARITAN RIVER AT FOUR BRIDGES, NJ—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1999 - 2003	
ANNUAL TOTAL	10,564.7		23,656.5			
ANNUAL MEAN	28.9		64.8		41.7	
HIGHEST ANNUAL MEAN					64.8	2003
LOWEST ANNUAL MEAN					19.9	2002
HIGHEST DAILY MEAN	294	May 14	430	Mar 21	1,530a	Sep 16, 1999
LOWEST DAILY MEAN	2.4	Aug 19	4.3	Oct 3	2.4	Aug 19, 2002
ANNUAL SEVEN-DAY MINIMUM	2.7	Aug 13	4.9	Oct 2	2.7	Aug 13, 2002
MAXIMUM PEAK FLOW			960	Sep 23	3,000a	Sep 16, 1999
MAXIMUM PEAK STAGE			7.44	Sep 23	10.60	Sep 16, 1999
INSTANTANEOUS LOW FLOW			4.0	Oct 3, 4	2.3	Aug 19, 2002
ANNUAL RUNOFF (CFSM)	0.93		2.09		1.34	
ANNUAL RUNOFF (INCHES)	12.68		28.39		18.27	
10 PERCENT EXCEEDS	58		142		85	
50 PERCENT EXCEEDS	19		47		27	
90 PERCENT EXCEEDS	4.7		23		8.5	

a Revised. From rating curve extended above 860 ft^3/s
e Estimated



01396500 SOUTH BRANCH RARITAN RIVER NEAR HIGH BRIDGE, NJ

LOCATION.--Lat 40°40'40", long 74°52'45", Hunterdon County, Hydrologic Unit 02030105, on left bank, 0.7 mi upstream of dam at Lake Solitude, 1.0 mi northeast of High Bridge, and 4.4 mi upstream from Spruce Run.

DRAINAGE AREA.--65.3 mi^2.

PERIOD OF RECORD.--October 1918 to current year. Monthly discharge only for some periods, published in WSP 1302.

REVISED RECORDS.--WSP 601: 1924. WSP 781: Drainage area. WSP 1552: 1919(M), 1920(M), 1921, 1923, 1924(M), 1927-28(M), 1934(M), 1941(M).

GAGE.--Water-stage recorder and crest-stage gage. Concrete control since Sept. 28, 1930. Datum of gage is 282.10 ft above NGVD of 1929 (levels from New Jersey Geological Survey bench mark). Prior to Sept. 30, 1921, reference point at same site and datum.

REMARKS.--Records good, except for estimated daily discharges which are fair. Occasional regulation from unknown source. Several measurements of water temperature were made during the year. Satellite gage-height telemetry at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Floods occurred on Feb. 6, 1896, in February 1902, and October 1903. At High Bridge, according to reports of the New Jersey State Geologist, the discharges for these floods respectively were 7,560 ft^3/s, 3,840 ft^3/s, and 2,670 ft^3/s.

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

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Feb 23	1645	1,030	8.47	Sep 15	0445	1,160	8.63
Mar 21	0930	1,320	8.81	Sep 23	1730	*1,350	*8.84

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	22	47	62	235	e65	109	219	101	404	113	60	67
2	20	43	58	724	e70	265	227	99	212	105	74	235
3	19	40	55	277	e70	324	200	101	133	99	64	146
4	19	37	53	244	86	172	177	91	406	98	122	126
5	22	34	52	196	97	214	187	88	283	90	224	96
6	21	71	57	177	68	289	171	87	193	84	494	73
7	18	60	53	163	70	176	157	86	300	82	165	65
8	17	45	58	153	65	156	164	103	426	85	121	60
9	16	40	51	160	63	206	212	113	229	77	173	57
10	18	37	52	173	65	193	249	98	186	79	314	54
11	176	37	99	140	62	135	252	94	162	85	179	52
12	350	49	325	e120	60	135	287	104	359	78	391	50
13	123	107	175	e105	58	189	213	93	345	70	176	53
14	71	65	397	e100	61	199	176	85	265	65	137	207
15	51	59	225	e90	58	187	165	80	203	65	115	548
16	70	57	152	e85	63	285	157	77	165	61	103	327
17	148	497	117	e85	e60	365	145	72	148	59	109	142
18	74	359	100	e75	e120	337	140	70	181	57	98	99
19	55	160	97	e80	e105	269	134	67	164	77	86	193
20	47	112	321	e75	e85	274	128	65	230	59	78	155
21	41	96	270	e70	e90	938	123	73	585	66	73	109
22	35	107	157	e70	e315	383	151	77	574	280	71	91
23	32	139	132	e65	789	294	133	68	294	367	67	686
24	36	94	118	e65	442	251	118	88	224	172	63	280
25	38	81	136	e60	237	224	112	85	191	108	59	177
26	90	74	145	e60	166	211	149	300	166	82	58	154
27	79	76	124	e65	136	249	141	188	152	72	58	167
28	55	74	115	e65	120	192	116	134	136	79	55	543
29	46	66	109	e60	---	247	110	117	126	67	54	244
30	47	64	104	e60	---	475	107	94	123	60	61	170
31	53	---	107	e60	---	283	---	90	---	57	56	---
TOTAL	1,909	2,827	4,076	4,157	3,746	8,226	5,020	3,088	7,565	2,998	3,958	5,426
MEAN	61.6	94.2	131	134	134	265	167	99.6	252	96.7	128	181
MAX	350	497	397	724	789	938	287	300	585	367	494	686
MIN	16	34	51	60	58	109	107	65	123	57	54	50
CFSM	0.94	1.44	2.01	2.05	2.05	4.06	2.56	1.53	3.86	1.48	1.96	2.77
IN.	1.09	1.61	2.32	2.37	2.13	4.69	2.86	1.76	4.31	1.71	2.25	3.09

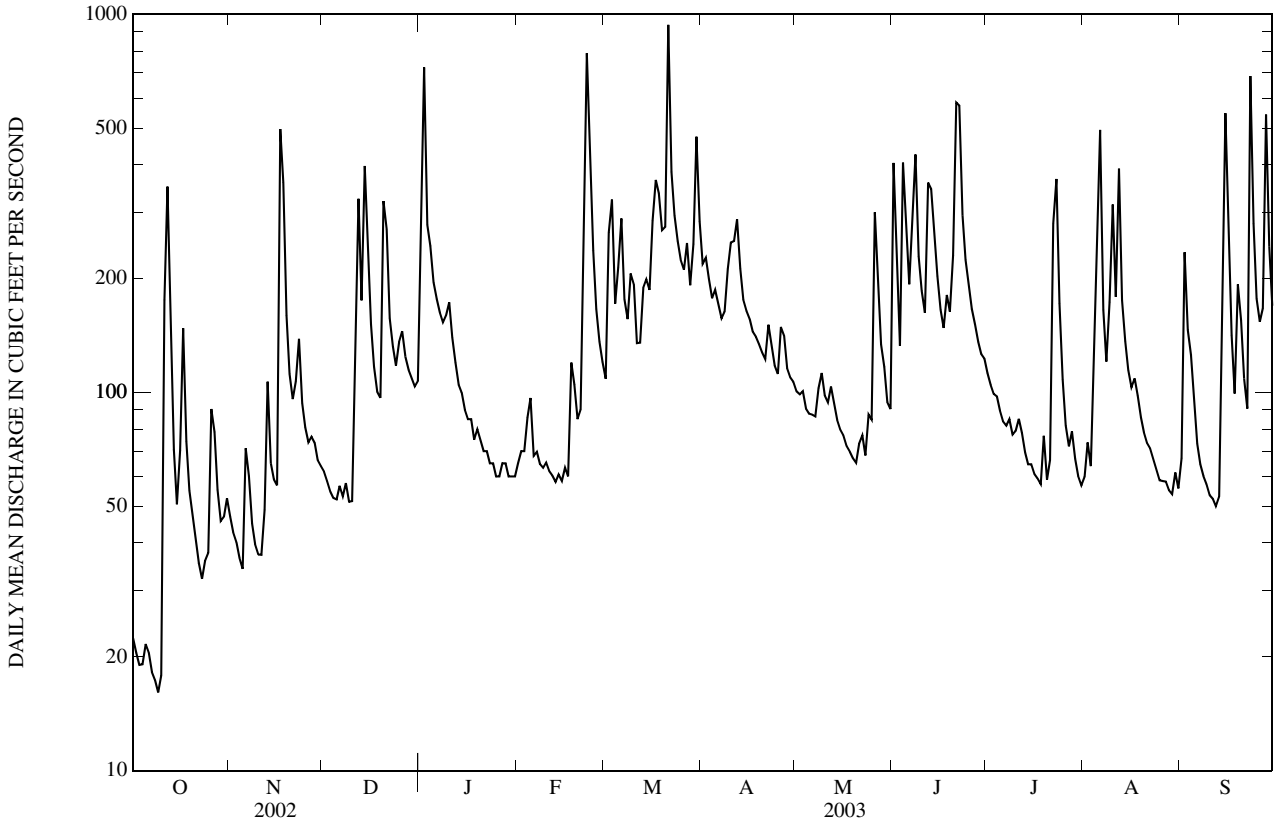
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1919 - 2003, BY WATER YEAR (WY)

MEAN	73.2	107	131	139	151	202	190	143	99.4	83.2	75.5	71.9
MAX	257	335	408	480	301	466	528	337	401	295	285	195
(WY)	(1928)	(1928)	(1997)	(1979)	(1925)	(1936)	(1983)	(1989)	(1972)	(1975)	(1942)	(1979)
MIN	21.8	25.6	30.2	31.8	34.2	72.3	70.7	50.5	27.6	20.7	20.4	20.8
(WY)	(1964)	(2002)	(1999)	(1981)	(2002)	(2002)	(1965)	(1965)	(1965)	(1965)	(1965)	(1964)

01396500 SOUTH BRANCH RARITAN RIVER NEAR HIGH BRIDGE, NJ—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1919 - 2003	
ANNUAL TOTAL	25,199		52,996			
ANNUAL MEAN	69.0		145		122	
HIGHEST ANNUAL MEAN					213	1928
LOWEST ANNUAL MEAN					46.2	1965
HIGHEST DAILY MEAN	617	May 14	938	Mar 21	3,340	Jan 25, 1979
LOWEST DAILY MEAN	16	Many days	16	Oct 9	13	Aug 11, 1966
ANNUAL SEVEN-DAY MINIMUM	17	Aug 14	19	Oct 4	17	Aug 14, 2002
MAXIMUM PEAK FLOW			1,350	Sep 23	6,910	Jan 25, 1979
MAXIMUM PEAK STAGE			8.84	Sep 23	14.26a	Jan 28, 1994
INSTANTANEOUS LOW FLOW			16	Oct 8-10	6.6	Oct 11, 1930
ANNUAL RUNOFF (CFSM)	1.06		2.22		1.87	
ANNUAL RUNOFF (INCHES)	14.36		30.19		25.39	
10 PERCENT EXCEEDS	131		288		234	
50 PERCENT EXCEEDS	48		105		85	
90 PERCENT EXCEEDS	20		53		35	

a Result of an ice jam
e Estimated



01396580 SPRUCE RUN AT GLEN GARDNER, NJ

LOCATION.--Lat 40°41'35", long 74°56'24", Hunterdon County, Hydrologic Unit 02030105, on right downstream wingwall of bridge on Sanatorium Road in Glen Gardner, 0.8 mi downstream from Alpaugh Brook, and 2.0 mi upstream from Spruce Run Reservoir.

DRAINAGE AREA.--11.3 mi^2.

PERIOD OF RECORD.--March 1978 to September 1988, December 1991 to current year.

REVISED RECORD.--WDR NJ-86-1: 1983-85(P). WDR NJ-93-1: Drainage area, longitude.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 389.10 ft above NGVD of 1929.

REMARKS.--Records fair, except for estimated daily discharges which are poor. Some regulation from unknown sources upstream. Several measurements of water temperature were made during the year. Satellite gage-height telemetry at station.

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

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Dec 20	1315	604	4.28	Aug 9	2230	519	4.00
Jan 2	0130	559	4.13	Aug 11	2130	765	4.78
Jul 22	2230	556	4.12	Sep 23	0930	803	4.89
Aug 5	1845	*978	*5.37	Sep 28	0400	631	4.37

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.8	8.0	8.4	134	11	14	33	13	135	13	10	18
2	2.8	6.6	7.5	182	12	82	32	14	29	12	14	108
3	2.7	6.4	7.0	58	13	55	25	13	21	12	28	40
4	2.8	5.7	6.8	55	21	28	23	12	118	11	35	31
5	3.3	5.7	6.6	40	16	49	27	12	45	9.9	156	22
6	2.9	18	e7.5	36	e11	58	22	12	28	9.2	92	14
7	2.8	9.6	e7.5	32	e12	33	22	12	107	9.4	28	12
8	2.7	7.0	e7.5	31	e11	26	23	16	57	10	28	11
9	2.7	6.5	e7.0	38	e12	65	45	16	34	8.6	92	9.6
10	3.1	6.2	e7.0	38	e11	36	48	13	26	9.2	89	8.6
11	43	6.9	50	27	e10	21	51	12	23	9.8	149	8.5
12	38	17	93	21	e9.0	27	51	13	68	8.2	97	8.4
13	9.2	23	38	20	e9.0	52	30	11	40	7.0	48	11
14	5.8	12	121	18	e10	41	25	9.7	35	6.5	37	36
15	4.4	9.0	35	16	e9.0	54	23	9.0	27	6.3	28	33
16	21	11	23	16	e6.0	80	21	8.7	20	6.0	25	39
17	18	160	18	16	e6.0	85	21	8.6	17	5.6	24	14
18	7.4	83	14	e14	e10	65	20	7.9	26	5.6	22	9.7
19	5.6	21	14	e14	e11	41	19	7.4	22	12	19	38
20	5.0	16	151	e15	10	93	18	7.1	117	6.0	17	15
21	4.4	13	55	e12	11	166	18	10	146	13	15	11
22	4.2	19	32	e11	92	55	e26	9.2	69	121	14	9.6
23	4.1	19	27	e10	233	38	20	9.0	41	72	13	161
24	3.9	13	24	e10	75	33	17	13	29	28	11	31
25	3.9	10	34	e10	31	30	16	13	24	13	11	17
26	20	9.6	31	e11	21	33	29	84	21	9.7	11	16
27	11	11	23	e11	17	37	22	24	18	8.4	10	21
28	7.9	10	21	e10	16	26	17	33	16	14	9.5	145
29	7.1	9.1	20	10	---	76	16	21	15	8.3	9.5	32
30	8.4	8.8	19	10	---	71	15	18	14	7.1	13	19
31	11	---	27	11	---	41	---	27	---	6.4	9.8	---
TOTAL	271.9	561.1	942.8	937	716.0	1,611	775	488.6	1,388	478.2	1,164.8	949.4
MEAN	8.77	18.7	30.4	30.2	25.6	52.0	25.8	15.8	46.3	15.4	37.6	31.6
MAX	43	160	151	182	233	166	51	84	146	121	156	161
MIN	2.7	5.7	6.6	10	6.0	14	15	7.1	14	5.6	9.5	8.4
CFSM	0.78	1.66	2.69	2.67	2.26	4.60	2.29	1.39	4.09	1.37	3.33	2.80
IN.	0.90	1.85	3.10	3.08	2.36	5.30	2.55	1.61	4.57	1.57	3.83	3.13

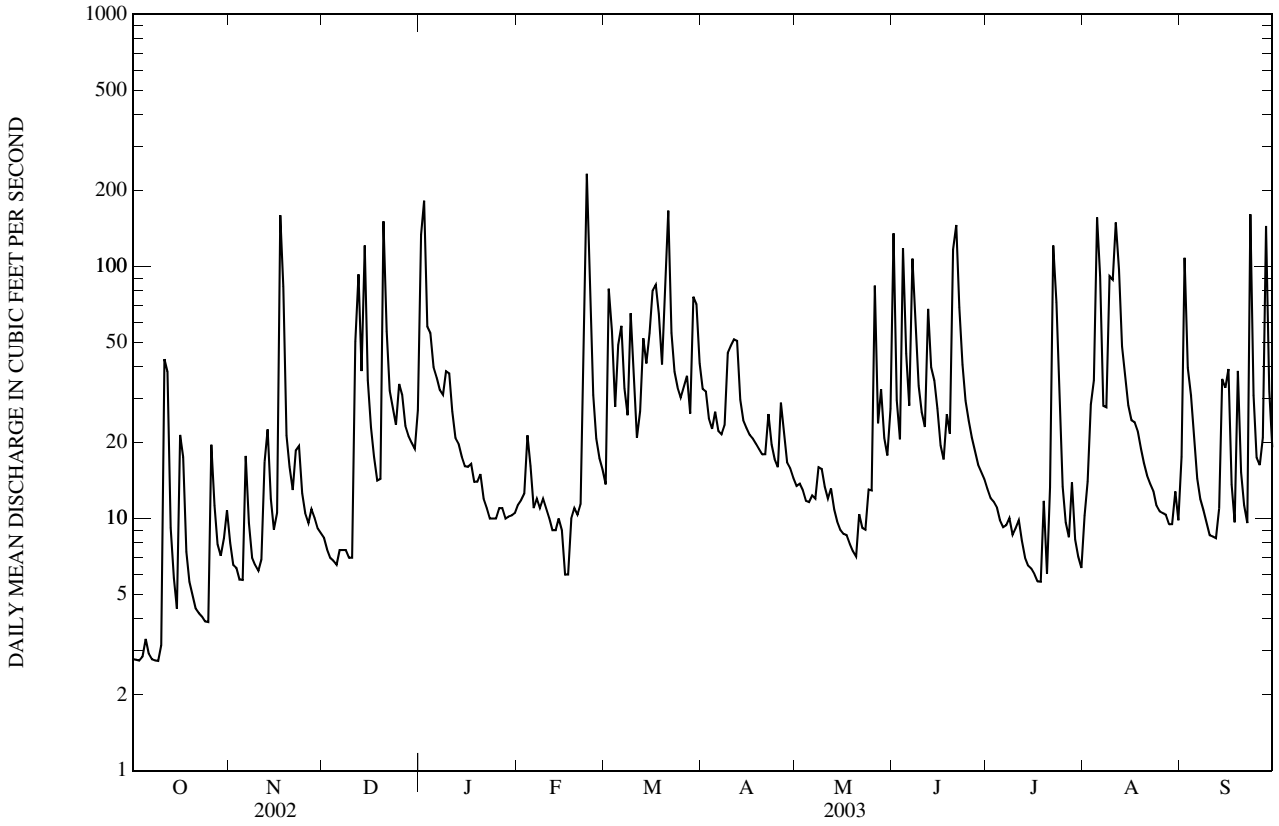
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1978 - 2003, BY WATER YEAR (WY)

MEAN	11.7	17.2	23.6	25.3	24.9	36.3	33.8	24.7	16.1	10.8	7.87	9.59
MAX	44.4	34.6	87.6	106	44.7	83.5	73.7	61.3	46.3	46.9	37.6	31.6
(WY)	(1996)	(1986)	(1997)	(1979)	(1979)	(1994)	(1983)	(1984)	(2003)	(1984)	(2003)	(2003)
MIN	2.65	3.30	3.54	5.66	6.95	12.8	9.74	8.95	3.16	1.85	2.48	1.88
(WY)	(2002)	(2002)	(1999)	(1981)	(2002)	(1981)	(1985)	(1995)	(1999)	(1999)	(1999)	(1980)

01396580 SPRUCE RUN AT GLEN GARDNER, NJ—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1978 - 2003	
ANNUAL TOTAL	4,814.0		10,283.8			
ANNUAL MEAN	13.2		28.2		20.4	
HIGHEST ANNUAL MEAN					33.2	1984
LOWEST ANNUAL MEAN					9.40	2002
HIGHEST DAILY MEAN	160	Nov 17	233	Feb 23	650	Sep 16, 1999
LOWEST DAILY MEAN	1.8	Aug 11	2.7	Oct 3, 8, 9	1.0	Sep 4, 1999
ANNUAL SEVEN-DAY MINIMUM	1.9	Aug 9	2.8	Oct 3	1.3	Aug 31, 1999
MAXIMUM PEAK FLOW			978	Aug 5	2,750a	Sep 16, 1999
MAXIMUM PEAK STAGE			5.37	Aug 5	9.27	Sep 16, 1999
INSTANTANEOUS LOW FLOW			2.6	Oct 1-3, 7-9	0.80	Sep 23, 1998
ANNUAL RUNOFF (CFSM)	1.17		2.49		1.80	
ANNUAL RUNOFF (INCHES)	15.85		33.85		24.47	
10 PERCENT EXCEEDS	23		66		41	
50 PERCENT EXCEEDS	7.3		16		11	
90 PERCENT EXCEEDS	2.6		6.9		3.4	

a From rating curve above 700 ft^3/s on basis of slope-conveyance computation.
e Estimated



01396660 MULHOCKAWAY CREEK AT VAN SYCKEL, NJ

LOCATION.--Lat 40°38'51", long 74°58'08", Hunterdon County, Hydrologic Unit 02030105, on left bank downstream side of bridge on Jutland Road, 0.2 mi south of Van Syckel, 0.8 mi north of Perryville, and 0.3 mi upstream from Spruce Run Reservoir.

DRAINAGE AREA.--11.8 mi^2.

PERIOD OF RECORD.--Occasional low-flow measurements, water years 1973-77. July 1977 to current year.

REVISED RECORDS.--WDR-NJ 89-1: 1978(P), 1979(P), 1980(P), 1981(P), 1982(P).

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 280.25 ft above NGVD of 1929.

REMARKS.--Records fair, except for estimated discharges which are poor. Several measurements of water temperature were made during the year. Satellite gage-height telemetry at station.

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

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Nov 17	0445	441	3.07	Jun 21	1515	355	2.79
Dec 20	1400	739	3.87	Jul 22	2245	1,000	4.41
Jan 1	2330	549	3.41	Aug 5	1900	*1,310	*4.91
Mar 21	0115	361	2.81	Aug 6	0600	335	2.72
Jun 7	1645	326	2.69	Sep 23	1000	429	3.03
Jun 20	2015	667	3.71	Sep 28	0400	417	2.99

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.4	7.8	9.5	124	13	18	50	37	102	25	25	17
2	3.3	7.1	8.8	131	14	77	49	37	30	24	23	41
3	2.9	6.3	8.3	42	13	67	47	36	22	23	23	43
4	3.7	6.4	7.8	50	17	31	45	35	122	23	45	26
5	4.1	6.3	8.4	32	14	44	51	34	61	21	176	18
6	3.1	18	9.4	30	11	56	45	35	39	20	99	14
7	2.9	8.9	8.7	26	13	29	45	35	97	24	34	13
8	2.7	7.8	8.6	27	12	27	49	38	58	22	34	12
9	2.7	7.4	8.4	30	13	61	75	37	42	19	27	12
10	3.5	7.2	7.9	25	11	36	70	35	36	21	30	11
11	109	7.7	65	21	11	23	79	34	34	21	97	11
12	70	25	80	19	11	28	73	34	54	18	54	10
13	14	21	41	18	10	52	55	32	45	17	30	15
14	8.6	12	100	17	10	40	50	31	55	16	25	30
15	6.6	9.4	33	16	e9.0	38	48	30	41	16	23	22
16	30	16	24	15	e7.0	48	47	31	32	16	21	19
17	18	155	18	16	e6.0	47	45	32	30	15	21	13
18	9.4	76	17	13	e9.0	37	45	30	41	16	19	13
19	7.3	25	16	14	e10	28	44	29	37	18	17	51
20	6.6	18	145	14	11	73	43	28	205	15	16	16
21	5.9	15	49	13	12	171	43	32	179	46	16	13
22	5.5	22	32	12	87	76	58	30	70	232	16	12
23	5.1	18	26	11	200	59	45	29	52	96	15	84
24	4.9	13	21	11	67	53	42	36	43	39	14	23
25	4.9	12	39	11	31	49	40	37	37	22	13	17
26	25	11	30	11	23	51	49	113	34	18	13	16
27	9.8	15	23	12	20	54	44	43	31	16	13	16
28	7.3	12	21	10	18	46	40	37	29	18	12	78
29	7.0	11	20	11	---	79	39	32	27	14	12	21
30	12	11	19	11	---	79	38	27	26	13	13	17
31	11	---	25	12	---	60	---	31	---	13	12	---
TOTAL	410.2	588.3	929.8	805	683.0	1,637	1,493	1,117	1,711	917	988	704
MEAN	13.2	19.6	30.0	26.0	24.4	52.8	49.8	36.0	57.0	29.6	31.9	23.5
MAX	109	155	145	131	200	171	79	113	205	232	176	84
MIN	2.7	6.3	7.8	10	6.0	18	38	27	22	13	12	10
CFSM	1.12	1.66	2.54	2.20	2.07	4.48	4.22	3.05	4.83	2.51	2.70	1.99
IN.	1.29	1.85	2.93	2.54	2.15	5.16	4.71	3.52	5.39	2.89	3.11	2.22

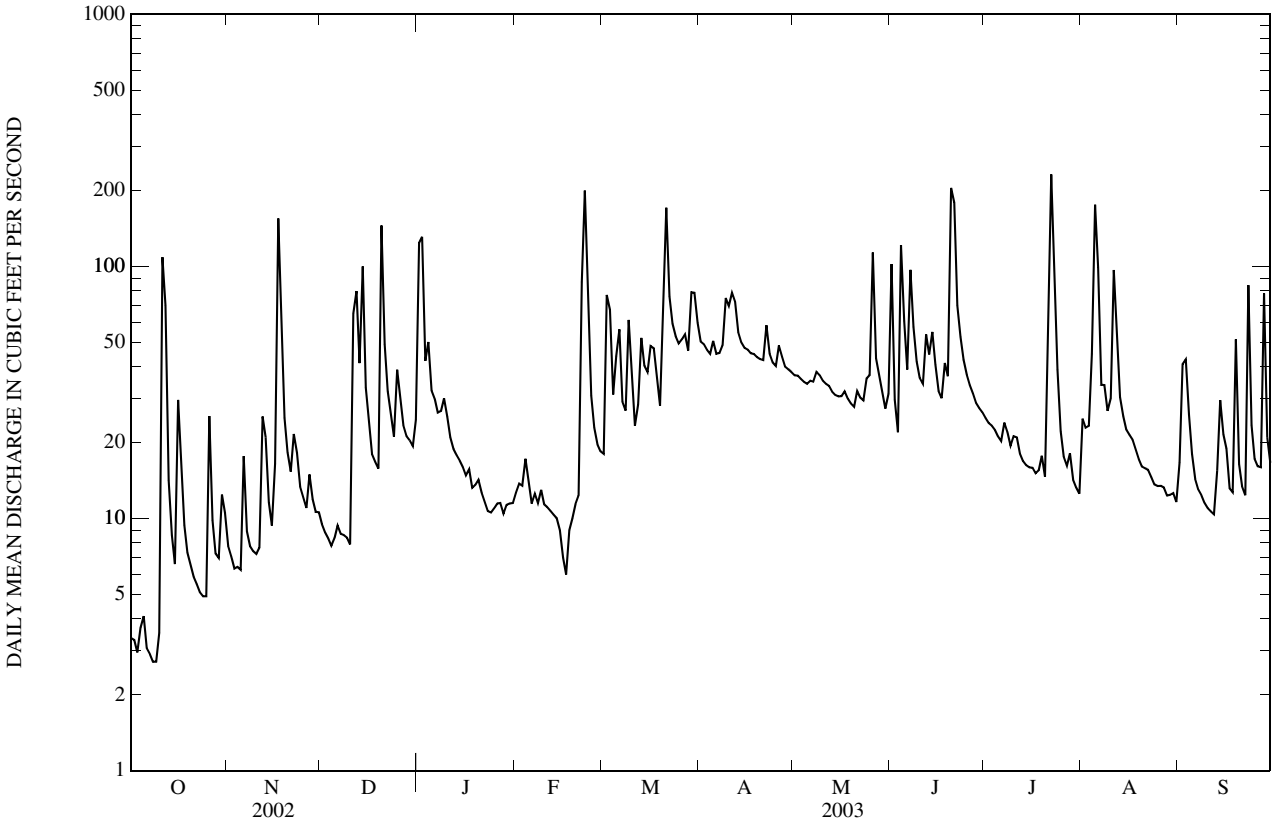
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1977 - 2003, BY WATER YEAR (WY)

MEAN	11.7	16.0	21.5	23.5	23.4	31.8	33.5	26.3	18.4	12.5	9.30	10.1
MAX	35.6	32.6	77.9	79.2	40.2	76.8	94.1	59.2	61.1	53.2	31.9	40.0
(WY)	(1990)	(1986)	(1997)	(1979)	(1979)	(1994)	(1984)	(1984)	(1989)	(1984)	(2003)	(1999)
MIN	3.54	4.04	3.95	5.01	5.26	10.2	6.88	10.0	4.62	1.98	2.79	2.85
(WY)	(2002)	(2002)	(1999)	(1981)	(2002)	(1985)	(1985)	(1995)	(1999)	(1999)	(1995)	(1980)

01396660 MULHOCKAWAY CREEK AT VAN SYCKEL, NJ—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1977 - 2003	
ANNUAL TOTAL	4,660.2		11,983.3			
ANNUAL MEAN	12.8		32.8		19.8	
HIGHEST ANNUAL MEAN					35.2	1984
LOWEST ANNUAL MEAN					8.67	2002
HIGHEST DAILY MEAN	155	Nov 17	232	Jul 22	918	Sep 16, 1999
LOWEST DAILY MEAN	1.9	Aug 19	2.7	Oct 8	1.1	Aug 2, 1999
ANNUAL SEVEN-DAY MINIMUM	2.1	Aug 13	3.2	Oct 3	1.2	Aug 1, 1999
MAXIMUM PEAK FLOW			1,310	Aug 5	3,590a	Sep 20, 1989
MAXIMUM PEAK STAGE			4.91	Aug 5	7.41	Sep 20, 1989
INSTANTANEOUS LOW FLOW			2.7	Oct 3, 4, 6-10	1.0	Aug 2, 1999
ANNUAL RUNOFF (CFSM)	1.08		2.78		1.68	
ANNUAL RUNOFF (INCHES)	14.69		37.78		22.84	
10 PERCENT EXCEEDS	24		67		39	
50 PERCENT EXCEEDS	7.2		23		12	
90 PERCENT EXCEEDS	2.7		8.5		4.2	

a From rating curve extended above 1,200 ft^3/s.
e Estimated



01396800 SPRUCE RUN AT CLINTON, NJ

LOCATION.--Lat 40°38'21", long 74°54'57", Hunterdon County, Hydrologic Unit 02030105, 1,800 ft downstream from dam at Spruce Run Reservoir, 0.2 mi north of Clinton, 0.3 mi upstream from mouth, and 2.2 mi southwest of High Bridge.

DRAINAGE AREA.--41.3 mi^2.

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

GAGE.--Water-stage recorder. Concrete control since Mar. 15, 1964. Datum of gage is 193.5 ft above NGVD of 1929. May to Nov. 24, 1959, nonrecording gage; Nov. 25, 1959 to July 23, 1961, water-stage recorder at site 1,800 ft upstream and at datum 1.41 ft lower; July 24, 1961 to Mar. 14, 1964, water-stage recorder at site 1,500 ft upstream at datum 1.41 ft lower.

REMARKS.--Records good. Flow regulated by Spruce Run Reservoir (see Raritan River basin, reservoirs in). Several measurements of water temperature were made during the year. Satellite gage-height telemetry at station.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	51	7.2	6.9	7.7	73	6.0	112	50	346	58	30	26
2	50	4.9	6.9	8.4	73	8.0	118	55	198	52	74	31
3	47	4.5	6.7	7.3	32	6.9	110	48	116	48	56	119
4	44	5.7	6.8	7.2	6.5	6.3	99	40	378	50	146	108
5	42	7.0	7.2	6.8	6.9	6.6	117	38	293	48	303	83
6	45	5.9	7.1	6.7	6.8	6.7	113	39	183	39	558	48
7	99	4.2	6.9	6.9	6.8	6.4	95	43	241	39	208	36
8	132	8.4	6.9	6.8	6.4	6.3	108	52	319	55	156	30
9	154	6.6	6.9	6.5	25	6.6	136	58	189	39	134	26
10	143	6.9	6.9	6.7	74	6.4	173	53	149	34	231	23
11	55	6.6	8.3	6.9	73	6.4	184	45	122	41	204	41
12	6.3	6.9	8.4	6.9	73	6.4	203	61	183	39	387	61
13	5.6	6.4	8.1	6.9	73	6.8	148	53	174	29	229	73
14	4.6	6.3	8.7	6.9	73	6.9	112	27	167	22	121	74
15	5.0	6.3	8.0	6.9	73	20	103	15	162	22	14	55
16	6.7	6.9	8.0	6.9	95	116	105	21	104	25	32	60
17	6.3	8.9	7.8	6.9	111	192	81	29	80	43	51	41
18	4.2	7.9	7.4	7.0	111	188	78	29	106	53	53	32
19	3.8	7.2	7.4	6.9	82	152	75	26	103	26	50	104
20	3.8	7.4	8.4	6.9	21	166	72	25	271	7.5	46	84
21	5.4	7.4	7.8	6.9	5.8	527	67	37	626	25	42	49
22	7.3	7.8	7.4	47	8.2	267	117	36	374	410	42	75
23	5.5	7.4	7.2	117	10	177	123	33	225	521	45	219
24	6.7	6.9	6.9	115	7.8	149	77	45	167	215	23	169
25	8.1	6.9	7.5	114	6.4	133	28	53	140	105	47	82
26	7.9	6.9	6.9	114	6.0	134	74	231	115	61	58	58
27	6.0	7.1	6.9	116	6.0	148	90	186	103	50	58	51
28	4.6	6.9	6.9	118	6.0	117	68	125	74	48	56	277
29	5.8	6.9	6.9	116	---	149	61	104	70	33	54	150
30	5.3	6.9	6.9	96	---	265	55	75	70	27	54	119
31	5.9	---	6.9	75	---	194	---	85	---	23	54	---
TOTAL	976.8	203.2	227.9	1,175.0	1,151.6	3,186.7	3,102	1,817	5,848	2,287.5	3,616	2,404
MEAN	31.5	6.77	7.35	37.9	41.1	103	103	58.6	195	73.8	117	80.1
MAX	154	8.9	8.7	118	111	527	203	231	626	521	558	277
MIN	3.8	4.2	6.7	6.5	5.8	6.0	28	15	70	7.5	14	23

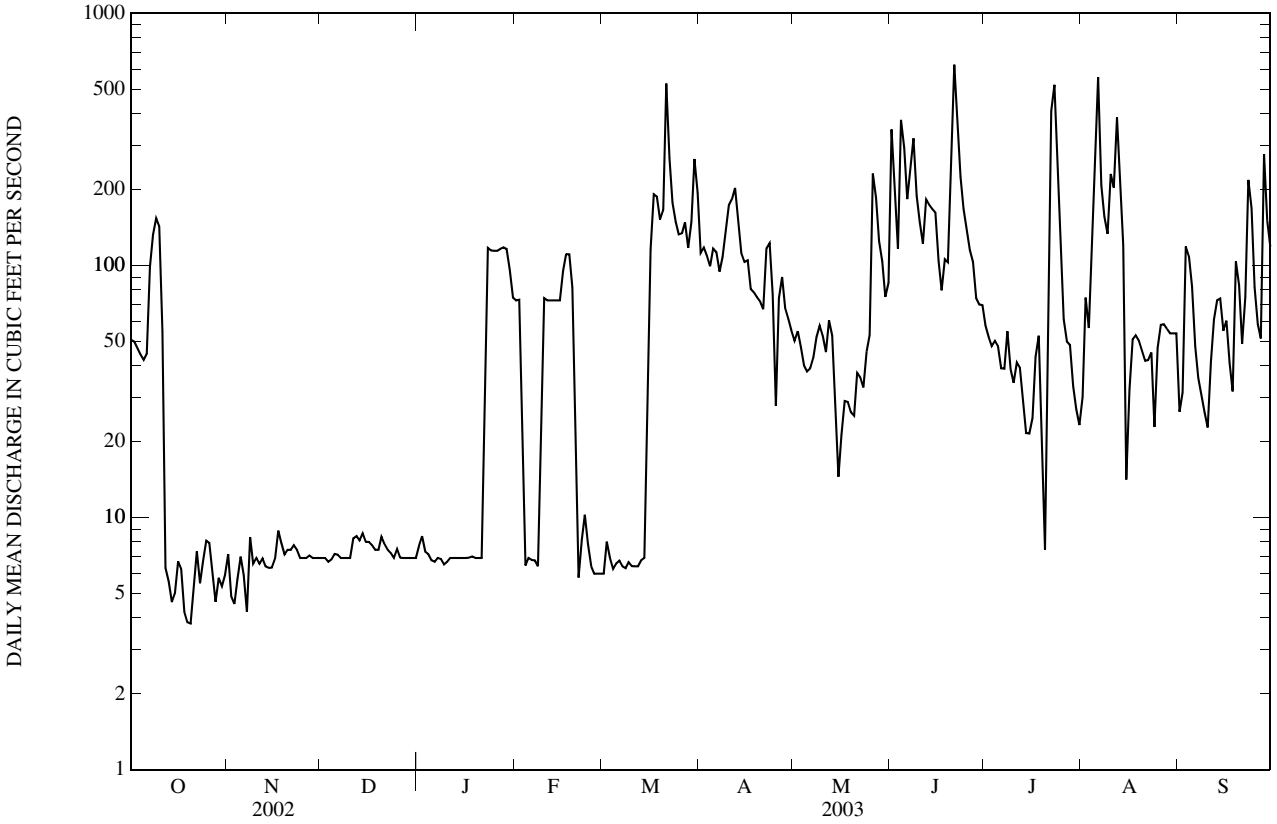
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1959 - 2003, BY WATER YEAR (WY)

MEAN	58.8	30.9	47.4	58.5	63.1	78.8	96.9	70.9	64.5	72.1	61.1	76.9
MAX	290	96.2	308	258	162	190	342	225	278	244	171	241
(WY)	(1990)	(1990)	(1997)	(1979)	(1971)	(1993)	(1983)	(1984)	(1972)	(1975)	(1995)	(1989)
MIN	0.000	0.000	0.000	0.000	0.000	0.19	0.86	0.81	2.60	4.24	4.32	0.50
(WY)	(1964)	(1964)	(1964)	(1964)	(1964)	(1964)	(1964)	(1964)	(1981)	(1964)	(1963)	(1963)

01396800 SPRUCE RUN AT CLINTON, NJ—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1959 - 2003	
ANNUAL TOTAL	8,040.1		25,995.7			
ANNUAL MEAN	22.0		71.2		65.0	
HIGHEST ANNUAL MEAN					111	1997
LOWEST ANNUAL MEAN					3.81	1964
HIGHEST DAILY MEAN	221	Sep 14	626	Jun 21	2,060	Jul 7, 1984
LOWEST DAILY MEAN	1.6	Apr 7	3.8	Oct 19, 20	0.00a	Aug 22, 1963
ANNUAL SEVEN-DAY MINIMUM	1.8	Apr 4	4.9	Oct 14	0.00a	Aug 22, 1963
MAXIMUM PEAK FLOW			942	Aug 5	6,410	Apr 2, 1970
MAXIMUM PEAK STAGE			2.90	Aug 5	5.17	Apr 2, 1970
INSTANTANEOUS LOW FLOW			1.6	Nov 7	0.00a	Aug 22, 1963
10 PERCENT EXCEEDS	42		175		153	
50 PERCENT EXCEEDS	7.5		45		40	
90 PERCENT EXCEEDS	2.0		6.5		6.9	

a Result of reservoir filling.



01397000 SOUTH BRANCH RARITAN RIVER AT STANTON, NJ

LOCATION.--Lat 40°34'19", long 74°52'04", Hunterdon County, Hydrologic Unit 02030105, on right bank at downstream side of bridge on Stanton Road at Stanton Station, 0.4 mi upstream from Prescott Brook, and 1.4 mi west of Stanton.

DRAINAGE AREA.--147 mi^2.

PERIOD OF RECORD.--July 1903 to December 1906, July 1919 to current year. Monthly discharge only for some periods published in WSP 1302.

REVISED RECORDS.--WSP 561: Drainage area. WSP 1552: 1904, 1922-24(M), 1928-29(M), 1933-35(M). WDR NJ-88-1: 1982. WDR NJ-02-1: 2002(m).

GAGE.--Water-stage recorder. Datum of gage is 125.01 ft above NGVD of 1929. Prior to Aug. 17, 1925, nonrecording gage on downstream side of highway bridge at same site and datum.

REMARKS.--Records good except for estimated daily discharges, which are fair. Flow regulated by Spruce Run Reservoir since September 1963 (see Raritan River basin, reservoirs in). Occasional regulation at low flows by ponds above station. Water diverted by Hamden Pumping Station, 4.0 mi upstream, into Round Valley Reservoir since February 1966 (see Raritan River basin, diversions). Water can be released (maximum rate 186 ft^3/s) from Round Valley Reservoir at Hamden Pumping Station since July 1990. Several measurements of water temperature were made during the year. USGS satellite gage-height telemetry and National Weather Service telephone gage-height telemetry at station.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	84	92	e125	422	183	185	261	79	999	258	142	131
2	88	80	116	1,320	185	650	264	80	630	239	224	358
3	77	73	109	557	156	691	227	78	362	223	171	341
4	78	69	105	525	131	308	188	78	1,300	217	380	308
5	87	68	114	389	154	439	142	78	1,020	203	580	237
6	72	118	113	341	120	613	136	78	623	186	1,440	167
7	121	114	101	307	119	318	147	78	748	181	545	137
8	148	85	e105	285	111	285	182	81	1,160	209	391	125
9	172	73	103	286	118	477	313	81	650	174	410	115
10	176	69	99	294	e165	391	409	78	505	172	785	106
11	512	69	e200	247	e145	249	431	78	424	185	494	112
12	700	121	681	210	e140	249	436	78	729	173	921	131
13	243	213	378	e195	e140	379	271	118	723	146	535	160
14	147	135	801	e190	e135	388	227	102	e665	131	378	296
15	100	111	466	e170	e135	314	195	91	537	126	199	829
16	131	115	306	e160	e140	508	182	95	397	122	196	534
17	248	974	239	e170	e165	752	143	73	335	132	228	254
18	141	749	198	e145	e165	702	130	71	408	140	217	179
19	105	344	189	e160	e165	582	78	85	389	151	189	404
20	89	244	525	e155	135	573	81	82	698	101	174	320
21	79	204	580	e145	109	1,850	101	110	1,890	122	161	219
22	71	220	297	e150	430	957	177	100	1,430	1,360	156	196
23	64	255	245	e235	1,630	665	150	92	849	1,650	153	1,040
24	57	186	216	e255	951	552	102	77	614	748	127	768
25	68	160	277	e255	433	483	81	75	502	377	131	363
26	174	147	279	e255	284	454	98	654	431	252	147	288
27	151	157	228	e240	230	518	95	516	382	205	146	260
28	103	e150	209	e235	202	380	91	237	327	201	140	1,170
29	86	e135	198	e235	---	e310	86	207	297	169	135	575
30	105	e130	188	e210	---	e750	81	153	284	145	144	382
31	103	---	189	184	---	470	---	236	---	132	140	---
TOTAL	4,580	5,660	7,979	8,927	7,176	16,442	5,505	4,119	20,308	8,830	10,179	10,505
MEAN	148	189	257	288	256	530	184	133	677	285	328	350
MAX	700	974	801	1,320	1,630	1,850	436	654	1,890	1,650	1,440	1,170
MIN	57	68	99	145	109	185	78	71	284	101	127	106

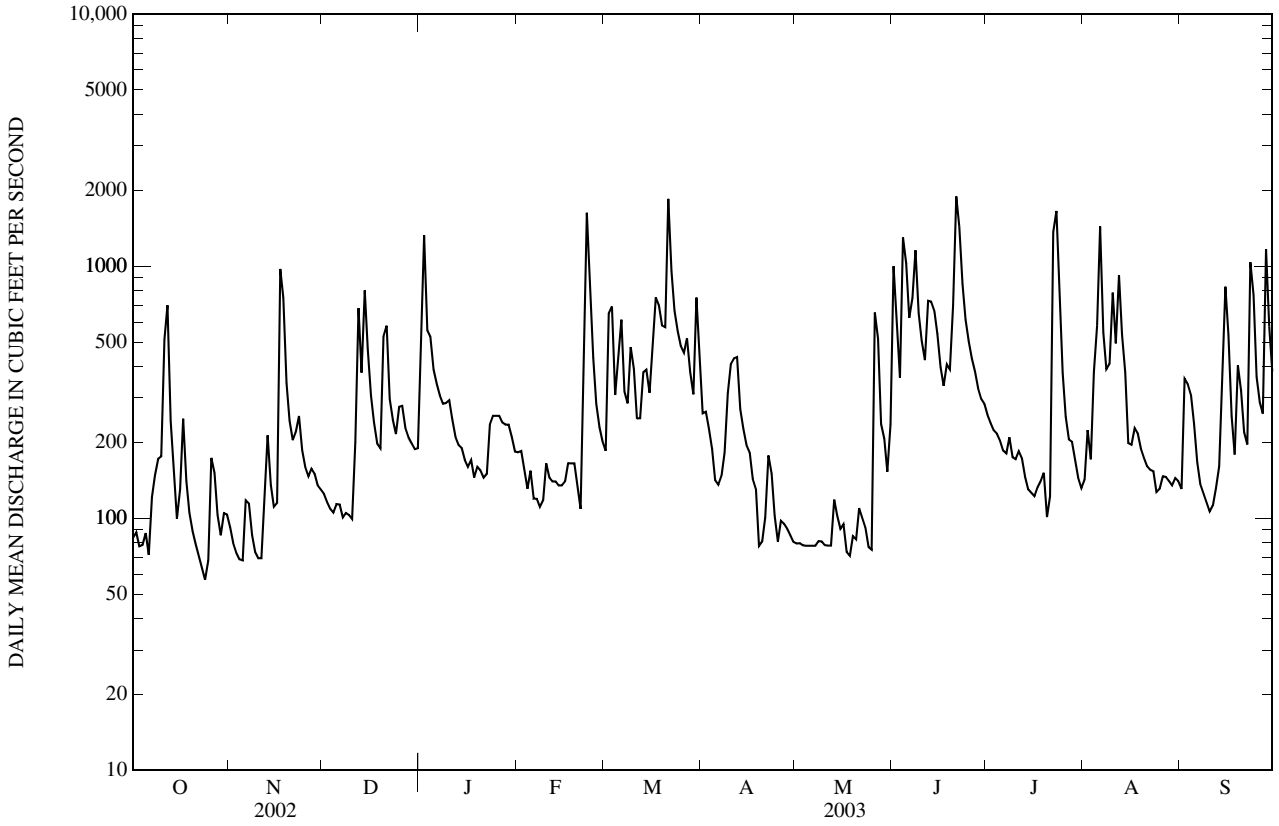
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1904 - 2003, BY WATER YEAR (WY)

MEAN	163	201	261	285	313	399	368	269	198	178	165	166
MAX	641	659	1,026	1,099	807	1,057	1,137	750	967	752	793	554
(WY)	(1904)	(1952)	(1997)	(1979)	(1925)	(1936)	(1983)	(1989)	(1972)	(1975)	(1955)	(1989)
MIN	34.1	46.2	58.3	55.0	61.2	61.3	58.5	80.3	60.1	40.7	30.1	31.0
(WY)	(1964)	(1965)	(1999)	(1966)	(1967)	(1981)	(1981)	(1965)	(1965)	(1955)	(1957)	(1957)

01397000 SOUTH BRANCH RARITAN RIVER AT STANTON, NJ—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1904 - 2003	
ANNUAL TOTAL	50,910		110,210			
ANNUAL MEAN	139		302		247	
HIGHEST ANNUAL MEAN					413	1952
LOWEST ANNUAL MEAN					95.0	1966
HIGHEST DAILY MEAN	1,400	May 14	1,890	Jun 21	8,060	Aug 19, 1955
LOWEST DAILY MEAN	46	Sep 3	57	Oct 24	12	Oct 18, 1963
ANNUAL SEVEN-DAY MINIMUM	58	Feb 23	76	Oct 19	25	Sep 4, 1957
MAXIMUM PEAK FLOW			3,650	Jul 23	18,000a	Aug 19, 1955
MAXIMUM PEAK STAGE			7.73	Jul 23	15.22	Aug 19, 1955
INSTANTANEOUS LOW FLOW			38	Oct 30	9.0	Nov 7, 1931
10 PERCENT EXCEEDS	246		665		486	
50 PERCENT EXCEEDS	93		190		165	
90 PERCENT EXCEEDS	60		83		64	

a From rating curve above 6,400 ft^3/s on basis of computation of flow over Clinton Dam, 6.5 mi upstream, at gage height 10.72 ft, contracted opening measurement 1.7 mi downstream, and slope-area measurement 0.4 mi downstream at gage height 15.22 ft, adjusted to present site.
e Estimated



01398000 NESHANIC RIVER AT REAVILLE, NJ

LOCATION.--Lat 40°28'24", long 74°49'40", Hunterdon County, Hydrologic Unit 02030105, on left bank 50 ft downstream from bridge on Everitts Road, 0.6 mi southwest of Reaville, 1.5 mi downstream from Third Neshanic River, and 2.2 mi upstream from Back Brook.

DRAINAGE AREA.--25.7 mi^2.

PERIOD OF RECORD.--June 1930 to current year.

REVISED RECORDS.--WSP 1552: 1933, 1934(M), 1936(M), 1938, 1940(M), 1942(M), 1945-46, 1951, 1952(M).

GAGE.--Water-stage recorder. Concrete control since Sept. 26, 1935. Datum of gage is 109.46 ft above NGVD of 1929.

REMARKS.--Records good, except for discharges less than 2.0 ft^3/s and estimated daily discharges which are fair. Several measurements of water temperature, other than those published, were made during the year. Occasional regulation possibly due to irrigation pumpage. Satellite gage-height telemetry at station.

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

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Feb 22	2145	1,830	7.89	Jun 4	1330	*2,330	*8.56

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.7	e20	26	246	11	23	51	12	368	14	26	6.6
2	7.1	e17	23	313	11	274	46	13	101	13	47	36
3	5.8	e14	20	142	10	166	36	11	61	12	12	35
4	6.7	e15	16	169	14	56	32	9.7	1,040	11	46	33
5	6.9	e14	16	90	12	248	33	9.4	371	9.3	139	19
6	4.6	e65	20	78	8.1	223	28	9.7	121	8.4	93	11
7	3.9	32	16	65	9.1	77	28	9.4	205	7.4	36	8.3
8	3.2	26	17	62	8.5	90	39	14	152	7.2	44	6.8
9	2.8	23	15	63	8.0	282	149	11	88	6.1	55	5.8
10	4.4	20	14	48	8.3	92	124	10	59	6.9	78	5.0
11	361	20	83	38	8.0	51	128	9.6	45	10	47	4.4
12	236	88	289	31	7.3	74	176	9.2	47	9.6	33	3.9
13	71	109	146	28	6.9	111	85	7.9	121	6.0	23	8.8
14	44	55	358	25	6.3	84	60	7.2	114	5.1	18	51
15	30	41	109	21	6.6	70	48	6.8	62	4.8	15	37
16	78	45	74	20	4.9	81	40	6.7	42	4.6	13	56
17	66	474	51	18	2.8	87	32	7.9	33	4.1	16	20
18	38	262	39	15	10	68	28	6.6	82	3.8	12	14
19	29	90	36	15	14	48	25	5.9	56	5.5	9.5	92
20	24	65	163	15	15	133	23	5.3	172	3.8	8.1	30
21	19	52	86	13	15	291	21	7.3	459	3.5	7.0	21
22	16	108	58	11	526	99	24	6.2	170	56	6.3	16
23	14	75	46	9.9	e887	65	20	6.0	91	43	5.7	129
24	13	50	38	9.3	211	50	17	13	59	109	4.6	44
25	12	41	119	9.7	88	41	15	9.9	42	18	4.4	28
26	109	35	89	10	53	39	22	182	33	9.9	4.1	22
27	40	52	62	9.5	33	47	18	51	27	7.4	4.1	23
28	30	39	53	8.2	27	33	15	42	22	8.6	3.7	23
29	e24	33	48	9.6	---	e63	14	42	19	5.9	3.3	17
30	e38	31	42	9.5	---	e84	13	27	16	4.7	5.2	14
31	e31	---	52	9.5	---	69	---	38	---	4.1	5.0	---
TOTAL	1,377.1	2,011	2,224	1,611.2	2,021.8	3,219	1,390	606.7	4,278	422.7	824.0	820.6
MEAN	44.4	67.0	71.7	52.0	72.2	104	46.3	19.6	143	13.6	26.6	27.4
MAX	361	474	358	313	887	291	176	182	1,040	109	139	129
MIN	2.8	14	14	8.2	2.8	23	13	5.3	16	3.5	3.3	3.9
CFSM	1.73	2.61	2.79	2.02	2.81	4.04	1.80	0.76	5.55	0.53	1.03	1.06
IN.	1.99	2.91	3.22	2.33	2.93	4.66	2.01	0.88	6.19	0.61	1.19	1.19

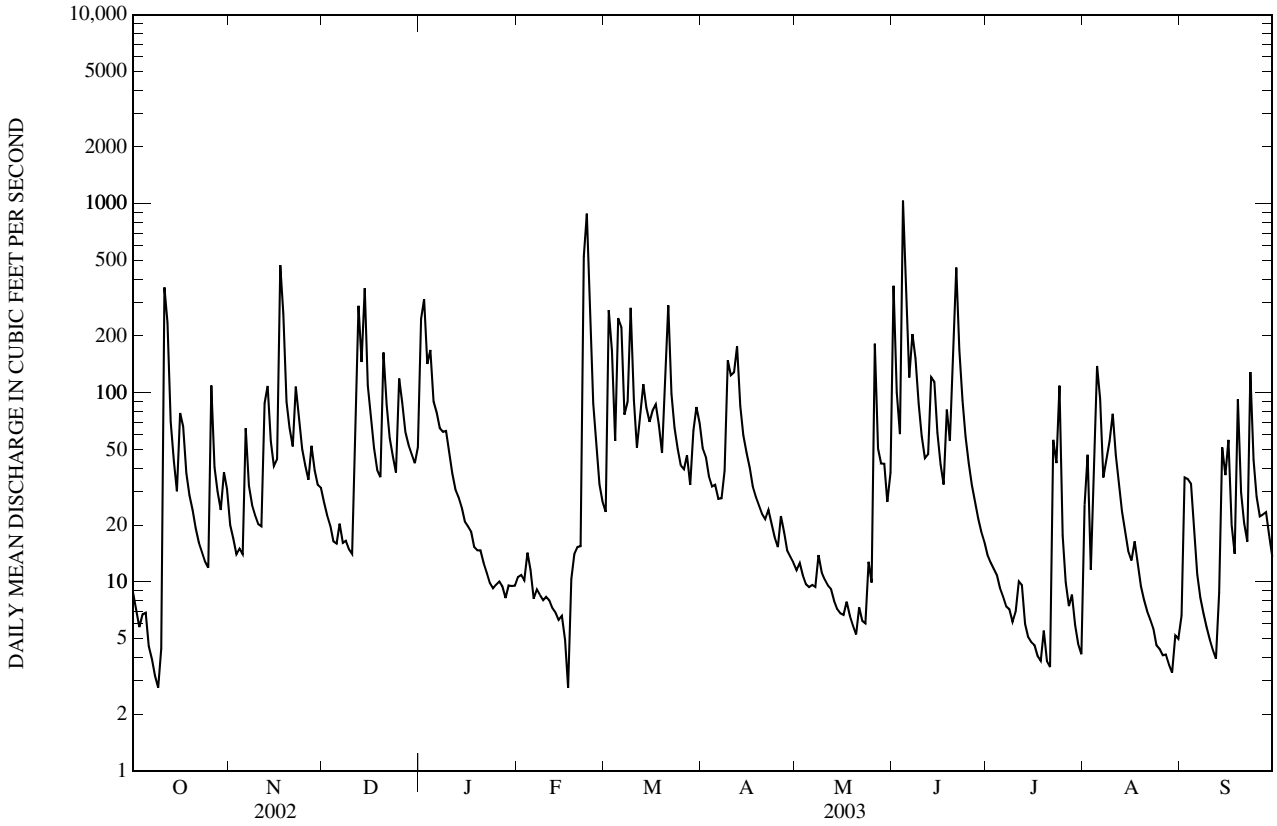
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1931 - 2003, BY WATER YEAR (WY)

MEAN	15.4	33.4	48.6	56.5	58.6	76.8	54.6	33.3	23.1	18.0	17.9	18.8
MAX	147	139	206	280	147	201	200	135	143	138	216	283
(WY)	(1997)	(1933)	(1997)	(1994)	(1939)	(1994)	(1983)	(1989)	(2003)	(1938)	(1971)	(1999)
MIN	0.67	0.90	1.42	1.14	3.92	15.2	7.20	3.78	1.11	0.066	0.44	0.47
(WY)	(1965)	(1966)	(1999)	(1981)	(1934)	(1985)	(1985)	(1963)	(1965)	(1999)	(1964)	(1965)

01398000 NESHANIC RIVER AT REAVILLE, NJ—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1931 - 2003	
ANNUAL TOTAL	10,586.31		20,806.1			
ANNUAL MEAN	29.0		57.0		37.8	
HIGHEST ANNUAL MEAN					70.8	1994
LOWEST ANNUAL MEAN					14.2	2002
HIGHEST DAILY MEAN	474	Nov 17	1,040	Jun 4	7,000	Sep 16, 1999
LOWEST DAILY MEAN	0.00	Aug 1	2.8	Oct 9, Feb 17	0.00	Jul 29, 1965
ANNUAL SEVEN-DAY MINIMUM	0.00	Aug 9	4.2	Aug 24	0.00	Aug 4, 1966
MAXIMUM PEAK FLOW			2,330	Jun 4	23,100a	Sep 16, 1999
MAXIMUM PEAK STAGE			8.56	Jun 4	15.33b	Sep 16, 1999
INSTANTANEOUS LOW FLOW			1.9	Feb 17	0.00	Jul 29, 1965
ANNUAL RUNOFF (CFSM)	1.13		2.22		1.47	
ANNUAL RUNOFF (INCHES)	15.32		30.12		19.99	
10 PERCENT EXCEEDS	66		126		76	
50 PERCENT EXCEEDS	12		26		12	
90 PERCENT EXCEEDS	0.50		6.1		1.3	

a From rating curve extended above 1,700 ft^3/s on basis of slope-area measurement 0.7 mi downstream (adjusted to present site) at gage height 11.90 ft.
b From high-water mark in gage house.
e Estimated



01398500 NORTH BRANCH RARITAN RIVER NEAR FAR HILLS, NJ

LOCATION.--Lat 40°42'30", long 74°38'10", Somerset County, Hydrologic Unit 02030105, on left bank 75 ft upstream from Ravine Lake Dam, 1.3 mi southeast of Peapack, 1.6 mi north of Far Hills, and 2.3 mi upstream from Peapack Brook.

DRAINAGE AREA.--26.2 mi^2.

PERIOD OF RECORD.--October 1921 to September 1975, October 1977 to current year. Operated as crest-stage gage, water years 1976-77. Monthly discharge only for some periods, published in WSP 1302.

REVISED RECORDS.--WSP 781: Drainage area. WSP 1552: 1922-23, 1924-25(M), 1935(M). WSP 1902: 1954.

GAGE.--Water-stage recorder and crest-stage gage above masonry dam. Datum of gage is 224.49 ft above NGVD of 1929 (New Jersey Geological Survey bench mark). Prior to June 18, 1925, nonrecording gage in stilling box at left end of dam at same datum.

REMARKS.--Records fair, except for estimated daily discharges which are poor . Records formerly included diversion by small turbine at dam (average discharge, 3.0 ft^3/s) which returned to river 1,000 ft downstream from Ravine Lake Dam. Turbine is no longer operated. Flow regulated occasionally by operation of waste gate in dam. Several measurements of water temperature were made during the year. Telephone, radio, and satellite telemetry for gage height. Radio-telemetry for rain gage 500 downstream from station.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 700 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jun 21	2145	713	3.38	Sep 15	2345	971	3.69
Aug 11	2345	*1,160	*3.90				

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.3	16	27	95	e21	47	57	39	260	52	22	26
2	6.2	13	25	191	e23	169	61	39	61	48	30	93
3	6.2	13	23	80	e23	e125	52	36	45	47	24	54
4	6.8	12	18	87	e29	e70	48	34	220	46	33	51
5	8.3	12	e20	70	e30	e88	56	36	191	43	143	43
6	6.9	37	e22	65	e21	122	48	36	81	41	114	32
7	5.4	27	20	62	e23	78	48	36	175	39	52	26
8	4.5	16	23	59	e21	74	49	46	138	40	51	24
9	4.1	13	21	63	e21	97	76	43	83	37	53	22
10	4.4	12	19	65	e22	87	85	38	71	38	59	20
11	73	12	39	55	e20	67	78	34	61	40	115	19
12	160	23	135	e46	e20	71	114	35	119	36	226	18
13	41	66	61	e39	e20	96	72	31	157	31	73	19
14	25	35	154	e37	e20	94	58	28	89	30	60	79
15	15	22	75	e33	e19	97	55	25	66	28	52	112
16	21	19	56	e31	e21	136	53	24	53	27	46	202
17	44	184	47	e30	e20	140	49	23	48	26	44	41
18	21	127	41	e27	e43	116	48	22	57	24	42	37
19	14	60	41	e28	e32	92	46	21	50	31	38	107
20	12	47	127	e26	e28	122	45	19	101	24	31	43
21	11	39	82	e24	e30	335	43	21	257	24	28	36
22	10	59	55	e24	e190	139	50	22	193	95	27	31
23	9.6	71	49	e21	407	112	42	20	107	143	26	112
24	9.2	41	45	e21	139	97	39	27	90	82	23	49
25	9.4	33	56	e20	69	86	39	25	80	45	22	37
26	38	30	56	e20	59	84	55	109	73	34	21	35
27	32	34	48	e22	60	109	49	46	68	29	21	33
28	19	33	45	e21	56	72	41	37	61	32	20	122
29	14	29	44	e19	---	130	40	31	57	25	19	42
30	16	28	42	e19	---	130	40	26	55	23	24	35
31	19	---	44	e19	---	66	---	32	---	22	21	---
TOTAL	672.3	1,163	1,560	1,419	1,487	3,348	1,636	1,041	3,167	1,282	1,560	1,600
MEAN	21.7	38.8	50.3	45.8	53.1	108	54.5	33.6	106	41.4	50.3	53.3
MAX	160	184	154	191	407	335	114	109	260	143	226	202
MIN	4.1	12	18	19	19	47	39	19	45	22	19	18
CFSM	0.83	1.48	1.92	1.75	2.03	4.12	2.08	1.28	4.03	1.58	1.92	2.04
IN.	0.95	1.65	2.21	2.01	2.11	4.75	2.32	1.48	4.50	1.82	2.21	2.27

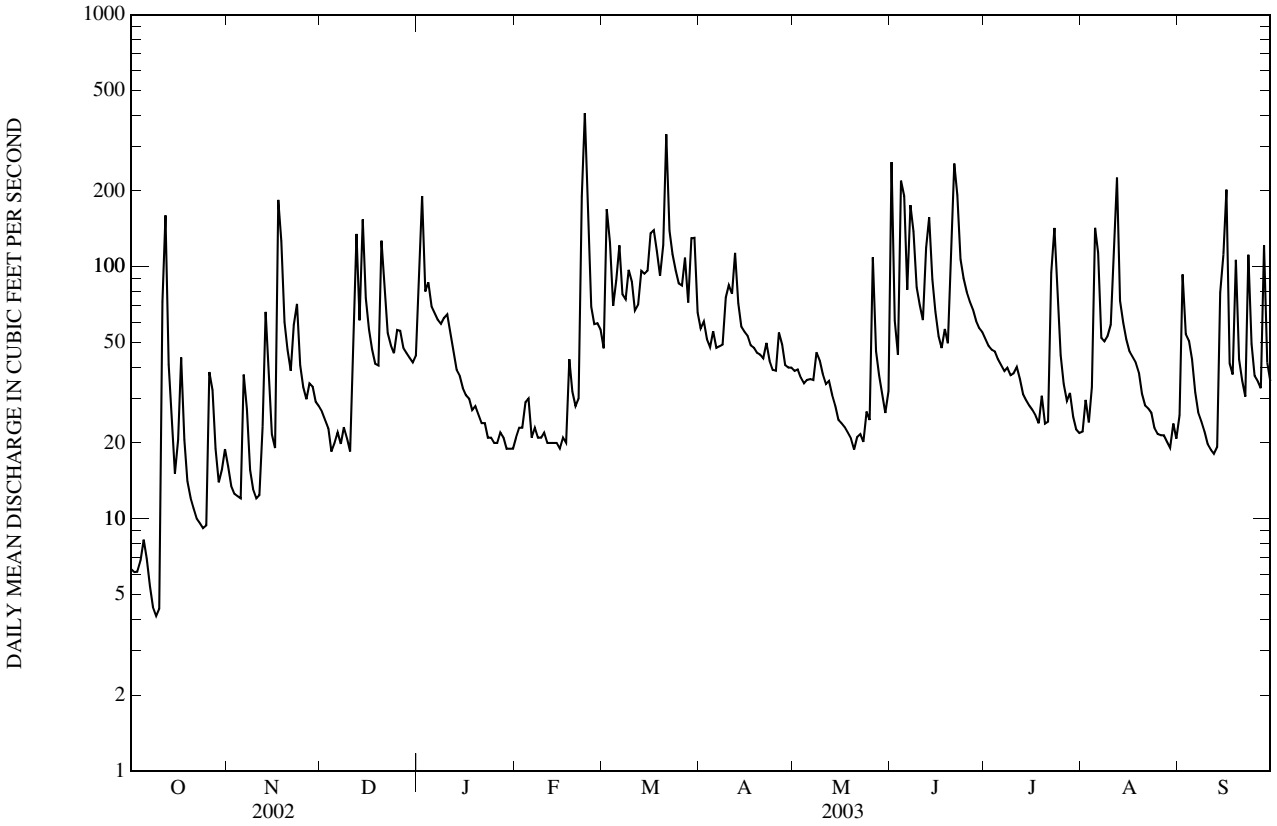
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1922 - 2003, BY WATER YEAR (WY)

MEAN	26.1	41.8	48.7	53.7	58.4	81.3	80.9	58.8	39.6	30.1	27.6	27.1
MAX	120	170	124	182	128	207	226	178	190	132	153	134
(WY)	(1997)	(1928)	(1974)	(1979)	(1973)	(1936)	(1983)	(1989)	(1972)	(1984)	(1942)	(1971)
MIN	6.29	8.15	7.93	6.76	11.6	22.8	26.8	20.0	10.5	4.41	4.55	3.61
(WY)	(1954)	(2002)	(1999)	(1981)	(2002)	(1981)	(1985)	(1965)	(1965)	(1966)	(1965)	(1964)

01398500 NORTH BRANCH RARITAN RIVER NEAR FAR HILLS, NJ—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1922 - 2003	
ANNUAL TOTAL	9,262.8		19,935.3			
ANNUAL MEAN	25.4		54.6		47.8	
HIGHEST ANNUAL MEAN					89.7	1928
LOWEST ANNUAL MEAN					17.7	1965
HIGHEST DAILY MEAN	214	Apr 29	407	Feb 23	1,770	Oct 19, 1996
LOWEST DAILY MEAN	2.8	Sep 13	4.1	Oct 9	0.20	Oct 22, 1953
ANNUAL SEVEN-DAY MINIMUM	3.6	Sep 8	5.8	Oct 4	0.20	Oct 22, 1953
MAXIMUM PEAK FLOW			1,160	Aug 11	6,390a	Aug 28, 1971
MAXIMUM PEAK STAGE			3.90	Aug 11	7.28	Aug 28, 1971
INSTANTANEOUS LOW FLOW			4.0	Oct 9, 10	0.00b	Many days
ANNUAL RUNOFF (CFSM)	0.97		2.08		1.82	
ANNUAL RUNOFF (INCHES)	13.15		28.31		24.77	
10 PERCENT EXCEEDS	49		114		94	
50 PERCENT EXCEEDS	15		40		32	
90 PERCENT EXCEEDS	4.7		19		9.8	

a From rating curve extended above 2000 ft^3/s on basis of flow over dam computation of peak flow.
b Several times when lake was filling.
e Estimated



01399500 LAMINGTON (BLACK) RIVER NEAR POTTERSVILLE, NJ

LOCATION.--Lat 40°43'39", long 74°43'49", Morris County, Hydrologic Unit 02030105, on right bank 1.1 mi upstream from bridge on County Highway 512, 1.2 mi northwest of Pottersville, and 5.5 mi upstream from Cold Brook.

DRAINAGE AREA.--32.8 mi^2.

PERIOD OF RECORD.--October 1921 to current year. Monthly discharge only for October and November 1921, published in WSP 1302. Prior to October 1952, published as "Black River near Pottersville".

REVISED RECORDS.--WSP 741: 1932. WSP 781: Drainage area. WSP 1552: 1922, 1924-29(M), 1931(M), 1933-34(M), 1938(P), 1939(M), 1940, 1941(M), 1942-46(P), 1947(M), 1948-49(P), 1951-52(P), 1953(M). WDR-NJ-80-1: Correction 1979(P).

GAGE.--Water-stage recorder. Concrete control since July 1, 1937. Datum of gage is 284.14 ft above NGVD of 1929 (levels from New Jersey Geological Survey bench mark). Prior to July 1, 1922, nonrecording gage on downstream side of highway bridge at Pottersville, 1.1 mi downstream at different datum.

REMARKS.--Records fair except for estimated daily discharges, which are poor. Flow regulated occasionally by ponds above station. Several measurements of water temperature were made during the year. Satellite gage-height telemetry at station.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 380 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jul 22	2215	*381	*3.09	No other peak greater than base discharge.			

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	26	34	90	e30	81	119	57	104	64	35	28
2	11	24	32	160	e30	141	112	57	84	60	35	67
3	9.4	23	e30	108	e35	128	99	55	88	58	32	57
4	9.6	e20	e25	112	42	e100	90	52	163	56	47	57
5	e9.5	20	29	100	43	e120	93	51	150	53	117	57
6	8.3	32	29	92	e35	e135	84	50	123	49	137	53
7	8.0	27	e30	84	e40	e105	80	50	151	47	113	47
8	7.3	25	e30	79	e35	e100	80	56	152	45	108	41
9	6.9	22	e25	78	e35	103	91	55	125	43	98	35
10	7.6	22	e30	76	e30	91	98	55	116	42	101	31
11	56	22	45	69	e30	78	98	55	104	42	86	27
12	96	33	72	e65	e25	79	106	55	132	40	82	25
13	65	38	59	e60	e25	91	98	51	137	37	75	25
14	53	33	95	e55	e25	87	95	49	126	36	69	56
15	52	30	88	e50	e25	91	87	48	120	34	64	84
16	62	31	82	e45	e25	108	81	45	107	33	59	e90
17	60	121	e70	e45	e20	124	76	43	93	31	53	76
18	48	101	e60	e40	e35	132	72	40	95	33	47	78
19	40	78	59	e40	e40	126	69	37	87	35	41	e105
20	35	78	96	e35	e45	156	65	35	107	30	36	e50
21	32	75	86	e35	e55	256	63	39	177	32	33	e105
22	27	75	76	e30	e130	194	67	36	168	114	30	60
23	25	67	76	e30	e220	166	64	38	146	110	28	102
24	24	58	71	e25	e170	135	61	44	145	87	26	90
25	22	52	72	e25	e175	116	58	43	129	73	25	75
26	37	48	65	e25	e155	107	66	94	110	66	25	75
27	30	48	58	e25	e110	103	64	76	93	59	24	e105
28	27	43	58	e25	87	93	60	75	80	57	23	e100
29	25	39	59	e25	---	113	60	75	74	46	22	e100
30	27	36	58	e25	---	136	58	67	69	39	24	92
31	28	---	59	e30	---	124	---	61	---	34	22	---
TOTAL	960.6	1,347	1,758	1,783	1,752	3,719	2,414	1,644	3,555	1,585	1,717	1,993
MEAN	31.0	44.9	56.7	57.5	62.6	120	80.5	53.0	118	51.1	55.4	66.4
MAX	96	121	96	160	220	256	119	94	177	114	137	105
MIN	6.9	20	25	25	20	78	58	35	69	30	22	25
CFSM	0.94	1.37	1.73	1.75	1.91	3.66	2.45	1.62	3.61	1.56	1.69	2.03
IN.	1.09	1.53	1.99	2.02	1.99	4.22	2.74	1.86	4.03	1.80	1.95	2.26

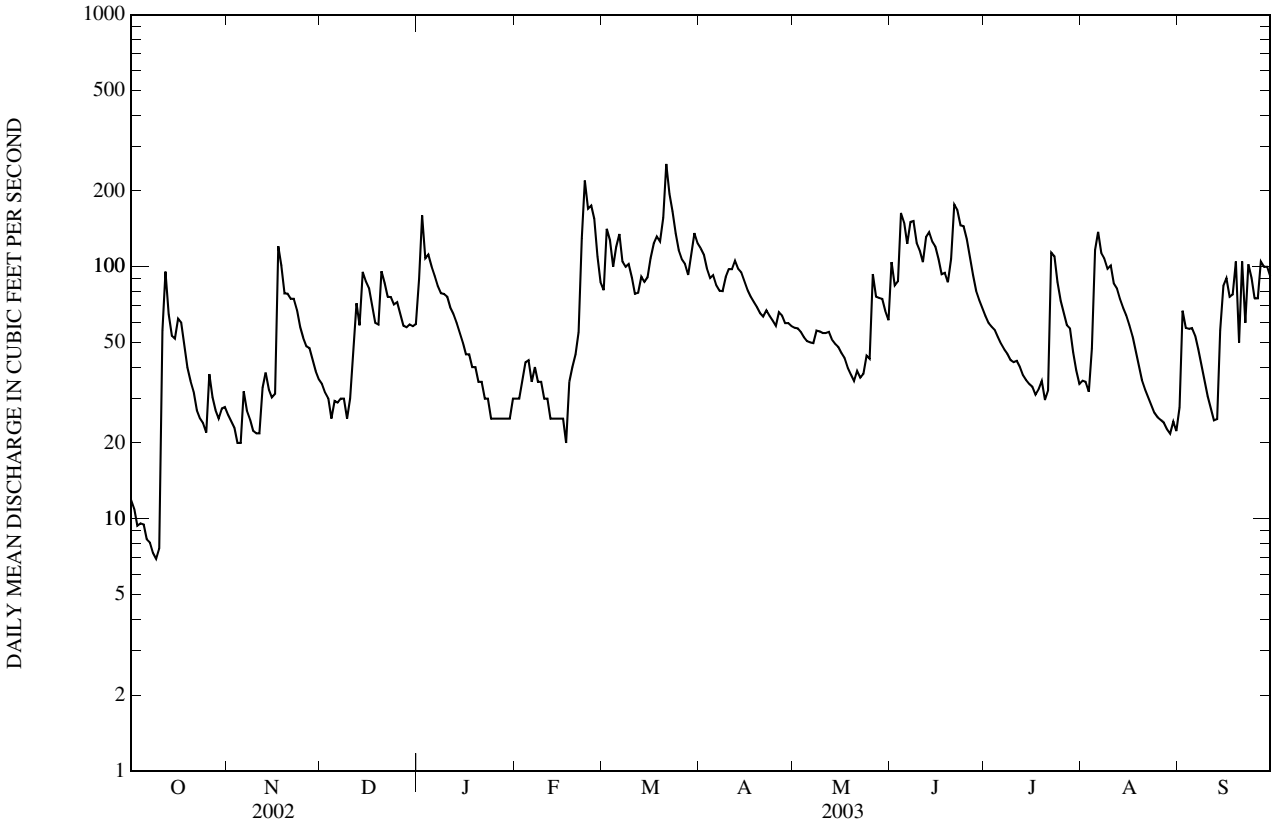
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1922 - 2003, BY WATER YEAR (WY)

MEAN	33.8	48.7	59.1	64.2	69.5	89.7	87.4	66.5	46.8	36.2	32.6	32.6
MAX	116	163	207	225	144	230	239	169	191	165	126	123
(WY)	(1956)	(1928)	(1997)	(1979)	(1973)	(1936)	(1984)	(1989)	(1972)	(1984)	(1928)	(1971)
MIN	5.69	9.61	15.4	11.7	19.7	31.0	25.9	19.0	10.1	5.48	5.28	3.76
(WY)	(1931)	(2002)	(1981)	(1981)	(2002)	(2002)	(1985)	(1965)	(1965)	(1965)	(2002)	(1964)

01399500 LAMINGTON (BLACK) RIVER NEAR POTTERSVILLE, NJ—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1922 - 2003	
ANNUAL TOTAL	11,452.6		24,227.6			
ANNUAL MEAN	31.4		66.4		55.5	
HIGHEST ANNUAL MEAN					104	1928
LOWEST ANNUAL MEAN					20.5	1965
HIGHEST DAILY MEAN	135	Jun 7	256	Mar 21	905	Jan 25, 1979
LOWEST DAILY MEAN	2.8	Aug 19	6.9	Oct 9	1.5	Oct 4, 1930
ANNUAL SEVEN-DAY MINIMUM	3.1	Aug 17	8.2	Oct 4	2.4	Sep 22, 1964
MAXIMUM PEAK FLOW			381	Jul 22	3,460a	Jul 7, 1984
MAXIMUM PEAK STAGE			3.09	Jul 22	5.94b	Jul 7, 1984
INSTANTANEOUS LOW FLOW			6.9	Oct 8-10	1.3	Oct 4, 1930
ANNUAL RUNOFF (CFSM)	0.96		2.02		1.69	
ANNUAL RUNOFF (INCHES)	12.99		27.48		23.00	
10 PERCENT EXCEEDS	71		120		112	
50 PERCENT EXCEEDS	25		58		42	
90 PERCENT EXCEEDS	7.1		25		14	

a From rating curve extended above 380 ft^3/s on basis of slope-area measurement at gage height 4.71 ft
b From floodmark.
e Estimated



01399670 SOUTH BRANCH ROCKAWAY CREEK AT WHITEHOUSE STATION, NJ

LOCATION.--Lat 40°37'10", long 74°46'25", Hunterdon County, Hydrologic Unit 02030105, on right bank 1,700 ft upstream from bridge on U.S. Route 22, 0.4 mi northeast of Whitehouse Station, and 0.8 mi upstream from mouth.

DRAINAGE AREA.--12.3 mi^2.

PERIOD OF RECORD.--October 1986 to current year. March 1977 to September 1986, water-stage recorder 1,700 ft downstream, at datum 8.07 ft lower (sta. 01399690), drainage area 13.2 mi^2.

REVISED RECORDS.--WDR NJ-88-1: 1987. WDR NJ-90-1: 1988.

GAGE.--Water-stage recorder. Datum of gage is 121.5 ft above NGVD of 1929.

REMARKS.--Records good, except for estimated daily discharges, which are fair. Releases from Round Valley Reservoir enter stream directly upstream from station (see Raritan River basin, reservoirs in and diversions from). Satellite gage-height telemetry at station. Several measurements of water temperature were made during the year.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.8	7.3	9.7	58	8.6	13	20	12	198	19	13	9.3
2	2.6	6.4	8.8	143	8.8	166	20	12	37	14	17	33
3	2.4	5.4	8.3	41	8.6	56	18	12	25	13	11	28
4	2.6	5.3	7.8	65	11	23	17	11	235	12	30	23
5	4.0	5.2	8.3	33	9.5	63	19	11	103	11	34	15
6	2.6	21	8.7	30	7.7	52	16	11	41	9.9	55	10
7	2.4	9.0	7.5	26	e9.0	26	17	11	95	11	25	8.7
8	1.9	6.8	7.8	24	e7.0	30	20	13	58	13	23	7.9
9	2.0	6.4	7.3	26	7.6	55	56	12	35	9.8	26	7.5
10	2.6	6.0	6.6	22	7.8	30	41	11	28	13	33	7.0
11	87	6.0	40	18	e7.0	20	39	10	24	13	21	6.6
12	91	27	98	16	6.1	21	36	10	37	10	17	6.3
13	17	30	35	15	6.3	38	25	9.5	40	8.7	14	9.6
14	10	12	107	14	5.4	32	21	9.0	47	8.2	12	154
15	6.8	9.7	33	13	6.6	25	19	8.7	35	8.2	11	85
16	14	11	23	12	5.7	30	19	8.6	23	7.9	10	63
17	14	166	17	12	6.1	33	17	8.8	20	7.2	31	19
18	7.7	78	14	8.5	6.3	27	16	8.8	32	6.7	21	15
19	6.2	25	13	9.3	6.5	21	16	8.4	24	8.4	11	53
20	5.6	18	56	e11	7.6	70	14	7.9	42	6.5	9.6	21
21	5.0	15	32	e10	8.6	155	14	11	171	24	8.8	16
22	4.3	26	20	e9.0	107	38	19	9.4	60	253	8.6	14
23	4.2	e20	17	e8.0	275	28	15	9.3	37	329	8.1	75
24	3.7	e15	14	e7.0	67	24	13	14	28	112	7.3	25
25	3.7	12	33	7.8	28	21	13	13	23	31	7.2	18
26	37	11	32	8.0	19	21	32	96	20	22	7.0	16
27	11	17	e20	8.1	16	23	19	26	18	17	7.0	26
28	7.0	13	e15	6.9	14	18	15	27	16	16	6.6	78
29	6.4	11	e15	7.4	---	22	14	20	15	13	6.4	22
30	12	11	14	7.6	---	34	13	18	14	12	6.9	17
31	11	---	16	7.6	---	26	---	26	---	11	6.4	---
TOTAL	390.5	612.5	744.8	684.2	683.8	1,241	633	475.4	1,581	1,050.5	504.9	888.9
MEAN	12.6	20.4	24.0	22.1	24.4	40.0	21.1	15.3	52.7	33.9	16.3	29.6
MAX	91	166	107	143	275	166	56	96	235	329	55	154
MIN	1.9	5.2	6.6	6.9	5.4	13	13	7.9	14	6.5	6.4	6.3

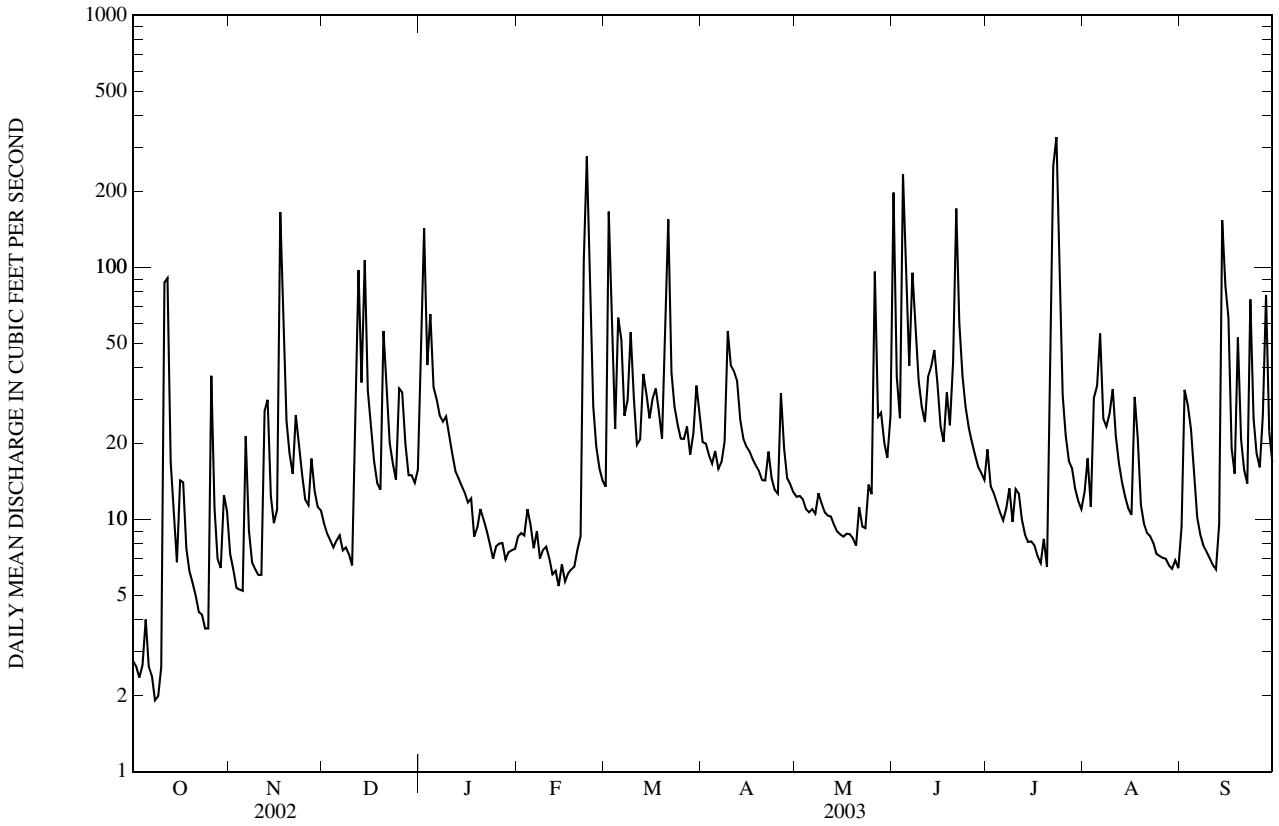
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1977 - 2003, BY WATER YEAR (WY)

MEAN	25.5	27.9	34.2	32.5	25.6	32.6	29.6	24.5	20.2	33.3	35.3	26.9
MAX	116	88.9	91.6	93.3	51.1	74.5	85.0	60.5	52.7	245	204	146
(WY)	(1981)	(1999)	(1981)	(1981)	(1979)	(1994)	(1983)	(1989)	(2003)	(1999)	(2002)	(1980)
MIN	4.55	6.58	9.85	8.31	9.90	10.2	3.80	8.18	8.50	4.78	5.49	4.19
(WY)	(1995)	(1982)	(1996)	(1985)	(1992)	(1985)	(1985)	(1995)	(1993)	(1993)	(1983)	(1983)

01399670 SOUTH BRANCH ROCKAWAY CREEK AT WHITEHOUSE STATION, NJ—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1977 - 2003	
ANNUAL TOTAL	16,444.35		9,490.5			
ANNUAL MEAN	45.1		26.0		29.3	
HIGHEST ANNUAL MEAN					66.0	1999
LOWEST ANNUAL MEAN					11.1	1992
HIGHEST DAILY MEAN	283	Aug 17	329	Jul 23	885	Sep 16, 1999
LOWEST DAILY MEAN	0.95	Sep 12	1.9	Oct 8	0.07	Nov 12, 1994
ANNUAL SEVEN-DAY MINIMUM	1.9	Sep 7	2.6	Oct 3	0.09	Aug 5, 1995
MAXIMUM PEAK FLOW			1,080	Jul 23	2,620	Sep 16, 1999
MAXIMUM PEAK STAGE			7.14	Jul 23	10.68	Sep 16, 1999
INSTANTANEOUS LOW FLOW			1.8	Oct 8, 9	0.00	Feb 2, 1993
10 PERCENT EXCEEDS	164		55		70	
50 PERCENT EXCEEDS	11		14		14	
90 PERCENT EXCEEDS	3.8		6.6		4.7	

e Estimated



01400000 NORTH BRANCH RARITAN RIVER NEAR RARITAN, NJ

LOCATION.--Lat 40°34'14", long 74°40'44", Somerset County, Hydrologic Unit 02030105, on right bank, 400 ft upstream from U.S. Highway 202, 1.4 mi upstream from confluence with South Branch Raritan River, and 2.7 mi west of Raritan.

DRAINAGE AREA.--190 mi^2.

PERIOD OF RECORD.--June 1923 to current year. Monthly discharge only for June 1923, published in WSP 1302. Prior to October 1943, published as "at Milltown".

REVISED RECORDS.--WSP 1552: 1924-26, 1928-35. WDR NJ-79-1: 1971-78(P).

GAGE.--Water-stage recorder. Concrete control since Sept. 1, 1936. Datum of gage is 50.43 ft above NGVD of 1929. Prior to Oct. 17,1936, nonrecording gage at site 30 ft downstream at same datum.

REMARKS.--Records good, except for estimated record which is poor. Releases from Round Valley Reservoir enter basin upstream from gage (See station number 01399670 and Raritan River Basin, diversions in). Occasional regulation from gate operation at Ravine Lake, 13.8 mi upstream. Several measurements of water temperature were made during the year. U.S. Geological Survey satellite gage-height telemetry and National Weather Service telephone gage-height telemetry at station.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 5,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
No peak greater than base discharge.							

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	54	121	153	681	e160	290	471	206	1,560	241	144	114
2	49	104	139	1,870	168	1,360	473	203	593	225	191	504
3	45	95	126	684	152	1,140	400	213	377	212	145	351
4	47	89	97	1,030	166	457	359	186	2,510	203	271	302
5	58	85	106	593	186	911	380	179	1,580	188	712	255
6	52	258	147	506	133	1,040	349	181	730	175	946	181
7	41	167	105	440	141	528	327	180	1,070	165	407	155
8	37	118	124	384	127	494	381	207	1,110	178	383	139
9	33	105	113	407	119	974	861	207	651	159	317	128
10	34	98	123	379	142	649	785	196	523	167	436	117
11	646	95	382	305	126	377	669	183	436	191	317	109
12	1,030	279	1,480	263	115	391	753	186	630	171	1,150	102
13	311	570	567	259	115	666	532	176	975	142	336	108
14	193	246	1,430	251	121	672	431	165	977	132	270	382
15	144	175	608	245	149	511	387	156	674	127	229	878
16	196	158	402	e212	e100	668	360	147	444	122	205	958
17	276	1,820	307	e231	e68	776	327	143	370	117	199	298
18	163	1,150	248	153	e120	656	309	138	568	109	236	242
19	126	414	231	173	e180	515	290	132	425	136	169	470
20	110	305	931	198	184	717	275	127	467	111	152	305
21	98	258	638	171	164	2,300	259	146	1,980	145	141	229
22	87	432	357	167	e600	913	296	146	1,310	884	135	201
23	81	437	301	e145	e2,400	673	267	137	692	1,700	130	787
24	76	255	266	e145	1,560	553	240	182	552	1,120	114	419
25	73	212	481	e155	743	471	225	170	464	354	109	268
26	405	192	472	e160	636	432	346	1,000	393	249	107	241
27	199	247	325	e160	496	529	315	491	344	209	107	384
28	132	212	285	e155	314	387	242	337	301	203	103	1,060
29	109	177	265	e170	---	576	225	311	271	173	97	401
30	154	167	252	e175	---	974	220	241	257	151	107	288
31	161	---	268	e170	---	601	---	248	---	139	104	---
TOTAL	5,220	9,041	11,729	11,037	9,685	22,201	11,754	6,920	23,234	8,598	8,469	10,376
MEAN	168	301	378	356	346	716	392	223	774	277	273	346
MAX	1,030	1,820	1,480	1,870	2,400	2,300	861	1,000	2,510	1,700	1,150	1,060
MIN	33	85	97	145	68	290	220	127	257	109	97	102

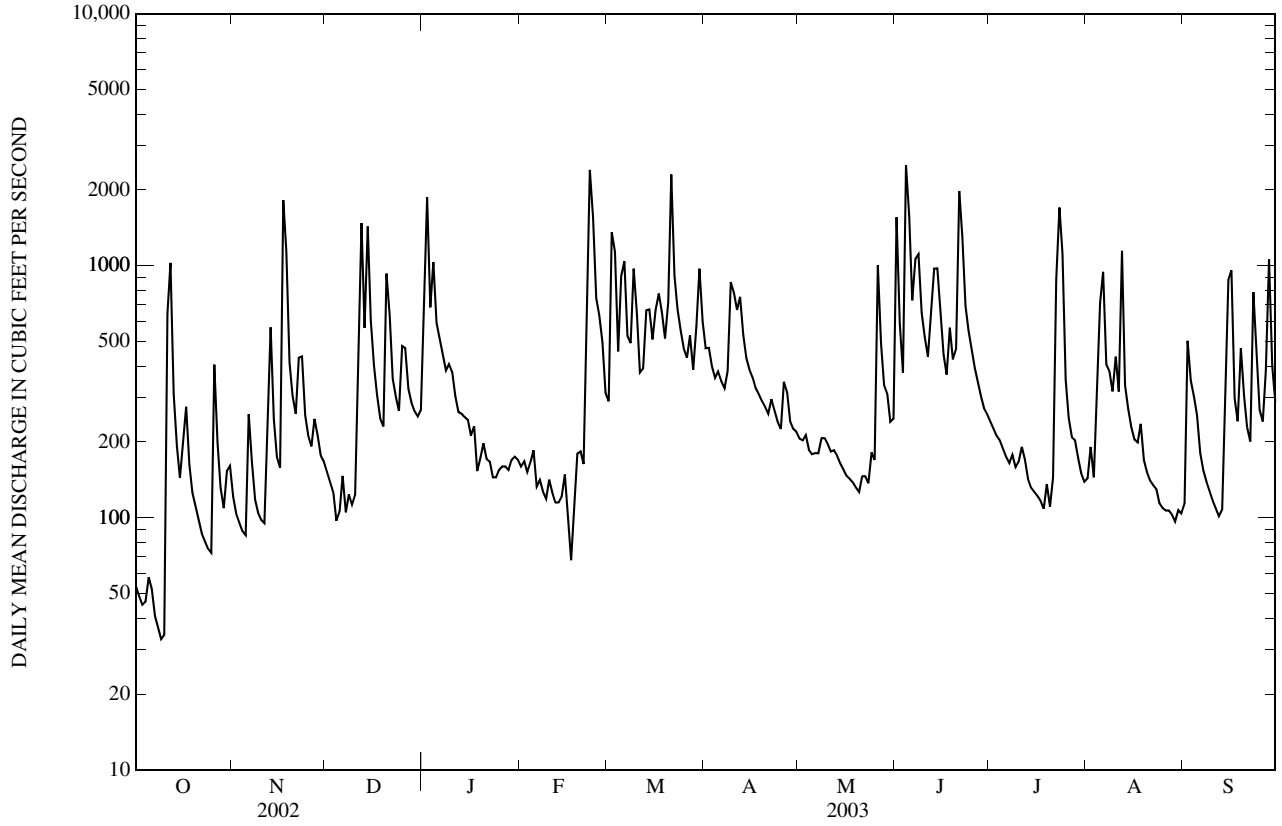
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1924 - 2003, BY WATER YEAR (WY)

MEAN	175	277	348	390	426	519	466	341	231	185	187	173
MAX	882	824	1,077	1,416	948	1,272	1,368	1,027	1,270	1,291	1,068	675
(WY)	(1997)	(1973)	(1997)	(1979)	(1925)	(1936)	(1983)	(1989)	(1972)	(1984)	(1942)	(1999)
MIN	26.6	46.1	73.1	79.4	87.5	163	117	84.1	46.4	25.5	22.3	14.8
(WY)	(1931)	(1965)	(1966)	(1940)	(2002)	(1981)	(1985)	(1926)	(1965)	(1966)	(1932)	(1964)

01400000 NORTH BRANCH RARITAN RIVER NEAR RARITAN, NJ—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1924 - 2003	
ANNUAL TOTAL	76,255		138,264			
ANNUAL MEAN	209		379		309	
HIGHEST ANNUAL MEAN					605	1984
LOWEST ANNUAL MEAN					120	1965
HIGHEST DAILY MEAN	3,150	May 14	2,510	Jun 4	15,300	Jul 7, 1984
LOWEST DAILY MEAN	16	Sep 13	33	Oct 9	7.5	Sep 26, 1964
ANNUAL SEVEN-DAY MINIMUM	22	Sep 8	43	Oct 4	8.9	Sep 22, 1964
MAXIMUM PEAK FLOW			4,530	Jun 4	29,100	Oct 19, 1996
MAXIMUM PEAK STAGE			7.95	Jun 4	18.98	Sep 16, 1999
INSTANTANEOUS LOW FLOW			31	Oct 9-10	3.0a	Nov 28, 1930
10 PERCENT EXCEEDS	354		868		620	
50 PERCENT EXCEEDS	147		246		184	
90 PERCENT EXCEEDS	64		109		57	

a About, result of freezeup.
e Estimated



01400500 RARITAN RIVER AT MANVILLE, NJ

LOCATION.--Lat 40°33'19", long 74°34'58", Somerset County, Hydrologic Unit 02030105, on left bank at downstream side of bridge on North Main Street (Finderne Avenue) at Manville, and 1.4 mi upstream from Millstone River.

DRAINAGE AREA.--490 mi^2.

PERIOD OF RECORD.--June 1903 to March 1907 (published as "at Finderne"), August 1908 to April 1915 (gage heights only, published in WSP 521), August 1921 to current year. Monthly discharge only for some periods, published in WSP 1302.

REVISED RECORDS.--WSP 1552: 1904, 1906, 1922, 1923(M), 1924-25, 1926-29(M), 1930, 1932-33(M), 1924-54. WDR NJ-75-1: 1964(M), 1969(M), 1970(P), 1971(P), 1972(P), 1973(P), WDR-NJ-1-02: 2000(M).

GAGE.--Water-stage recorder. Datum of gage is 20.61 ft above NGVD of 1929. Prior to Aug. 15, 1923, nonrecording gage on downstream side of highway bridge at same site and datum. From Oct. 1, 1952 to Sept. 30, 1966, water-stage recorder at station at Bound Brook, above Calco Dam (station 01403000) used as auxiliary gage when stage is above 5.50 ft. In Oct. 1, 1966, water-stage recorder at station at Bound Brook, used as auxiliary gage, was moved downstream to present site (station 01403060). Between June 9, 1978 and June 7, 1979, gage temporarily relocated at site 1.4 mi downstream, just upstream from Millstone River, because of reconstruction of highway bridge.

REMARKS.--Records good, except for estimated daily discharge, which are fair. Records given herein represent flow at gage only. Slight diurnal fluctuation at low flow. Flow regulated by Spruce Run and Round Valley Reservoirs (see Raritan River basin, reservoirs in). Diversion to Round Valley Reservoir since March 1966 (see Raritan River basin, diversions). Prior to Sept. 1, 1986, water diverted 1,500 ft upstream from station by Johns-Manville Corporation and returned to river, 600 ft downstream from Millstone River. Several measurements of water temperature were made during the year. USGS satellite gage-height telemetry and National Weather Service telephone gage-height telemetry at station.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 10,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Feb 23	0645	Ice jam	*14.19c	Jun 4	2015	*11,000	12.83

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	196	458	459	1,330	e340	646	1,040	391	2,480	622	367	296
2	200	384	409	5,690	e345	2,260	973	414	2,270	579	645	870
3	188	338	380	2,420	e345	3,800	864	428	1,120	545	436	887
4	188	306	315	2,970	e380	1,420	751	364	6,210	524	671	753
5	195	284	334	1,770	e415	2,250	738	338	6,970	498	1,540	688
6	192	670	418	1,370	e360	3,490	688	334	2,800	463	3,080	467
7	164	568	368	1,190	e340	1,740	598	331	2,380	433	1,390	374
8	199	409	374	1,010	e340	1,250	777	357	3,960	462	1,080	337
9	218	354	392	1,040	e305	2,540	1,560	366	1,980	424	812	312
10	241	324	367	960	e370	2,160	2,230	343	1,390	394	1,400	281
11	2,120	307	628	800	e390	1,020	1,810	320	1,090	462	1,050	263
12	4,090	502	4,130	666	e340	902	2,290	314	1,480	456	2,180	267
13	1,460	2,010	2,190	616	e325	1,400	1,600	301	2,530	368	1,070	306
14	746	927	4,450	584	e320	1,820	1,050	316	2,680	326	810	564
15	499	621	2,370	534	e385	1,140	895	289	1,900	305	581	2,160
16	560	537	1,310	e440	e325	1,430	792	274	1,190	295	490	2,070
17	1,080	4,920	930	e515	e260	1,940	696	276	940	290	491	844
18	644	4,330	720	e400	e360	1,740	626	248	1,390	291	617	590
19	455	1,810	643	e450	e560	1,380	576	234	1,220	341	458	1,020
20	381	1,090	1,900	e445	e500	1,340	505	239	1,330	290	414	910
21	326	838	2,330	e410	e500	4,350	481	258	5,590	282	379	640
22	285	1,100	1,110	e390	e1,840	3,070	550	302	4,990	1,980	359	522
23	258	1,370	874	e360	e6,760	1,850	578	269	2,300	3,970	346	1,720
24	231	838	736	e350	5,480	1,410	491	326	1,540	2,650	316	1,950
25	218	668	1,250	e340	2,300	1,180	434	312	1,190	1,030	283	884
26	1,100	584	1,660	e340	1,230	1,060	532	1,360	1,010	657	306	704
27	771	669	1,080	e345	849	1,260	610	1,850	884	533	305	719
28	480	645	875	e320	706	1,010	456	835	779	495	294	2,240
29	386	534	767	e325	---	940	431	793	700	446	277	1,350
30	530	500	710	e330	---	2,300	418	564	659	381	283	811
31	559	---	697	e330	---	1,480	---	627	---	346	301	---
TOTAL	19,160	28,895	35,176	29,040	26,970	55,578	26,040	13,973	66,952	21,138	23,031	25,799
MEAN	618	963	1,135	937	963	1,793	868	451	2,232	682	743	860
MAX	4,090	4,920	4,450	5,690	6,760	4,350	2,290	1,850	6,970	3,970	3,080	2,240
MIN	164	284	315	320	260	646	418	234	659	282	277	263

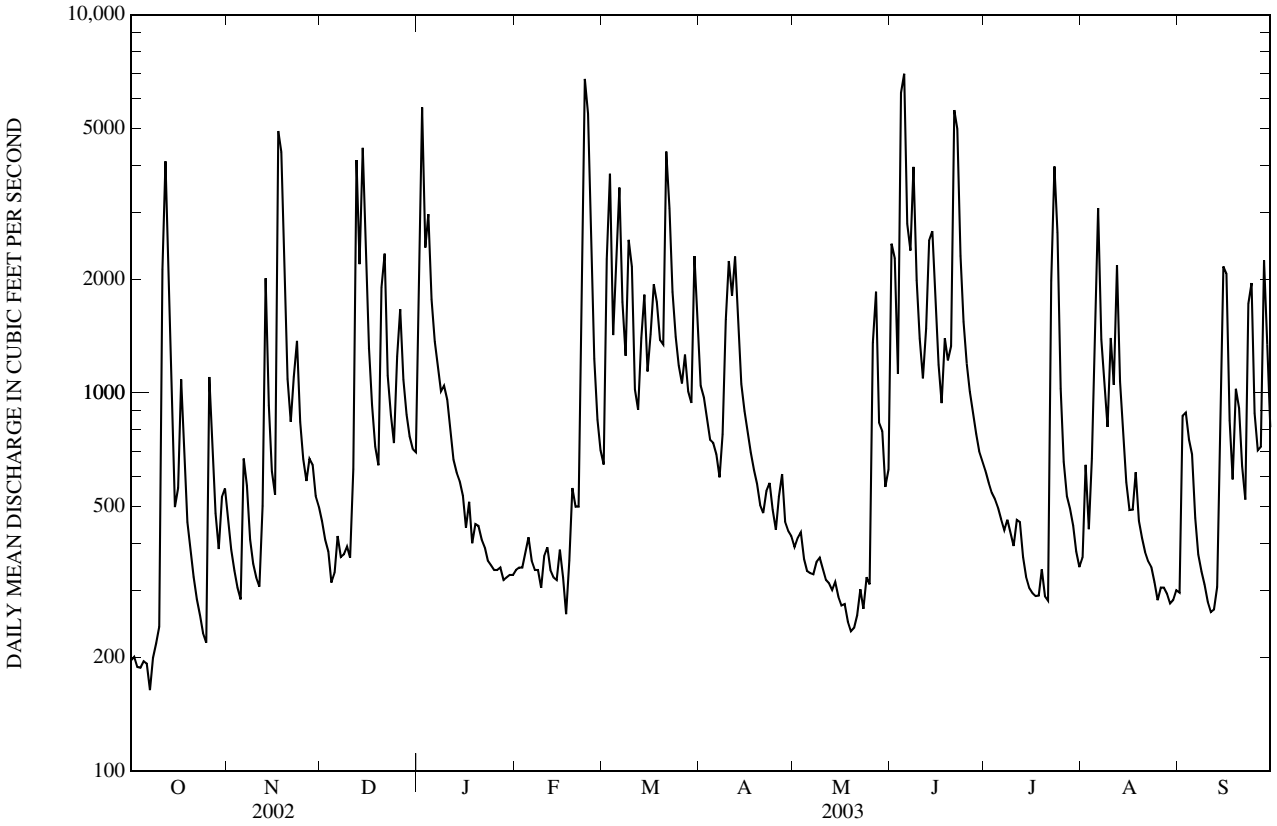
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1904 - 2003, BY WATER YEAR (WY)

MEAN	458	666	879	989	1,055	1,353	1,139	802	550	471	464	475
MAX	2,433	2,460	2,877	3,856	2,406	3,260	3,507	2,707	2,581	2,542	2,552	2,068
(WY)	(1904)	(1933)	(1997)	(1979)	(1925)	(1936)	(1983)	(1989)	(1972)	(1975)	(1955)	(1971)
MIN	64.8	87.5	148	188	216	354	259	212	88.8	65.1	50.5	51.2
(WY)	(1942)	(1932)	(1966)	(1966)	(2002)	(1981)	(1985)	(1926)	(1965)	(1955)	(1932)	(1941)

01400500 RARITAN RIVER AT MANVILLE, NJ—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1904 - 2003	
ANNUAL TOTAL	202,772		371,752			
ANNUAL MEAN	556		1,018		773	
HIGHEST ANNUAL MEAN					1,365	1984
LOWEST ANNUAL MEAN					309	1965
HIGHEST DAILY MEAN	6,750	May 14	6,970	Jun 5	30,700	Sep 17, 1999
LOWEST DAILY MEAN	125	Sep 6	164	Oct 7	17a	Sep 19, 1964
ANNUAL SEVEN-DAY MINIMUM	177	Feb 14	189	Oct 1	29	Aug 27, 1944
MAXIMUM PEAK FLOW			11,000	Jun 4	77,600b	Sep 16, 1999
MAXIMUM PEAK STAGE			14.19c	Feb 23	27.49	Sep 17, 1999
INSTANTANEOUS LOW FLOW			155	Oct 7		
10 PERCENT EXCEEDS	1,090		2,250		1,580	
50 PERCENT EXCEEDS	329		617		436	
90 PERCENT EXCEEDS	209		296		144	

a Does not include water diverted to Johns-Manville plant.
b From rating curve extended above 14,000 ft^3/sec on basis of slope-area measurements at gage heights 14.9, 20.42, and 27.49 ft.
c Ice jam
e Estimated



01401000 STONY BROOK AT PRINCETON, NJ

LOCATION.--Lat 40°19'59", long 74°40'55", Mercer County, Hydrologic Unit 02030105, on right bank 10 ft downstream from bridge on U.S. Highway 206, 1.6 mi southwest of Princeton, and 4.0 mi upstream from Carnegie Lake.

DRAINAGE AREA.--44.5 mi^2.

PERIOD OF RECORD.--October 1953 to current year.

GAGE.--Water-stage recorder, crest-stage gage, and concrete control. Datum of gage is 62.23 ft above NGVD of 1929 (levels from New Jersey Geological Survey bench mark).

REMARKS.--Records good except for estimated daily discharges, which are poor. Since July 1959 some regulation by several small reservoirs, combined capacity, 49,800,000 gal. Several measurements of water temperature were made during the year. Satellite gage-height telemetry at station.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,800 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Nov 17	0830	1,830	5.47	Jun 4	1615	*3,440	7.70
Feb 23	0100	(b)	*10.06b	Jun 21	1645	2,240	6.06
Mar 21	0321	2,030	5.76				

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.1	34	39	274	14	56	69	20	612	18	14	3.1
2	5.3	24	31	495	16	459	67	23	187	15	92	11
3	4.0	20	27	193	16	408	59	29	87	13	23	19
4	3.9	17	23	328	20	125	52	21	1,800	13	11	20
5	3.7	17	19	140	27	423	50	17	640	11	51	19
6	3.2	93	33	114	e17	560	51	17	185	8.9	112	10
7	2.9	51	22	104	e16	211	48	17	281	7.5	36	6.2
8	2.1	29	25	88	e15	162	65	29	331	6.8	90	4.5
9	2.5	23	23	116	e13	402	245	25	136	5.8	45	3.6
10	3.0	20	22	92	e13	228	290	21	90	5.8	51	3.0
11	149	20	139	66	e12	109	248	19	67	6.3	42	2.6
12	222	96	697	e47	e12	113	377	17	69	9.1	22	2.2
13	53	321	243	e39	e12	179	167	15	320	11	17	7.1
14	27	89	701	e33	e10	183	100	13	280	7.5	12	43
15	18	53	191	e29	e11	111	79	12	141	5.3	9.2	48
16	27	45	109	e23	e11	141	69	12	75	4.6	7.7	80
17	62	722	75	e22	e9.5	175	57	15	55	3.8	26	20
18	28	452	58	e17	e21	131	45	16	284	37	42	11
19	19	116	53	e16	e13	91	44	14	137	66	13	57
20	14	75	298	e15	e16	165	40	13	289	10	7.6	30
21	11	60	198	e14	e21	851	37	13	940	5.6	6.0	14
22	8.7	165	92	e12	e350	224	36	16	300	86	4.9	9.0
23	7.8	150	72	e10	e1,450	122	33	16	138	54	4.1	75
24	8.9	71	59	e9.8	e800	89	28	24	85	25	3.4	56
25	7.3	55	402	e9.6	e350	74	25	22	64	18	2.8	21
26	186	46	255	e9.8	e180	70	39	436	55	9.3	2.5	15
27	62	67	128	e9.5	e100	111	45	149	44	6.4	2.6	18
28	30	69	99	e9.2	e65	72	31	75	33	7.1	2.4	87
29	23	49	82	e9.9	---	69	25	79	26	6.1	2.1	27
30	44	44	77	e10	---	126	23	47	22	4.5	2.4	16
31	57	---	82	e11	---	102	---	58	---	3.6	2.5	---
TOTAL	1,101.4	3,093	4,374	2,365.8	3,610.5	6,342	2,544	1,300	7,773	491.0	759.2	738.3
MEAN	35.5	103	141	76.3	129	205	84.8	41.9	259	15.8	24.5	24.6
MAX	222	722	701	495	1,450	851	377	436	1,800	86	112	87
MIN	2.1	17	19	9.2	9.5	56	23	12	22	3.6	2.1	2.2
CFSM	0.80	2.32	3.17	1.71	2.90	4.60	1.91	0.94	5.82	0.36	0.55	0.55
IN.	0.92	2.59	3.66	1.98	3.02	5.30	2.13	1.09	6.50	0.41	0.63	0.62

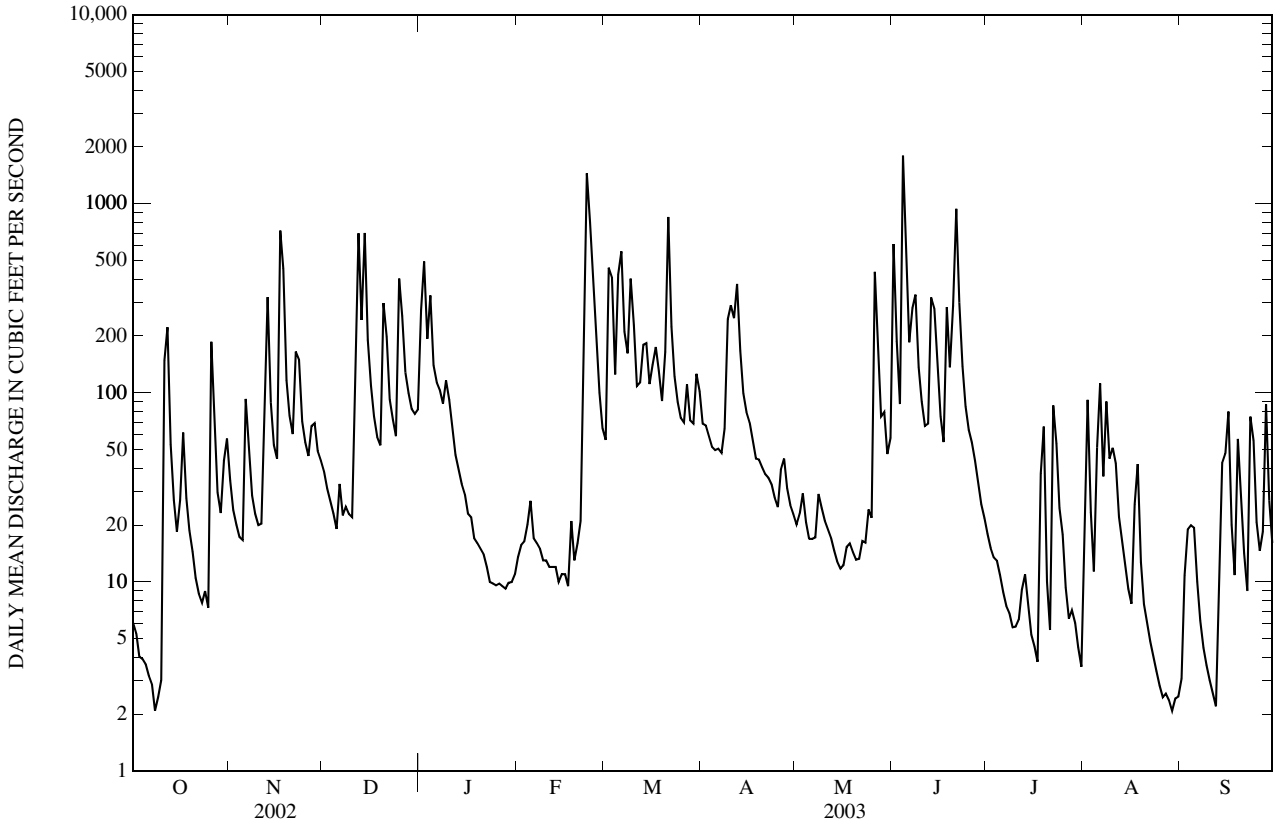
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1954 - 2003, BY WATER YEAR (WY)

MEAN	27.7	51.5	89.1	96.0	105	134	103	64.2	38.5	30.8	29.8	30.1
MAX	181	212	363	319	203	337	295	216	259	216	240	210
(WY)	(1997)	(1973)	(1997)	(1996)	(1971)	(1994)	(1983)	(1989)	(2003)	(1975)	(1955)	(1999)
MIN	1.00	1.50	1.94	3.22	15.8	31.3	20.9	8.95	2.67	0.56	0.14	1.31
(WY)	(1958)	(1966)	(1999)	(1981)	(2002)	(1985)	(1985)	(1963)	(1957)	(1957)	(1966)	(1970)

01401000 STONY BROOK AT PRINCETON, NJ—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1954 - 2003	
ANNUAL TOTAL	18,798.66		34,492.2			
ANNUAL MEAN	51.5		94.5		66.5	
HIGHEST ANNUAL MEAN					118	1996
LOWEST ANNUAL MEAN					28.5	1966
HIGHEST DAILY MEAN	1,030	May 18	1,800	Jun 4	3,730	Sep 16, 1999
LOWEST DAILY MEAN	0.07	Aug 16, 17	2.1	Oct 8, Aug 28	0.00	Aug 5, 1966
ANNUAL SEVEN-DAY MINIMUM	0.10	Aug 13	2.5	Aug 25	0.00	Aug 5, 1966
MAXIMUM PEAK FLOW			3,440	Jun 4	8,960a	Aug 28, 1971
MAXIMUM PEAK STAGE			10.06b	Feb 23	14.26	Aug 28, 1971
INSTANTANEOUS LOW FLOW			1.3	Oct 8, 9	0.00	Aug 5, 1966
ANNUAL RUNOFF (CFSM)	1.16		2.12		1.49	
ANNUAL RUNOFF (INCHES)	15.71		28.83		20.29	
10 PERCENT EXCEEDS	103		246		142	
50 PERCENT EXCEEDS	19		33		22	
90 PERCENT EXCEEDS	1.2		6.2		2.1	

a From rating extended above 4,000 ft^3/s on basis of contracted-opening measurement of peak flow.
b Ice Jam
e Estimated



01401650 PIKE RUN AT BELLE MEAD, NJ

LOCATION.--Lat 40°28'05", long 74°38'56", Somerset County, Hydrologic Unit 02030105, on right bank 20 ft upstream from bridge on Township Line Road, 0.7 mi east of Belle Mead, 0.8 mi upstream from Cruser Brook, and 1.0 mi downstream from bridge on U.S. Route 206.

DRAINAGE AREA.--5.36 mi^2.

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

REVISED RECORDS. --WRD NJ-01-1: 1994(M), 1996(M), 1997(P), 1999(P).

GAGE.--Water-stage recorder, crest-stage gage, and concrete parking-block control. Datum of gage is 58.85 ft above NGVD of 1929.

REMARKS.--Records fair, except estimated daily discharges, which are poor. Several measurements of water temperature were made during the year. Some regulation during summer months, possibly from irrigation. Rain-gage and gage-height radio telemetry at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1810, 13.5 ft, Aug. 28, 1971, from floodmark, present datum.

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

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Nov 17	0600	503	6.42	Jun 4	1200	*807	*7.78
Feb 22	1930	537	6.58	Jun 4	2345	516	6.48
Mar 21	0100	324	5.52				

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.93	5.1	3.9	60	1.5	5.1	5.1	2.4	77	1.7	9.8	0.83
2	0.79	3.6	3.2	59	1.6	80	5.1	5.1	13	1.6	8.8	5.5
3	0.72	2.8	2.8	25	1.5	31	4.5	7.5	6.1	1.5	2.2	5.9
4	0.90	2.4	2.2	37	2.3	e15	4.1	3.0	349	1.6	36	4.1
5	0.88	2.1	2.4	13	e2.2	62	4.6	2.3	81	1.3	44	2.5
6	0.72	21	2.6	11	e2.0	43	4.1	2.2	15	1.1	12	1.2
7	0.63	6.1	2.6	9.5	1.7	e15	4.0	2.2	55	1.0	4.0	0.77
8	0.60	3.8	2.5	9.0	e1.5	20	8.5	3.4	26	0.99	15	0.60
9	0.57	3.1	2.7	9.5	1.5	39	38	2.9	11	0.89	4.5	0.47
10	0.70	2.5	2.4	6.9	1.5	e14	19	2.5	6.8	0.87	3.8	0.40
11	86	2.4	45	5.1	1.5	e9.0	20	2.1	5.1	1.2	2.7	0.37
12	74	49	94	e4.5	1.5	9.8	42	2.0	12	1.2	2.0	0.32
13	11	31	31	3.7	1.7	16	12	1.7	42	0.80	1.6	2.3
14	5.7	9.8	94	e4.0	1.9	13	8.1	1.6	32	0.75	1.3	2.0
15	3.3	6.2	16	2.9	1.5	10	6.5	1.5	9.8	0.72	1.1	5.0
16	17	8.4	10	e3.0	1.6	13	5.5	1.4	5.7	0.66	1.0	10
17	11	170	6.8	3.1	0.95	15	4.5	1.5	4.4	0.61	1.1	1.9
18	4.7	55	4.9	e2.8	4.9	11	4.0	1.4	21	0.54	1.1	1.2
19	3.0	11	4.6	2.1	7.7	7.7	3.7	1.2	10	0.58	0.72	4.0
20	2.4	7.7	41	2.0	3.8	44	3.5	1.1	32	0.37	0.61	1.9
21	1.9	6.1	14	1.9	3.1	86	3.4	1.6	76	0.40	0.54	1.2
22	1.6	27	8.3	1.8	201	16	3.4	1.6	20	26	0.48	0.92
23	1.4	14	6.3	1.8	339	9.8	3.1	1.6	9.6	34	0.40	12
24	1.4	7.2	5.0	1.7	124	7.3	2.7	4.3	5.5	2.8	0.32	4.0
25	1.3	5.4	50	1.6	31	6.1	2.6	2.7	4.0	1.7	0.30	1.8
26	42	4.4	21	1.6	e15	6.2	5.2	91	3.3	1.3	0.28	1.4
27	7.8	10	13	1.5	7.8	10	4.7	13	2.7	1.2	0.26	1.7
28	4.1	6.7	9.7	1.6	5.6	5.9	3.2	7.8	2.3	2.0	0.22	11
29	3.9	5.0	8.9	1.6	---	5.8	2.8	7.0	2.0	0.91	0.18	3.3
30	12	4.7	8.1	1.5	---	8.1	2.6	3.8	1.9	0.69	0.29	1.8
31	12	---	9.7	1.4	---	7.0	---	7.9	---	0.62	0.33	---
TOTAL	314.94	493.5	528.6	291.1	770.85	640.8	240.5	191.3	941.2	91.60	156.93	90.38
MEAN	10.2	16.4	17.1	9.39	27.5	20.7	8.02	6.17	31.4	2.95	5.06	3.01
MAX	86	170	94	60	339	86	42	91	349	34	44	12
MIN	0.57	2.1	2.2	1.4	0.95	5.1	2.6	1.1	1.9	0.37	0.18	0.32
CFSM	1.90	3.07	3.18	1.75	5.14	3.86	1.50	1.15	5.85	0.55	0.94	0.56
IN.	2.19	3.43	3.67	2.02	5.35	4.45	1.67	1.33	6.53	0.64	1.09	0.63

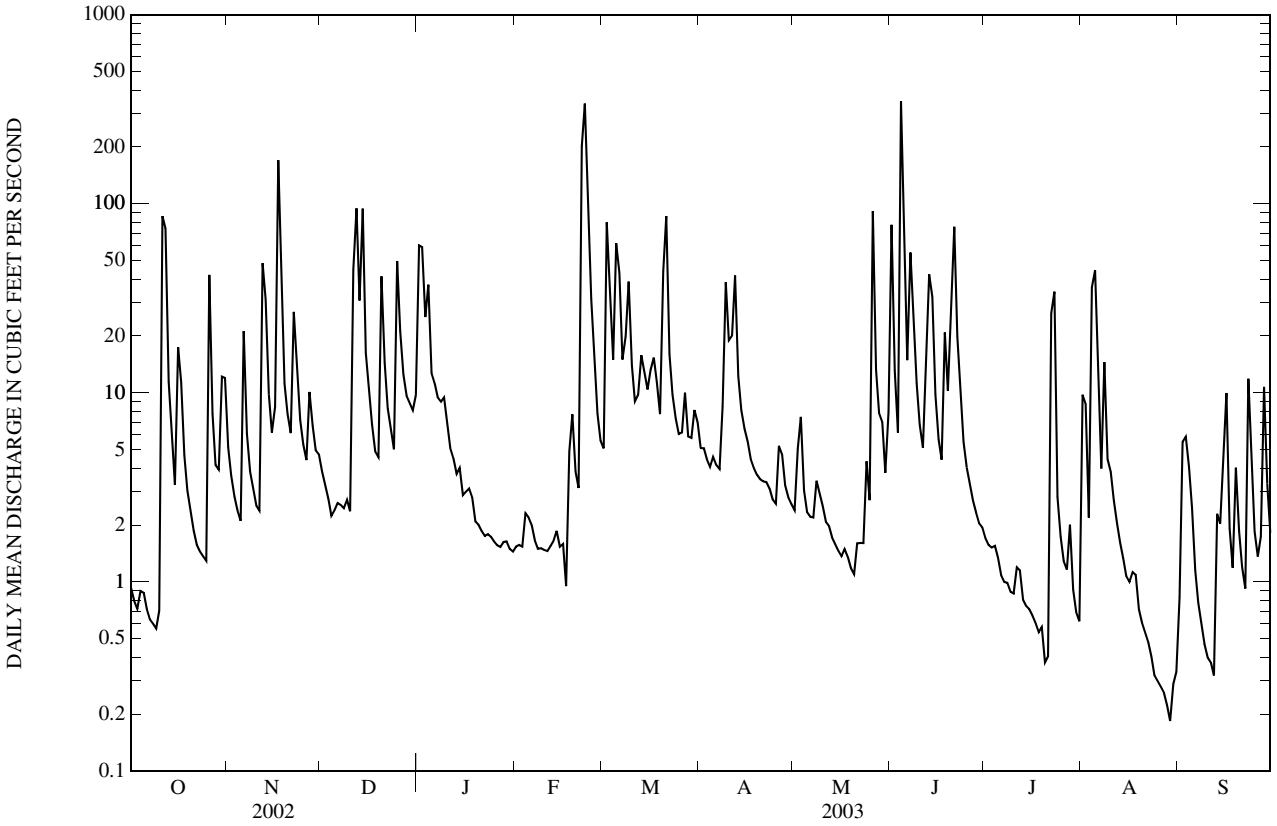
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1980 - 2003, BY WATER YEAR (WY)

MEAN	5.27	7.92	10.9	13.2	12.9	14.7	12.0	8.84	6.05	5.60	3.27	5.03
MAX	40.1	22.3	35.5	43.3	27.5	38.8	43.1	26.2	31.4	26.1	9.94	56.9
(WY)	(1997)	(1989)	(1997)	(1996)	(1994)	(1994)	(1983)	(1989)	(2003)	(1984)	(1990)	(1999)
MIN	0.40	0.28	0.12	0.043	1.97	3.05	2.18	1.89	0.37	0.000	0.17	0.51
(WY)	(2002)	(1999)	(1999)	(1981)	(2002)	(1981)	(1985)	(1986)	(1995)	(1999)	(1980)	(1983)

01401650 PIKE RUN AT BELLE MEAD, NJ—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1980 - 2003	
ANNUAL TOTAL	2,495.43		4,751.70			
ANNUAL MEAN	6.84		13.0		8.83	
HIGHEST ANNUAL MEAN					14.3	1984
LOWEST ANNUAL MEAN					3.32	2002
HIGHEST DAILY MEAN	170	Nov 17	349	Jun 4	1,590	Sep 16, 1999
LOWEST DAILY MEAN	0.00	Aug 9	0.18	Aug 29	0.00	Many days
ANNUAL SEVEN-DAY MINIMUM	0.00	Aug 9	0.26	Aug 24	0.00	Many days
MAXIMUM PEAK FLOW			807	Jun 4	4,120a	Sep 16, 1999
MAXIMUM PEAK STAGE			7.78	Jun 4	13.61b	Sep 16, 1999
INSTANTANEOUS LOW FLOW			0.16	Aug 29	0.00	Many days
ANNUAL RUNOFF (CFSM)	1.28		2.43		1.65	
ANNUAL RUNOFF (INCHES)	17.32		32.98		22.38	
10 PERCENT EXCEEDS	14		32		16	
50 PERCENT EXCEEDS	2.0		3.8		2.6	
90 PERCENT EXCEEDS	0.15		0.80		0.28	

a From rating curve extended above 790 ft^3/s on basis of step-backwater computation.
b From high-water mark in gage
e Estimated



01402000 MILLSTONE RIVER AT BLACKWELLS MILLS, NJ

LOCATION.--Lat 40°28'30", long 74°34'33", Somerset County, Hydrologic Unit 02030105, on left bank 30 ft downstream from highway bridge at Blackwells Mills, and 0.3 mi downstream from Six Mile Run.

DRAINAGE AREA.--258 mi^2.

PERIOD OF RECORD.--June 1903 to December 1904 (gage heights only), August 1921 to current year. Monthly discharge only for some periods, published in WSP 1302. Published as "at Millstone" 1903-04.

REVISED RECORDS.--WSP 1552: 1924-25(M), 1926.

GAGE.--Water-stage recorder. Concrete control since Nov. 18, 1933. Datum of gage is 26.97 ft above NGVD of 1929. June 27, 1903 to Dec. 31, 1904, nonrecording gage at bridge 2.0 mi downstream at Millstone at different datum. Aug. 4, 1921 to Aug. 16, 1928, nonrecording gage at present site and datum.

REMARKS.--Records good. Inflow from and losses to Delaware and Raritan Canal above station. Flow slightly regulated by Carnegie Lake, capacity, 310,000,000 gal and several smaller reservoirs, combined capacity, 49,800,000 gal. Several measurements of water temperature were made during the year. Satellite gage-height telemetry at station.

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

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Feb 24	0330	4,710	9.76	Jun 5	0615	*5,980	*10.98

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

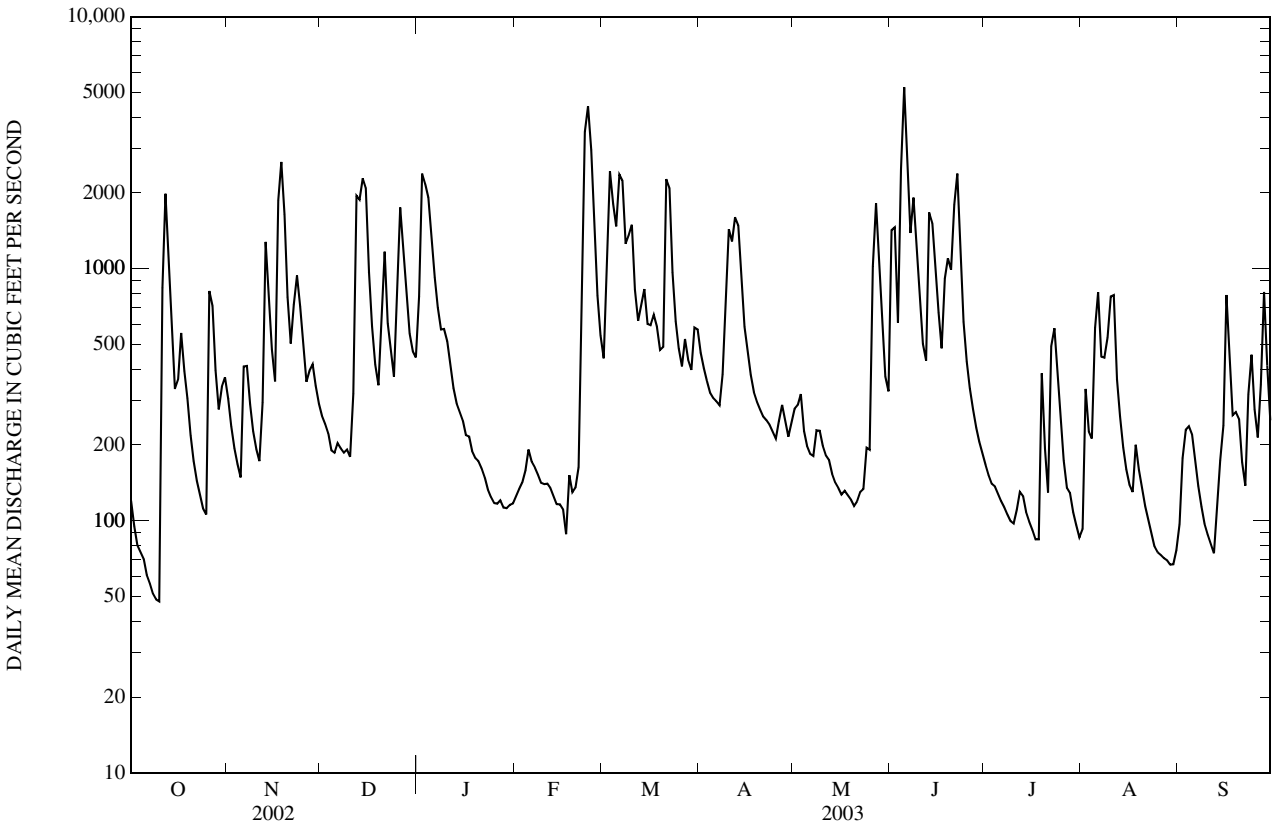
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	120	305	261	777	125	441	465	278	1,420	167	93	97
2	95	238	243	2,390	134	1,080	403	289	1,460	152	334	177
3	80	194	222	2,160	142	2,440	359	319	611	140	226	230
4	75	168	190	1,920	159	1,810	322	227	2,480	137	212	238
5	71	149	186	1,360	192	1,470	308	198	5,260	129	583	221
6	61	409	203	925	172	2,360	298	184	2,930	120	809	171
7	56	412	194	702	163	2,240	288	181	1,390	113	448	138
8	51	290	187	575	153	1,260	381	229	1,920	106	444	114
9	49	227	192	577	142	1,360	747	228	1,230	100	534	98
10	48	192	180	516	140	1,490	1,440	199	759	98	776	88
11	840	173	320	418	140	827	1,280	182	503	111	786	81
12	1,990	295	1,950	337	135	622	1,600	174	432	130	365	74
13	1,110	1,280	1,880	292	125	720	1,490	153	1,670	125	260	112
14	560	785	2,280	270	117	831	904	142	1,520	108	195	174
15	334	480	2,090	250	116	604	588	135	1,070	99	160	239
16	364	357	972	219	111	597	469	127	671	92	139	787
17	556	1,870	592	216	88	656	380	132	484	85	130	424
18	393	2,660	417	189	152	592	324	126	915	85	200	263
19	307	1,640	345	177	130	477	297	122	1,100	385	159	271
20	219	773	693	173	136	490	277	115	992	193	135	253
21	173	505	1,170	162	163	2,270	260	120	1,800	130	114	171
22	144	721	609	149	819	2,090	251	131	2,380	493	101	138
23	127	941	476	133	3,490	967	240	134	1,230	581	90	318
24	112	708	373	124	4,410	619	226	195	616	380	79	456
25	106	490	819	118	2,960	483	212	191	428	260	75	277
26	817	356	1,750	117	1,460	410	249	1,020	336	173	73	214
27	713	394	1,130	121	783	527	288	1,820	278	135	71	346
28	395	417	757	113	544	435	250	960	235	129	70	809
29	277	343	554	112	---	397	216	590	206	108	67	414
30	341	292	471	116	---	585	245	374	186	96	67	251
31	371	---	445	117	---	575	---	327	---	86	77	---
TOTAL	10,955	18,064	22,151	15,825	17,401	31,725	15,057	9,602	36,512	5,246	7,872	7,644
MEAN	353	602	715	510	621	1,023	502	310	1,217	169	254	255
MAX	1,990	2,660	2,280	2,390	4,410	2,440	1,600	1,820	5,260	581	809	809
MIN	48	149	180	112	88	397	212	115	186	85	67	74
CFSM	1.37	2.33	2.77	1.98	2.41	3.97	1.95	1.20	4.72	0.66	0.98	0.99
IN.	1.58	2.60	3.19	2.28	2.51	4.57	2.17	1.38	5.26	0.76	1.14	1.10

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1922 - 2003, BY WATER YEAR (WY)

MEAN	198	329	462	513	564	693	535	363	252	240	216	229
MAX	1,079	1,113	1,550	1,743	1,199	1,882	1,520	1,264	1,217	1,808	1,267	1,370
(WY)	(1997)	(1973)	(1997)	(1979)	(1925)	(1994)	(1983)	(1989)	(2003)	(1975)	(1971)	(1999)
MIN	42.6	51.2	67.0	62.9	105	158	103	82.8	45.5	19.3	17.3	20.2
(WY)	(1942)	(1966)	(1966)	(1981)	(1934)	(1985)	(1985)	(1963)	(1963)	(1966)	(1981)	(1980)

01402000 MILLSTONE RIVER AT BLACKWELLS MILLS, NJ—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1922 - 2003	
ANNUAL TOTAL	109,959		198,054			
ANNUAL MEAN	301		543		382	
HIGHEST ANNUAL MEAN					690	1975
LOWEST ANNUAL MEAN					165	1985
HIGHEST DAILY MEAN	2,750	May 19	5,260	Jun 5	22,000	Sep 17, 1999
LOWEST DAILY MEAN	29	Aug 18	48	Oct 10	5.0	Sep 16, 1923
ANNUAL SEVEN-DAY MINIMUM	31	Aug 13	59	Oct 4	6.3	Aug 7, 1966
MAXIMUM PEAK FLOW			5,980	Jun 5	26,200	Sep 17, 1999
MAXIMUM PEAK STAGE			10.98	Jun 5	21.01	Sep 17, 1999
INSTANTANEOUS LOW FLOW			46	Oct 9,10	5.0	Sep 16, 1923
ANNUAL RUNOFF (CFSM)	1.17		2.10		1.48	
ANNUAL RUNOFF (INCHES)	15.85		28.56		20.11	
10 PERCENT EXCEEDS	665		1,450		822	
50 PERCENT EXCEEDS	162		288		197	
90 PERCENT EXCEEDS	45		107		59	



01403060 RARITAN RIVER BELOW CALCO DAM, AT BOUND BROOK, NJ

LOCATION.--Lat 40°33'04", long 74°32'54", Somerset County, Hydrologic Unit 02030105, on right bank 1,000 ft downstream from Calco Dam and Cuckold Brook, 1,400 ft upstream from bridge on Interstate 287, 1.2 mi downstream from Millstone River, and 1.2 mi southwest of Bound Brook.

DRAINAGE AREA.--785 mi^2 (includes 11 mi^2 which drains into the Delaware and Raritan Canal).

PERIOD OF RECORD.--September 1903 to March 1909, October 1944 to current year. Monthly discharge only for some periods, published in WSP 1302. Prior to October 1966 published as "Raritan River at Bound Brook" (station 01403000).

REVISED RECORDS.--WSP 1552: 1903-07, 1946(M), 1949, 1952(P).

GAGE.--Water-stage recorder. Datum of gage is NGVD of 1929. Sept. 12, 1903 to Mar. 31, 1909, nonrecording gages at highway bridge, 1.2 mi downstream at different datum. October 1944 to Sept. 30, 1966, water-stage recorder and concrete control at site 1,000 ft upstream at datum 18.06 ft higher.

REMARKS.--Records good, except for estimated discharges which are fair. Water diverted 1.2 mi above station by Elizabethtown Water Co. for municipal supply (see Raritan River basin, diversions). Flow regulated by Spruce Run and Round Valley Reservoirs (see Raritan River basin, reservoirs in). Diversions to and releases from Round Valley Reservoir (see Raritan River basin, diversions and station 01399690). Slight diurnal fluctuations at low flow. Several measurements of water temperature were made during the year. National Weather Service telephone and USGS satellite gage-height telemetry at station.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 12,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Feb 23	1845	14,300	26.42	Jun 4	2245	*16,700	*27.47

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	198	692	656	2,070	e315	1,090	1,620	416	5,450	609	326	233
2	171	523	561	7,900	e330	3,580	1,450	468	4,230	536	935	1,010
3	148	429	507	4,820	e340	6,970	1,270	622	1,930	496	535	1,120
4	153	360	381	5,230	e375	3,440	1,070	448	9,540	460	836	938
5	151	324	375	3,390	e440	3,900	1,030	393	13,400	417	2,550	844
6	140	1,020	476	2,480	373	6,220	965	383	6,170	362	4,430	498
7	103	955	405	2,040	344	4,150	821	374	4,020	322	2,030	351
8	130	621	404	1,700	332	2,720	1,170	458	6,380	346	1,650	288
9	141	486	400	1,730	281	4,090	2,440	476	3,510	312	1,370	242
10	165	416	329	1,570	350	4,090	4,030	430	2,370	300	2,200	194
11	2,860	380	780	1,270	371	2,010	3,360	391	1,720	387	1,920	177
12	6,320	710	6,090	987	323	1,620	4,260	369	2,140	413	2,650	180
13	2,710	3,350	4,280	864	289	2,250	3,380	343	4,460	315	1,370	257
14	1,360	1,810	6,690	785	284	2,920	2,120	336	4,650	250	944	589
15	796	1,110	4,700	692	326	1,890	1,600	285	3,340	213	615	2,550
16	858	873	2,500	542	293	2,190	1,300	270	2,060	193	478	3,100
17	1,720	6,970	1,650	612	205	2,840	1,070	285	1,520	172	471	1,270
18	1,040	7,340	1,180	443	290	2,570	916	249	2,440	164	669	762
19	701	3,700	985	490	492	2,020	821	222	2,490	496	463	1,270
20	522	2,000	2,330	e470	471	1,930	705	222	2,470	320	378	1,160
21	405	1,420	3,810	e430	419	9,150	657	252	7,580	210	316	710
22	323	1,910	1,870	e390	1,900	5,640	699	306	8,150	2,650	273	517
23	281	2,440	1,430	e350	11,100	3,130	733	274	3,920	4,940	255	2,040
24	240	1,610	1,140	e330	10,100	2,250	608	409	2,370	3,200	219	2,590
25	220	1,200	2,050	e310	5,430	1,810	525	390	1,720	1,280	170	1,160
26	1,850	926	3,550	e310	2,940	1,580	674	3,090	1,350	687	190	846
27	1,540	1,060	2,370	e315	1,750	1,940	826	3,930	1,090	503	186	1,070
28	829	1,070	1,750	e290	1,310	1,550	585	1,940	911	459	174	3,270
29	580	845	1,410	e290	---	1,350	508	1,500	771	390	157	1,950
30	804	746	1,210	e300	---	3,190	461	918	682	301	173	1,040
31	877	---	1,150	e300	---	2,260	---	981	---	268	207	---
TOTAL	28,336	47,296	57,419	43,700	41,773	96,340	41,674	21,430	112,834	21,971	29,140	32,226
MEAN	914	1,577	1,852	1,410	1,492	3,108	1,389	691	3,761	709	940	1,074
MAX	6,320	7,340	6,690	7,900	11,100	9,150	4,260	3,930	13,400	4,940	4,430	3,270
MIN	103	324	329	290	205	1,090	461	222	682	164	157	177

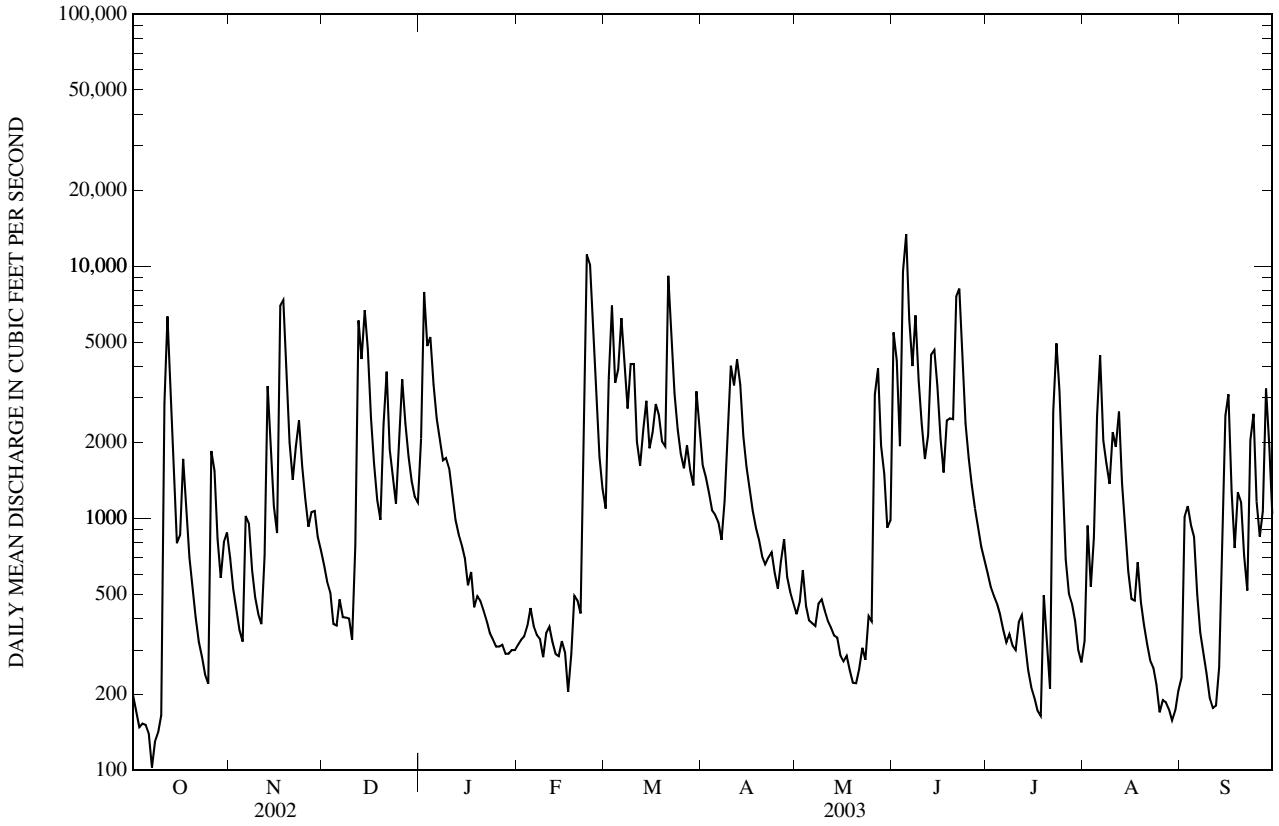
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1903 - 2003, BY WATER YEAR (WY)

MEAN	662	1,011	1,447	1,583	1,665	2,140	1,727	1,256	815	662	654	683
MAX	2,953	3,684	4,615	5,825	3,232	5,093	5,326	3,862	3,883	4,624	3,576	3,358
(WY)	(1904)	(1973)	(1997)	(1979)	(1971)	(1994)	(1983)	(1989)	(1972)	(1975)	(1955)	(1999)
MIN	113	138	165	179	198	454	230	329	117	84.7	69.9	76.1
(WY)	(1958)	(1966)	(1999)	(1981)	(2002)	(1985)	(1985)	(1992)	(1965)	(1955)	(1957)	(1957)

01403060 RARITAN RIVER BELOW CALCO DAM, AT BOUND BROOK, NJ—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1903 - 2003	
ANNUAL TOTAL	275,070		574,139			
ANNUAL MEAN	754		1,573		1,189	
HIGHEST ANNUAL MEAN					2,046	1975
LOWEST ANNUAL MEAN					432	2002
HIGHEST DAILY MEAN	7,340	Nov 18	13,400	Jun 5	61,000	Sep 17, 1999
LOWEST DAILY MEAN	98	Feb 24	103	Oct 7	37	Sep 6, 1964
ANNUAL SEVEN-DAY MINIMUM	114	Feb 24	138	Oct 3	46	Sep 4, 1957
MAXIMUM PEAK FLOW			16,700	Jun 4	82,900a	Sep 17, 1999
MAXIMUM PEAK STAGE			27.47	Jun 4	42.13b	Sep 17, 1999
INSTANTANEOUS LOW FLOW			79	Oct 7	26	Dec 31, 2001
10 PERCENT EXCEEDS	1,830		3,920		2,580	
50 PERCENT EXCEEDS	323		844		615	
90 PERCENT EXCEEDS	137		254		165	

a From rating extended above 46,000 ft^3/s on basis of indirect computation of peak flow downstream at Fieldville Dam.
b From floodmark, highest since 1700.
e Estimated



01403150 WEST BRANCH MIDDLE BROOK NEAR MARTINSVILLE, NJ

LOCATION.--Lat 40°36'44", long 74°35'27", Somerset County, Hydrologic Unit 02030105, on left bank 150 ft upstream from bridge on Crim Road, 1.4 mi northwest of Martinsville, and 1.8 mi upstream from confluence with East Branch Middle Brook.

DRAINAGE AREA.--1.99 mi^2.

PERIOD OF RECORD.--June 1979 to current year.

REVISED RECORDS.--WDR NJ-91-1: 1990. WDR NJ-96-1: 1980-94 (P), WDR NJ-99-1: 1990 (M), 1997 (M).

GAGE.--Water-stage recorder. Datum of gage is 240.48 ft above above NGVD of 1929 (levels by Somerset County).

REMARKS.--Records fair, except for flows below 1 ft^3/s, which are poor. Several measurements of water temperature were made during the year. Rain-gage radio telemetry at station.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 150 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Nov 17	0300	161	4.24	Aug 5	1600	165	4.27
Aug 4	1600	155	4.20	Sep 15	2100	*167	*4.28

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.10	0.73	0.96	18	0.72	0.98	3.0	1.1	18	0.77	0.95	0.30
2	0.10	0.66	0.90	18	0.76	16	2.7	1.4	2.9	0.75	0.63	2.1
3	0.08	0.56	0.89	7.9	0.78	7.5	2.1	1.1	1.6	0.72	0.29	1.9
4	0.11	0.50	0.73	10	1.5	2.3	2.0	1.0	55	0.69	8.8	1.2
5	0.16	0.47	0.81	4.6	0.85	12	2.2	0.94	15	0.64	17	0.52
6	0.11	4.6	0.82	4.2	0.72	9.5	1.8	0.96	3.3	0.58	2.2	0.30
7	0.12	1.2	0.72	3.2	0.74	3.4	1.9	0.90	16	0.52	0.92	0.25
8	0.12	0.81	0.78	3.0	0.72	4.3	3.4	1.00	5.8	0.45	4.2	0.22
9	0.12	0.73	0.75	4.1	0.72	13	16	0.90	3.0	0.40	1.1	0.20
10	0.15	0.76	0.72	3.0	0.72	4.5	8.7	0.83	2.0	0.44	1.0	0.18
11	15	0.88	16	2.2	0.72	2.2	7.9	0.81	1.6	1.5	1.0	0.18
12	12	11	19	1.8	0.72	4.1	10	0.75	8.8	0.47	0.70	0.15
13	1.4	4.5	10	1.6	0.64	13	3.6	0.68	13	0.34	0.55	0.22
14	0.65	1.6	22	1.5	0.61	6.2	2.6	0.61	19	0.30	0.50	4.0
15	0.37	1.0	4.6	1.4	0.57	7.7	2.3	0.57	4.7	0.29	0.46	14
16	5.7	1.6	2.9	1.2	0.56	11	2.0	0.54	2.4	0.29	0.43	3.1
17	1.6	33	1.9	1.2	1.3	9.1	1.7	0.50	1.8	0.28	0.48	0.48
18	0.62	11	1.4	1.1	0.77	5.3	1.6	0.49	11	0.26	0.46	0.32
19	0.42	2.1	1.4	1.1	0.58	3.1	1.6	0.43	3.2	0.31	0.41	2.5
20	0.33	1.5	15	1.1	0.69	21	1.5	0.43	6.0	0.29	0.36	0.53
21	0.28	1.2	4.2	0.90	0.88	20	1.5	0.57	25	1.9	0.34	0.34
22	0.24	6.1	2.5	0.86	30	5.7	1.6	0.43	6.7	9.9	0.31	0.30
23	0.22	2.5	1.9	0.83	34	3.3	1.4	0.43	3.1	3.0	0.30	8.7
24	0.22	1.5	1.5	0.83	9.5	2.6	1.4	0.68	2.0	7.6	0.26	0.88
25	0.22	1.2	8.8	0.81	3.5	2.3	1.4	0.52	1.5	0.64	0.25	0.52
26	7.9	0.98	4.6	0.81	2.0	3.1	2.8	21	1.2	0.38	0.23	0.41
27	0.95	2.7	3.1	0.75	1.3	3.1	1.8	2.5	1.0	0.32	0.23	1.9
28	0.59	1.5	2.6	0.72	1.1	2.1	1.4	1.4	0.89	0.30	0.22	4.2
29	0.60	1.3	2.2	0.72	---	16	1.4	0.96	0.87	0.27	0.22	0.86
30	1.8	1.1	2.0	0.72	---	8.1	1.2	0.71	0.85	0.24	0.22	0.55
31	1.3	---	3.3	0.72	---	4.0	---	8.7	---	0.24	0.22	---
TOTAL	53.58	99.28	138.98	98.87	97.67	226.48	94.5	53.84	237.21	35.08	45.24	51.31
MEAN	1.73	3.31	4.48	3.19	3.49	7.31	3.15	1.74	7.91	1.13	1.46	1.71
MAX	15	33	22	18	34	21	16	21	55	9.9	17	14
MIN	0.08	0.47	0.72	0.72	0.56	0.98	1.2	0.43	0.85	0.24	0.22	0.15
CFSM	0.87	1.66	2.25	1.60	1.75	3.67	1.58	0.87	3.97	0.57	0.73	0.86
IN.	1.00	1.86	2.60	1.85	1.83	4.23	1.77	1.01	4.43	0.66	0.85	0.96

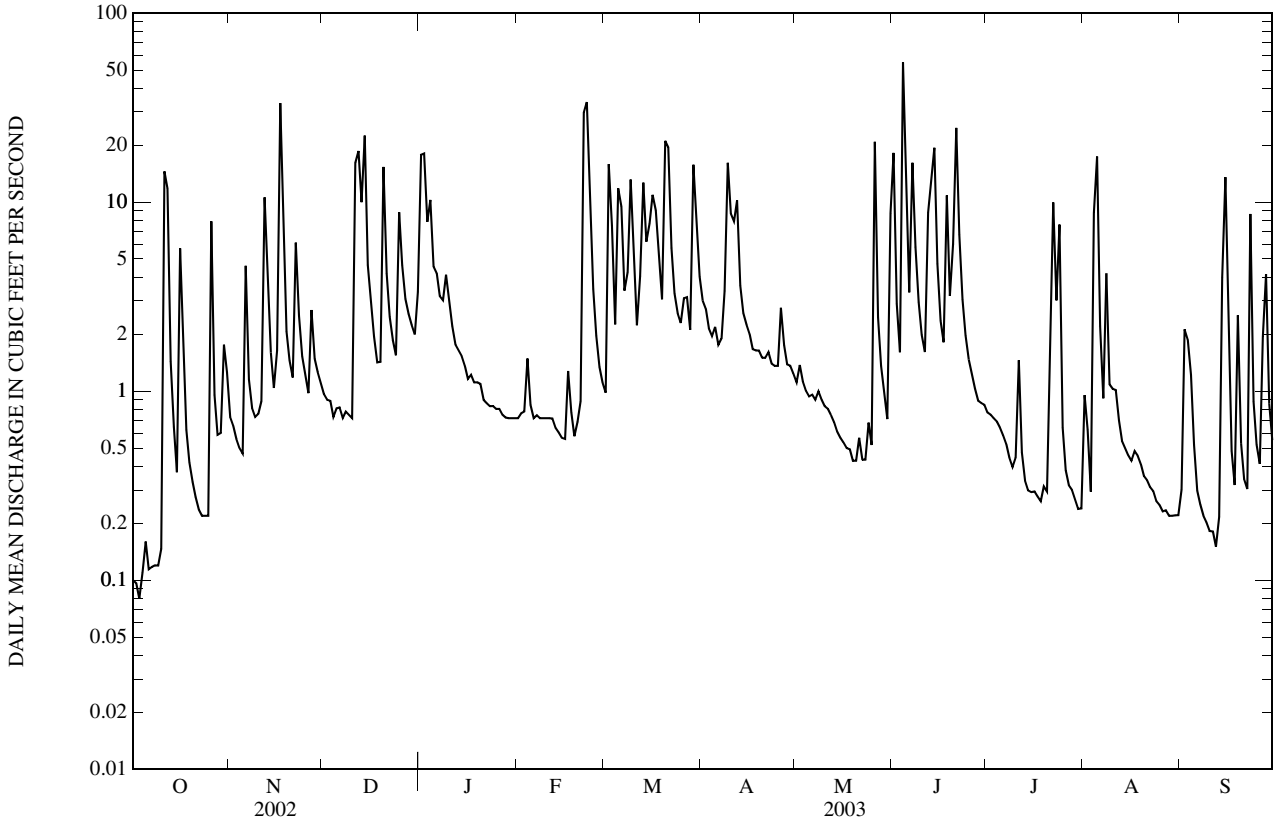
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1979 - 2003, BY WATER YEAR (WY)

MEAN	2.16	3.30	4.15	4.35	4.01	6.14	5.18	4.30	2.31	1.87	1.21	1.89
MAX	9.28	10.5	11.5	11.9	9.02	21.4	11.6	19.4	7.91	6.40	6.46	11.7
(WY)	(1990)	(1989)	(1984)	(1996)	(1988)	(1994)	(1983)	(1989)	(2003)	(1984)	(2000)	(1999)
MIN	0.12	0.22	0.13	0.12	0.41	1.64	0.74	0.76	0.27	0.083	0.12	0.11
(WY)	(2002)	(2002)	(1999)	(1981)	(2002)	(1985)	(1985)	(1986)	(1999)	(1980)	(1980)	(1980)

01403150 WEST BRANCH MIDDLE BROOK NEAR MARTINSVILLE, NJ—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1979 - 2003	
ANNUAL TOTAL	550.25		1,232.04			
ANNUAL MEAN	1.51		3.38		3.41	
HIGHEST ANNUAL MEAN					5.48	1989
LOWEST ANNUAL MEAN					0.77	2002
HIGHEST DAILY MEAN	33	Nov 17	55	Jun 4	318	Sep 16, 1999
LOWEST DAILY MEAN	0.02	Aug 22	0.08	Oct 3	0.00	Sep 19, 1980
ANNUAL SEVEN-DAY MINIMUM	0.04	Aug 13	0.11	Oct 1	0.00	Sep 19, 1980
MAXIMUM PEAK FLOW			167	Sep 15	1,490a	Sep 16, 1999
MAXIMUM PEAK STAGE			4.28	Sep 15	9.30	Sep 16, 1999
INSTANTANEOUS LOW FLOW			0.08	Oct 2	0.00	Sep 19, 1980
ANNUAL RUNOFF (CFSM)	0.76		1.70		1.71	
ANNUAL RUNOFF (INCHES)	10.29		23.03		23.27	
10 PERCENT EXCEEDS	3.2		9.9		6.0	
50 PERCENT EXCEEDS	0.41		1.1		0.84	
90 PERCENT EXCEEDS	0.06		0.29		0.14	

a From rating curve extended above 400 ft^3/s on basis of indirect computation of peak flow



01403400 GREEN BROOK AT SEELEY MILLS, NJ

LOCATION.--Lat 40°39'58", long 74°24'12", Somerset County, Hydrologic Unit 02030105, on right bank at Seeley Mills, 250 ft downstream from Blue Brook, 300 ft downstream from bridge on Diamond Hill Road, and 0.5 mi northwest of Scotch Plains.

DRAINAGE AREA.--6.23 mi^2.

PERIOD OF RECORD.--Occasional low-flow measurements, water years 1959-64, 1969: annual maximum, water years 1969-79. June 1979 to current year. Fragmentary records 1944-53 in the files of the U.S. Geological Survey. Crest-stage data 1927-38, 1958-68 in files of Union County Park Commission.

REVISED RECORDS.--WDR-NJ 81-1: 1979(M). WDR-NJ 87-1: 1971(M), 1973(M), 1975(M).

GAGE.--Water-stage recorder. Datum of gage is 184.44 ft above NGVD of 1929. From 1944 to 1953, water-stage recorder and masonry dam about 400 ft downstream, above lower Seeley Mills dam at different datum. From July 1969 to May 1979, crest-stage gage about 450 ft downstream below lower Seeley Mills dam (washed out May 29, 1968) at different datum.

REMARKS.--Records poor. Several measurements of water temperature were made during the year. Satellite/radio gage height telemetry at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of July 23, 1938 reached an elevation of 196.5 ft, New Jersey Geological Survey datum, above lower Seeley Mills dam, discharge, 5,840 ft^3/s, computed by State Water Policy Commission.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 250 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Aug 5	1630	*428	*3.33	No other peak greater than base discharge.			

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.3	1.9	4.9	43	e2.0	6.6	11	6.3	89	4.9	11	3.7
2	1.2	1.8	4.6	81	e1.9	32	10	8.0	29	4.4	12	10
3	1.2	1.8	4.2	37	e1.9	21	8.9	8.4	14	4.4	3.5	6.4
4	1.3	1.8	3.8	39	e3.0	10	8.2	6.3	127	4.1	2.9	4.6
5	1.6	1.9	3.8	23	e2.3	29	9.0	5.7	59	3.8	82	3.0
6	1.2	10	4.0	20	e2.1	28	7.9	5.7	24	3.5	34	2.5
7	1.1	2.3	3.7	16	e2.3	14	8.3	5.4	49	3.4	8.2	2.3
8	1.1	2.0	3.8	14	e2.2	13	11	8.1	40	3.3	13	2.1
9	1.1	2.0	3.5	16	e2.1	25	27	6.3	19	3.4	31	2.0
10	1.2	1.9	3.4	15	e2.1	16	25	5.7	13	4.1	12	1.9
11	61	1.8	28	11	e2.1	11	28	5.2	11	6.2	6.5	1.6
12	69	19	50	7.8	e1.8	12	52	5.0	18	4.1	5.4	1.1
13	8.1	12	30	6.6	e1.6	25	23	4.8	40	3.3	4.3	3.6
14	2.4	4.9	55	e5.7	e1.5	19	14	4.5	47	3.1	3.7	3.3
15	1.9	3.0	25	e5.1	e1.5	17	12	4.5	17	2.9	3.2	11
16	13	5.4	16	e4.5	e1.4	21	11	4.3	11	2.7	2.8	5.1
17	4.7	79	11	e4.2	e1.1	20	10	4.2	9.1	2.6	3.0	2.3
18	2.2	50	8.8	e3.6	e1.7	15	9.3	4.0	29	2.6	3.4	2.2
19	1.9	20	6.9	e3.2	e1.8	11	8.5	3.8	13	2.7	2.7	11
20	1.8	12	33	e3.0	e2.5	27	8.0	3.6	18	2.4	2.5	3.5
21	1.7	9.4	24	e2.7	3.7	69	7.5	4.8	57	4.5	2.4	2.4
22	1.6	37	14	e2.5	43	37	7.5	4.0	43	25	2.3	2.1
23	1.6	25	10	e2.3	63	18	7.0	4.2	19	8.9	2.3	20
24	1.5	13	7.9	e2.2	25	13	6.5	6.1	12	4.9	2.2	4.6
25	1.5	9.6	23	e2.1	12	11	6.2	4.7	9.4	3.3	2.1	2.7
26	18	6.5	20	e2.0	8.9	12	13	66	8.1	2.8	2.1	2.3
27	2.3	14	13	e1.9	7.7	13	9.8	17	7.1	2.5	2.1	2.8
28	2.0	9.1	11	e1.8	7.1	9.7	7.3	8.8	6.2	2.9	1.8	35
29	2.0	6.3	9.6	e2.0	---	14	6.8	7.1	5.7	2.4	2.0	6.7
30	2.6	6.0	7.9	e2.0	---	17	6.5	6.9	5.4	2.3	2.2	3.2
31	2.2	---	11	e2.0	---	12	---	26	---	2.3	1.8	---
TOTAL	215.3	370.4	454.8	382.2	209.3	598.3	380.2	265.4	849.0	133.7	270.4	165.0
MEAN	6.95	12.3	14.7	12.3	7.47	19.3	12.7	8.56	28.3	4.31	8.72	5.50
MAX	69	79	55	81	63	69	52	66	127	25	82	35
MIN	1.1	1.8	3.4	1.8	1.1	6.6	6.2	3.6	5.4	2.3	1.8	1.1
CFSM	1.11	1.98	2.35	1.98	1.20	3.10	2.03	1.37	4.54	0.69	1.40	0.88
IN.	1.29	2.21	2.72	2.28	1.25	3.57	2.27	1.58	5.07	0.80	1.61	0.99

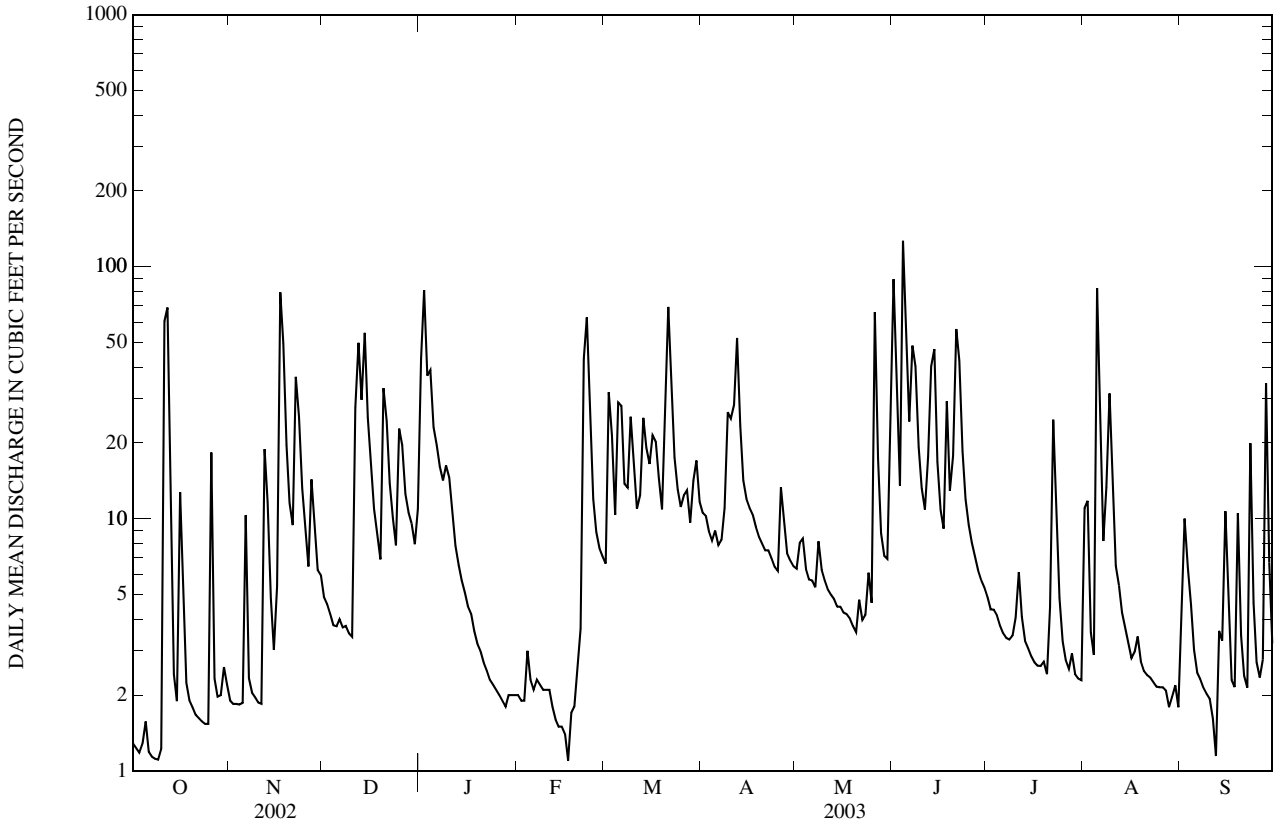
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1979 - 2003, BY WATER YEAR (WY)

MEAN	6.82	9.08	11.4	11.6	11.3	16.9	16.8	12.6	8.00	6.22	4.83	8.93
MAX	31.9	22.4	46.9	27.1	22.3	40.9	41.1	42.0	28.3	18.9	16.1	97.1
(WY)	(1997)	(1986)	(1984)	(1996)	(1998)	(1994)	(1983)	(1989)	(2003)	(1984)	(1990)	(1999)
MIN	1.21	1.48	1.62	1.67	2.24	5.11	3.50	2.44	0.35	0.32	1.33	1.68
(WY)	(1995)	(1999)	(1999)	(1981)	(2002)	(1985)	(1985)	(1999)	(1999)	(1999)	(1981)	(1994)

01403400 GREEN BROOK AT SEELEY MILLS, NJ—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1979 - 2003	
ANNUAL TOTAL	2,020.01		4,294.0			
ANNUAL MEAN	5.53		11.8		10.4	
HIGHEST ANNUAL MEAN					18.2	1984
LOWEST ANNUAL MEAN					3.25	2002
HIGHEST DAILY MEAN	79	Nov 17	127	Jun 4	1,470	Sep 16, 1999
LOWEST DAILY MEAN	0.20	Aug 16	1.1	Oct 7	0.00	Sep 11, 1981
ANNUAL SEVEN-DAY MINIMUM	0.27	Aug 13	1.2	Oct 3	0.05	Sep 24, 1981
MAXIMUM PEAK FLOW			428	Aug 5	6,240a	Aug 2, 1973
MAXIMUM PEAK STAGE			3.33	Aug 5	16.10b	Aug 2, 1973
INSTANTANEOUS LOW FLOW			0.76	Sep 12	0.00	Sep 11, 1981
ANNUAL RUNOFF (CFSM)	0.89		1.89		1.67	
ANNUAL RUNOFF (INCHES)	12.06		25.64		22.65	
10 PERCENT EXCEEDS	13		28		21	
50 PERCENT EXCEEDS	2.3		6.1		4.7	
90 PERCENT EXCEEDS	0.53		1.9		1.4	

a From rating curve extended above 600 ft^3/s on basis of slope area measurement of peak flow.
b Site and datum then in use.
e Estimated



01403540 STONY BROOK AT WATCHUNG, NJ

LOCATION.--Lat 40°38'12", long 74°27'05", Somerset County, Hydrologic Unit 02030105, on right bank at Watchung Borough Administration Building in Watchung, 150 ft downstream from bridge on Mountain Boulevard, 400 ft downstream from East Branch Stony Brook, and 2.9 mi upstream from confluence with Green Brook.

DRAINAGE AREA.--5.51 mi^2.

PERIOD OF RECORD.--October 1974 to current year.

REVISED RECORDS.--WDR NJ-86-1: 1973 (P).

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 162.24 ft above NGVD of 1929. Prior to Oct. 1, 1996, at datum 10.00 ft higher.

REMARKS.--Records good. Occasional regulation from Watchung and Best Lake directly upstream from station and other small lakes. Several measurements of water temperature were made during the year. Gage-height radio telemetry at station. Channel significantly enlarged and modified in 1991, and modified again in 1997 when the right wall was replaced.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Aug. 2, 1973, reached a stage of 24.5 ft, from floodmark, adjusted to current datum, discharge, 10,500 ft^3/s (highest since 1896), from slope-area measurements of peak flow.

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

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Oct 12	0130	447	12.41	Jun 4	0900	426	12.36
Nov 17	0315	406	12.31	Aug 5	1600	670	*12.89
Feb 22	1530	335	12.12	Aug 9	1815	371	12.22
May 31	2230	481	12.49				

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.9	6.2	6.6	60	3.4	7.6	11	3.7	83	4.8	7.1	2.1
2	2.6	5.6	6.2	70	3.5	51	11	8.4	18	4.4	11	8.5
3	2.3	5.3	5.4	30	3.5	24	9.6	9.1	12	4.1	3.9	8.4
4	2.5	4.7	5.0	34	4.6	12	8.6	6.7	192	4.0	3.3	5.4
5	2.9	4.3	5.7	18	4.5	40	8.6	6.3	56	3.3	59	3.9
6	2.4	19	5.9	16	3.6	35	7.9	6.1	21	3.8	9.2	2.7
7	2.1	7.0	5.3	13	3.6	15	8.2	5.9	54	3.8	6.0	2.3
8	2.0	2.8	5.2	13	3.5	16	11	7.0	29	3.1	10	2.0
9	1.9	4.0	5.0	14	3.2	39	33	6.5	18	2.8	39	1.9
10	2.1	4.6	4.8	12	3.2	18	27	6.1	15	2.8	13	1.7
11	73	3.8	38	10	3.1	13	28	5.9	13	4.5	6.4	1.6
12	90	28	43	8.8	2.9	16	57	5.5	23	5.5	4.9	1.5
13	14	18	24	8.0	2.7	34	20	4.8	34	3.1	5.1	2.5
14	8.8	10	61	7.4	2.6	21	14	4.5	35	2.7	4.7	4.3
15	7.0	7.5	17	7.1	2.7	20	13	4.3	16	2.6	3.3	23
16	16	8.1	13	6.7	2.5	25	12	4.1	12	2.5	2.7	13
17	12	104	11	6.6	2.5	22	11	4.0	11	2.1	2.6	7.8
18	7.5	43	8.9	5.9	2.5	17	11	3.8	28	2.1	2.4	4.7
19	5.9	13	8.4	5.4	2.9	13	9.6	3.6	13	2.7	2.2	3.2
20	5.1	11	34	5.1	3.0	48	8.7	3.3	15	1.9	1.9	1.1
21	4.4	9.1	14	4.8	3.6	91	8.1	3.9	72	2.3	1.6	0.98
22	3.9	36	11	4.4	87	35	7.7	3.9	29	22	1.4	1.5
23	3.6	16	9.6	4.1	89	19	7.1	3.7	16	10	1.5	23
24	3.4	11	8.2	3.9	26	15	6.7	5.0	12	5.0	1.4	6.1
25	3.4	10	20	3.8	13	13	6.4	4.4	11	4.2	1.3	3.8
26	28	8.1	13	3.8	11	14	10	63	9.0	3.4	1.3	3.1
27	7.6	11	11	3.6	8.9	15	8.7	13	7.3	2.8	1.3	2.9
28	5.8	9.3	10	3.4	7.9	12	7.0	10	6.9	2.9	1.3	20
29	5.3	7.7	8.9	3.4	---	13	9.6	8.2	6.6	2.7	1.2	5.9
30	8.2	7.2	8.3	3.2	---	14	4.4	6.8	5.7	2.1	1.2	3.9
31	7.7	---	9.1	3.2	---	12	---	47	---	1.9	1.2	---
TOTAL	344.3	435.3	436.5	392.6	310.4	739.6	395.9	278.5	873.5	125.9	212.4	172.78
MEAN	11.1	14.5	14.1	12.7	11.1	23.9	13.2	8.98	29.1	4.06	6.85	5.76
MAX	90	104	61	70	89	91	57	63	192	22	59	23
MIN	1.9	2.8	4.8	3.2	2.5	7.6	4.4	3.3	5.7	1.9	1.2	0.98
CFSM	2.02	2.63	2.56	2.30	2.01	4.33	2.40	1.63	5.28	0.74	1.24	1.05
IN.	2.32	2.94	2.95	2.65	2.10	4.99	2.67	1.88	5.90	0.85	1.43	1.17

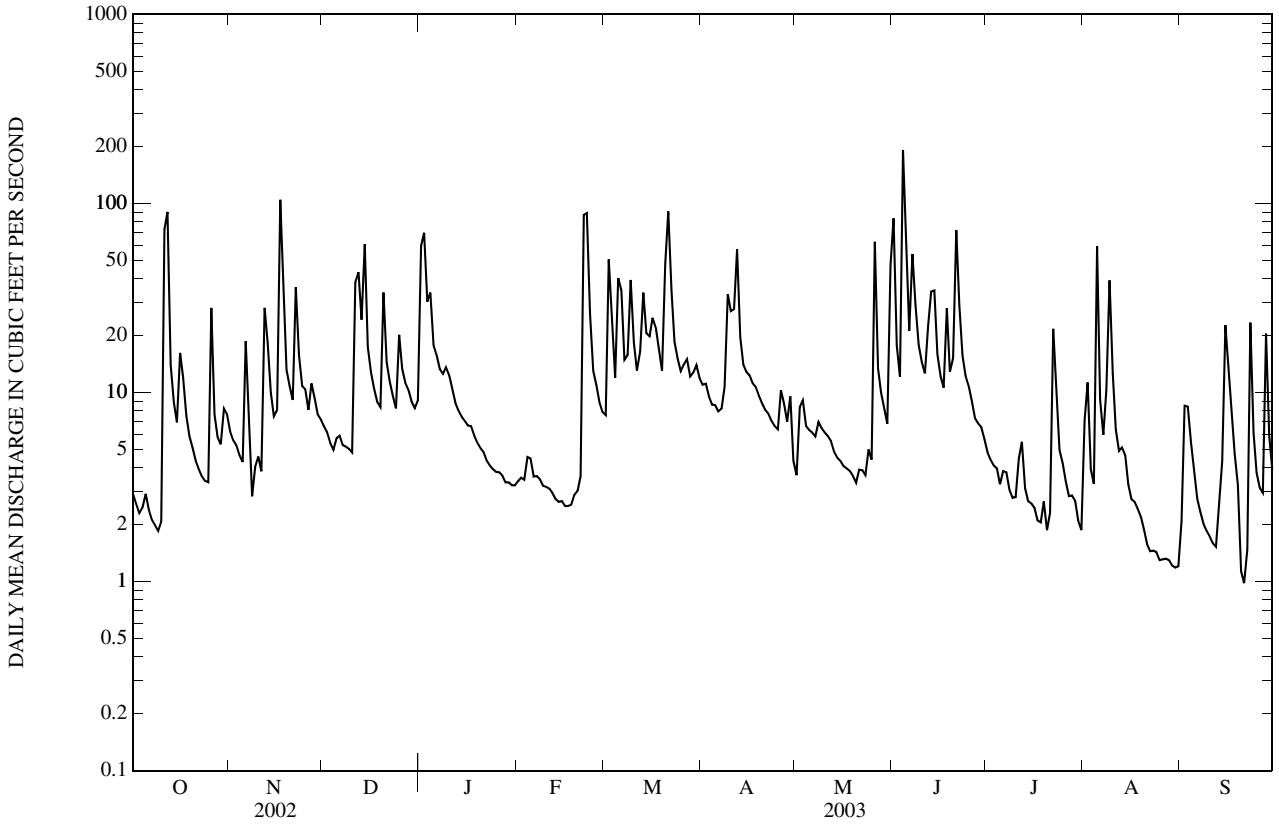
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1975 - 2003, BY WATER YEAR (WY)

MEAN	5.87	8.96	11.6	13.5	11.9	17.3	15.2	11.7	7.28	5.84	4.06	5.54
MAX	24.6	25.6	37.1	37.5	20.1	45.0	38.3	37.8	29.1	32.1	18.4	30.8
(WY)	(1997)	(1996)	(1984)	(1979)	(1988)	(1994)	(1983)	(1989)	(2003)	(1975)	(2000)	(1999)
MIN	0.81	1.48	1.21	1.08	1.86	5.60	3.89	3.42	1.80	0.55	0.75	0.87
(WY)	(1995)	(2002)	(1999)	(1981)	(2002)	(1985)	(1985)	(1986)	(1999)	(1999)	(1998)	(1983)

01403540 STONY BROOK AT WATCHUNG, NJ—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1975 - 2003	
ANNUAL TOTAL	2,491.68		4,717.68			
ANNUAL MEAN	6.83		12.9		9.88	
HIGHEST ANNUAL MEAN					16.0	1984
LOWEST ANNUAL MEAN					3.96	2002
HIGHEST DAILY MEAN	104	Nov 17	192	Jun 4	814	Sep 16, 1999
LOWEST DAILY MEAN	0.40	Aug 15	0.98	Sep 21	0.00	Sep 18, 1982
ANNUAL SEVEN-DAY MINIMUM	0.44	Aug 11	1.3	Aug 25	0.06	Sep 13, 1982
MAXIMUM PEAK FLOW			678	Aug 5	5,380a	Sep 16, 1999
MAXIMUM PEAK STAGE			12.89	Aug 5	20.40b	Jul 14, 1975
INSTANTANEOUS LOW FLOW			0.71	Sep 18	0.00	Sep 13, 1982
ANNUAL RUNOFF (CFSM)	1.24		2.35		1.79	
ANNUAL RUNOFF (INCHES)	16.82		31.85		24.36	
10 PERCENT EXCEEDS	13		29		20	
50 PERCENT EXCEEDS	3.3		7.0		4.5	
90 PERCENT EXCEEDS	0.96		2.5		1.1	

a From rating curve extended above 500 ft^3/s on basis of slope-area computation of peak flow.
b Adjusted to current datum



01405030 LAWRENCE BROOK AT WESTONS MILLS, NJ

LOCATION.--Lat 40°28'59", long 74°24'44", Middlesex County, Hydrologic Unit 02030105, on left bank at dam on Westons Mill Pond at Westons Mills, 200 ft downstream from bridge on State Route 18, and 1.3 mi upstream from mouth.

DRAINAGE AREA.--44.9 mi^2.

PERIOD OF RECORD.--Water-quality records water years 1976-81. December 1988 to October 1994, July 1995 to current year.

REVISED RECORDS.--WDR NJ-89-1: Drainage area.

GAGE.--Water-stage recorder above masonry dam. Datum of gage is NGVD of 1929.

REMARKS.--Records fair. Flow regulated by Farrington Lake, capacity, 655,250,000 gal. Diversion at gage by New Brunswick Water Department (see Raritan River basin, diversions). Several measurements of water temperature were made during the year.

COOPERATION.--Water-stage recorder inspected by and records of gate openings and diversions provided by employees of City of New Brunswick.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13	33	34	232	25	51	56	33	252	26	28	15
2	12	27	31	659	25	312	56	52	127	25	46	44
3	9.3	26	34	211	24	316	48	112	58	24	30	69
4	11	26	31	292	33	105	42	51	832	25	23	59
5	9.2	25	36	116	31	244	42	39	433	23	329	39
6	7.9	102	38	86	25	354	41	34	144	21	272	22
7	6.9	44	34	75	29	178	49	38	191	20	66	16
8	9.1	32	33	70	27	114	79	49	298	18	131	13
9	6.4	28	37	67	23	146	167	39	107	18	81	12
10	9.6	29	31	57	24	135	199	35	67	18	212	12
11	419	37	124	47	25	71	155	31	51	29	168	13
12	542	100	341	39	23	62	265	30	60	27	60	13
13	115	177	152	35	21	69	140	26	423	21	36	26
14	51	65	316	33	20	73	75	24	274	19	27	85
15	34	44	121	32	21	59	59	21	117	19	22	187
16	95	45	70	29	21	61	48	21	60	19	19	419
17	92	337	51	31	e15	60	40	24	46	19	22	36
18	41	303	42	27	26	52	39	23	245	34	26	29
19	31	98	37	27	24	46	38	22	141	138	20	56
20	26	64	115	25	26	85	37	22	98	41	16	29
21	24	49	119	25	34	345	33	30	314	29	14	21
22	22	128	59	26	459	224	37	33	190	182	14	17
23	21	152	48	24	793	97	36	31	45	214	14	123
24	21	70	46	22	357	66	37	44	47	74	12	82
25	21	49	181	22	158	56	39	35	46	49	11	30
26	276	40	226	22	98	55	54	481	39	35	11	21
27	85	65	94	24	69	73	50	257	31	28	11	19
28	41	52	65	23	55	50	39	84	29	30	12	149
29	33	41	58	25	---	65	38	57	31	30	12	54
30	57	37	51	24	---	114	32	42	29	25	12	35
31	46	---	47	23	---	78	---	57	---	23	12	---
TOTAL	2,187.4	2,325	2,702	2,450	2,511	3,816	2,070	1,877	4,825	1,303	1,769	1,745
MEAN	70.6	77.5	87.2	79.0	89.7	123	69.0	60.5	161	42.0	57.1	58.2
MAX	542	337	341	659	793	354	265	481	832	214	329	419
MIN	6.4	25	31	22	15	46	32	21	29	18	11	12

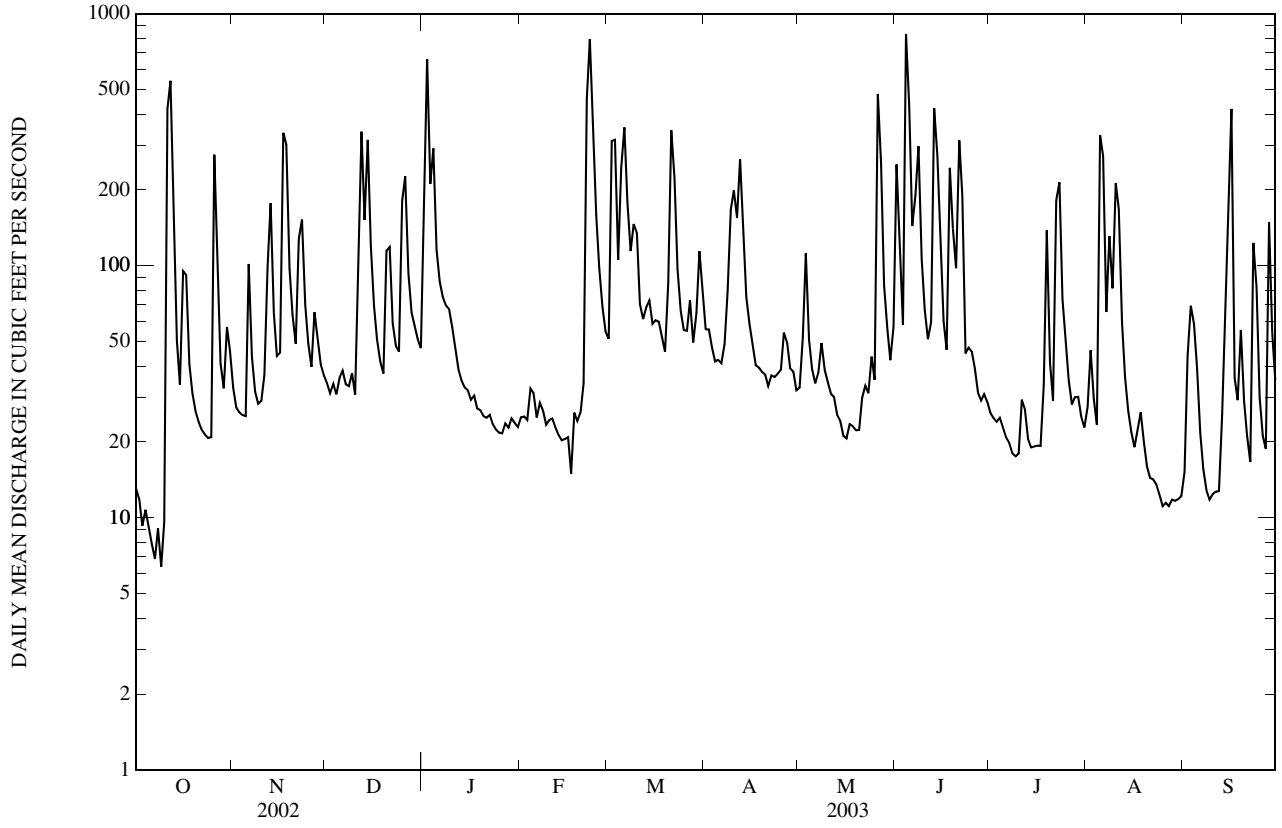
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1989 - 2003, BY WATER YEAR (WY)

MEAN	35.4	35.5	59.8	63.9	54.0	82.0	66.8	63.8	51.4	36.2	42.1	44.0
MAX	104	77.5	174	114	113	179	116	169	161	92.7	103	184
(WY)	(1997)	(2003)	(1993)	(1996)	(1998)	(1993)	(1993)	(1989)	(2003)	(1989)	(1990)	(1989)
MIN	9.72	1.33	5.57	9.99	2.55	30.3	27.4	24.9	3.91	2.70	7.32	13.6
(WY)	(2002)	(1999)	(1999)	(2002)	(2002)	(2002)	(1995)	(1995)	(1999)	(1999)	(1995)	(2001)

01405030 LAWRENCE BROOK AT WESTONS MILLS, NJ—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1989 - 2003	
ANNUAL TOTAL	15,026.21		29,580.4			
ANNUAL MEAN	41.2		81.0		51.1	
HIGHEST ANNUAL MEAN					81.0	2003
LOWEST ANNUAL MEAN					23.9	2002
HIGHEST DAILY MEAN	585	May 18	832	Jun 4	2,200	Sep 21, 1989
LOWEST DAILY MEAN	0.05	Feb 5	6.4	Oct 9	0.00	Aug 19, 1995
ANNUAL SEVEN-DAY MINIMUM	0.75	Feb 24	8.5	Oct 3	0.00	Aug 19, 1995
MAXIMUM PEAK FLOW			1,290	Jun 4,Sep 15	4,850a	Sep 21, 1989
MAXIMUM PEAK STAGE			17.31	Jun 4,Sep 15	19.20	Sep 21, 1989
INSTANTANEOUS LOW FLOW			0.05	Oct 7	0.00	many days
10 PERCENT EXCEEDS	99		211		99	
50 PERCENT EXCEEDS	18		39		27	
90 PERCENT EXCEEDS	4.8		19		7.4	

a From rating curve extended above 1,000 ft^3/s.
e Estimated



01405400 MANALAPAN BROOK AT SPOTSWOOD, NJ

LOCATION.--Lat 40°23'22", long 74°23'26", Middlesex County, Hydrologic Unit 02030105, on right bank of DeVoe Lake Dam in Spotswood, 0.1 mi upstream from Cedar Brook, and 0.6 mi upstream from confluence with Matchaponix Brook.

DRAINAGE AREA.--40.7 mi^2.

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

REVISED RECORDS.--WSP 1722: 1957-60.

GAGE.--Water-stage recorder above concrete dam. Datum of gage is NGVD of 1929 (levels by Duhernal Water System). January 1957 to September 1966 at datum 17.72 ft higher.

REMARKS.--Records good except for estimated daily discharges, which are poor. Discharge given herein includes flow through sluice gate when open. Gate open many days throughout the year. Some regulation by Lake Manalapan, Helmetta Pond, and DeVoe Lake. Several measurements of water temperature were made during the year. Satellite gage-height telemetry at station.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 468 ft^3/s, June 5, gage height, 18.80 ft; minimum discharge, 0.00 ft^3/s, on several days, gage height, 17.59 ft.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18	45	46	85	38	77	76	45	83	e29	27	42
2	17	37	43	284	40	136	70	51	109	27	94	48
3	16	33	38	e450	43	333	e65	79	70	27	94	e65
4	14	31	37	e420	48	266	e60	67	211	e30	49	75
5	16	29	37	e300	56	171	57	53	427	e29	57	e73
6	e15	55	37	e190	48	e380	54	49	252	e28	107	e50
7	14	68	37	122	45	266	57	51	e200	e27	e90	e31
8	14	49	37	e104	43	e250	78	55	e370	e25	147	e27
9	14	39	37	e86	39	e200	132	51	e260	25	165	e23
10	16	34	37	73	44	182	234	48	e170	25	e130	25
11	91	33	49	63	41	139	189	45	e140	40	e110	25
12	258	42	182	55	38	e125	248	45	e100	38	72	32
13	186	109	e300	49	35	109	289	45	111	32	52	e50
14	74	95	e290	48	36	117	132	42	145	27	e31	e80
15	63	75	196	45	39	96	88	40	138	28	e29	e105
16	76	99	98	41	34	89	75	40	96	19	27	161
17	83	e180	69	43	37	89	65	37	69	21	29	85
18	76	e340	56	37	36	85	58	29	140	24	42	64
19	50	191	48	36	40	74	57	27	e288	50	45	e45
20	39	95	62	37	44	76	55	28	e110	32	31	e30
21	35	70	99	35	e52	192	52	32	e180	27	26	18
22	29	94	78	34	e100	200	54	38	e300	89	24	18
23	27	152	61	33	e440	120	68	42	e170	e133	23	41
24	27	89	51	32	e400	85	58	51	83	e96	21	85
25	24	66	83	30	312	73	51	52	64	e53	18	63
26	81	57	207	32	270	69	55	151	54	36	18	44
27	96	59	148	34	e170	76	63	307	e42	32	18	38
28	e57	61	88	31	86	72	55	162	e39	27	18	42
29	43	54	71	33	---	66	51	86	e34	27	18	42
30	49	49	62	35	---	87	48	64	e32	24	21	38
31	52	---	59	35	---	88	---	53	---	23	35	---
TOTAL	1,670	2,430	2,743	2,932	2,654	4,388	2,694	1,965	4,487	1,150	1,668	1,565
MEAN	53.9	81.0	88.5	94.6	94.8	142	89.8	63.4	150	37.1	53.8	52.2
MAX	258	340	300	450	440	380	289	307	427	133	165	161
MIN	14	29	37	30	34	66	48	27	32	19	18	18
CFSM	1.32	1.99	2.17	2.32	2.33	3.48	2.21	1.56	3.67	0.91	1.32	1.28
IN.	1.53	2.22	2.51	2.68	2.43	4.01	2.46	1.80	4.10	1.05	1.52	1.43

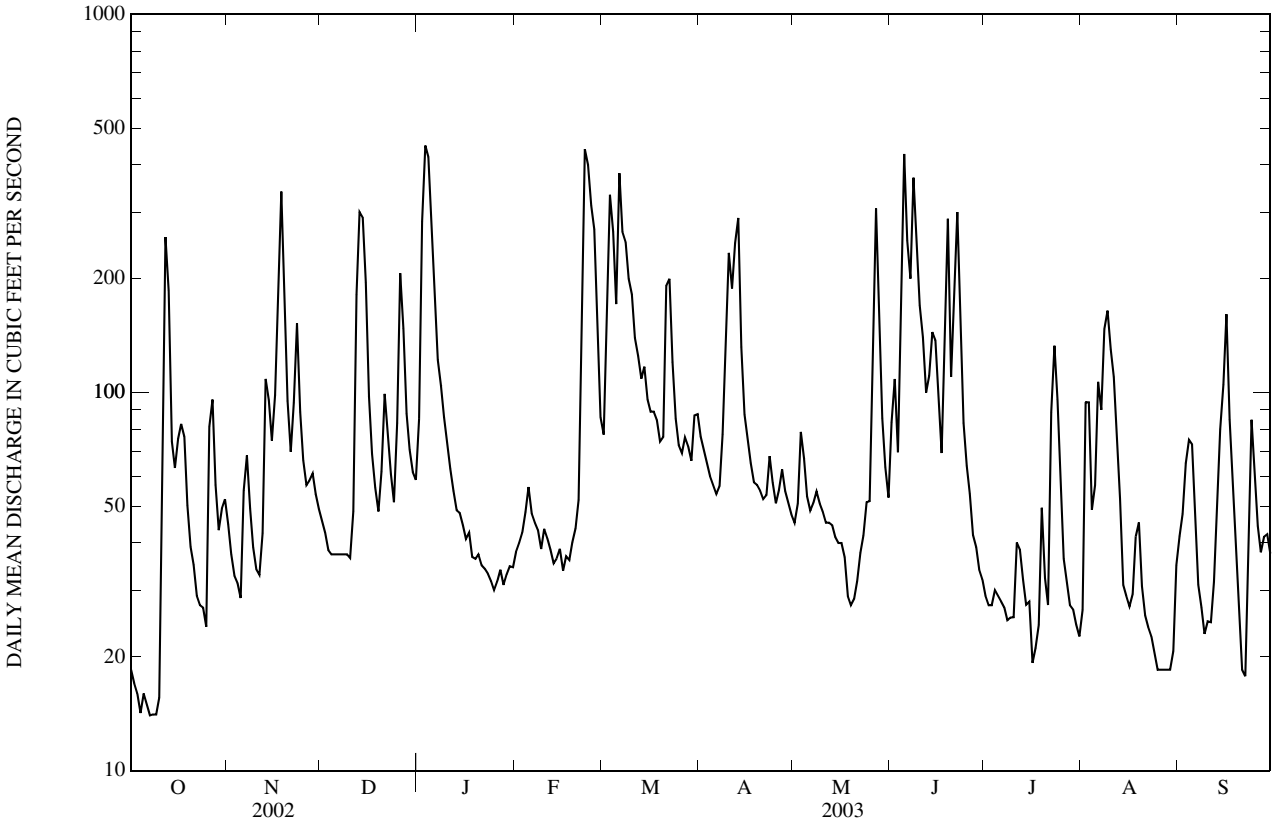
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1957 - 2003, BY WATER YEAR (WY)

MEAN	39.8	55.4	72.8	78.1	76.1	91.4	83.4	66.2	48.3	41.6	41.9	40.6
MAX	95.2	154	156	186	139	164	154	148	150	141	128	138
(WY)	(1990)	(1978)	(1984)	(1978)	(1979)	(1958)	(1983)	(1984)	(2003)	(1975)	(1990)	(1989)
MIN	13.7	14.2	21.4	21.1	23.6	36.3	31.1	26.5	14.8	4.40	5.56	11.6
(WY)	(1983)	(2002)	(1999)	(1981)	(2002)	(2000)	(1985)	(1977)	(1999)	(1966)	(1966)	(1965)

01405400 MANALAPAN BROOK AT SPOTSWOOD, NJ—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1957 - 2003	
ANNUAL TOTAL	14,927.7		30,346			
ANNUAL MEAN	40.9		83.1		61.5	
HIGHEST ANNUAL MEAN					101	1973
LOWEST ANNUAL MEAN					26.5	2002
HIGHEST DAILY MEAN	340	Nov 18	450	Jan 3	1,390	May 30, 1968
LOWEST DAILY MEAN	8.0	Jul 28	14	Oct 4, 7-9	0.00	Jun 16, 1957
ANNUAL SEVEN-DAY MINIMUM	8.7	Jul 24	15	Oct 3	0.64	Sep 24, 1999
MAXIMUM PEAK FLOW			468	Jun 5	1,700	Sep 20, 1989
MAXIMUM PEAK STAGE			18.80	Jun 5	20.50	Sep 20, 1989
INSTANTANEOUS LOW FLOW			0.00	Many days	0.00a	Many days
ANNUAL RUNOFF (CFSM)	1.00		2.04		1.51	
ANNUAL RUNOFF (INCHES)	13.64		27.74		20.53	
10 PERCENT EXCEEDS	81		189		117	
50 PERCENT EXCEEDS	26		53		44	
90 PERCENT EXCEEDS	9.8		27		18	

a Zero flow recorded on June 16, 1957 and many days since.
e Estimated



01406050 DEEP RUN AT OLD BRIDGE, NJ

LOCATION.--Lat 40°24'55", long 74°20'55", Middlesex County, Hydrologic Unit 02030105, on right end of dam for Deep Run Reservoir, 800 ft upstream of Waterworks Road, 0.9 mi east of Old Bridge, 1.2 mi upstream of mouth, and 3.2 mi south of Sayreville.

DRAINAGE AREA.--16.0 mi^2 (revised).

PERIOD OF RECORD.--Miscellaneous measurements made in Water Year 2000. October 1, 2000 to current year.

GAGE.--Water-stage recorder above concrete dam. Datum of gage is 2.5 ft above National Geodetic Vertical Datum of 1929 (determined by personnel of Hatch Mott MacDonald).

REMARKS.--Records fair. Dam construction for Deep Run Reservoir was completed in 1988. Water diverted for municipal supply by City of Perth Amboy from nearby wells. Records given herein represent flow over spillway, flow through gates and leakage. Several measurements of water temperature were made during the year. Satellite gage-height telemetry at station.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

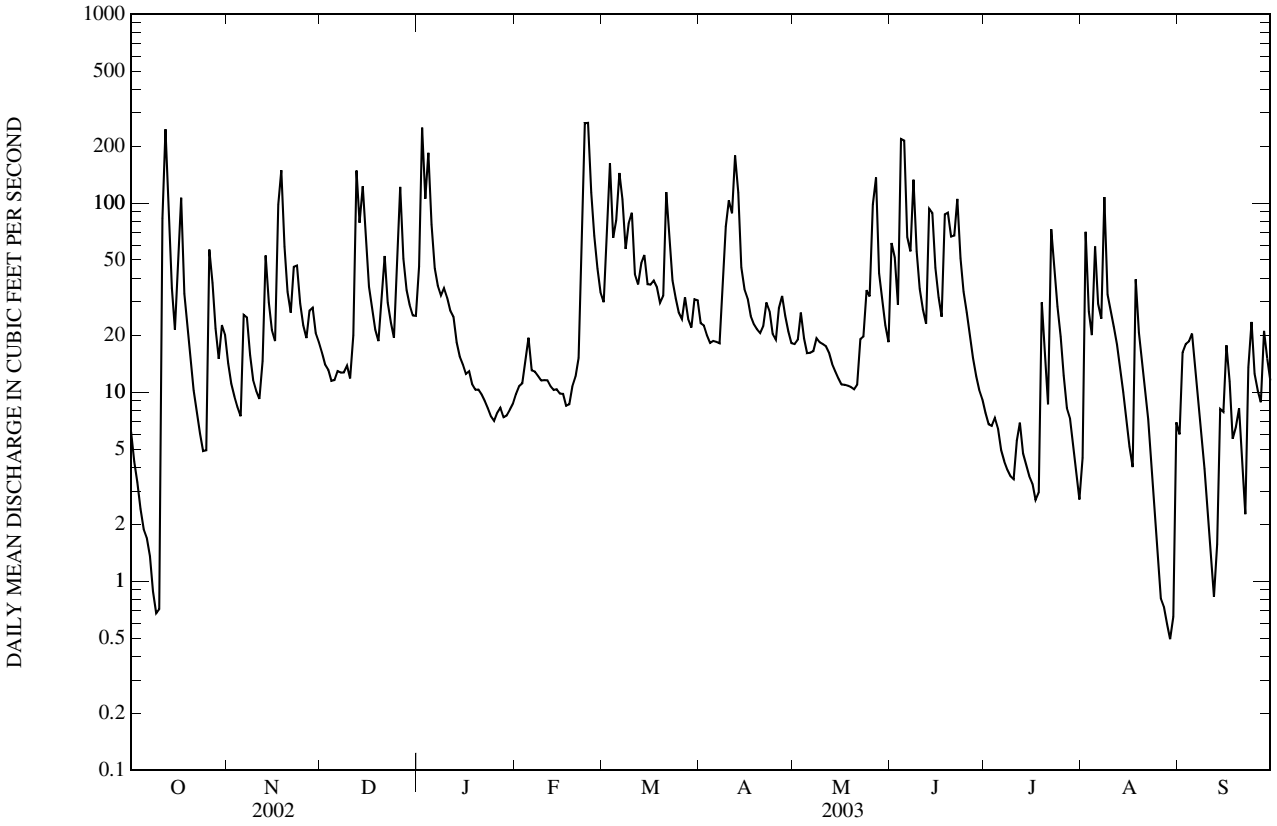
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.2	14	16	46	9.8	30	23	18	61	7.8	4.5	6.0
2	4.3	11	14	250	11	78	23	19	52	6.8	71	16
3	3.3	9.5	13	105	11	162	20	26	29	6.6	27	18
4	2.4	8.3	11	185	15	65	18	19	218	7.3	20	19
5	1.9	7.5	12	77	19	81	19	16	214	6.4	59	20
6	1.7	26	13	45	13	144	18	16	66	4.9	29	13
7	1.4	25	13	37	13	105	18	16	56	4.3	24	8.8
8	0.88	16	13	32	12	57	36	19	133	3.9	108	5.6
9	0.68	12	14	35	12	78	75	18	55	3.6	33	3.9
10	0.71	10	12	32	12	89	103	18	35	3.5	27	2.4
11	83	9.2	20	27	12	42	88	18	27	5.5	22	1.4
12	246	15	149	25	11	37	179	16	23	6.9	18	0.83
13	101	53	79	18	10	48	114	14	94	4.7	13	1.6
14	36	30	123	15	10	53	46	13	89	4.2	10	8.1
15	21	21	67	14	9.8	37	35	12	45	3.6	7.2	7.9
16	52	19	36	13	9.8	37	31	11	32	3.3	5.1	18
17	107	98	28	13	8.5	39	25	11	25	2.7	4.0	11
18	33	149	21	11	8.6	36	23	11	87	2.9	40	5.7
19	22	59	19	10	11	30	22	11	89	30	21	6.5
20	14	34	32	10	12	32	21	10	67	17	15	8.2
21	10	26	53	9.7	15	114	22	11	67	8.6	10	4.2
22	7.8	46	30	9.0	56	70	30	19	105	73	7.2	2.3
23	6.0	47	23	8.2	264	39	27	20	51	46	4.4	14
24	4.9	29	19	7.4	266	31	20	35	34	28	2.5	24
25	4.9	23	54	7.1	114	26	19	32	26	20	1.4	13
26	57	19	122	7.8	67	24	28	98	20	12	0.81	10
27	38	27	51	8.3	45	32	32	137	15	8.2	0.73	8.8
28	22	28	35	7.4	34	24	25	43	12	7.3	0.59	21
29	15	21	29	7.5	---	22	21	31	10	5.2	0.49	15
30	23	18	25	8.1	---	31	18	23	9.1	3.7	0.65	12
31	20	---	25	8.7	---	31	---	18	---	2.7	6.9	---
TOTAL	947.07	910.5	1,171	1,089.2	1,091.5	1,724	1,179	779	1,846.1	350.6	593.47	306.23
MEAN	30.6	30.4	37.8	35.1	39.0	55.6	39.3	25.1	61.5	11.3	19.1	10.2
MAX	246	149	149	250	266	162	179	137	218	73	108	24
MIN	0.68	7.5	11	7.1	8.5	22	18	10	9.1	2.7	0.49	0.83

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2001 - 2003, BY WATER YEAR (WY)

MEAN	13.3	16.0	20.8	23.0	23.5	42.3	27.7	20.3	31.9	6.24	9.53	8.52
MAX	30.6	30.4	37.8	35.1	39.0	55.6	39.3	25.1	61.5	11.3	19.1	13.4
(WY)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2002)
MIN	0.94	0.73	4.07	7.57	5.55	16.6	11.8	14.6	15.0	0.55	4.16	1.95
(WY)	(2002)	(2002)	(2002)	(2002)	(2002)	(2002)	(2002)	(2001)	(2001)	(2002)	(2001)	(2001)

01406050 DEEP RUN AT OLD BRIDGE, NJ—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 2001 - 2003	
ANNUAL TOTAL	6,101.56		11,987.67			
ANNUAL MEAN	16.7		32.8		20.2	
HIGHEST ANNUAL MEAN					32.8	2003
LOWEST ANNUAL MEAN					8.90	2002
HIGHEST DAILY MEAN	246	Oct 12	266	Feb 24	340	Mar 22, 2001
LOWEST DAILY MEAN	0.10	Aug 23	0.49	Aug 29	0.10	Aug 23, 2002
ANNUAL SEVEN-DAY MINIMUM	0.12	Aug 18	1.0	Aug 24	0.11	Nov 10, 2001
MAXIMUM PEAK FLOW			419	Jun 4	576	Mar 22, 2001
MAXIMUM PEAK STAGE			7.58	Jun 4	7.68	Mar 22, 2001
INSTANTANEOUS LOW FLOW			0.43	Aug 30	0.10	Aug 22, 2002
10 PERCENT EXCEEDS	40		80		46	
50 PERCENT EXCEEDS	7.6		19		9.7	
90 PERCENT EXCEEDS	0.33		4.5		0.55	



RARITAN RIVER BASIN

01406710 RARITAN RIVER AT SOUTH AMBOY, NJ

LOCATION.--Lat 40°29'31", long 74°16'51", Middlesex County, Hydrologic Unit 02030105, on right bank at the Werner Generating Station in South Amboy, 0.1 mi downstream from NJ Transit railroad bridge, 0.4 mi upstream from the mouth, and 1.3 mi southwest of Perth Amboy.

DRAINAGE AREA.--1,100 mi^2.

PERIOD OF RECORD.--August 1997 to September 1999 (unpublished fragmentary gage-height record), October 1999 to current year.

GAGE.--Water-stage recorder. Datum of gage is at 0.00 ft North American Vertical Datum of 1988 (NAVD of 1988). To determine approximate elevations to National Geodetic Vertical Datum of 1929 (NGVD of 1929), add 0.99 ft. To determine elevations to Mean Lower Low Water Datum, add 3.05 ft. (revised to tidal Epoch 1983-2001).

REMARKS.--Significant ice effect during January and February. Summaries for months with short periods of no gage-height record have been estimated with little or no loss of accuracy. Satellite stage telemetry at station.

EXTREMES FOR PERIOD OF PUBLISHED RECORD.--Maximum elevation recorded, 5.55 ft (NAVD of 1988), Dec. 25, 2002; minimum recorded, -5.33 ft (NAVD of 1988), Feb. 28, 2002, but a lower elevation could have occurred when the well was frozen, Jan. 18 to Feb. 10, 2000 and Jan. 18 to Feb. 28, 2003.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum elevation known, 9.4 ft (adjusted to NAVD of 1988), Dec. 11, 1992, from tidal crest-stage gage at Perth Amboy (station 01406700).

EXTREMES FOR CURRENT YEAR.--Maximum elevation recorded, 5.55 ft (NAVD of 1988), Dec. 25; minimum recorded, -5.30 ft (NAVD of 1988), Dec. 1, but a lower elevation may have occurred during period of ice effect Jan. 18 to Feb. 28, 2003.

Summaries of tide elevations during the year are as follows:

TIDE ELEVATIONS, IN FEET, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

		OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
Maximum	Elevation	4.51	4.20	5.55	5.50	---	4.40	5.32	5.02	4.56	4.01	3.52	4.49
high tide	Date	7	6	25	3	---	19	17	16	13	10	11	28
Minimum	Elevation	-4.20	-4.82	-5.30	---	-4.90	---	-5.02	-3.94	-3.45	-3.49	-3.68	-3.24
low tide	Date	6	18	1	---	5	---	16	15	15	15	30	11
Mean high tide		2.76	2.17	2.14	---	---	2.3e	2.54	2.52	2.62	2.46	2.53	2.89
Mean water level		.29	-.33	-.41	---	---	-.2e	.11	.06	.18	.00	.01	.41
Mean low tide		-2.29	-2.99	-3.13	---	---	-2.8e	-2.52	-2.52	-2.37	-2.63	-2.65	-2.19

e - estimated

RESERVOIRS IN RARITAN RIVER BASIN

01396790 SPRUCE RUN RESERVOIR.--Lat 40°38'37", long 74°55'25", Hunterdon County, Hydrologic Unit 02030105, at dam on Spruce Run, 0.5 mi north of Clinton, and 0.6 mi upstream from mouth.
DRAINAGE AREA.-- 41.3 mi^2.
PERIOD OF RECORD.-- November 1963 to current year.
REVISED RECORDS.-- WDR NJ-84-1: (M). WDR NJ-85-1: 1984.
GAGE.-- Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929.
REMARKS.--Reservoir is formed by earthfill dam with concrete spillway; dam completed in October 1963 with crest of spillway at elevation 273.00 ft. Usable capacity, 11,000,000,000 gal. Dead storage 300,000 gal. Reservoir used for water supply and recreation. Outflow mostly regulated by gates. Water is released to maintain minimum flow on the South Branch Raritan River and, at times, for municipal supply. Records given herein represent usable capacity.
COOPERATION.--Records provided by New Jersey Water Supply Authority.
EXTREMES FOR PERIOD OF RECORD.--Maximum contents observed, 11,820,000,000 gal, Jan. 24, 1979, elevation, 274.72 ft; minimum observed, 3,100,000,000 gal, Oct. 18, 1983, elevation, 246.68 ft.
EXTREMES FOR CURRENT YEAR.--Maximum contents, 11,250,000,000 gal, June 21, elevation, 273.50 ft; minimum observed, 4,920,000,000 gal, Oct. 11, elevation, 254.61 ft.

01397050 ROUND VALLEY RESERVOIR.--Lat 40°36'39", long 74°50'41", Hunterdon County, Hydrologic Unit 02030105, at main dam on Prescott Brook, 1.8 mi south of Lebanon, 3.2 mi upstream from mouth, and 4.5 mi west of Whitehouse.
DRAINAGE AREA.-- 5.7 mi^2.
PERIOD OF RECORD.-- March 1966 to current year.
REVISED RECORDS.-- WDR NJ-85-1: 1984. WDR NJ-01-1: 1996 (elevation, contents). WDR NJ-02-1: 2001 (contents).
GAGE, Nonrecording gage read daily. Datum of gage is National Geodetic Vertical Datum of 1929.
REMARKS.--Reservoir is formed by earthfill dam at main dam on Prescott Brook and two dams on South Branch Rockaway Creek at Lebanon; storage began in March 1966. Capacity at spillway level, 55,000,000,000 gal, elevation, 385.00 ft. Reservoir is used primarily for storage and is filled by pumping from South Branch Raritan River at Hamden Pumping Station (see following page). Outflow is controlled by operation of gates in pipe in dams. Water is released into South Branch Rockaway Creek and Prescott Brook.
COOPERATION.--Records provided by New Jersey Water Supply Authority.
EXTREMES FOR PERIOD OF RECORD.--Maximum contents observed, 55,400,000,000 gal, June 15, 1975, elevation, 385.63 ft; minimum observed (after first filling), 37,100,000,000 gal, Feb. 9, 1981, elevation, 361.30 ft.
EXTREMES FOR CURRENT YEAR: Maximum contents observed, 53,140,000,000 gal, Sept. 29, elevation, 382.68 ft; minimum observed, 44,540,000,000 gal, Oct 10, elevation, 371.17 ft.

MONTHEND ELEVATION AND CONTENTS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Elevation (feet)†	Contents (million gallons)	Change in contents (equivalent in ft^3/s)	Elevation (feet)†	Contents (million gallons)	Change in contents (equivalent in ft^3/s)
	01396790 SPRUCE RUN RESERVOIR			01397050 ROUND VALLEY RESERVOIR		
Sept.30.....	256.34	5,350		371.24	44,570	
Oct. 31.....	256.82	5,490	+7.0	371.44	44,740	+8.5
Nov. 30.....	260.22	6,410	+47.4	371.62	44,920	+9.3
Dec. 31.....	265.18	8,000	+79.3	371.82	45,110	+9.5
CAL YR 2002			+18.6			-27.5
Jan. 31.....	268.00	9,050	+52.4	371.85	45,130	+1.0
Feb. 28.....	269.90	9,720	+37.0	372.26	45,380	+13.8
Mar. 31.....	273.10	11,060	+66.9	373.22	46,220	+41.9
Apr. 30.....	272.90	10,960	-5.2	378.68	50,240	+207
May 31.....	272.90	10,960	0	381.28	52,040	+89.8
June 30.....	273.02	11,010	+2.6	381.94	52,540	+25.8
July 31.....	272.86	10,950	-3.0	382.24	52,740	+10.0
Aug. 31.....	272.53	10,830	-6.0	382.27	52,770	+1.5
Sept.30.....	272.96	10,980	+7.7	382.65	53,130	+18.6
WTR YR 2003			+23.9			+36.3

† Elevation at 0900 of the last day of each month.

RARITAN RIVER BASIN

DIVERSIONS IN RARITAN RIVER BASIN

01396920 Water is diverted at the Hamden Pumping Station 4.0 mi upstream from the gaging station on South Branch Raritan River at Stanton (see station 01397000) for storage in Round Valley Reservoir. Water can be released from Round Valley Reservoir into the South Branch Raritan River at Hamden and are noted as negative discharge. Records provided by New Jersey Water Supply Authority. REVISED RECORDS.-- WDR NJ-85-1: 1984, WDR NJ-03-1: 2002

01399669 Water is also released from Round Valley Reservoir and enters the South Branch Rockaway Creek directly upstream from gaging station (01399670) at Whitehouse Station. Records provided by New Jersey Water Supply Authority.

01400836 Water is diverted from Carnegie Lake (Millstone River) at Princeton to the Delaware and Raritan Canal at the aqueduct 4.1 mi downstream from the gaging station on the Delaware and Raritan Canal at Port Mercer (station 01460440). Negative discharge indicates flow from Canal to Carnegie Lake. Records provided by New Jersey Water Supply Authority. REVISED RECORDS.--WDR NJ-85-1: 1984.

01402910 Water is diverted from the Raritan River just below the Millstone River to the Delaware and Raritan Canal at Ten Mile Lock for municipal supply. Negative discharge indicates flow from Canal to Millstone River. Records provided by the New Jersey Water Supply Authority. REVISED RECORDS.--WDR NJ-85-1: 1984.

01402915 (revised) Elizabethtown Water Company diverts water from the Raritan River just downstream from the mouth of the Millstone River at Manville. In October 1996, the intake was relocated from just upstream of mouth to the present location. Previous to the 2003 water year, records were pulished as 01400509 Raritan and Milllstone Rivers. Records provided by the Elizabethtown Water Company. REVISED RECORDS.-- WDR NJ-91-1: 1992.

01405029 Water is diverted from Lawrence Brook at Westons Mills, just upstream of gaging station (01405030), by City of New Brunswick (since 1873), for municipal supply. Records provided by City of New Brunswick Water Department.

01460570 Elizabethtown Water Company diverts water from the Delaware and Raritan Canal 1200 ft downstream from Ten Mile Lock at Franklin for municipal supply. Records provided by the Elizabethtown Water Company.

DIVERSIONS, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

MONTH	01396920 Hamden pumping station	01399669 Whitehouse Release	01400836 Carnegie Lake	01402910 Ten Mile Lock diversion	01402915 Raritan River	01405029 Westons Mills	01460570 Delaware and Raritan Canal
October	0	0	0	-25.5	163	.45	20.5
November	0	0	0	-33.0	165	.75	12.9
December	0	0	0	-32.8	160	2.06	22.8
CAL YR 2002	3.06	33.2	0	-15.5	189	1.59	14.6
January	0	0	0	-32.9	165	2.09	24.5
February	0	0	0	-18.7	168	.73	29.0
March	19.4	0	0	-31.5	165	1.84	25.6
April	192	0	0	-34.9	162	3.11	27.7
May	86.5	0	0	-28.1	181	2.73	14.1
June	0	0	0	-59.1	199	1.19	1.13
July	0	0	0	-8.98	205	1.74	31.5
August	0	0	0	-4.84	195	1.65	27.4
September ...	0	0	0	-12.4	175	2.62	30.8
WTR YR 2003	24.8	0	0	-26.9	175	1.75	22.3

MONTH	01396920 Hamden pumping station
October.....	0a
November.....	0a
December.....	0a
CAL YR 2001	0a
January.....	0a
February.....	0a
March.....	0a
April.....	10.9
May.....	25.5
June.....	0a
July.....	0a
August.....	0a
September....	0a
WTR YR 2002	3.06a

a Corrected figures for water year 2002.

WAACKAACK CREEK BASIN

01407080 WAACKAACK CREEK AT KEANSBURG, NJ

LOCATION.--Lat 40°26'55", long 74°08'50", Monmouth County, Hydrologic Unit 02030104, on left bank just upstream of Bayshore Flood Control Station in Keansburg, 200 ft upstream from tide gate, 1.3 mi east of Union Beach, and 0.3 mi downstream from bridge on Laurel Avenue.

DRAINAGE AREA.--8.03 mi^2.

PERIOD OF RECORD.--September 1997 to January 2000 (unpublished fragmentary gage-height record), February 2000 to current year.

GAGE.--Water-stage recorder. Datum of gage is at 0.00 ft North American Vertical Datum of 1988 (NAVD of 1988).To determine approximate corresponding National Geodetic Vertical Datum of 1929 (NGVD of 1929) elevation, add 1.18 ft. To determine approximate corresponding Mean Lower Low Water datum, add 3.10 ft (revised to tidal Epoch 1983-2001).

REMARKS.--No gage-height record Jan. 20-29, Feb. 1-20, Mar. 7, and portions of numerous other days. Ice effect evident Jan. 13 to Feb. 28. Gage cannot measure a tide level of less than -2.62 ft (NAVD of 1988). Monthly minimum elevations, monthly mean low tides, and monthly mean water levels are undetermined for this period. Some regulation by tide gate and pumps at Bayshore Flood Control Station. Bay Shore Flood Control Station construction began June 19, 1970 and was completed January 18, 1973. Summaries for months with short periods of no gage-height record have been estimated with little or no loss of accuracy unless otherwise noted. Some periods cannot be estimated and are noted by dashed (---) lines. Satellite stage telemetry at station.

EXTREMES FOR PERIOD OF PUBLISHED RECORD.--Maximum elevation recorded, 3.44 ft (NAVD of 1988), Sept. 20, 2001.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum known elevation, 7.9 ft (adjusted to NAVD of 1988), Nov. 25, 1950, from high-water mark in Keansburg (prior to installation of flood gate), published in Tidal Flood Plain Information - Sandy Hook Bay and Raritan Bay Shore Areas, Monmouth County, New Jersey, July 1972, by the U.S. Army Corp of Engineers.

EXTREMES FOR CURRENT YEAR.--Maximum elevation recorded, 3.25 ft (NAVD of 1988), May 14.

Summaries of tide elevations during the year are as follows:

TIDE ELEVATIONS, IN FEET, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

		OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
Maximum	Elevation	3.24	3.13	3.04	---	---	3.19	3.21	3.25	3.18	3.14	3.10	3.18
high tide	Date	4	5	31	---	---	19	18	14	12	11	27, 31	23
Minimum	Elevation	---	---	---	---	---	---	---	---	---	---	---	---
low tide	Date	---	---	---	---	---	---	---	---	---	---	---	---
Mean high tide		2.46	2.00	1.85	---	---	2.08	2.31	2.33	2.42	2.31	2.42	2.62
Mean water level		---	---	---	---	---	---	---	---	---	---	---	---
Mean low tide		---	---	---	---	---	---	---	---	---	---	---	---

RARITAN BAY

01407081 RARITAN BAY AT KEANSBURG, NJ

LOCATION.--Lat 40°26'56", long 74°08'52", Monmouth County, Hydrologic Unit 02030104, on south bank at Bayshore Flood Control Station in Keansburg, 20 ft downstream from tide gate, 1.3 mi east of Union Beach, and 0.3 mi downstream from bridge over Waackaack Creek on Laurel Avenue.

PERIOD OF RECORD.--September 1997 to October 2000(unpublished fragmentary gage-height record), November 2000 to current year.

GAGE.--Water-stage, air temperature, water temperature, wind speed and direction, barometric pressure, and precipitation recorder. Datum of gage is at 0.00 ft North American Vertical Datum of 1988 (NAVD of 1988). To determine approximate corresponding National Geodetic Vertical Datum of 1929 (NGVD of 1929) elevation, add 1.18 ft. To determine approximate corresponding Mean Lower Low Water datum, add 3.10 ft (revised to tidal Epoch 1983-2001).

REMARKS.--No gage-height record Dec. 9 - 11. Ice effect evident Jan. 12 to Mar. 8. Bay Shore Flood Control Station construction began June 19, 1970 and was completed January 18, 1973. Summaries for months with short periods of no gage-height record have been estimated with little or no loss of accuracy. Some periods cannot be estimated and are noted by dashed (---) lines. Satellite stage and weather telemetry at station.

EXTREMES FOR PERIOD OF PUBLISHED RECORD.--Maximum elevation recorded, 5.46 ft (NAVD of 1988), Dec. 25, 2002. Minimum recorded elevation, -5.76 ft (NAVD of 1988), Dec. 12, 2000.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum known elevation, 7.9 ft (adjusted to NAVD of 1988), Nov. 25, 1950, from high-water mark in Keansburg (prior to installation of flood gate), published in Tidal Flood Plain Information - Sandy Hook Bay and Raritan Bay Shore Areas, Monmouth County, New Jersey, July 1972, by the U.S. Army Corp of Engineers.

EXTREMES FOR CURRENT WATER YEAR.-- Maximum elevation recorded, 5.46 ft (NAVD of 1988), Dec. 25. Minimum elevation recorded, -4.91 ft (NAVD of 1988), Dec. 12, although a lower tide elevation may have occurred during the period of ice effect Jan. 12 to Mar. 8.

Summaries of tide elevations during water year 2003 are as follows:

TIDE ELEVATIONS, IN FEET, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

		OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
Maximum	Elevation	4.40	4.66	5.46	5.21	3.79	4.18	4.99	4.74	4.36	3.86	3.42	4.37
high tide	Date	7	6	25	3	23	19	17	16	13	10	11	28
Minimum	Elevation	-4.03	-4.55	-4.91	---	---	---	-4.74	-3.78	-3.32	-3.37	-3.51	-3.11
low tide	Date	6	19	12	---	---	---	16	15	15	15	30	11
Mean high tide		2.66	2.09	2.10	---	---	2.16	2.38	2.42	2.49	2.36	2.43	2.77
Mean water level		.27	-.34	-.49	---	---	-.30	.02	-.02	.14	-.03	-.02	.35
Mean low tide		-2.22	-2.90	-3.09	---	---	-2.77	-2.48	-2.46	-2.31	-2.54	-2.56	-2.14

Figure 15. U.S. Geological Survey gage continuously monitoring the stage of Hohokus Brook at Ho-Ho-Kus, NJ. Photograph taken by Richard W. Edwards, 2002.

01407290 BIG BROOK NEAR MARLBORO, NJ

LOCATION.--Lat 40°19'10", long 74°12'52", Monmouth County, Hydrologic Unit 02030104, on left bank on Hillsdale Road, 1.7 mi east of Marlboro, and 3.6 mi upstream from mouth.

DRAINAGE AREA.--6.42 mi^2.

PERIOD OF RECORD.--October 1980 to September 2003 as crest-stage partial-record station, August 2003 to September 2003.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 80 ft above NGDV 1929 (from topographic map). Prior to August 12, 2003 at datum 10.00 ft lower. Online peaks have been adjusted to current datum.

REMARKS.--Records good, except for estimated daily values which are fair. Several measurements of water temperature were made during the year. Satellite gage-height telemetry at site.

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

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
No peak greater than base discharge.							

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	---	---	---	6.6
2	---	---	---	---	---	---	---	---	---	---	---	11
3	---	---	---	---	---	---	---	---	---	---	---	15
4	---	---	---	---	---	---	---	---	---	---	---	18
5	---	---	---	---	---	---	---	---	---	---	---	9.0
6	---	---	---	---	---	---	---	---	---	---	---	7.3
7	---	---	---	---	---	---	---	---	---	---	---	e6.9
8	---	---	---	---	---	---	---	---	---	---	---	e6.3
9	---	---	---	---	---	---	---	---	---	---	---	e5.6
10	---	---	---	---	---	---	---	---	---	---	---	e5.1
11	---	---	---	---	---	---	---	---	---	---	---	4.7
12	---	---	---	---	---	---	---	---	---	---	7.8	4.5
13	---	---	---	---	---	---	---	---	---	---	7.8	7.3
14	---	---	---	---	---	---	---	---	---	---	7.0	6.3
15	---	---	---	---	---	---	---	---	---	---	6.6	10
16	---	---	---	---	---	---	---	---	---	---	6.3	9.8
17	---	---	---	---	---	---	---	---	---	---	19	5.5
18	---	---	---	---	---	---	---	---	---	---	11	5.1
19	---	---	---	---	---	---	---	---	---	---	6.5	8.4
20	---	---	---	---	---	---	---	---	---	---	5.4	5.1
21	---	---	---	---	---	---	---	---	---	---	5.0	4.4
22	---	---	---	---	---	---	---	---	---	---	4.7	4.3
23	---	---	---	---	---	---	---	---	---	---	5.1	e19
24	---	---	---	---	---	---	---	---	---	---	5.1	e6.5
25	---	---	---	---	---	---	---	---	---	---	5.9	e4.7
26	---	---	---	---	---	---	---	---	---	---	5.3	5.1
27	---	---	---	---	---	---	---	---	---	---	5.4	5.2
28	---	---	---	---	---	---	---	---	---	---	e4.6	11
29	---	---	---	---	---	---	---	---	---	---	4.3	5.4
30	---	---	---	---	---	---	---	---	---	---	9.2	4.7
31	---	---	---	---	---	---	---	---	---	---	5.1	---
TOTAL	---	---	---	---	---	---	---	---	---	---	---	227.8
MEAN	---	---	---	---	---	---	---	---	---	---	---	7.59
MAX	---	---	---	---	---	---	---	---	---	---	---	19
MIN	---	---	---	---	---	---	---	---	---	---	---	4.3

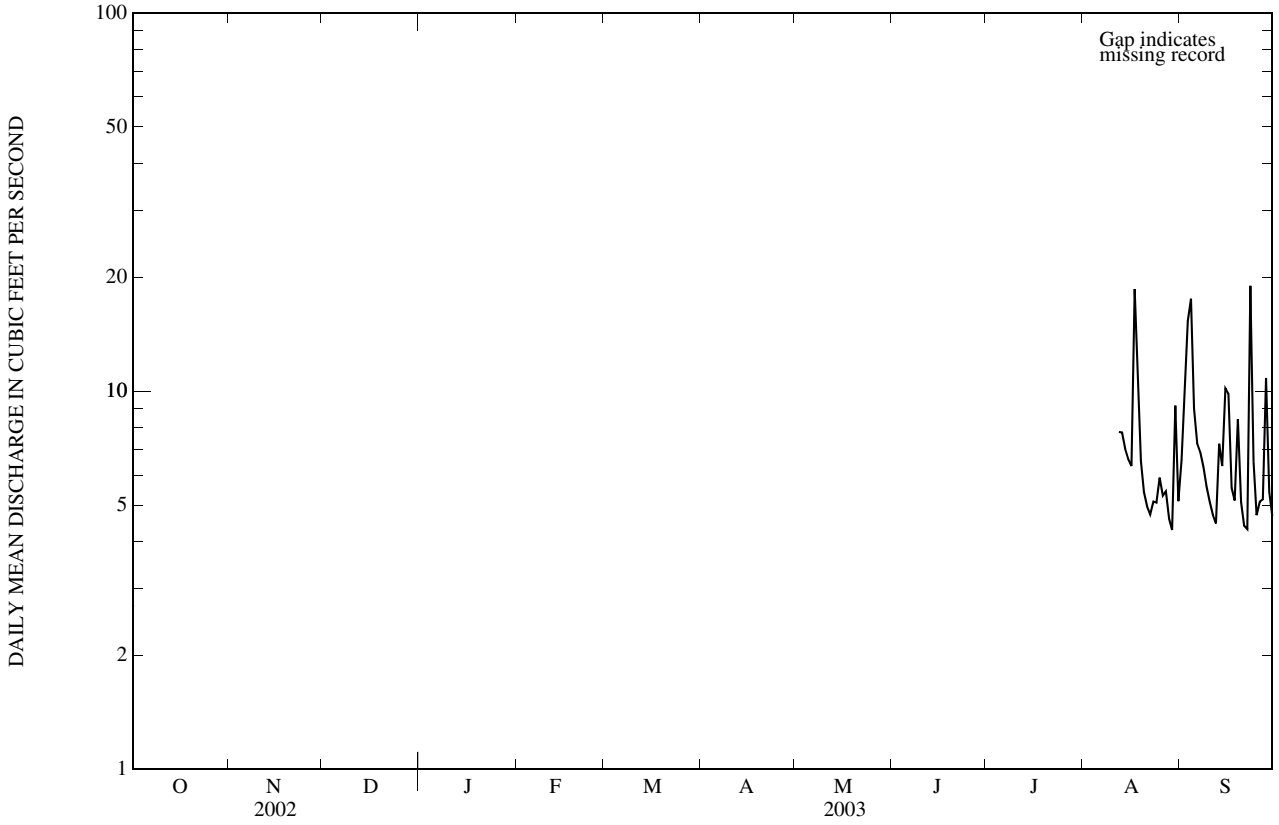
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2003 - 2003, BY WATER YEAR (WY)

MEAN	---	---	---	---	---	---	---	---	---	---	---	7.59
MAX	---	---	---	---	---	---	---	---	---	---	---	7.59
(WY)	---	---	---	---	---	---	---	---	---	---	---	(2003)
MIN	---	---	---	---	---	---	---	---	---	---	---	7.59
(WY)	---	---	---	---	---	---	---	---	---	---	---	(2003)

01407290 BIG BROOK NEAR MARLBORO, NJ—Continued

SUMMARY STATISTICS	FOR AUG 12-SEPT 30, 2003		WATER YEARS 1980-2003	
ANNUAL MEAN				
HIGHEST ANNUAL MEAN				
LOWEST ANNUAL MEAN				
HIGHEST DAILY MEAN	19	Aug 17	19	Aug 17, 2003
LOWEST DAILY MEAN	4.3	Aug 29, Sep 22	4.3	Aug 29, 2003
ANNUAL SEVEN-DAY MINIMUM				
MAXIMUM PEAK FLOW	340a	Feb 23	1,370	Sep 20, 1989
MAXIMUM PEAK STAGE	14.91a	Feb 23	20.16ab	Sep 20, 1989
INSTANTANEOUS LOW FLOW	3.0	Aug 28	3.0	Aug 28, 2003
10 PERCENT EXCEEDS				
50 PERCENT EXCEEDS				
90 PERCENT EXCEEDS				

a From crest-stage gage
b Adjusted to current datum
e Estimated



01407500 SWIMMING RIVER NEAR RED BANK, NJ

LOCATION.--Lat 40°19'09", long 74°06'58", Monmouth County, Hydrologic Unit 02030104, on left bank 50 ft upstream from spillway at Swimming River Reservoir, 3.3 mi southwest of Red Bank, and 4.8 mi upstream from mouth.

DRAINAGE AREA.--49.2 mi^2.

PERIOD OF RECORD.--August 1922 to current year.

REVISED RECORDS.--WSP 891: 1939. WDR NJ-83-1: Drainage area. WDR NJ-90-1: 1989.

GAGE.--Water-stage recorder above concrete dam. Datum of gage is 30.00 ft above NGVD of 1929. Prior to Jan. 19, 1962, at site 800 ft upstream at datum 17.67 ft lower. Jan. 19 to Mar. 30, 1962, nonrecording gage, 700 ft upstream at datum 13.87 ft lower.

REMARKS.--Records good, except discharges below 200 ft^3/s which are fair and estimated daily values which are poor . Records given herein represent flow over spillway and flow or leakage through blowoff gates. Flow regulated by and diversions from Swimming River Reservoir for municipal supply (see Reservoirs and Diversions in Atlantic Coastal Basins). Several measurements of water temperature were made during the year. Satellite gage-height telemetry at station.

COOPERATION.--Water-stage recorder inspected by and record of diversion furnished by New Jersey-American Water Co.

EXTREMES OUTSIDE PERIOD OF RECORD.--A flood in July 1919 reached a stage of 7.84 ft (site and datum then in use), from floodmark, discharge about 11,800 ft^3/s.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.05	33	32	129	39	66	67	61	220	27	25	0.05
2	0.05	24	27	468	38	276	73	61	139	22	134	0.27
3	0.05	19	28	252	36	429	66	66	73	24	56	3.4
4	0.05	16	24	552	52	135	63	56	589	28	38	15
5	0.05	14	31	178	59	237	68	47	418	22	42	40
6	0.05	62	38	127	37	470	63	56	147	17	56	30
7	0.05	54	34	108	45	240	77	60	174	14	66	21
8	0.05	33	31	89	39	137	146	57	391	13	101	16
9	0.05	24	29	87	33	218	248	57	146	10	64	13
10	0.05	20	27	76	35	213	275	51	96	42	108	10
11	0.05	21	58	62	36	113	252	48	76	81	54	8.0
12	0.05	38	454	48	32	104	386	46	70	37	35	6.3
13	0.05	140	156	46	29	125	190	34	169	23	29	7.6
14	0.05	70	376	48	27	125	111	34	205	17	24	11
15	0.05	44	146	48	27	95	89	35	113	15	17	13
16	132	46	81	42	27	93	78	35	71	13	13	48
17	375	299	59	47	e16	100	67	37	64	10	10	31
18	87	357	52	38	e34	94	68	36	267	7.6	19	20
19	43	107	50	37	e38	79	70	32	195	23	18	26
20	30	67	114	37	e36	87	66	31	138	24	14	26
21	24	64	171	36	e39	287	63	34	166	18	9.5	23
22	20	144	93	33	296	145	158	62	242	41	6.1	17
23	17	120	71	31	961	91	111	68	123	106	3.6	60
24	15	59	63	30	500	77	75	110	85	59	1.7	84
25	14	48	261	30	187	70	66	74	62	31	0.71	35
26	107	44	346	30	110	66	103	350	46	20	0.12	25
27	87	58	115	32	82	81	107	273	37	15	0.05	24
28	44	50	79	28	74	65	74	102	32	13	0.05	61
29	35	38	67	30	---	64	63	70	30	12	0.05	55
30	50	36	62	32	---	104	59	53	30	10	0.05	27
31	44	---	63	34	---	87	---	47	---	9.2	0.05	---
TOTAL	1,124.75	2,149	3,238	2,865	2,970	4,573	3,402	2,183	4,614	803.8	944.98	756.62
MEAN	36.3	71.6	104	92.4	106	148	113	70.4	154	25.9	30.5	25.2
MAX	375	357	454	552	961	470	386	350	589	106	134	84
MIN	0.05	14	24	28	16	64	59	31	30	7.6	0.05	0.05

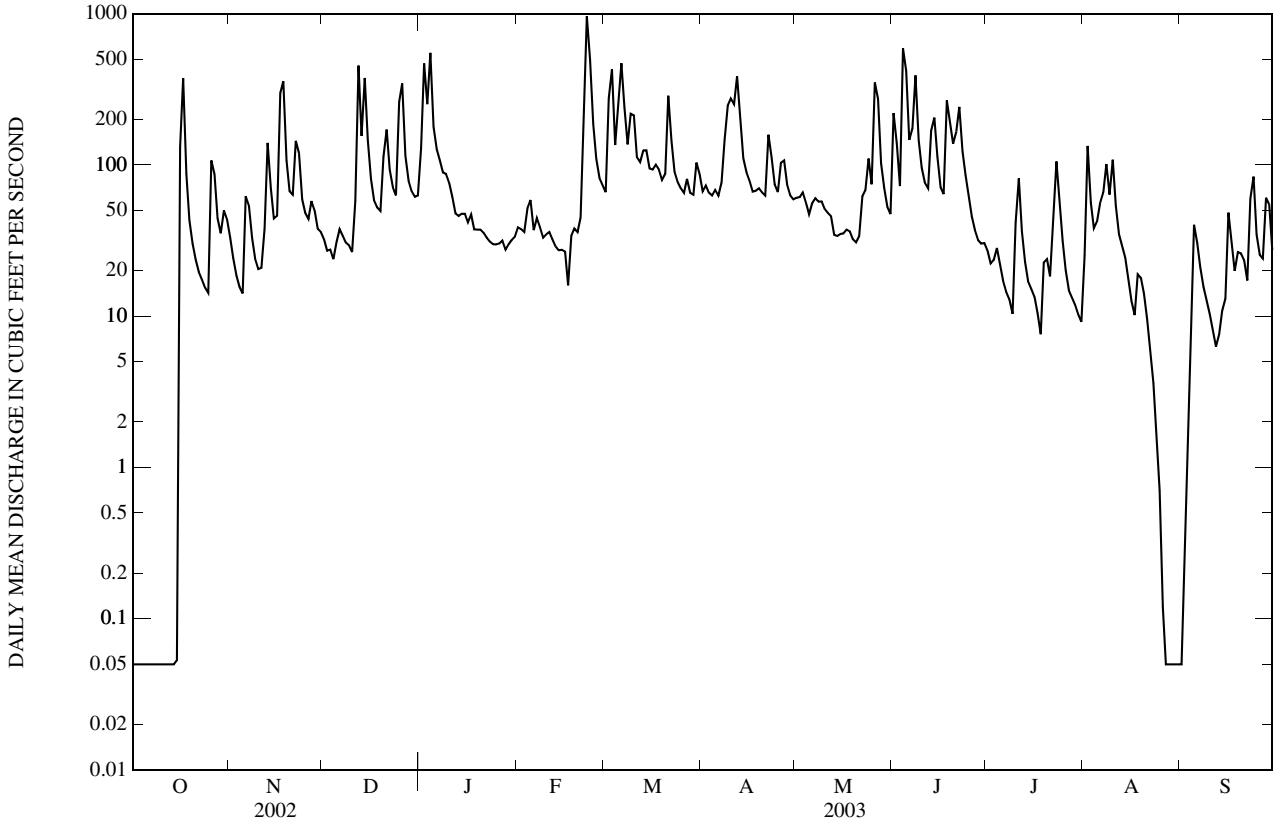
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1922 - 2003, BY WATER YEAR (WY)

MEAN	37.3	52.7	66.2	77.9	89.1	103	89.9	68.8	47.6	37.8	36.4	36.2
MAX	163	208	196	248	201	216	209	227	154	187	128	210
(WY)	(1944)	(1973)	(1978)	(1978)	(1979)	(1994)	(1980)	(1998)	(2003)	(1938)	(1955)	(1938)
MIN	0.000	0.000	0.000	0.000	0.050	0.53	1.53	4.07	0.000	0.000	0.000	0.000
(WY)	(1971)	(1981)	(1981)	(1981)	(2002)	(2002)	(2002)	(1985)	(1985)	(1966)	(1957)	(1980)

01407500 SWIMMING RIVER NEAR RED BANK, NJ—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1922 - 2003	
ANNUAL TOTAL	7,711.40		29,624.15			
ANNUAL MEAN	21.1		81.2		61.7	
HIGHEST ANNUAL MEAN					123	1928
LOWEST ANNUAL MEAN					3.30	2002
HIGHEST DAILY MEAN	454	Dec 12	961	Feb 23	3,050	Oct 27, 1943
LOWEST DAILY MEAN	0.05	Many days	0.05	Many days	0.00	Jun 22, 1923
ANNUAL SEVEN-DAY MINIMUM	0.05	Many days	0.05	Many days	0.00	Jul 16, 1955
MAXIMUM PEAK FLOW			1,060	Feb 23	8,910a	Oct 27, 1943
MAXIMUM PEAK STAGE			5.90	Feb 23	8.96	Oct 27, 1943
INSTANTANEOUS LOW FLOW			0.05	Many days	0.00	Jun 22, 1923
10 PERCENT EXCEEDS	62		188		120	
50 PERCENT EXCEEDS	0.05		48		44	
90 PERCENT EXCEEDS	0.05		10		0.05	

a From rating curve extended above 1,000 ft^3/s on basis of weir formula, site and datum then in use.
e Estimated



SHREWSBURY RIVER BASIN

01407600 SHREWSBURY RIVER AT SEA BRIGHT, NJ

LOCATION.--Lat 40°21'55", long 73°58'29", Monmouth County, Hydrologic Unit 02030104, on right upstream wingwall of bridge on Rumson Road (County Route 520) in Sea Bright, 0.5 mi downstream of Gunning Island, and 3.3 mi south of Sandy Hook Bay.

PERIOD OF RECORD.--August 1997 to December 1999 (unpublished fragmentary gage-height record), January 2000 to current year.

GAGE.--Water-stage recorder. Datum of gage is at 0.00 ft North American Vertical Datum of 1988 (NAVD of 1988). To determine approximate elevations to National Geodetic Vertical Datum of 1929 (NGVD of 1929), add 1.20 ft. To determine approximate elevations to Mean Lower Low Water Datum, add 2.19 ft (revised to tidal Epoch 1983-2001).

REMARKS.-- No gage record Oct. 18-23, Jun. 15-25, and Jul. 11 - Sept. 8, and short portions of other days. Ice effect was evident Jan. 14 to Feb. 27. Gage cannot measure a tide level of less than -1.92 ft (NAVD of 1988). All monthly minimum elevations, and most monthly mean low tides and monthly mean water levels are undetermined. Summaries for months with short periods of no gage-height record have been estimated with little or no loss of accuracy unless otherwise noted. Some periods cannot be estimated and are noted by dashed (---) lines. Satellite stage telemetry at station.

EXTREMES FOR PERIOD OF PUBLISHED RECORD.--Maximum recorded, 4.41 ft (NAVD of 1988), Dec. 25, 2002.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum elevation known, 8.7 ft (adjusted to NAVD of 1988), Dec. 11, 1992, from high-water mark near the intersection of County Route 520 and Ocean Drive in Sea Bright.

EXTREMES FOR CURRENT YEAR.--Maximum elevation recorded, 4.41 ft (NAVD of 1988), Dec. 25.

Summaries of tide elevations during the year are as follows:

TIDE ELEVATIONS, IN FEET, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

		OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
Maximum	Elevation	4.07	3.71	4.41	4.15	---	2.99	3.64	3.37	3.19	2.96	---	3.25
high tide	Date	16	6	25	3	---	20	18	16	13	11	---	28
Minimum	Elevation	---	---	---	---	---	---	---	---	---	---	---	---
low tide	Date	---	---	---	---	---	---	---	---	---	---	---	---
Mean high tide		2.1e	1.46	1.45	---	1.1e	1.52	1.79	1.75	1.9e	---	---	2.1e
Mean water level		0.4e	-0.2e	-0.2e	---	---	-0.2e	0.1e	0.1e	---	---	---	0.4e
Mean low tide		---	---	---	---	---	---	---	---	---	---	---	---

e - estimated

Figure 16. U.S. Geological Survey gage continuously monitoring the stage of the Rahway River near Springfield, NJ. Photograph taken by Blaine White, 2004.

01407705 SHARK RIVER NEAR NEPTUNE CITY, NJ

LOCATION.--Lat 40°11'55", long 74°04'13", Monmouth County, Hydrologic Unit 02030104, on left bank 100 ft upstream from bridge on Remsen Mill Road, 0.3 mi downstream from Robins Swamp Brook, and 1.7 mi west of Neptune City.

DRAINAGE AREA.--9.96 mi^2.

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

GAGE.--Water-stage recorder, crest-stage gage, and concrete control. Datum of gage is 7.05 ft above NGVD of 1929.

REMARKS.--Records fair, except for estimated daily discharges which are poor. Discharge reported is flow over the control only and does not include water returned to the river below the control. Diversion above station by New Jersey-American Water Co. for municipal supply (See Atlantic Coastal basin diversions) and by farmers for irrigation. Entire flow from 0.34 mi^2 of drainage area, subsequent to November 1962, controlled by Glendola Reservoir (capacity 1,000 million gal) on Robins Swamp Brook, 0.6 mi southwest of gage. Water pumped into Glendola Reservoir from Manasquan River or Reservoir subsequent to July 1990 (see Atlantic Coastal Basins, diversions from). Several measurements of water temperature were made during the year.

COOPERATION.--Water-stage recorder inspected by New Jersey-American Water Co.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.8	9.5	11	41	4.4	14	11	7.0	51	4.9	49	9.5
2	2.0	8.7	10	85	4.7	58	9.7	7.2	30	4.1	59	18
3	2.4	4.6	9.6	96	5.3	72	8.7	7.4	16	11	12	14
4	3.1	3.1	9.7	143	11	33	7.5	5.6	101	7.3	6.8	17
5	2.1	2.4	10	53	6.2	47	8.2	5.0	69	5.1	11	11
6	3.1	37	10	37	2.7	87	7.3	9.5	27	4.2	17	8.2
7	2.9	13	10	26	3.4	56	15	7.7	56	3.8	12	7.2
8	2.9	11	10	19	3.3	34	50	7.7	119	4.3	19	5.8
9	3.5	9.9	10	16	6.8	47	73	6.6	43	3.7	30	4.8
10	4.1	9.3	8.9	14	7.1	39	68	6.0	27	3.8	70	4.2
11	90	11	49	11	6.9	18	77	5.7	23	5.7	21	3.2
12	83	27	104	9.0	4.7	18	80	5.2	22	4.6	16	6.5
13	64	47	51	12	6.0	20	46	4.0	53	4.4	14	9.6
14	18	20	117	12	5.5	18	25	3.3	43	5.4	13	6.5
15	9.3	14	50	5.7	4.8	15	20	2.5	40	3.7	11	7.5
16	123	25	23	5.0	4.2	15	19	2.4	21	4.3	12	10
17	88	115	16	5.8	8.1	14	15	2.9	18	3.8	12	5.2
18	19	97	14	5.0	8.1	13	12	2.2	84	4.9	11	4.6
19	11	39	13	6.6	6.7	12	12	4.9	55	22	8.0	5.4
20	7.9	18	39	7.2	3.4	20	12	5.4	33	5.4	3.2	4.6
21	6.3	15	31	6.4	5.6	61	13	8.3	49	6.7	4.8	4.8
22	5.5	55	17	5.7	82	28	33	9.1	61	15	3.7	4.3
23	3.8	37	13	6.3	168	16	18	9.7	27	59	2.9	28
24	3.4	17	11	9.4	e105	15	13	17	13	6.9	2.1	9.1
25	3.1	15	87	7.7	e50	14	12	9.6	8.9	5.5	2.2	4.9
26	42	15	89	7.2	e25	14	26	83	6.3	5.6	2.3	4.2
27	13	15	37	6.3	19	16	18	73	4.6	4.8	2.5	6.6
28	9.0	12	18	6.2	16	13	13	42	3.8	4.0	2.4	26
29	7.8	11	14	6.7	---	14	10	35	3.0	4.8	2.5	11
30	14	11	13	7.9	---	17	7.7	19	3.4	3.6	8.2	5.8
31	12	---	12	7.8	---	14	---	18	---	4.6	6.7	---
TOTAL	661.0	724.5	917.2	686.9	583.9	872	740.1	431.9	1,111.0	236.9	447.3	267.5
MEAN	21.3	24.1	29.6	22.2	20.9	28.1	24.7	13.9	37.0	7.64	14.4	8.92
MAX	123	115	117	143	168	87	80	83	119	59	70	28
MIN	1.8	2.4	8.9	5.0	2.7	12	7.3	2.2	3.0	3.6	2.1	3.2

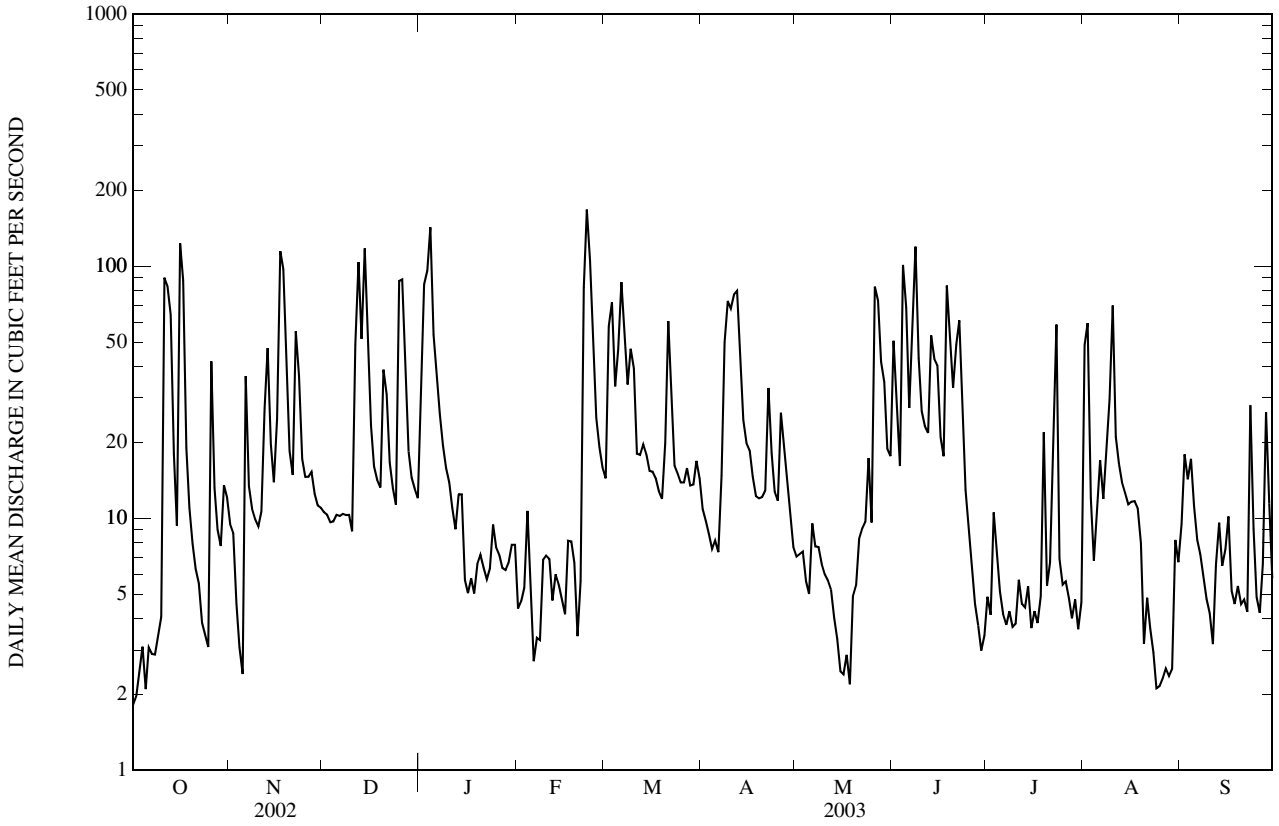
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1967 - 2003, BY WATER YEAR (WY)

MEAN	10.0	12.9	16.5	17.9	16.2	22.3	19.4	16.1	10.2	9.51	10.8	9.03
MAX	34.0	31.7	44.2	41.1	42.4	56.3	48.3	50.9	37.0	30.1	29.2	22.6
(WY)	(1990)	(1978)	(1970)	(1978)	(1998)	(1993)	(1983)	(1998)	(2003)	(1984)	(1992)	(1989)
MIN	2.81	1.73	4.07	3.57	3.56	6.53	6.39	3.51	2.13	2.39	3.11	1.28
(WY)	(1982)	(1982)	(1999)	(1981)	(2002)	(1986)	(1985)	(1986)	(1986)	(2002)	(1995)	(1988)

01407705 SHARK RIVER NEAR NEPTUNE CITY, NJ—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1967 - 2003	
ANNUAL TOTAL	4,148.64		7,680.2			
ANNUAL MEAN	11.4		21.0		14.2	
HIGHEST ANNUAL MEAN					24.9	1984
LOWEST ANNUAL MEAN					6.27	2002
HIGHEST DAILY MEAN	123	Oct 16	168	Feb 23	560	Dec 26, 1969
LOWEST DAILY MEAN	0.95	Aug 22	1.8	Oct 1	0.00	Sep 20, 1981
ANNUAL SEVEN-DAY MINIMUM	1.3	Aug 16	2.4	Aug 23	0.70	Sep 26, 1988
MAXIMUM PEAK FLOW			265	Oct 16	1,170	Aug 18, 1992
MAXIMUM PEAK STAGE			4.84	Oct 16	6.59	Aug 18, 1992
INSTANTANEOUS LOW FLOW			0.05	Oct 10	0.00a	Many days
10 PERCENT EXCEEDS	30		56		28	
50 PERCENT EXCEEDS	3.8		11		7.8	
90 PERCENT EXCEEDS	1.9		3.7		2.6	

a First occurrence of 0.00 cfs on Aug 20, 1978
e Estimated



01407760 JUMPING BROOK NEAR NEPTUNE CITY, NJ

LOCATION.--Lat 40°12'13", long 74°03'56", Monmouth County, Hydrologic Unit 02030104, on left bank 60 ft downstream from dam on Jumping Brook Reservoir, 0.8 mi upstream from mouth, and 1.4 mi west of Neptune City.

DRAINAGE AREA.--6.46 mi^2.

PERIOD OF RECORD.--October 1966 to current year. Records for water years 1976-83 are unpublished but are available in the files of New Jersey District Office.

REVISED RECORDS.--WDR-84-1: drainage area.

GAGE.--Water-stage recorder, crest-stage gage, and concrete control. Datum of gage is 13.76 ft above NGVD of 1929.

REMARKS.--Records good except those above 300 ft^3/s, which are fair. Diversion above station by New Jersey-American Water Co. for municipal supply (see Atlantic Coastal Basins, diversions) and by farmers for irrigation. Several measurements of water temperature were made during the year.

COOPERATION.--Water-stage recorder inspected by and records of diversion provided by New Jersey-American Water Co.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.0	5.0	5.0	29	5.3	7.9	6.9	6.2	28	4.6	68	6.7
2	1.8	4.2	4.7	45	5.1	40	6.8	6.2	14	4.5	42	13
3	1.8	3.9	4.5	97	4.9	28	6.2	6.5	9.2	10	13	13
4	1.8	3.5	4.1	86	9.1	13	6.1	5.7	76	6.1	8.7	15
5	1.9	3.5	4.7	17	6.8	23	6.3	5.7	26	4.6	8.8	8.5
6	1.8	29	5.4	15	4.9	45	5.8	8.4	14	4.2	12	4.9
7	1.9	8.3	4.8	12	5.2	20	10	6.6	52	3.9	8.4	4.2
8	1.7	5.0	4.9	12	4.9	15	28	6.5	67	3.8	14	3.9
9	1.6	4.4	5.0	11	4.7	19	43	5.7	16	3.6	14	3.3
10	4.0	4.0	4.5	8.7	4.8	15	24	5.6	11	5.4	40	3.1
11	99	5.0	52	7.3	5.3	10	40	5.6	10	5.4	11	2.9
12	67	18	70	6.5	4.6	9.8	30	5.6	9.3	4.4	7.0	2.8
13	45	27	21	6.4	4.4	11	15	5.1	29	3.5	5.7	4.0
14	12	11	74	6.2	4.0	10	11	4.7	21	3.7	5.1	4.8
15	6.2	5.8	16	5.9	4.0	8.4	9.4	4.7	19	3.4	4.5	4.9
16	138	23	10	5.7	3.7	8.3	8.4	4.7	9.2	3.3	4.1	7.4
17	36	95	7.7	5.7	4.0	8.2	7.2	4.9	7.7	3.3	4.3	3.8
18	9.9	48	6.7	5.2	5.3	7.7	7.0	4.7	51	5.1	4.0	3.2
19	6.5	15	6.2	5.1	4.9	7.0	6.7	4.4	20	17	3.6	6.7
20	4.9	8.6	28	5.1	5.8	14	6.6	4.2	16	5.4	3.3	4.0
21	4.0	7.5	16	4.8	7.4	28	6.4	7.4	31	5.5	3.1	3.1
22	3.5	31	8.4	4.5	101	12	19	9.2	27	16	3.2	3.0
23	3.3	16	6.8	4.6	168	8.6	9.5	11	13	49	2.9	29
24	3.2	8.0	5.9	4.2	35	7.6	7.0	21	9.4	9.7	2.7	10
25	3.1	6.5	98	4.1	16	6.9	6.3	8.7	8.0	6.1	2.5	5.1
26	37	6.0	41	4.4	12	7.7	21	102	7.1	4.4	2.6	4.2
27	10	10	15	4.4	9.8	9.0	13	24	6.4	3.7	2.4	4.1
28	5.5	6.5	10	4.1	9.1	6.8	8.2	26	5.6	3.4	2.5	14
29	6.0	5.7	8.6	4.4	---	7.5	7.1	15	5.1	4.1	3.2	8.4
30	11	5.6	7.4	4.3	---	11	6.4	9.6	4.9	3.8	8.5	4.5
31	8.3	---	7.2	4.7	---	8.0	---	8.6	---	4.3	6.2	---
TOTAL	539.7	430.0	563.5	440.3	460.0	433.4	388.3	354.2	622.9	215.2	321.3	205.5
MEAN	17.4	14.3	18.2	14.2	16.4	14.0	12.9	11.4	20.8	6.94	10.4	6.85
MAX	138	95	98	97	168	45	43	102	76	49	68	29
MIN	1.6	3.5	4.1	4.1	3.7	6.8	5.8	4.2	4.9	3.3	2.4	2.8

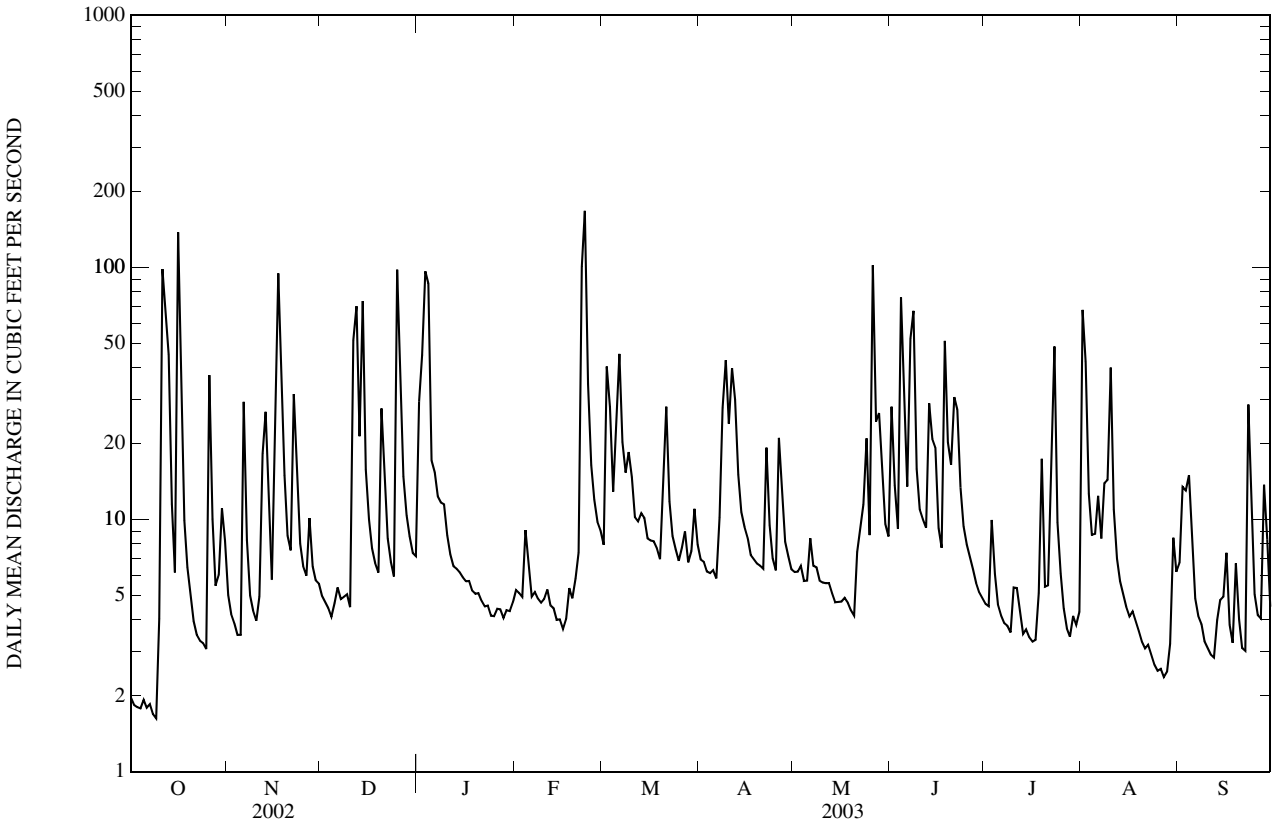
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1967 - 2003, BY WATER YEAR (WY)

MEAN	7.14	8.72	10.4	12.5	11.5	14.4	13.6	12.0	7.56	7.07	7.54	6.95
MAX	34.5	47.4	30.5	55.5	62.1	47.1	66.5	53.8	23.7	21.5	19.0	24.2
(WY)	(1990)	(1978)	(1970)	(1979)	(1979)	(1984)	(1980)	(1989)	(1972)	(1989)	(1992)	(1971)
MIN	1.97	1.89	2.78	1.94	3.40	3.86	3.29	2.08	2.11	1.90	1.52	1.25
(WY)	(1982)	(1982)	(1981)	(1981)	(2002)	(1985)	(1985)	(1977)	(1986)	(2002)	(1982)	(1982)

01407760 JUMPING BROOK NEAR NEPTUNE CITY, NJ—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1967 - 2003	
ANNUAL TOTAL	3,290.20		4,974.3			
ANNUAL MEAN	9.01		13.6		9.95	
HIGHEST ANNUAL MEAN					20.4	1979
LOWEST ANNUAL MEAN					4.05	1981
HIGHEST DAILY MEAN	138	Oct 16	168	Feb 23	954	Jan 21, 1979
LOWEST DAILY MEAN	0.89	Aug 19	1.6	Oct 9	0.12	Sep 15, 1981
ANNUAL SEVEN-DAY MINIMUM	1.0	Aug 13	1.8	Oct 3	0.51	Oct 7, 1966
MAXIMUM PEAK FLOW			341	Oct 16	1,830a	Sep 12, 1971
MAXIMUM PEAK STAGE			4.52	Oct 16	7.43	Aug 18, 1992
INSTANTANEOUS LOW FLOW			1.6	Many days	0.00	Jun 7, 1971
10 PERCENT EXCEEDS	21		29		18	
50 PERCENT EXCEEDS	3.6		6.7		4.9	
90 PERCENT EXCEEDS	1.6		3.5		2.0	

a From rating curve extended above 150 ft^3/s.



01408000 MANASQUAN RIVER AT SQUANKUM, NJ

LOCATION.--Lat 40°09'41", Long 74°09'17", Monmouth County, Hydrologic Unit 02040104, on right bank 50 ft upstream from northbound bridge on County Highway 547 (Squankum Park Road) in Squankum, and 0.4 mi downstream from Marsh Bog Brook.

DRAINAGE AREA.--44.0 mi^2.

PERIOD OF RECORD.--July 1931 to current year. Monthly discharge only for July 1931, published in WSP 1302.

REVISED RECORDS.--WDR NJ-83-1: Drainage area.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 18.82 ft above NGVD of 1929. Prior to Aug. 13, 1940, water stage recorder at site 80 ft upstream at same datum.

REMARKS.--Records good, except for daily discharges above 300 ft^3/s and estimated daily discharges which are fair. Several measurements of water temperature were made during the year. Satellite gage-height telemetry at station.

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

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jan 4	0700	643	5.81	Jun 8	0545	*705	*6.10
Jun 4	1700	605	5.61				

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20	49	60	113	51	89	76	60	121	50	57	37
2	19	44	57	304	53	231	75	60	100	48	122	69
3	18	41	54	200	51	301	71	78	74	60	54	80
4	18	39	51	435	66	131	68	60	371	54	46	111
5	19	38	50	167	67	183	68	57	292	47	61	86
6	18	111	50	136	51	298	66	68	146	47	55	49
7	17	64	51	118	53	181	68	66	173	41	48	41
8	17	48	50	106	50	140	134	64	440	40	108	38
9	17	45	50	105	48	171	200	59	165	38	63	35
10	18	42	49	94	48	147	185	57	116	48	107	33
11	206	43	80	84	49	107	172	56	97	52	70	32
12	246	68	347	77	45	101	218	55	88	42	52	30
13	106	143	132	74	43	106	144	52	130	36	46	46
14	63	76	292	72	42	105	110	51	144	35	43	55
15	47	59	139	69	44	92	100	49	134	33	40	41
16	232	58	101	64	40	91	93	49	96	31	38	65
17	215	215	84	64	27	91	84	49	83	30	38	38
18	82	266	75	60	55	87	77	47	240	28	42	32
19	60	110	70	57	52	79	76	46	168	57	36	42
20	52	86	118	57	50	79	73	45	122	32	37	34
21	46	76	139	55	55	171	71	47	184	29	34	31
22	43	143	89	53	188	117	126	69	207	56	33	30
23	41	129	78	50	e315	96	90	59	127	107	32	85
24	39	84	72	49	e200	86	75	85	103	56	30	71
25	37	73	191	48	194	79	69	60	86	41	30	40
26	121	68	253	49	133	77	86	267	74	34	29	36
27	72	70	121	49	105	92	78	220	66	34	27	39
28	51	74	99	46	95	76	70	111	59	33	26	70
29	45	67	88	48	---	75	66	92	57	32	26	55
30	74	63	81	48	---	105	63	77	54	27	37	39
31	64	---	79	49	---	92	---	69	---	28	67	---
TOTAL	2,123	2,492	3,250	3,000	2,270	3,876	2,952	2,284	4,317	1,326	1,534	1,490
MEAN	68.5	83.1	105	96.8	81.1	125	98.4	73.7	144	42.8	49.5	49.7
MAX	246	266	347	435	315	301	218	267	440	107	122	111
MIN	17	38	49	46	27	75	63	45	54	27	26	30
CFSM	1.56	1.89	2.38	2.20	1.84	2.84	2.24	1.67	3.27	0.97	1.12	1.13
IN.	1.79	2.11	2.75	2.54	1.92	3.28	2.50	1.93	3.65	1.12	1.30	1.26

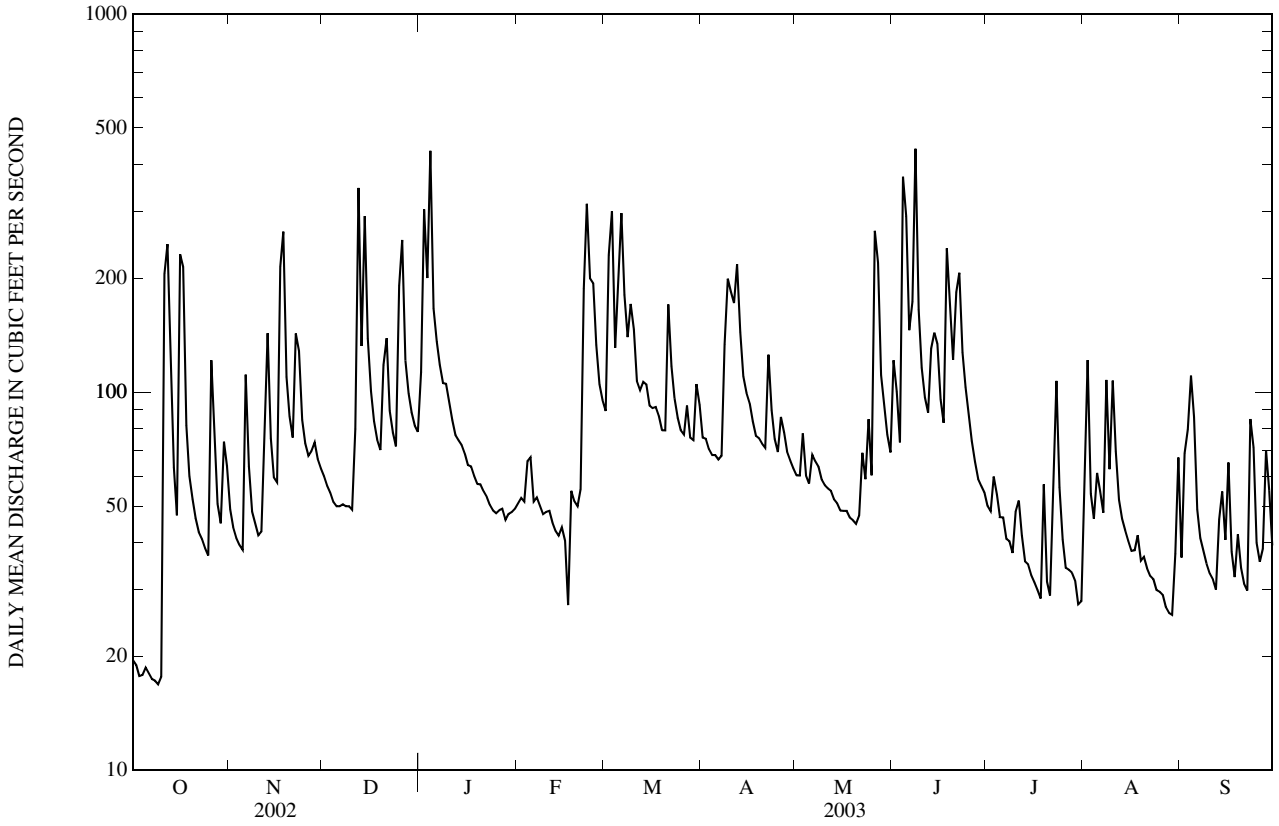
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1932 - 2003, BY WATER YEAR (WY)

MEAN	50.4	68.1	80.2	89.1	94.6	112	98.8	78.7	58.2	51.0	50.4	51.2
MAX	130	231	212	218	214	221	218	204	144	200	108	183
(WY)	(1972)	(1978)	(1978)	(1979)	(1979)	(1984)	(1983)	(1998)	(2003)	(1938)	(1948)	(1938)
MIN	20.9	19.2	24.3	30.7	27.7	47.2	38.6	38.8	26.6	17.9	16.7	16.7
(WY)	(2002)	(2002)	(2002)	(1981)	(2002)	(1985)	(1995)	(1955)	(1957)	(2002)	(1932)	(1932)

01408000 MANASQUAN RIVER AT SQUANKUM, NJ—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1932 - 2003	
ANNUAL TOTAL	17,523		30,914			
ANNUAL MEAN	48.0		84.7		73.5	
HIGHEST ANNUAL MEAN					131	1978
LOWEST ANNUAL MEAN					31.9	2002
HIGHEST DAILY MEAN	347	Dec 12	440	Jun 8	1,720	Nov 8, 1977
LOWEST DAILY MEAN	11	Aug 15	17	Oct 7-9	10	Dec 5, 1998
ANNUAL SEVEN-DAY MINIMUM	11	Aug 13	18	Oct 3	11	Aug 13, 2002
MAXIMUM PEAK FLOW			705	Jun 8	2,940	Sep 21, 1938
MAXIMUM PEAK STAGE			6.10	Jun 8	12.45	Sep 21, 1938
INSTANTANEOUS LOW FLOW			17	Oct 6-10	8.1	Aug 6, 1981
ANNUAL RUNOFF (CFSM)	1.09		1.92		1.67	
ANNUAL RUNOFF (INCHES)	14.81		26.14		22.69	
10 PERCENT EXCEEDS	93		171		129	
50 PERCENT EXCEEDS	32		65		53	
90 PERCENT EXCEEDS	16		34		26	

e Estimated



01408029 MANASQUAN RIVER NEAR ALLENWOOD, NJ

LOCATION.--Lat 40°08'48", long 74°07'22", Monmouth County, Hydrologic Unit 02040104, on left bank just downstream from pumping station of Manasquan Water Supply System, 1400 ft upstream from Hospital Road, 1.1 mi west of Allenwood, 1.2 mi downstream from Mill Run, 2.2 mi east of Squankum, and 7.9 mi upstream of mouth.

DRAINAGE AREA.--63.3 mi^2.

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

REVISED RECORDS.--WDR NJ-92-1: 1991 Diversions.

GAGE.--Water-stage recorder and concrete control. Datum of gage is NGVD of 1929 (New Jersey Water Supply Authority benchmark).

REMARKS.--Records good, except for estimated daily discharges which are fair. Diversion by New Jersey-American Water Company from Manasquan Reservoir since 1990 and by Manasquan Water Supply System at gage to Manasquan Reservoir for municipal supply since March 1990 (see Atlantic Coastal Basins, diversions). Records of diversions provided by New Jersey Water Supply Authority. Several measurements of water temperature were made during the year.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	37	22	132	41	110	86	64	159	43	78	27
2	12	15	36	468	37	268	84	64	145	40	224	68
3	12	13	32	310	42	528	78	83	91	56	99	84
4	12	24	35	756	51	205	74	62	505	50	71	113
5	12	23	50	299	63	249	74	58	557	38	68	94
6	12	128	50	214	41	457	72	75	237	34	67	11
7	12	69	15	181	42	338	76	77	226	34	32	11
8	12	41	14	148	29	209	200	73	771	30	100	22
9	14	15	39	131	28	256	289	65	284	31	37	25
10	12	13	46	113	36	244	342	62	180	35	151	22
11	180	28	97	98	38	158	268	59	124	47	121	17
12	308	62	562	86	36	139	359	58	99	33	64	16
13	71	192	226	80	32	153	227	52	183	25	43	33
14	16	73	472	73	35	144	150	49	214	23	36	49
15	14	45	236	54	e37	120	124	46	217	30	30	35
16	230	28	138	51	e36	115	114	45	134	23	26	61
17	361	257	101	56	e30	115	95	45	94	21	27	31
18	32	405	82	27	e41	106	85	43	379	14	30	23
19	16	146	75	e50	e42	92	82	42	321	52	24	27
20	15	76	133	e50	e42	94	78	40	199	24	17	17
21	12	60	205	e50	e45	291	75	39	253	18	20	19
22	12	161	114	e50	e205	183	157	57	388	46	17	18
23	12	79	90	e45	e1,070	128	120	47	182	144	16	76
24	21	30	77	e45	e939	104	89	65	127	47	13	80
25	28	55	233	e40	e337	91	77	35	96	28	13	23
26	81	55	479	e40	e196	87	106	322	72	26	12	22
27	56	61	193	e45	e145	109	105	496	71	23	13	29
28	38	57	131	e40	e118	87	85	177	61	23	13	77
29	31	46	108	e40	---	82	80	126	56	21	14	68
30	61	25	95	e45	---	122	72	95	53	20	32	28
31	55	---	89	e45	---	110	---	81	---	17	70	---
TOTAL	1,772	2,319	4,275	3,862	3,834	5,494	3,923	2,702	6,478	1,096	1,578	1,226
MEAN	57.2	77.3	138	125	137	177	131	87.2	216	35.4	50.9	40.9
MAX	361	405	562	756	1,070	528	359	496	771	144	224	113
MIN	12	13	14	27	28	82	72	35	53	14	12	11

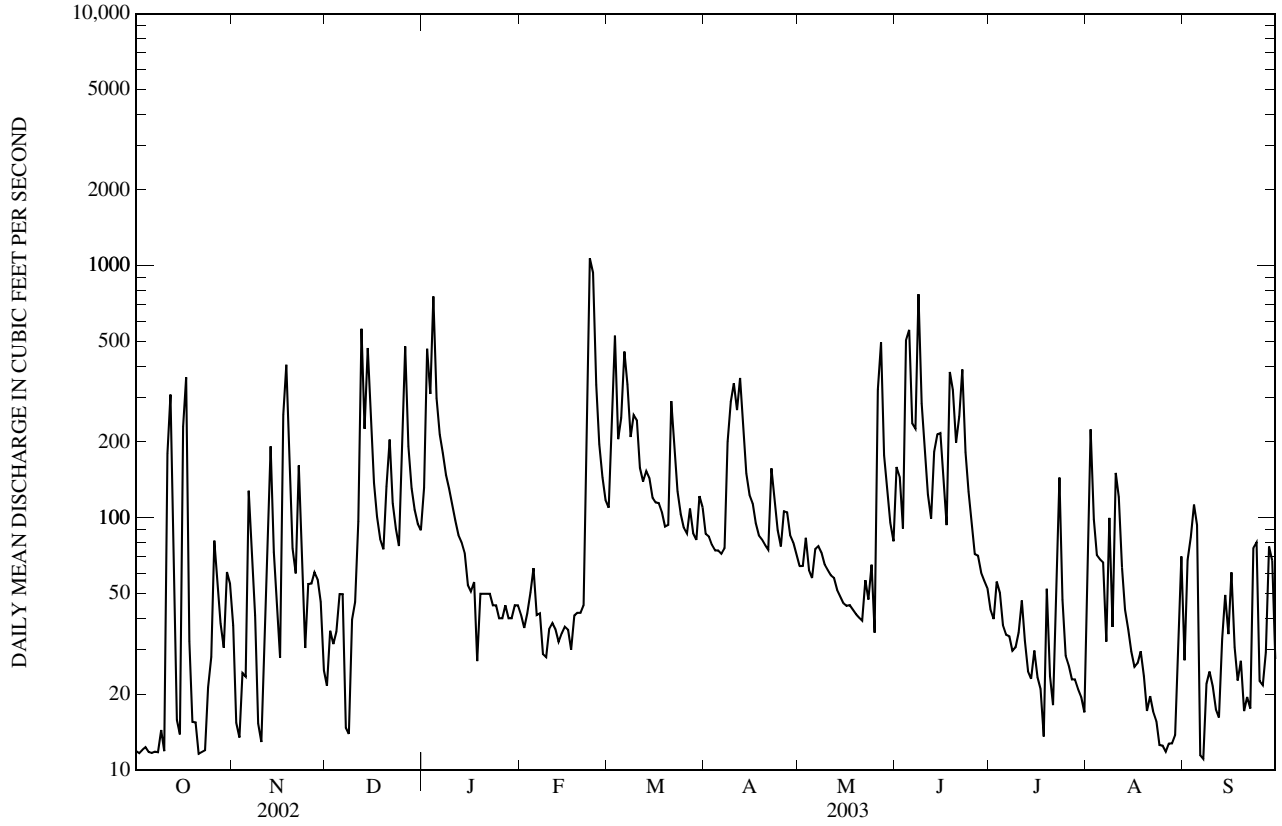
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1990 - 2003, BY WATER YEAR (WY)

MEAN	45.8	54.2	89.6	118	99.2	158	110	80.1	62.8	35.6	52.4	44.2
MAX	152	129	227	218	270	319	180	312	216	66.4	131	89.9
(WY)	(1997)	(1996)	(1997)	(1996)	(1998)	(1993)	(1997)	(1998)	(2003)	(1990)	(1990)	(2000)
MIN	19.2	15.4	16.5	16.9	11.6	22.5	21.4	31.2	17.0	15.0	20.0	14.7
(WY)	(1995)	(2002)	(2002)	(2002)	(2002)	(2002)	(2002)	(1992)	(1999)	(1999)	(2001)	(2001)

01408029 MANASQUAN RIVER NEAR ALLENWOOD, NJ—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1990 - 2003	
ANNUAL TOTAL	15,378.2		38,559			
ANNUAL MEAN	42.1		106		78.5	
HIGHEST ANNUAL MEAN					133	1998
LOWEST ANNUAL MEAN					23.5	2002
HIGHEST DAILY MEAN	562	Dec 12	1,070e	Feb 23	1,930	Dec 12, 1992
LOWEST DAILY MEAN	7.7	Mar 29	11	Sep 6-7	7.7	Mar 29, 2002
ANNUAL SEVEN-DAY MINIMUM	8.8	Apr 5	12	Oct 1	8.8	Apr 5, 2002
MAXIMUM PEAK FLOW			1,330e	Feb 23	2,580	Mar 9, 1999
MAXIMUM PEAK STAGE			13.67e	Feb 23	15.87	Mar 9, 1999
INSTANTANEOUS LOW FLOW			4.0	Jul 31,Aug 20	0.00a	Jun 24, 1993
10 PERCENT EXCEEDS	96		240		159	
50 PERCENT EXCEEDS	14		62		41	
90 PERCENT EXCEEDS	9.6		17		14	

a Results of pumping to Manasquan Reservoir, also occurred on Nov 26, 2001.
e Estimated



MANASQUAN RIVER BASIN

01408050 MANASQUAN RIVER AT POINT PLEASANT, NJ

LOCATION.--Lat 40° 06’09”, long 74° 02’17”,revised, Ocean County, Hydrologic Unit 02040104, on left bank along Cooks Creek at the U.S. Coast Guard Station Manasquan Inlet in Point Pleasant, 0.3 mi west of inlet mouth, and 0.7 mi east of State Route 35 bridge over Manasquan River.

PERIOD OF RECORD.--September 1997 to May 2000 (unpublished fragmentary gage-height record), June 2000 to current year.

GAGE.--Water-stage, air temperature, water temperature, wind speed and direction, barometric pressure, and precipitation recorder. Datum of gage is at 0.00 ft North American Vertical Datum of 1988 (NAVD of 1988). To determine approximate elevations to National Geodetic Vertical Datum of 1929 (NGVD of 1929), add 1.10 ft. To determine approximate elevations in Mean Lower Low Water datum, add 2.43 ft (revised to tidal Epoch 1983-2001).

REMARKS.-- Gage cannot record tide levels below -2.82 ft (NAVD of 88). Some monthly minimum and monthly mean statistics are undetermined. Summaries for months with short periods of no gage-height record have been estimated with little or no loss of accuracy. Some periods cannot be estimated and are noted by dashed (---) lines. Satellite stage and weather telemetry at station.

EXTREMES FOR PERIOD OF PUBLISHED RECORD.--Maximum elevation recorded, 4.33 ft (NAVD of 1988), Dec. 25, 2002.

EXTREMES FOR CURRENT YEAR.-- Maximum elevation recorded, 4.33 ft (NAVD of 1988), Dec. 25, 2002.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum elevation known, 6.96 ft (adjusted to NAVD of 1988), December 11, 1992, from high-water mark at 58 Channel Drive across Cooks Creek from the U.S. Coast Guard Station.

Summaries of tide elevations for water year 2003 are as follows:

TIDE ELEVATIONS, IN FEET, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

		OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
Maximum	Elevation	3.56	3.96	4.33	4.29	4.14	3.24	3.82	3.71	3.36	3.22	2.70	3.54
high tide	Date	7	6	25	3	17	20	17	16	13	11	11	28
Minimum	Elevation	-3.0e	-3.1e	---	---	---	---	---	---	-2.61	-2.60	-2.9e	-2.52
low tide	Date	6	18	---	---	---	---	---	---	12	14	28	11
Mean high tide		2.12	1.61	1.58	1.35	1.06	1.59	1.82	1.75	1.94	1.80	1.86	2.21
Mean water level		.23	-.3e	-.3e	-.4e	-.8e	-.29	-.02	-.02	.10	-.05	-.05	.31
Mean low tide		-1.74	-2.3e	-2.3e	-2.4e	---	-2.3e	-1.93	-1.9e	-1.78	-1.97	-2.04	-1.66

e - estimated

Figure 17. Ice jam downstream of U.S. Geological Survey gaging station at Stony Brook at Princeton, NJ, February 3, 2004. Photograph taken by Jason C. Shvanda, 2004.

01408120 NORTH BRANCH METEDECONK RIVER NEAR LAKEWOOD, NJ

LOCATION.--Lat 40°05'30", long 74°09'09", Ocean County, Hydrologic Unit 02040301, on upstream right bank at bridge on County Route 549 (Lanes Mill Road) at Lanes Mills, 1.0 mi upstream from confluence with South Branch Metedeconk River, and 2.3 mi east of Lakewood.

DRAINAGE AREA.--34.9 mi^2.

PERIOD OF RECORD.--October 1972 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 3.89 ft above NGVD of 1929. Prior to Nov. 17, 1977, gage located on upstream left side of bridge. Nov. 17, 1977 to Dec. 19, 1984, gage located on the downstream side of bridge.

REMARKS.--Records good, except for estimated daily discharges, which are poor. Several measurements of water temperature were made during the year. Satellite gage-height telemetry at station.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 250 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Oct 17	0430	266	6.27	May 27	1245	291	6.44
Jan 4	1145	337	6.67	Jun 8	2315	265	6.26
Feb 23	1815	*465	*7.17	Aug 2	0415	291	6.44

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16	48	42	75	41	73	64	46	77	37	74	86
2	15	40	40	155	43	111	60	45	76	35	248	75
3	14	35	39	182	43	195	55	47	59	51	121	129
4	14	33	37	303	49	146	53	46	148	47	51	153
5	15	31	39	219	56	146	52	44	208	38	49	115
6	14	78	41	154	47	178	51	50	162	34	52	85
7	13	70	40	107	45	206	57	60	143	32	43	52
8	13	52	39	81	42	164	104	53	225	31	56	40
9	13	40	40	74	40	133	124	49	220	29	60	36
10	15	36	38	68	41	114	153	48	132	34	99	33
11	110	36	68	63	40	103	150	45	82	36	73	31
12	214	56	198	57	39	90	178	43	69	33	49	30
13	177	94	161	54	36	78	137	40	120	29	41	44
14	78	79	210	52	36	75	105	38	129	28	36	47
15	39	63	182	49	37	71	80	37	157	29	32	42
16	120	56	116	47	33	67	65	36	91	28	30	53
17	224	155	82	47	e35	65	58	38	66	27	30	45
18	114	202	58	44	e41	62	54	36	153	26	31	37
19	57	151	50	44	45	58	52	35	206	43	29	37
20	37	96	77	43	46	61	51	34	147	41	28	34
21	31	68	96	42	50	125	49	37	129	32	26	31
22	28	95	82	40	153	127	80	50	185	36	26	30
23	27	98	66	38	358	95	78	48	131	142	32	55
24	26	79	54	37	300	72	64	63	87	97	24	60
25	26	63	115	37	256	61	55	55	63	45	23	51
26	84	52	218	38	181	58	67	123	52	33	23	39
27	76	55	152	39	133	68	68	271	46	28	24	36
28	51	52	102	36	88	62	58	166	42	27	27	56
29	38	47	73	37	---	57	52	95	40	28	25	60
30	55	44	61	38	---	65	48	68	39	27	51	43
31	58	---	57	39	---	68	---	54	---	27	169	---
TOTAL	1,812	2,104	2,673	2,339	2,354	3,054	2,322	1,900	3,484	1,210	1,682	1,665
MEAN	58.5	70.1	86.2	75.5	84.1	98.5	77.4	61.3	116	39.0	54.3	55.5
MAX	224	202	218	303	358	206	178	271	225	142	248	153
MIN	13	31	37	36	33	57	48	34	39	26	23	30
CFSM	1.67	2.01	2.47	2.16	2.41	2.82	2.22	1.76	3.33	1.12	1.55	1.59
IN.	1.93	2.24	2.85	2.49	2.51	3.26	2.48	2.03	3.71	1.29	1.79	1.77

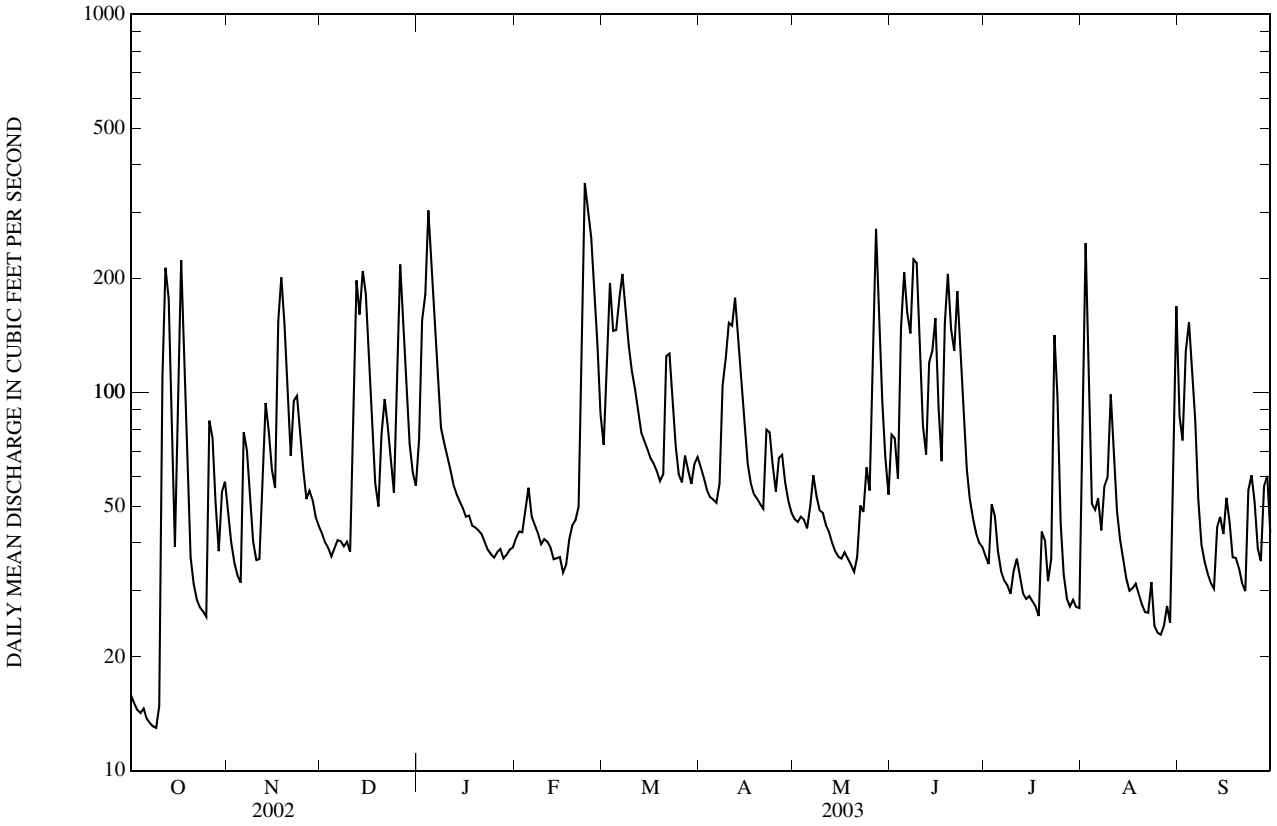
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1973 - 2003, BY WATER YEAR (WY)

MEAN	43.4	56.9	68.8	74.6	70.2	83.8	79.8	64.3	49.9	42.0	42.3	39.4
MAX	92.6	141	129	153	153	160	153	160	116	107	88.8	80.9
(WY)	(1990)	(1973)	(1978)	(1979)	(1979)	(1984)	(1984)	(1998)	(2003)	(1984)	(1990)	(1989)
MIN	22.0	19.4	22.7	25.2	24.6	38.8	32.9	27.1	25.7	17.7	15.2	17.8
(WY)	(2002)	(2002)	(1999)	(1981)	(2002)	(1981)	(1995)	(1977)	(1999)	(2002)	(1981)	(1988)

01408120 NORTH BRANCH METEDECONK RIVER NEAR LAKEWOOD, NJ—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1973 - 2003	
ANNUAL TOTAL	14,971.5		26,599			
ANNUAL MEAN	41.0		72.9		59.6	
HIGHEST ANNUAL MEAN					91.5	1984
LOWEST ANNUAL MEAN					28.7	2002
HIGHEST DAILY MEAN	224	Oct 17	358	Feb 23	838	Feb 25, 1979
LOWEST DAILY MEAN	7.4	Aug 19	13	Oct 7-9	7.4	Aug 19, 2002
ANNUAL SEVEN-DAY MINIMUM	7.7	Aug 16	14	Oct 3	7.7	Aug 16, 2002
MAXIMUM PEAK FLOW			465	Feb 23	1,370a	Nov 8, 1977
MAXIMUM PEAK STAGE			7.17	Feb 23	9.28	Nov 8, 1977
INSTANTANEOUS LOW FLOW			13	Oct 4,6-9	10	Sep 8, 1995
ANNUAL RUNOFF (CFSM)	1.18		2.09		1.71	
ANNUAL RUNOFF (INCHES)	15.96		28.35		23.19	
10 PERCENT EXCEEDS	83		153		110	
50 PERCENT EXCEEDS	28		52		44	
90 PERCENT EXCEEDS	13		30		21	

a From rating curve extended above 600 ft^3/s
e Estimated



RESERVOIRS IN ATLANTIC COASTAL BASINS

01407500 SWIMMING RIVER RESERVOIR. --Lat 40°19'09", long 74°06'58", Monmouth County, Hydrologic Unit 02030104, at dam on Swimming River, 3.3 mi southwest of Red Bank, and 4.8 mi upstream from mouth.
DRAINAGE AREA.-- 49.2 mi^2.
PERIOD OF RECORD.-- August 1922 to current year.
REVISED RECORDS.-- WDR NJ-00-1: 1999 (elevation, contents).
GAGE.-- Water-stage recorder above concrete dam. Datum of gage is National Geodetic Vertical Datum of 1929.
REMARKS.--Reservoir formed by concrete core and earth embankment dam, with a Trenton-type overflow spillway. Capacity at spillway level, 2,610,000,000 gal, elevation, 35.0 ft. Reservoir used for storage and water diversion by New Jersey-American Water Company. Reservoir enlarged and dam raised in 1962. Outflow is controlled by gates on a pipe.
COOPERATION.--Water-stage recorder inspected by and records of discharge provided by New Jersey-American Water Company.
EXTREMES FOR CURRENT YEAR.--Maximum contents 2,799,000,000 gal, Feb. 23, elevation, 35.90 ft; minimum, 1,901,000,000 gal, Oct. 8-11, elevation, 31.18ft.

01407965 MANASQUAN RESERVOIR.--Lat 40°10'45", long 74°11'39", Monmouth County, Hydrologic Unit 02040301, at dam on Timber Swamp Brook, 1.6 mi southwest of Farmingdale, and 1.2 mi upstream from the Manasquan River.
DRAINAGE AREA, 3.18 mi^2 (revised).
PERIOD OF RECORD, March 1990 to current year.
GAGE, water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929.
REMARKS.--Reservoir is formed by an earthfill dam 4,840 ft long, utilizing a soil-bentonite cut-off wall to control water seepage; dam completed in July 1990 with nominal crest elevation 112.0 ft, but filling began earlier. Usable capacity 4,669,700,000 gal (revised) at elevation 103.0 ft, which represents the normal and service spillway elevation; outflow is regulated through an inlet/outlet tower and the reservoir is filled by pumping from the Manasquan River Intake Pumping Station and the Reservoir Pumping Station through 5.25 mi of 66-in. pipeline (see station 01408029). Water is used for municipal supply.
COOPERATION.--Records provided by New Jersey Water Supply Authority.
EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 4,694,000,000 gal, Mar. 26, 1993, elevation, 103.1 ft; minimum (after first filling), 3,531,000,000 gal, Feb. 26, 1992, elevation 97.7 ft.
EXTREMES FOR CURRENT YEAR.--Maximum contents 4,690,000,000 gal, Jan. 4, elevation, 103.07 ft; minimum, 3,160,000,000 gal, Oct. 10, elevation, 95.82 ft.

MONTHEND ELEVATION AND CONTENTS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Elevation (feet)†	Contents (million gallons)	Change in contents (equivalent in ft^3/s)	Elevation (feet)*	Contents (million gallons)	Change in contents (equivalent in ft^3/s)
	01407500 SWIMMING RIVER RESERVOIR			01407965 MANASQUAN RESERVOIR		
Sept.30.....	31.56	1,970		96.38	3,270	
Oct. 31.....	35.18	2,648	+33.8	99.66	3,920	+32.4
Nov. 30.....	35.18	2,648	0	102.37	4,520	+30.9
Dec. 31.....	35.24	2,660	+.6	102.90	4,640	+6.0
CAL YR 2002			+3.3			+7.1
Jan. 31.....	35.20	2,652	-.4	101.89	4,410	-11.5
Feb. 28.....	35.25	2,662	+.6	102.62	4,560	+8.3
Mar. 31.....	35.25	2,662	0	102.97	4,660	+5.0
Apr. 30.....	35.23	2,658	-.2	102.77	4,610	-2.6
May 31.....	35.25	2,662	+.2	102.95	4,660	+2.5
June 30.....	35.17	2,646	-.8	102.31	4,510	-7.7
July 31.....	35.01	2,612	-1.7	101.36	4,300	-10.5
Aug. 31.....	34.48	2,506	-5.3	100.56	4,130	-8.5
Sept.30.....	35.13	2,637	+6.8	100.93	4,210	+4.1
WTR YR 2003			+2.8			+4.0

† Elevation at 2400 on the last day of each month.
* Elevation at 0600 on the first day of the following month.

ATLANTIC COASTAL BASINS

DIVERSIONS IN ATLANTIC COASTAL RIVER BASINS

01407499 Water is diverted from Swimming River Reservoir just upstream of gaging station (01407500) near Red Bank by New Jersey-American Water Company for municipal supply. Records provided by New Jersey-American Water Company.

01407704 Water is diverted from Shark River just upstream of gaging station (01407705) near Neptune City by New Jersey-American Water Company (since 1962), for municipal supply. Records provided by New Jersey-American Water Company.

01407704 Water is diverted from Jumping Brook just upstream of gaging station (01407760) near Neptune City by New Jersey-American Water Company (since 1962), for municipal supply. Records provided by New Jersey-American Water Company. REVISED RECORDS.--WDR NJ-98-1: 1997.

0140802880 New Jersey Water Supply Authority diverts water from the Manasquan Reservoir System, for municipal supply. Figures include water pumped to Glendola Reservoir for New Jersey-American Water Company.

0140802890 New Jersey Water Supply Authority diverts water from the Manasquan Reservoir System to the Glendola Reservoir of New Jersey-American Water Company in the Shark River Basin, for municipal supply.

01408153 Brick Township Municipal Utilities Authority diverts water from the Metedeconk River at a site located 0.7 mi upstream of the dam on Forge Pond for municipal supply (since 1987). Records furnished by Brick Township Municipal Utilities Authority.

DIVERSIONS, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

MONTH	01407499 Swimming River diversion	01407704 Shark River diversion	01407759 Jumping Brook diversion	0140802880 Manasquan Reservoir System diversion	0140802890 Glendola Reservoir NJ American Water Company	01408153 Metedeconk River diversion
October	36.9	8.22	0	55.2	18.3	8.84
November	34.8	19.2	0	52.9	18.4	11.6
December	33.5	14.1	0	30.2	18.4	7.31
CAL YR 2002	37.6	6.42	0	37.7	20.3	8.54
January	33.5	11.4	0	12.6	17.6	6.86
February	34.1	12.1	0	29.4	18.1	7.01
March	33.2	12.7	0	22.1	19.5	9.03
April	31.5	7.02	0	22.3	19.0	11.7
May	26.2	12.5	0	29.7	19.0	13.5
June	27.6	3.06	0	15.6	19.0	9.03
July	42.3	6.34	0	39.0	22.4	15.0
August	36.6	5.95	0	32.6	19.5	12.3
September	24.4	8.50	0	35.8	19.3	12.2
WTR YR 2003	32.9	10.1	0	31.5	19.0	10.4

Figure 18. U.S. Geological Survey gage continuously monitoring the stage at Manasquan River at Squankum, NJ. Photograph taken by Blaine T. White, 2003.

BARNEGAT BAY

01408168 BARNEGAT BAY AT MANTOLOKING, NJ

LOCATION.--Lat. 40°02'24", long 74°03'09", revised, Ocean County, Hydrologic Unit 02040301, on northeast abutment of bridge on County Route 528 (Mantoloking Road-Herbert Street) in Mantoloking, 2.1 mi south of Bay Head, and 4.7 mi north of Lavalette.

PERIOD OF RECORD.--Tidal crest-stage gage 1979-85, 1993. June 1993 to current year.

GAGE.--Water-stage recorder. Datum of gage is 0.00 ft North American Vertical Datum of 1988 (NAVD of 1988). Data published for water years 1979-2000 was referenced to National Geodetic Vertical Datum of 1929 (NGVD of 1929). Data for 1993-2000 was collected 1100 ft south of present gage at foot of Downer Avenue. This past data can be adjusted to NAVD of 1988 by subtracting 1.12 ft. To determine approximate elevations to Mean Lower Low Water Datum, add 0.08 ft (revised to tidal Epoch 1983-2001).

REMARKS.--Gage cannot accurately record tide levels below -1.45 ft. Some monthly minimum and mean low tides have been estimated. Ice effect Jan. 14 to Feb. 20. Summaries for months with short periods of no gage-height record have been estimated with little or no loss of accuracy unless otherwise noted. Some periods cannot be estimated and are noted by dashed (---) lines. Satellite stage telemetry at station.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation known, 3.81 ft (adjusted to NAVD of 1988), Dec. 11, 1992, from crest-stage gage; minimum recorded, -1.55 ft (adjusted to NAVD of 1988, measured at old location), Oct. 8, 1996.

EXTREMES FOR CURRENT YEAR.--Maximum elevation recorded, 2.18 ft (NAVD of 1988), Oct. 16.

Summaries of tide elevations during the year are as follows:

TIDE ELEVATIONS, IN FEET, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

		OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
Maximum	Elevation	2.18	1.31	1.54	1.77	---	1.39	.94	.95	1.22	1.36	1.14	2.17
high tide	Date	16	6	20	4	---	21	6	12	1	21	10	19
Minimum	Elevation	-.72	-1.5e	-1.6e	---	---	-1.25	-1.35	-.90	-.53	-.57	-.48	-.76
low tide	Date	29	25	9	---	---	13	8	22	3	25	23	18
Mean high tide		.57	.20	.06	---	---	.23	.23	.33	.61	.55	.56	.74
Mean water level		.33	-.08	-.21	---	---	-.09	-.06	.09	.28	.27	.30	.45
Mean low tide		.04	-.34	-.52	---	---	-.37	-.33	-.18	.04	.00	.01	.15

e - estimated

01408500 TOMS RIVER NEAR TOMS RIVER, NJ

LOCATION.--Lat 39°59'11", long 74°13'24", Ocean County, Hydrologic Unit 02040301, on left bank 500 ft downstream from bridge on County Route 527 (Oak Ridge Parkway), 1.9 mi downstream from Union Branch, and 2.6 mi northwest of community of Toms River.

DRAINAGE AREA.--123 mi^2.

PERIOD OF RECORD.--October 1928 to current year. Monthly discharge only for October and November 1928, published in WSP 1302.

REVISED RECORDS.--WSP 1702: 1938. WDR NJ-76-1: 1975(M). WDR NJ-77-1: 1976.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 8.10 ft above NGVD of 1929.

REMARKS.--Records good. Diversions by Ciba-Geigy Inc., 800 ft. upstream July 1966 through 1990; The effluent is returned by pipeline directly into the Atlantic Ocean, thus bypassing station. Temporary regulation also occurs from an unknown source. Several measurements of water temperature were made during the year. Satellite gage-height telemetry at station.

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

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Dec 15	1915	460	6.14	Mar 8	1130	519	6.51
Jan 5	1500	588	6.93	Jun 10	0100	573	6.69
Feb 25	1400	*955	*8.73	Jun 16	1500	600	6.89

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	82	203	181	245	173	388	246	209	238	170	133	209
2	77	193	174	302	178	360	241	201	231	163	263	228
3	73	176	168	361	180	380	229	188	222	180	283	218
4	70	162	163	540	185	417	220	181	271	188	276	251
5	71	153	162	585	198	473	217	176	321	177	231	270
6	69	e182	162	564	201	485	213	177	413	163	200	253
7	67	195	165	492	196	501	219	184	491	151	174	243
8	65	200	167	401	187	515	259	195	512	149	180	189
9	64	187	167	338	179	500	292	194	504	139	202	157
10	65	170	161	302	177	453	345	195	552	143	250	141
11	140	159	176	282	174	412	387	191	453	155	250	132
12	227	169	259	258	170	389	441	186	342	148	207	125
13	265	213	294	239	163	354	431	177	332	137	179	143
14	287	234	416	228	159	326	410	169	339	130	164	160
15	231	238	456	219	161	308	371	164	465	131	141	171
16	228	219	447	211	158	292	313	160	579	129	132	178
17	282	278	382	206	177	282	265	161	544	124	131	189
18	275	333	299	200	174	275	238	161	520	120	131	177
19	257	384	247	190	175	261	224	158	525	123	137	152
20	196	404	251	191	185	259	215	154	570	131	127	143
21	162	331	268	186	190	305	209	154	560	123	119	133
22	143	311	270	181	279	346	229	173	497	121	114	127
23	132	294	270	176	484	366	236	187	433	195	113	137
24	124	281	241	172	604	345	246	204	379	215	108	158
25	119	271	263	168	874	296	236	206	316	196	105	176
26	171	236	322	167	750	265	237	267	264	160	102	178
27	195	218	343	168	603	257	233	358	226	140	103	155
28	199	206	370	163	485	249	230	409	202	129	110	156
29	188	197	331	165	---	243	227	403	187	124	109	157
30	184	189	274	167	---	241	216	329	180	121	130	147
31	201	---	244	168	---	241	---	253	---	118	211	---
TOTAL	4,909	6,986	8,093	8,235	7,819	10,784	8,075	6,524	11,668	4,593	5,115	5,253
MEAN	158	233	261	266	279	348	269	210	389	148	165	175
MAX	287	404	456	585	874	515	441	409	579	215	283	270
MIN	64	153	161	163	158	241	209	154	180	118	102	125
CFSM	1.29	1.89	2.12	2.16	2.27	2.83	2.19	1.71	3.16	1.20	1.34	1.42
IN.	1.48	2.11	2.45	2.49	2.36	3.26	2.44	1.97	3.53	1.39	1.55	1.59

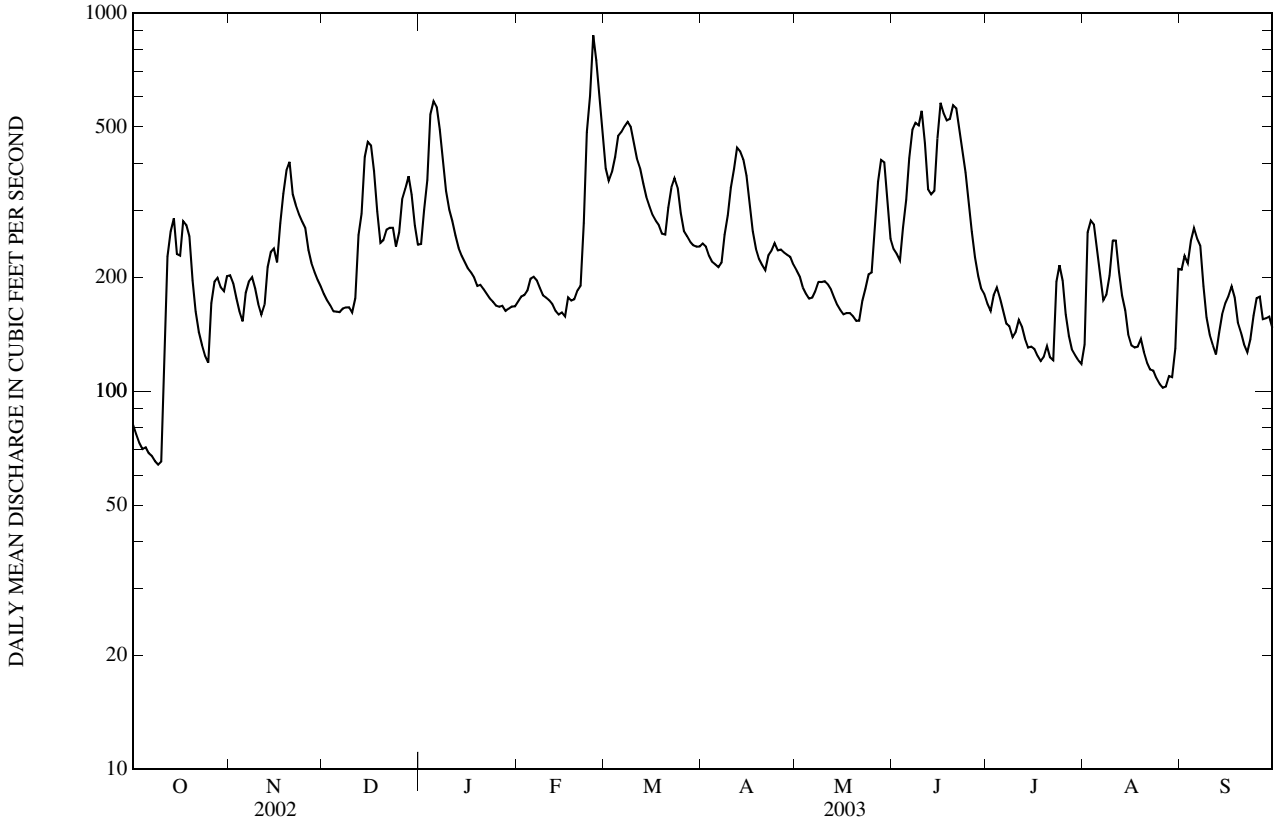
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1929 - 2003, BY WATER YEAR (WY)

MEAN	155	196	221	244	250	290	279	241	187	154	158	151
MAX	325	475	447	506	455	541	573	541	463	439	359	414
(WY)	(1972)	(1973)	(1973)	(1978)	(1973)	(1958)	(1984)	(1998)	(1968)	(1938)	(1990)	(1971)
MIN	83.3	84.2	93.6	104	103	143	120	118	96.8	71.0	57.9	63.0
(WY)	(1942)	(2002)	(1999)	(1981)	(2002)	(1985)	(1985)	(1992)	(1977)	(1999)	(1966)	(1995)

01408500 TOMS RIVER NEAR TOMS RIVER, NJ—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1929 - 2003	
ANNUAL TOTAL	51,763		88,054			
ANNUAL MEAN	142		241		210	
HIGHEST ANNUAL MEAN					335	1978
LOWEST ANNUAL MEAN					111	2002
HIGHEST DAILY MEAN	456	Dec 15	874	Feb 25	1,910	Sep 23, 1938
LOWEST DAILY MEAN	42	Aug 21	64	Oct 9	42	Aug 21, 2002
ANNUAL SEVEN-DAY MINIMUM	45	Aug 17	67	Oct 4	44	Sep 10, 1995
MAXIMUM PEAK FLOW			955	Feb 25	2,000a	Sep 23, 1938
MAXIMUM PEAK STAGE			8.73	Feb 25	12.50b	Sep 23, 1938
INSTANTANEOUS LOW FLOW			64	Oct 9,10	37c	Aug 4, 2001
ANNUAL RUNOFF (CFSM)	1.15		1.96		1.71	
ANNUAL RUNOFF (INCHES)	15.66		26.63		23.23	
10 PERCENT EXCEEDS	247		414		352	
50 PERCENT EXCEEDS	121		202		182	
90 PERCENT EXCEEDS	64		131		96	

a From rating curve extended above 1,500 ft^3/s.
b From floodmark.
c From temporary regulation from unknown source.
e Estimated



BARNEGAT BAY

01408750 BARNEGAT BAY AT SEASIDE HEIGHTS, NJ

LOCATION.--Lat 39°56'18", long 74°04'56", Ocean County, Hydrologic Unit 02040301, on public fishing pier in Seaside Heights just north of Seaside Park, 0.2 mi southeast of the east end of State Highway 37 bridge over Barnegat Bay, and 5.5 mi east of Village of Toms River.

PERIOD OF RECORD.--June 1997 to March 2000 (unpublished fragmentary gage-height record), April 2000 to present year.

GAGE.--Water-stage recorder. Datum of gage is at 0.00 ft North American Vertical Datum of 1988 (NAVD of 1988). To determine approximate elevations to National Geodetic Vertical Datum of 1929 (NGVD of 1929) elevation, add 1.15 ft. To determine approximate elevations in Mean Lower Low Water Datum, add 0.35 ft. (revised to tidal Epoch 1983-2001).

REMARKS.--Ice effect Jan. 14 to Feb. 18. Summaries for months with short periods of no gage-height record have been estimated with little or no loss of accuracy unless otherwise noted. Some periods cannot be estimated and are noted by dash (---) lines. Satellite stage telemetry at station.

EXTREMES FOR PERIOD OF PUBLISHED RECORD.--Maximum elevation recorded, 2.28 ft (NAVD of 1988), Oct. 16, 2002; minimum elevation recorded, -1.73 ft (NAVD of 1988), Feb. 12, 2001.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum elevation known, 6.12 ft (adjusted to NAVD of 1988), December 11, 1992, from high-water mark at the foot of South Bayview Avenue in Seaside Park. Other significant peak elevation, 3.0 ft (adjusted to NAVD of 1988), March 6-7, 1962, from high-water mark on foot of 12th Avenue in Seaside Park.

EXTREMES FOR CURRENT YEAR.--Maximum elevation recorded, 2.28 ft (NAVD of 1988), Oct. 16; minimum elevation recorded, -1.70 ft (NAVD of 1988), Feb. 26.

Summaries of tide elevations during the year are as follows:

TIDE ELEVATIONS, IN FEET, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

		OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
Maximum	Elevation	2.28	1.44	---	1.94	1.50	1.32	1.03	1.04	1.23	1.35	1.12	1.99
high tide	Date	16	6	---	4	18	21	6	12	1, 15	11	10	19
Minimum	Elevation	-.65	-1.50	-1.52	-1.54	-1.70	-1.11	-.99	-.70	-.53	-.6e	-.48	-.32
low tide	Date	24	25	9	14	26	14	7	22	3	---	21	17, 18
Mean high tide		.72	.26	.2e	---	---	.35	.41	.47	.71	.7e	.64	.86
Mean water level		.40	-.05	-.19	---	---	-.02	.06	.17	.38	.3e	.32	.54
Mean low tide		.04	-.37	-.53	---	---	-.34	-.27	-.16	.02	0.0e	-.02	.16

e - estimated

BARNEGAT BAY

01409110 BARNEGAT BAY AT WARETOWN, NJ

LOCATION.--Lat 39°47'28", long 74°10'55", Ocean County, Hydrologic Unit 02040301, on the public fishing pier near the Galley Restaurant at the end of Bryant Road on west side of Barnegat Bay, 0.7 mi east of Waretown, and 3.2 mi south of Forked River.

PERIOD OF RECORD.--August 1993 to current year.

GAGE.--Water-stage recorder. Datum of gage is 0.00 ft North American Vertical Datum of 1988 (NAVD of 1988). To determine approximate elevations in Mean Lower Low Water Datum, add 0.14 ft. (revised to tidal Epoch 1983-2001). Data published for water years 1993-2000 was referenced to National Geodetic Vertical Datum Of 1929 (NGVD of 1929). This past data can be adjusted to NAVD of 1988 by subtracting 1.23 ft.

REMARKS.--As of Nov. 4, 2002, gage cannot measure tide level below -0.82 ft. No gage height record Oct. 31 to Nov. 4 and Nov. 23-26. Ice effect is apparent Jan. 11 to Feb. 26. Summaries for months with short periods of no gage-height record have been estimated with little or no loss of accuracy unless otherwise noted. Some periods cannot be estimated and are noted by dashed (---) lines.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation recorded, 2.40 ft, Oct. 19, 1996 (adjusted to NAVD of 1988); minimum recorded, -1.87 ft, Mar. 4, 1996 (adjusted to NAVD of 1988).

EXTREMES FOR CURRENT YEAR.--Maximum elevation recorded, 2.14 ft (NAVD of 1988), Oct. 16.

Summaries of tide elevations during the year are as follows:

TIDE ELEVATIONS, IN FEET, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

		OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
Maximum	Elevation	2.14	1.49	1.56	2.08	1.36	1.06	1.17	1.15	1.03	1.12	.80	1.56
high tide	Date	16	17	25	3	18	19	18	16	14	11	9	19
Minimum	Elevation	-.53	-.68	-.9e	---	---	---	-.79	-.53	-.47	-.81	-.56	-.15
low tide	Date	24	20	10	---	---	---	16	20	3	27	21	17
Mean high tide		.70	---	.16	---	---	.20	.47	.42	.58	.41	.43	.83
Mean water level		.44	---	-.16	---	---	-.10	.17	.16	.32	.15	.15	.54
Mean low tide		.12	---	-.3e	---	---	-.3e	-.13	-.13	.04	-.13	-.12	.24

e - estimated

BARNEGAT BAY

01409125 BARNEGAT BAY AT BARNEGAT LIGHT, NJ

LOCATION.--Lat 39°45'38", long 74°06'37", Ocean County, Hydrologic Unit 02040301, on bulkhead at U.S. Coast Guard Station in Barnegat Light, 0.5 mi southwest of Barnegat Inlet, and 4.4 mi east of Pebble Beach in Barnegat Township.

PERIOD OF RECORD.--Tidal crest-stage gage 1965-1980. September 1997 to October 2000 (unpublished fragmentary gage-height record), November 2000 to current year.

GAGE.--Water-stage, air temperature, water temperature, wind speed/direction, barometric pressure, and precipitation recorder. Datum of gage is at 0.00 ft North American Vertical Datum of 1988 (NAVD of 1988). To determine approximate elevation corresponding National Geodetic Vertical Datum of 1929 (NGVD of 1929), add 1.26 ft. To determine approximate corresponding elevation in Mean Lower Low Water datum, add 1.33 ft (revised to tidal Epoch 1983-2001).Online peaks have been adjusted to NAVD of 1988.

REMARKS.--No gage-height record Mar. 3-7, and short periods of numerous other days. Ice may have affected the gage Jan. 21 to 29. Summaries for months with short periods of no gage-height record have been estimated with little or no loss of accuracy. Some periods cannot be estimated and are noted by dashed (---) lines. Satellite stage and weather telemetry at station.

EXTREMES FOR PERIOD OF PUBLISHED RECORD.--Maximum elevation recorded, 3.45 ft (NAVD of 1988), Dec. 25, 2002. Minimum elevation recorded, -3.77 ft (NAVD of 1988), Jan. 14, 2002.

EXTERMES OUTSIDE PERIOD OF RECORD.-- Maximum elevation recorded, 4.93 ft (adjusted to NAVD of 1988), Dec. 11, 1992, from mark on discontinued tidal crest-stage gage.

EXTREMES FOR CURRENT WATER YEAR.-- Maximum elevation recorded, 3.45 ft (NAVD of 1988), Dec. 25. Minimum elevation recorded, - 3.26 ft (NAVD of 1988), Dec. 1, although a lower elevation likely occurred during the period of ice effect Jan. 21-29.

Summaries of tide elevations during water year 2003 are as follows:

TIDE ELEVATIONS, IN FEET, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

		OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
Maximum	Elevation	2.89	3.10	3.45	3.43	3.08	2.64	2.99	2.99	2.68	2.62	2.16	2.91
high tide	Date	12	6	25	3	17	20	17	16	13	11	11	28
Minimum	Elevation	-1.83	-3.14	-3.26	---	-3.16	---	-2.74	-2.07	-1.74	-1.76	-1.74	-1.49
low tide	Date	6	24	1	---	5	---	16	15	11, 12	27	14	1
Mean high tide		1.75	1.27	1.24	1.17	.84	1.2e	1.47	1.47	1.56	1.45	1.48	1.82
Mean water level		.43	-.13	-.17	-.08	-.52	-.1e	.16	.13	.27	.11	.09	.52
Mean low tide		-.92	-1.56	-1.61	-1.5e	-2.01	-1.4e	-1.14	-1.20	-1.04	-1.26	-1.31	-.80

e - estimated

BARNEGAT BAY

01409146 EAST THOROFARE AT SHIP BOTTOM, NJ

LOCATION.--Lat 39°39'15", long 74°11'10", Ocean County, Hydrologic Unit 02040301, on south side of bridge carrying State Route 72 across East Thorofare (Manahawkin Bay) between Bonnet Island and Long Beach Island, 2.0 mi southeast of Bayside, 9.0 mi southwest of Barnegat Inlet, and 11.5 mi northeast of Little Egg Inlet.

PERIOD OF RECORD.--July 1997 to May 5, 2000 (unpublished fragmentary gage-height record); May 5, 2000 to present year.

GAGE.--Water-stage recorder. Datum of gage is at 0.00 ft North American Vertical Datum of 1988 (NAVD of 1988). To determine approximate elevations to National Geodetic Vertical Datum of 1929 (NGVD of 1929) add 1.25 ft. To determine approximate elevations to Mean Lower Low Water Datum, add 0.64 ft (revised to tidal Epoch 1983-2001).

REMARKS.--Missing data/ice effect Jan. 17 to Feb. 21. Summaries for months with short periods of no gage-height record have been estimated with little or no loss of accuracy unless otherwise noted. Some periods cannot be estimated and are noted by dashed (---) lines. Satellite stage telemetry at station.

EXTREMES FOR PERIOD OF PUBLISHED RECORD.--Maximum elevation recorded, 2.92 ft (NAVD of 1988), Sep. 30, 2001; minimum elevation recorded, -2.06 ft (NAVD of 1988), Mar. 11, 2002.

EXTREMES FOR CURRENT WATER YEAR.--Maximum elevation recorded, 2.83 ft (NAVD of 1988), Dec. 25; minimum elevation recorded, -1.93 ft (NAVD of 1988), Nov. 24.

Summaries of tide elevations during water year 2003 are as follows:

TIDE ELEVATIONS, IN FEET, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

		OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
Maximum	Elevation	2.48	2.25	2.83	2.67	---	1.57	1.99	1.96	1.78	1.69	1.35	1.98
high tide	Date	16	17	25	3	---	19	18	16	13	11	9	28
Minimum	Elevation	-.93	-1.93	-1.59	---	---	-1.39	-1.25	-.89	-.88	-1.07	-.78	-.49
low tide	Date	2	24	2	---	---	4	1, 16	20	3	26	21	1
Mean high tide		1.18	.64	.61	---	---	.66	.96	.94	1.09	.89	.94	1.33
Mean water level		.46	-.07	-.11	---	---	-.10	.24	.21	.34	.18	.20	.60
Mean low tide		-.24	-.73	-.79	---	---	-.80	-.46	-.47	-.34	-.51	-.48	-.10

01409280 WESTECUNK CREEK AT STAFFORD FORGE, NJ

LOCATION.--Lat 39'40'00", Long 74'19'12", Ocean County, Hydrologic Unit 02040301, 75 ft downstream from dam, 0.2 mi south of Stafford Forge, 1.2 mi downstream from Log Swamp Branch, and 2.0 mi west of Staffordville.

DRAINAGE AREA.--15.8 mi^2.

PERIOD OF RECORD.--October 1973 to September 1988, July 2003 to current year. Occasional low-flow water years 1969-1973, at site 400 ft downstream.

REVISED RECORDS.--WRD NJ -83-1: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 6.36 ft above National Geodetic Vertical Datum of 1929. Prior to Aug. 6, 1981, water-stage recorder and wooded control at site 50 ft upstream at datum 9.42 ft higher.

REMARKS.--Records fair. Flow regulated by dam 75 ft upstream. Satellite gage-height telemetry at station. Several measurements of water temperature were made during the year.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 75 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)

No peak greater than base discharge.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

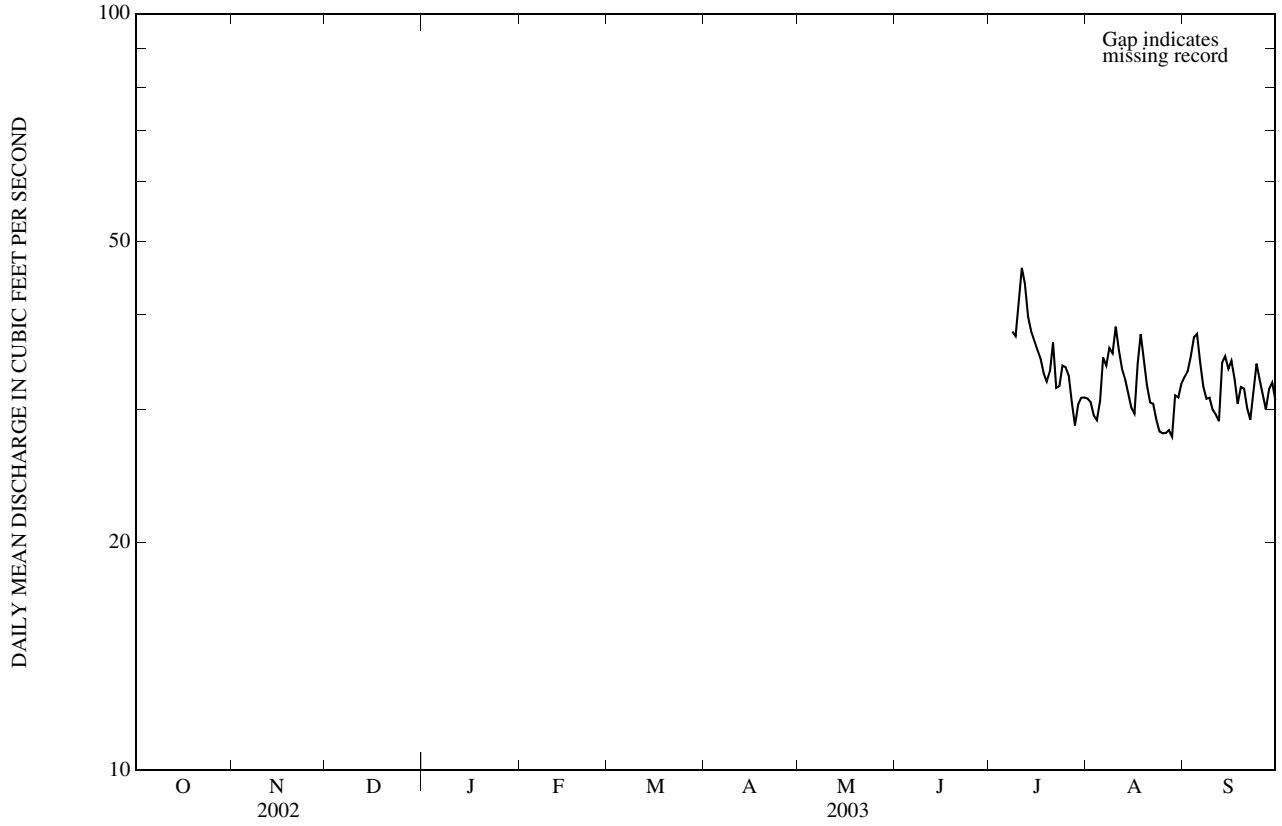
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	---	---	31	33
2	---	---	---	---	---	---	---	---	---	---	31	34
3	---	---	---	---	---	---	---	---	---	---	29	35
4	---	---	---	---	---	---	---	---	---	---	29	37
5	---	---	---	---	---	---	---	---	---	---	31	38
6	---	---	---	---	---	---	---	---	---	---	35	35
7	---	---	---	---	---	---	---	---	---	---	34	32
8	---	---	---	---	---	---	---	---	---	38	36	31
9	---	---	---	---	---	---	---	---	---	37	36	31
10	---	---	---	---	---	---	---	---	---	41	39	30
11	---	---	---	---	---	---	---	---	---	46	36	30
12	---	---	---	---	---	---	---	---	---	44	34	29
13	---	---	---	---	---	---	---	---	---	40	33	35
14	---	---	---	---	---	---	---	---	---	38	31	35
15	---	---	---	---	---	---	---	---	---	37	30	34
16	---	---	---	---	---	---	---	---	---	36	30	35
17	---	---	---	---	---	---	---	---	---	35	34	33
18	---	---	---	---	---	---	---	---	---	33	38	30
19	---	---	---	---	---	---	---	---	---	33	35	32
20	---	---	---	---	---	---	---	---	---	34	32	32
21	---	---	---	---	---	---	---	---	---	37	31	30
22	---	---	---	---	---	---	---	---	---	32	30	29
23	---	---	---	---	---	---	---	---	---	32	29	31
24	---	---	---	---	---	---	---	---	---	34	28	34
25	---	---	---	---	---	---	---	---	---	34	28	33
26	---	---	---	---	---	---	---	---	---	33	28	31
27	---	---	---	---	---	---	---	---	---	31	28	30
28	---	---	---	---	---	---	---	---	---	29	28	32
29	---	---	---	---	---	---	---	---	---	30	31	33
30	---	---	---	---	---	---	---	---	---	31	31	31
31	---	---	---	---	---	---	---	---	---	31	32	---
TOTAL	---	---	---	---	---	---	---	---	---	---	988	975
MEAN	---	---	---	---	---	---	---	---	---	---	31.9	32.5
MAX	---	---	---	---	---	---	---	---	---	---	39	38
MIN	---	---	---	---	---	---	---	---	---	---	28	29
CFSM	---	---	---	---	---	---	---	---	---	---	2.02	2.06
IN.	---	---	---	---	---	---	---	---	---	---	2.33	2.30

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1974 - 2003, BY WATER YEAR (WY)

MEAN	26.9	28.7	31.4	34.2	36.3	38.0	40.0	35.1	30.8	28.3	28.0	25.9
MAX	37.3	50.7	48.3	57.7	63.8	69.2	75.7	54.8	56.7	51.1	46.8	37.3
(WY)	(1980)	(1978)	(1984)	(1979)	(1979)	(1979)	(1984)	(1984)	(1984)	(1978)	(1978)	(1978)
MIN	16.6	17.6	21.5	19.6	23.5	24.3	20.9	16.2	16.7	13.8	18.0	13.6
(WY)	(1986)	(1986)	(1986)	(1986)	(1977)	(1982)	(1985)	(1986)	(1986)	(1985)	(1985)	(1985)

01409280 WESTECUNK CREEK AT STAFFORD, NJ—Continued

SUMMARY STATISTICS	FOR JULY 8-SEPT. 30, 2003		WATER YEARS 1974 - 2003	
ANNUAL MEAN			31.9	
HIGHEST ANNUAL MEAN			46.9	1978
LOWEST ANNUAL MEAN			19.7	1986
HIGHEST DAILY MEAN	46	Jul 11	218	Feb 26, 1979
LOWEST DAILY MEAN	28	Many days	1.1	Sep 18, 1981
ANNUAL SEVEN-DAY MINIMUM			9.0	Jul 19, 1985
MAXIMUM PEAK FLOW	47	Jul 11	256	Jul 4, 2003
MAXIMUM PEAK STAGE	10.76	Jul 11	3.70	Jul 4, 2003
INSTANTANEOUS LOW FLOW	27	Many days	0.00	May 17, 1974
ANNUAL RUNOFF (CFSM)			2.02	
ANNUAL RUNOFF (INCHES)			27.41	
10 PERCENT EXCEEDS			48	
50 PERCENT EXCEEDS			29	
90 PERCENT EXCEEDS			19	



GREAT BAY

01409335 LITTLE EGG INLET NEAR TUCKERTON, NJ

LOCATION.--Lat 39 30'32", Long 74 19'29", Ocean County Hydrologic Unit 02040301, on west end of docking pier at Rutgers University Marine Field Station (old U.S. Coast Guard Station) along Shooting Thorofare, 2.0 mi west of Atlantic Ocean, 4.3 mi southwest of Holgate (Long Beach Island), and 6.6 mi southeast of Tuckerton.

PERIOD OF RECORD.--1971-1975 (fragmentary gage-height record), July 1997 to Jan. 23, 2001 (unpublished fragmentary gage-height record), Jan. 24, 2001 to present year.

GAGE.--Water-stage recorder. Datum of gage is at 0.00 ft North American Vertical Datum of 1988 (NAVD of 1988). To determine approximate elevations to National Geodetic Vertical Datum of 1929 (NGVD of 1929), add 1.26 ft. To determine approximate elevations to Mean Lower Low Water Datum, add 1.97 ft (revised to tidal Epoch 1983-2001).

REMARKS.--No gage-height record for Jun. 23 to Sept. 30, and short portions of numerous other days. Ice effect apparent Jan. 18-31. Summaries for months with short periods of no gage-height record have been estimated with little or no loss of accuracy unless otherwise noted. Some periods cannot be estimated and are noted by dashed (---) lines. Satellite stage telemetry at station.

EXTREMES FOR PERIOD OF PUBLISHED RECORD.--Maximum elevation recorded, 4.61 ft (adjusted to NAVD of 1988), Feb. 19, 1972; minimum elevation recorded, -3.99 ft (NAVD of 1988), Feb. 11, 2001.

EXTREMES FOR CIRRENT WATER YEAR.--Maximum elevation recorded, 4.20 ft (NAVD of 1988), Feb. 17; minimum elevation recorded, -3.55 ft (NAVD of 1988), Feb. 5, although a lower tide elevation likely occurred during period of ice effect in January.

Summaries of tide elevations during water year 2003 are as follows:

TIDE ELEVATIONS, IN FEET, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

		OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
Maximum	Elevation	2.99	3.25	4.06	3.90	4.20	2.67	3.41	3.29	2.67	---	---	---
high tide	Date	12	6	25	3	17	19	17	16	13	---	---	---
Minimum	Elevation	-2.19	-3.36	-3.48	---	-3.55	-2.60	-3.08	-2.34	-2.07	---	---	---
low tide	Date	6	19	1	---	5	4	16	15	12	---	---	---
Mean high tide		1.79	1.22	1.21	---	.84	1.26	1.56	1.50	---	---	---	---
Mean water level		.29	-.32	-.37	---	-.6e	-.30	.07	-.02	---	---	---	---
Mean low tide		-1.18	-1.88	-1.94	---	-2.3e	-1.80	-1.41	-1.50	---	---	---	---

e - estimated

Figure 19. U.S. Geological Survey tide gage continuously monitoring the elevation of water surface at Barnegat Bay at Seaside Heights, NJ. Photograph taken by Peter B. Reilly, 2002.

01409400 MULLICA RIVER NEAR BATSTO, NJ

LOCATION.--Lat 39°40'28", long 74°39'54", Atlantic County, Hydrologic Unit 02040301, on right bank 2.4 mi upstream from Sleeper Branch, and 2.5 mi north of Batsto.

DRAINAGE AREA.--46.7 mi^2.

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

REVISED RECORDS.--WRD-NJ 1969: 1958(M), 1960(M), 1967-68(M), WDR NJ-83-1: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 11.93 ft above NGVD of 1929.

REMARKS.--Records good, except estimated discharges which are fair. Some regulation from upstream cranberry bogs and Atsion Lake. Diversions from Sleeper Branch enter river upstream from gage and substantially increase the discharge at the gage. Several measurements of water temperature were made during the year. Satellite gage-height telemetry at station.

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

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Feb 27	1130	*509	*3.86	Jun 8	2000	323	3.07
Mar 8	1615	387	3.39	Jun 19	1045	312	3.01
Apr 15	0730	291	2.89				

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	32	107	96	162	75	396	143	93	170	96	50	44
2	32	108	93	177	82	370	136	91	190	90	50	56
3	28	115	91	195	83	402	123	92	177	102	51	86
4	27	105	e87	240	e88	379	94	90	186	128	53	89
5	27	98	e86	238	e94	362	79	89	226	115	57	82
6	26	111	e85	218	e91	401	97	93	224	88	57	83
7	25	e115	e82	205	86	419	118	90	227	94	69	117
8	20	e100	e82	191	84	391	141	94	307	95	77	148
9	13	e90	e81	180	83	378	152	92	312	89	69	147
10	11	75	e80	168	85	364	177	93	307	88	70	107
11	27	78	e89	158	83	344	194	92	257	85	79	67
12	35	91	e125	147	82	321	246	92	212	81	86	62
13	30	119	e160	139	79	298	271	89	204	75	81	70
14	36	142	e210	132	79	274	269	86	211	68	60	72
15	42	131	247	126	80	202	286	82	186	64	53	74
16	59	123	229	114	70	156	264	81	190	63	53	119
17	75	163	234	113	66	155	231	93	201	62	67	134
18	81	240	225	97	78	161	176	95	243	60	90	86
19	74	250	206	95	79	175	146	93	308	65	77	111
20	68	233	e180	91	76	188	140	89	305	59	66	125
21	64	213	e170	88	103	213	139	70	305	56	60	96
22	60	222	e160	85	142	222	150	62	296	58	55	72
23	56	226	e140	82	291	219	159	61	272	69	42	87
24	53	199	122	80	421	203	150	83	213	76	38	106
25	53	177	135	75	441	190	142	99	179	75	37	115
26	78	162	178	74	448	179	147	121	166	56	36	109
27	87	154	213	73	490	174	140	149	145	54	35	103
28	79	138	212	71	460	163	130	151	120	54	35	99
29	78	106	197	70	---	158	111	164	104	53	35	91
30	101	99	182	71	---	155	97	173	101	51	37	85
31	111	---	169	71	---	151	---	159	---	50	48	---
TOTAL	1,588	4,290	4,646	4,026	4,419	8,163	4,848	3,101	6,544	2,319	1,773	2,842
MEAN	51.2	143	150	130	158	263	162	100	218	74.8	57.2	94.7
MAX	111	250	247	240	490	419	286	173	312	128	90	148
MIN	11	75	80	70	66	151	79	61	101	50	35	44

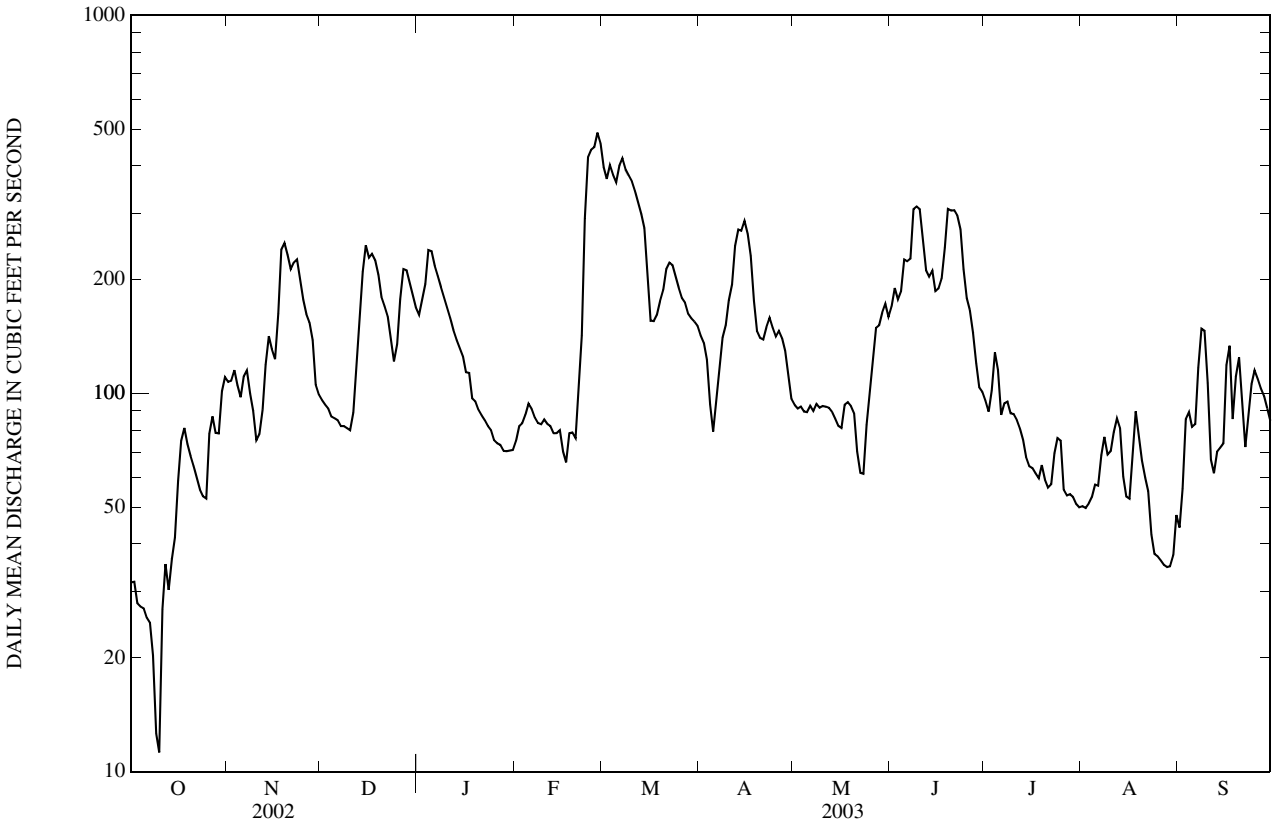
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1957 - 2003, BY WATER YEAR (WY)

MEAN	66.5	85.8	117	136	139	162	149	120	79.1	68.3	71.7	61.0
MAX	192	305	305	311	292	312	358	273	218	177	253	223
(WY)	(1976)	(1973)	(1973)	(1978)	(1979)	(1994)	(1983)	(1989)	(2003)	(1989)	(1958)	(1975)
MIN	24.1	22.0	21.8	29.3	41.1	59.1	50.3	53.3	32.3	21.9	19.8	17.6
(WY)	(1966)	(1966)	(1999)	(1981)	(2002)	(1985)	(1985)	(1992)	(1977)	(1977)	(1995)	(1995)

01409400 MULLICA RIVER NEAR BATSTO, NJ—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1957 - 2003	
ANNUAL TOTAL	24,366		48,559			
ANNUAL MEAN	66.8		133		105	
HIGHEST ANNUAL MEAN					168	1973
LOWEST ANNUAL MEAN					44.7	2002
HIGHEST DAILY MEAN	250	Nov 19	490	Feb 27	1,630	Feb 26, 1979
LOWEST DAILY MEAN	11	Oct 10	11	Oct 10	5.1	Sep 16, 1995
ANNUAL SEVEN-DAY MINIMUM	14	Aug 18	21	Oct 4	6.4	Sep 10, 1995
MAXIMUM PEAK FLOW			509	Feb 27	1,840	Feb 26, 1979
MAXIMUM PEAK STAGE			3.86	Feb 27	6.14	Feb 26, 1979
INSTANTANEOUS LOW FLOW			11	Oct 9, 10	4.9	Sep 16, 1995
10 PERCENT EXCEEDS	124		244		200	
50 PERCENT EXCEEDS	54		98		84	
90 PERCENT EXCEEDS	22		54		31	

e Estimated



01409500 BATSTO RIVER AT BATSTO, NJ

LOCATION.--Lat 39°38'30", long 74°39'01", Burlington County, Hydrologic Unit 02040301, on right bank 30 ft downstream from bridge on County Highway 542 at Batsto, 0.6 mi east of Pleasant Mills, and 1.0 mi upstream from mouth.

DRAINAGE AREA.--67.8 mi^2.

PERIOD OF RECORD.--October 1927 to current year. Monthly discharge only for April to September 1939, published in WSP 1302.

REVISED RECORDS.--WSP 1432: 1930, 1933, 1936, 1938. WDR NJ-83-1: Drainage area. WDR-87-1: 1939 (M). WDR-94-1: 1993 (M).

GAGE.--Water-stage recorder. Concrete control since Oct. 12, 1939; prior to Mar. 24, 1939, wooden control at site 50 ft downstream. Auxiliary tide gage (01409510) located 0.9 mi downstream used to adjust record for tide effect. Datum of gage is 1.4 ft above sea level.

REMARKS.--Records fair, except estimated discharges, which are poor. Considerable regulation at times by sluice gates prior to December 1954 and by automatic Bascule and sluice gates since July 1959 at Batsto Lake, 300 ft upstream; the capacity of Batsto Lake is about 60,000,000 gal. Satellite gage-height telemetry at station. Several measurements of water temperature were made during the year.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	39	95	112	143	86	317	132	114	155	100	e65	64
2	39	93	108	146	90	277	131	109	151	95	e66	64
3	39	88	102	155	76	280	128	107	158	97	e71	70
4	40	83	98	193	92	302	114	110	166	107	e75	73
5	44	79	99	220	101	328	121	108	174	109	72	73
6	40	92	97	226	105	332	118	106	191	106	73	85
7	41	90	93	204	108	358	118	104	215	104	72	105
8	39	98	92	185	108	385	127	109	249	99	93	113
9	39	94	92	170	102	349	141	107	266	92	97	125
10	39	91	91	158	99	310	156	107	291	87	102	114
11	51	89	98	143	98	284	181	106	253	102	95	83
12	67	96	117	134	95	247	203	104	210	94	94	81
13	71	110	151	127	92	225	221	103	184	e86	90	97
14	54	121	208	121	90	211	234	97	189	e83	84	82
15	50	125	217	117	89	191	213	92	182	e83	78	86
16	67	121	241	113	89	177	184	93	181	e81	74	99
17	72	155	216	110	92	161	164	107	174	e79	74	104
18	71	169	186	107	103	163	156	111	177	e77	77	90
19	63	205	157	104	97	158	141	107	204	e77	82	172
20	58	229	153	99	99	155	133	91	255	e76	81	118
21	53	206	148	97	99	160	126	94	275	e75	79	104
22	51	194	156	94	126	163	127	101	262	e75	77	95
23	49	170	150	94	201	178	132	103	238	e86	74	104
24	48	164	140	91	342	178	132	108	213	e90	71	102
25	48	158	147	90	514	165	127	114	181	e91	69	110
26	64	148	143	88	582	154	126	129	154	e81	65	115
27	76	137	179	88	522	146	125	149	136	e75	64	118
28	80	129	194	87	391	141	124	173	122	e70	62	121
29	74	123	183	86	---	135	121	189	113	e68	61	110
30	84	117	168	85	---	134	116	178	106	e66	59	93
31	93	---	154	84	---	132	---	159	---	e65	60	---
TOTAL	1,743	3,869	4,490	3,959	4,688	6,896	4,372	3,589	5,825	2,676	2,356	2,970
MEAN	56.2	129	145	128	167	222	146	116	194	86.3	76.0	99.0
MAX	93	229	241	226	582	385	234	189	291	109	102	172
MIN	39	79	91	84	76	132	114	91	106	65	59	64
CFSM	0.83	1.90	2.14	1.88	2.47	3.28	2.15	1.71	2.86	1.27	1.12	1.46
IN.	0.96	2.12	2.46	2.17	2.57	3.78	2.40	1.97	3.20	1.47	1.29	1.63

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1928 - 2003, BY WATER YEAR (WY)

MEAN	86.4	109	123	139	147	170	154	141	102	89.8	99.5	90.7
MAX	241	307	302	280	361	353	322	285	242	257	332	242
(WY)	(1959)	(1973)	(1973)	(1949)	(1939)	(1958)	(1970)	(1998)	(1948)	(1938)	(1958)	(1960)
MIN	43.9	43.4	46.0	51.5	54.0	68.5	71.8	65.1	50.9	40.6	40.8	40.5
(WY)	(1966)	(1966)	(1999)	(2002)	(2002)	(2002)	(1985)	(1977)	(1977)	(1977)	(2002)	(1995)

01409500 BATSTO RIVER AT BATSTO, NJ—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1928 - 2003	
ANNUAL TOTAL	26,642		47,433			
ANNUAL MEAN	73.0		130		120	
HIGHEST ANNUAL MEAN					193	1958
LOWEST ANNUAL MEAN					56.7	2002
HIGHEST DAILY MEAN	241	Dec 16	582	Feb 26	2,000	Aug 20, 1939
LOWEST DAILY MEAN	33	Aug 20	39	Oct 1	5.7	Oct 4, 1959
ANNUAL SEVEN-DAY MINIMUM	34	Aug 17	40	Oct 1	34	Aug 17, 2002
MAXIMUM PEAK FLOW			610	Feb 26	2,000	Aug 20, 1939
MAXIMUM PEAK STAGE			4.48	Feb 26	8.70a	Aug 20, 1939
ANNUAL RUNOFF (CFSM)	1.08		1.92		1.77	
ANNUAL RUNOFF (INCHES)	14.62		26.03		24.10	
10 PERCENT EXCEEDS	124		213		201	
50 PERCENT EXCEEDS	60		107		100	
90 PERCENT EXCEEDS	40		69		55	

a From floodmark
e Estimated

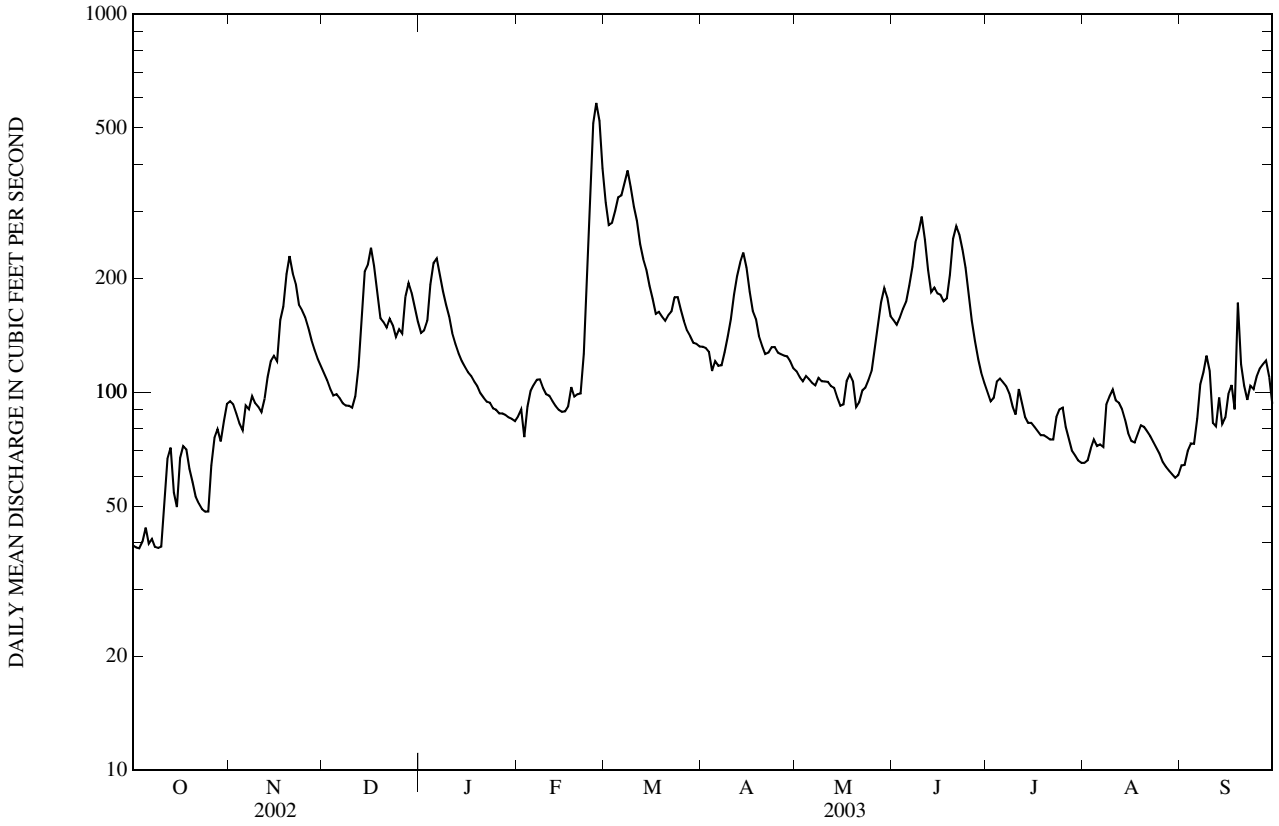


Figure 20. U.S. Geological Survey tide gage continuously monitoring the elevation of water surface at Barnegat Bay at Waretown, NJ. Photograph taken by Peter B. Reilly, 2002.

MULLICA RIVER BASIN

01409510 BATSTO RIVER AT PLEASANT MILLS, NJ

LOCATION.--Lat 39°37'55", long 74°38'40", Burlington County, Hydrologic Unit 02040301, on right bank, 0.4 mi upstream from Mullica River, 0.5 mi southeast of Pleasant Mills, and 0.9 mi downstream from highway bridge on County Route 542 at Batsto.

DRAINAGE AREA.--73.6 mi^2.

PERIOD OF RECORD.--July 1958 to current year. Annual maximum only published for 1958 to 1965.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is -8.6 ft NGVD of 1929. Gage-height record converted to elevation above or below (-) NGVD of 1929 for publication.

REMARKS.--Records good.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation recorded, 7.2 ft, Mar. 7, 1962; minimum recorded (after 1965), -0.67 ft, Jan. 2, 1981.

EXTREMES FOR CURRENT YEAR.--Maximum elevation recorded, 4.66 ft, Sept. 19; minimum recorded, 0.35 ft, May 20.

Summaries of tide elevations during the year are as follows:

TIDE ELEVATIONS, IN FEET, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

		OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
Maximum	Elevation	4.22	4.12	4.00	4.58	e4.5	3.89	4.36	4.12	3.72	3.73	3.35	4.66
high tide	Date	16	17	25	3	17	19	18	17	14	10	7	19
Minimum	Elevation	0.44	0.75	0.64	---	---	0.59	0.52	0.35	0.61	0.39	0.45	0.67
low tide	Date	2	5	11	---	---	31	29	20	30	27	3	1
Mean high tide		3.09	2.76	2.71	---	---	2.88	3.07	2.96	3.10	2.86	2.88	3.21
Mean water level		2.06	1.91	1.85	---	---	2.07	2.14	1.91	2.27	1.78	1.78	2.33
Mean low tide		0.90	1.12	1.08	---	---	1.22	1.05	0.71	1.27	0.64	0.65	1.14

01410000 OSWEGO RIVER AT HARRISVILLE, NJ

LOCATION.--Lat 39°39'48", long 74°31'27", Burlington County, Hydrologic Unit 02040301, on right bank 50 ft downstream from bridge on County Route Spur 563 at Harrisville, and 0.3 mi upstream from confluence with West Branch Wading River.

DRAINAGE AREA.--72.5 mi^2.

PERIOD OF RECORD.--October 1930 to current year. Monthly discharge only for some periods, published in WSP 1302. Prior to October 1955, published as "East Branch Wading River at Harrisville".

REVISED RECORDS.--WDR NJ-83-1: Drainage area.

GAGE.--Water-stage recorder. Concrete control since June 23, 1939. Datum of gage is 4.62 ft above NGVD of 1929.

REMARKS.--Records good, except estimated daily discharges, which are fair. Figures given herein represent flow over main spillway and through bypass channel. Flow regulated by Harrisville Pond, 200 ft above station, capacity, about 30,000,000 gal and by ponds and cranberry bogs 5 to 10 mi upstream. Flow probably reduced by ground-water outflow to nearby surface drainage basins, such as Oyster Creek. Several measurements of water temperature were made during the year. Satellite gage-height telemetry at station.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	29	72	61	85	59	179	107	73	95	59	45	45
2	29	63	57	121	62	173	100	70	94	56	42	50
3	30	57	47	e150	62	196	93	75	86	84	41	51
4	29	53	41	e200	66	174	87	74	105	99	40	58
5	29	51	43	e193	70	161	85	67	126	91	38	63
6	29	68	43	e215	66	202	80	65	116	75	39	59
7	28	64	42	194	66	249	85	65	136	66	42	54
8	28	60	42	159	64	223	119	71	287	59	49	50
9	28	e57	43	136	61	195	140	71	e305	56	50	46
10	27	e50	41	120	61	179	181	75	241	85	52	44
11	36	e60	53	107	61	159	183	85	175	100	52	42
12	38	e72	90	99	60	149	214	75	145	95	52	41
13	53	e77	90	88	57	133	226	67	e150	78	51	49
14	36	e75	124	83	56	121	184	62	e142	70	42	53
15	32	72	120	80	56	114	148	61	123	66	37	55
16	49	70	107	76	57	109	123	62	83	61	37	62
17	50	120	98	74	62	111	124	68	66	57	49	55
18	48	177	84	70	76	113	110	68	e160	54	47	53
19	44	158	80	67	69	108	100	62	e210	54	44	55
20	41	113	91	65	66	e108	94	58	e200	51	42	51
21	39	98	107	64	66	e132	105	58	e182	49	41	45
22	38	116	103	62	117	e127	96	65	166	48	39	45
23	37	119	94	61	295	e120	89	68	145	52	37	47
24	39	106	84	60	374	e115	88	79	128	53	35	50
25	34	92	93	58	383	e118	90	80	110	52	35	49
26	54	84	116	58	323	e95	94	99	91	48	35	48
27	55	80	113	58	256	e86	108	128	81	46	35	46
28	48	75	103	58	212	e84	97	119	72	45	34	e49
29	46	70	93	60	---	e101	84	106	66	45	35	e48
30	63	67	85	60	---	e130	77	95	63	45	40	e48
31	77	---	78	56	---	e115	---	87	---	45	48	---
TOTAL	1,243	2,496	2,466	3,037	3,283	4,379	3,511	2,358	4,149	1,944	1,305	1,511
MEAN	40.1	83.2	79.5	98.0	117	141	117	76.1	138	62.7	42.1	50.4
MAX	77	177	124	215	383	249	226	128	305	100	52	63
MIN	27	50	41	56	56	84	77	58	63	45	34	41
CFSM	0.55	1.15	1.10	1.35	1.62	1.95	1.61	1.05	1.91	0.86	0.58	0.69
IN.	0.64	1.28	1.27	1.56	1.68	2.25	1.80	1.21	2.13	1.00	0.67	0.78

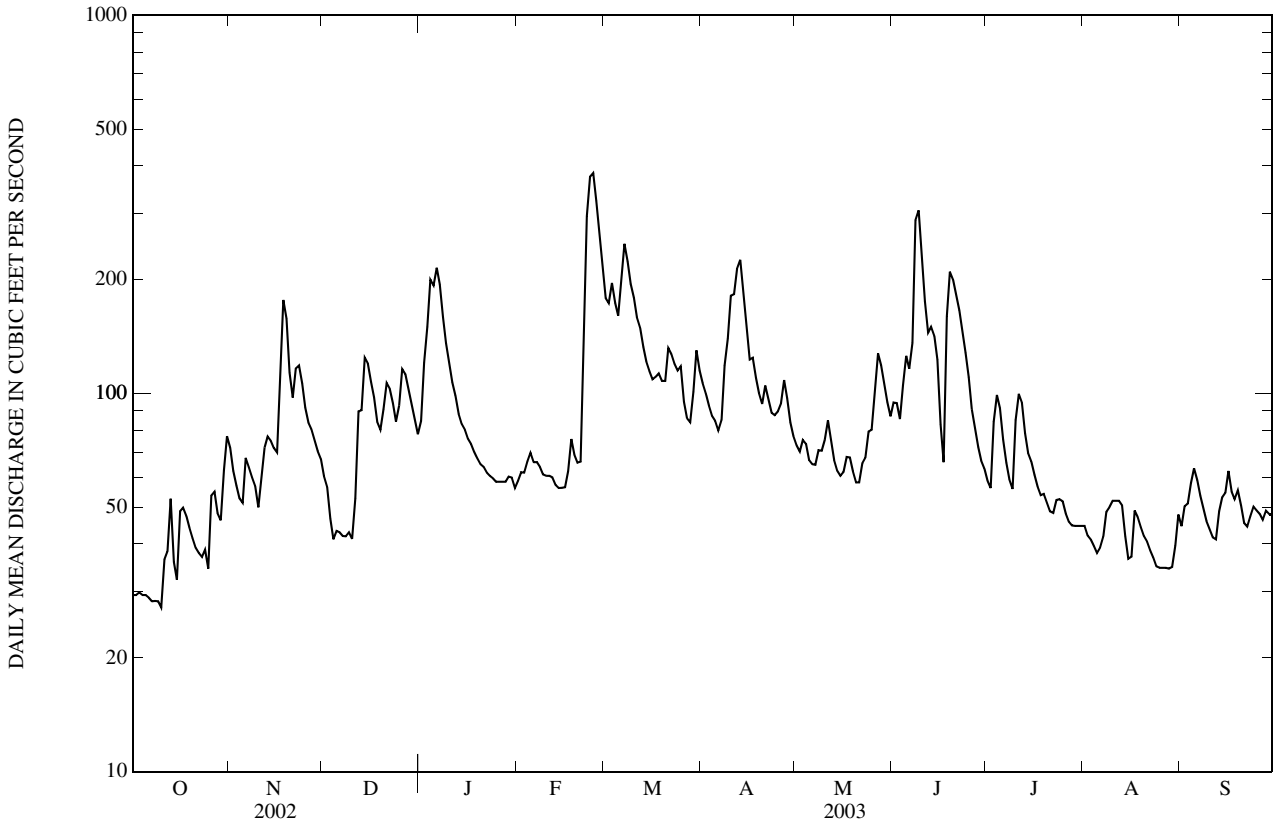
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1931 - 2003, BY WATER YEAR (WY)

MEAN	62.9	80.5	82.8	100	103	118	112	96.5	72.4	65.8	75.0	61.7
MAX	176	234	200	242	210	255	253	261	162	201	207	163
(WY)	(1959)	(1973)	(1973)	(1979)	(1939)	(1998)	(1970)	(1998)	(1998)	(1938)	(1933)	(1938)
MIN	28.6	28.6	27.1	31.2	28.8	40.5	41.3	43.1	33.7	24.2	23.9	24.4
(WY)	(1966)	(2002)	(1966)	(2002)	(2002)	(2002)	(1985)	(2002)	(1966)	(1977)	(1957)	(1951)

01410000 OSWEGO RIVER AT HARRISVILLE, NJ—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1931 - 2003	
ANNUAL TOTAL	16,834		31,682			
ANNUAL MEAN	46.1		86.8		85.8	
HIGHEST ANNUAL MEAN					138	1978
LOWEST ANNUAL MEAN					36.7	2002
HIGHEST DAILY MEAN	270	Jun 7	383	Feb 25	1,220	Aug 20, 1939
LOWEST DAILY MEAN	22	Aug 11	27	Oct 10	4.0	Jun 23, 1967
ANNUAL SEVEN-DAY MINIMUM	22	Aug 11	28	Oct 4	14	Sep 7, 1966
					1390a	
MAXIMUM PEAK FLOW			390	Feb 24	Aug 20, 1939	
MAXIMUM PEAK STAGE			4.21	Feb 24	9.54b	Aug 20, 1939
INSTANTANEOUS LOW FLOW			27	Oct 9	0.00c	Oct 26, 1932
ANNUAL RUNOFF (CFSM)	0.64		1.20		1.18	
ANNUAL RUNOFF (INCHES)	8.64		16.26		16.08	
10 PERCENT EXCEEDS	80		159		148	
50 PERCENT EXCEEDS	36		68		70	
90 PERCENT EXCEEDS	27		41		36	

a From rating curve extended above 840 ft^3/s extended by logarithmic plotting.
b From high-water mark in gage house
c While pond filling.
e Estimated.



01410150 EAST BRANCH BASS RIVER NEAR NEW GRETNA, NJ

LOCATION.--Lat 39°37'23", long 74°26'29", Burlington County, Hydrologic Unit 02040301, on left bank upstream from bridge on Stage Road, 0.7 mi west of Lake Absegami, 2.2 mi north of New Gretna, and 5.3 mi upstream from mouth.

DRAINAGE AREA.--8.11 mi^2.

PERIOD OF RECORD.--Occasional low-flow measurements, water years 1969 to 1974. January 1978 to current year.

REVISED RECORDS.--WDR NJ-81-1: 1978-80(P). WDR NJ-92-1: 1978, 1979, 1989, 1991 (P).

GAGE.--Water-stage recorder. Datum of gage is 1.10 ft above NGVD of 1929.

REMARKS.--Records good, except for estimated discharges and gage-height record above 200 ft^3/s which are considered fair. Occasional regulation by Lake Absegami. Satellite gage-height telemetry at station. Several measurements of water temperature were made during the year.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 65 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jun 8	0700	*79	*5.25	No other peak greater than base discharge.			

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10	14	14	20	15	22	22	15	16	18	17	15
2	9.9	13	14	29	16	24	20	15	16	18	16	15
3	9.8	12	14	30	16	28	19	16	14	27	16	16
4	9.9	12	14	39	16	25	18	15	18	29	16	18
5	9.9	12	14	32	17	25	18	15	20	23	16	19
6	9.8	16	16	26	16	33	18	15	17	19	19	16
7	9.8	16	15	23	16	35	19	15	26	18	18	15
8	9.7	13	14	22	15	29	24	16	70	18	21	15
9	9.7	13	14	21	14	27	26	16	44	17	19	14
10	9.8	12	14	20	14	27	28	16	31	24	19	14
11	11	12	16	19	14	25	28	15	25	28	18	14
12	13	14	27	19	14	24	33	14	23	23	17	14
13	12	18	24	18	14	23	30	14	28	19	16	16
14	11	16	33	18	13	23	24	14	47	19	16	17
15	11	14	29	18	13	22	22	14	40	19	15	16
16	12	13	22	17	14	21	20	14	29	18	15	19
17	14	22	19	17	23	22	20	16	24	17	18	16
18	12	26	18	17	16	21	19	15	35	17	21	15
19	11	20	17	17	14	20	19	14	43	17	17	16
20	11	17	20	16	14	20	18	13	35	17	16	15
21	11	15	23	16	15	26	18	13	32	16	15	14
22	11	19	20	16	24	25	20	15	29	16	15	14
23	10	19	18	16	50	21	19	15	27	17	15	e14
24	10	17	17	15	50	19	18	16	24	17	14	e15
25	10	15	21	15	37	19	17	15	22	e16	e14	e14
26	15	15	25	15	29	18	19	18	21	e16	e14	e14
27	15	15	22	15	25	19	20	20	20	e15	e14	14
28	12	15	19	15	23	18	17	18	19	e15	14	15
29	12	14	18	15	---	18	16	18	19	16	14	16
30	16	14	17	15	---	28	16	16	19	16	14	15
31	17	---	17	15	---	28	---	15	---	17	15	---
TOTAL	355.3	463	585	606	557	735	625	476	833	582	504	460
MEAN	11.5	15.4	18.9	19.5	19.9	23.7	20.8	15.4	27.8	18.8	16.3	15.3
MAX	17	26	33	39	50	35	33	20	70	29	21	19
MIN	9.7	12	14	15	13	18	16	13	14	15	14	14
CFSM	1.41	1.90	2.33	2.41	2.45	2.92	2.57	1.89	3.42	2.31	2.00	1.89
IN.	1.63	2.12	2.68	2.78	2.55	3.37	2.87	2.18	3.82	2.67	2.31	2.11

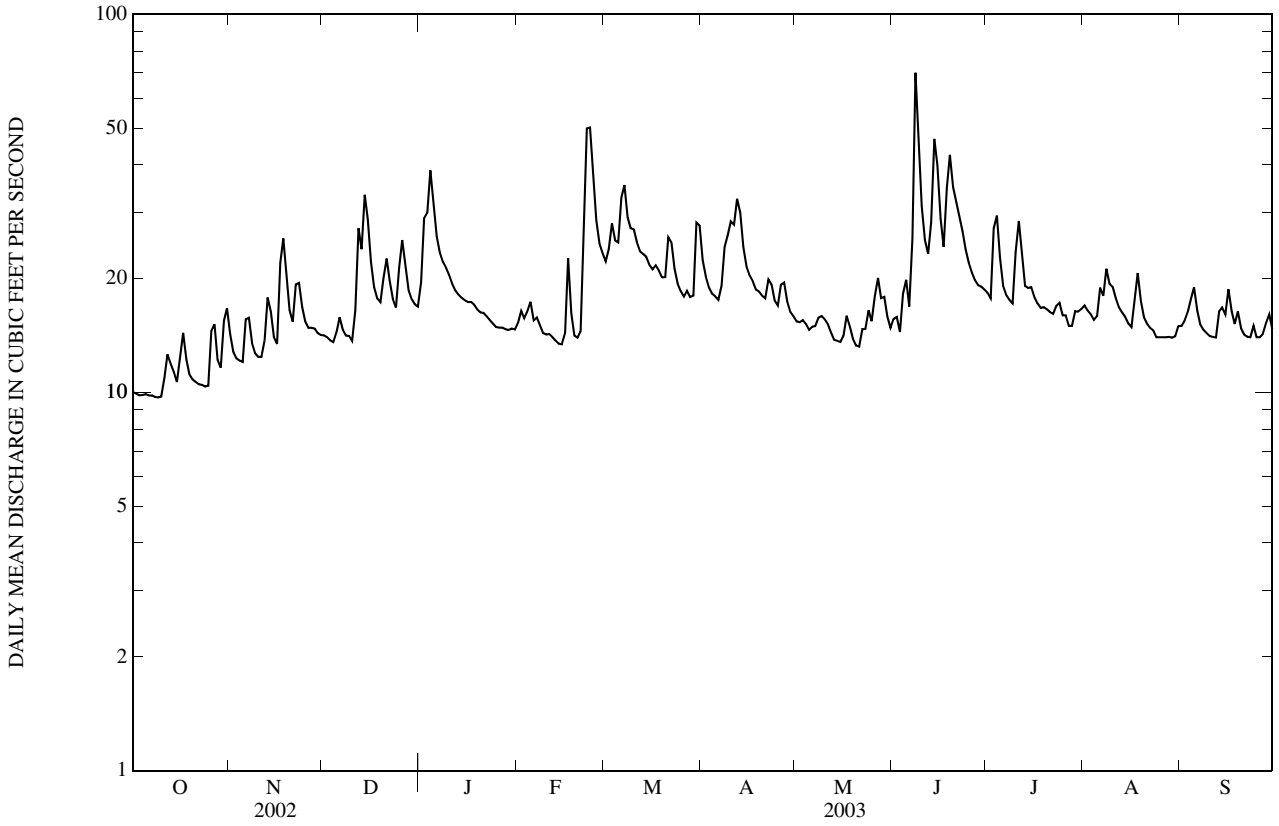
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1978 - 2003, BY WATER YEAR (WY)

MEAN	12.6	13.9	15.4	18.3	18.1	20.9	20.9	18.9	16.0	13.9	15.2	12.8
MAX	24.2	23.1	28.3	35.0	34.3	40.8	38.6	41.5	35.2	25.8	43.7	23.2
(WY)	(1990)	(1990)	(1997)	(1978)	(1998)	(1998)	(1984)	(1998)	(1998)	(1978)	(1997)	(2000)
MIN	8.13	8.75	9.78	9.28	9.19	10.4	9.06	8.95	8.11	7.80	6.54	6.77
(WY)	(1983)	(1982)	(1986)	(1981)	(2002)	(2002)	(1985)	(1985)	(1986)	(1985)	(1995)	(1995)

01410150 EAST BRANCH BASS RIVER NEAR NEW GRETNA, NJ—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1978 - 2003	
ANNUAL TOTAL	4,246.6		6,781.3			
ANNUAL MEAN	11.6		18.6		16.2	
HIGHEST ANNUAL MEAN					25.3	1998
LOWEST ANNUAL MEAN					9.60	1985
HIGHEST DAILY MEAN	33	Dec 14	70	Jun 8	533	Aug 21, 1997
LOWEST DAILY MEAN	8.7	Mar 1	9.7	Oct 8, 9	4.8	Sep 15, 1995
ANNUAL SEVEN-DAY MINIMUM	8.8	Feb 24	9.8	Oct 3	5.0	Sep 10, 1995
MAXIMUM PEAK FLOW			79	Jun 8	1,130a	Aug 21, 1997
MAXIMUM PEAK STAGE			5.25	Jun 8	7.28	Aug 21, 1997
INSTANTANEOUS LOW FLOW			9.6	Oct 9, 10	4.7	Sep 15, 1995
ANNUAL RUNOFF (CFSM)	1.43		2.29		1.99	
ANNUAL RUNOFF (INCHES)	19.48		31.11		27.09	
10 PERCENT EXCEEDS	16		27		26	
50 PERCENT EXCEEDS	10		17		14	
90 PERCENT EXCEEDS	9.2		13		8.8	

a From rating curve extended above 200 ft^3/s extended by logarithmic plotting.
e Estimated



ABSECON BAY

01410510 ABSECON CREEK AT US ROUTE 30, AT ABSECON, NJ

LOCATION.--Lat 39°25'22", long 74°29'58", Atlantic County, Hydrologic Unit 02040302, on left bank, 5 ft upstream of bridge on US Route 30 in Absecon, 200 ft downstream of AMTRAK railroad bridge, 1.8 mi upstream of mouth and Absecon Bay, 1.7 mi downstream of dam at Atlantic City Reservoir (Doughty Pond), and 2.4 mi northwest of Pleasantville.

PERIOD OF RECORD.--June 19, 1997 to April 4, 2000 (unpublished fragmentary gage-height record), April 5, 2000 to present year.

GAGE.--Water-stage recorder. Datum of gage is at 0.00 ft North American Vertical Datum of 1988 (NAVD of 1988). To determine approximate elevations to National Geodetic Vertical Datum of 1929 (NGVD of 1929), add 1.27 ft. To determine approximate elevations to Mean Lower Low Water Datum, add 2.30 ft (revised to tidal Epoch 1983-2001).

REMARKS.--No gage height record for portions of Jan. 18-Feb. 3, Feb. 17-22, and short portions of numerous other days. Summaries for months with short periods of no gage-height record have been estimated with little or no loss of accuracy unless otherwise noted. Some periods cannot be estimated and are noted by dashed (---) lines. Satellite stage telemetry at station.

EXTREMES FOR PERIOD OF PUBLISHED RECORD.--Maximum elevation recorded, 4.56 ft (NAVD of 1988), Feb. 17, 2003; minimum elevation recorded, -3.83 ft (NAVD of 1988), Feb. 5, 2003.

EXTREMES FOR WATER YEAR 2003.--Maximum elevation recorded, 4.56 ft (NAVD of 1988), Feb. 17; minimum elevation recorded, -3.83 ft (NAVD of 1988), Feb. 5.

Summaries of tide elevations during the water year are as follows:

TIDE ELEVATIONS, IN FEET, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

		OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
Maximum	Elevation	3.31	3.54	4.42	4.45	4.56	3.27	4.15	4.07	3.17	3.21	2.61	3.57
high tide	Date	12	6	25	3	17	19	18	16	13	10	11	18
Minimum	Elevation	-2.81	-3.49	-3.59	---	-3.83	-3.02	-3.33	-2.94	-2.61	-2.54	-2.59	-2.41
low tide	Date	6	23	3	--	5	4	16	13	12	27	14	30
Mean high tide		2.17	1.62	1.63	---	---	1.73	2.05	1.96	2.00	1.82	1.82	2.27
Mean water level		.38	-.29	-.32	--	--	-.18	.17	.09	.16	-.06	-.06	.51
Mean low tide		-1.71	-2.35	-2.45	---	---	-2.35	-1.91	-1.99	-1.90	-2.09	-2.10	-1.53

ABSECON BAY

01410560 INSIDE THOROFARE AT US ROUTE 40, AT ATLANTIC CITY, NJ

LOCATION.--Lat 39°21'12", long 74°27'25", Atlantic County, Hydrologic Unit 02040302, on wooden cribbing near east bank, about 10 ft south of bridge on US Routes 40 and 322 (Albany Street) in Chelsea Heights section of Atlantic City, 0.5 mi southwest of northern confluence with Beach Thorofare, 0.9 mi southwest of AMTRAK railroad bridge over Beach Thorofare, and 1.7 mi northeast of Ventnor post office.

PERIOD OF RECORD.--July 11, 1997 to June 2, 2000 (unpublished fragmentary gage-height record), June 3, 2000 to present year.

GAGE.--Water-stage recorder. Datum of gage is at 0.00 ft North American Vertical Datum of 1988 (NAVD of 1988). To determine approximate elevations to National Geodetic Vertical Datum of 1929 (NGVD of 1929), add 1.31 ft. To determine approximate elevations to Mean Lower Low Water Datum, add 2.44 ft (revised to tidal Epoch 1983-2001).

REMARKS.--No gage height record for portions of Jan.18 to Feb. 2 and Feb. 16-20, and short portions of numerous other days. Summaries for months with short periods of no gage-height record have been estimated with little or no loss of accuracy unless otherwise noted. Some periods cannot be estimated and are noted by dashed (---) lines. Satellite stage telemetry at station.

EXTREMES FOR PERIOD OF PUBLISHED RECORD.--Maximum elevation recorded, 4.61 ft (NAVD of 1988), Dec. 25, 2002; minimum elevation recorded, -4.81 ft (NAVD of 1988), Feb. 11, 2001.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum elevation known, 6.5 ft (adjusted to NAVD of 1988), March 6 or 7, 1962, from high-water mark near Raleigh Avenue about 0.4 mi southwest of gage.

EXTREMES FOR WATER YEAR 2003.--Maximum elevation recorded, 4.61 ft (NAVD of 1988), Dec. 25; minimum elevation recorded, -4.37 ft (NAVD of 1988), Jan. 20. Based on data collected at reference stations, minimum elevation probably occurred on Jan. 22. However, due to ice effect, no data is available for this date.

Summaries of tide elevations during the water year are as follows:

TIDE ELEVATIONS, IN FEET, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

		OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
Maximum	Elevation	3.57	3.88	4.61	4.45	4.48	3.24	4.07	3.92	3.36	3.24	2.72	3.38
high tide	Date	7	6	25	3	17	19	17	16	13	10	11,26	9
Minimum	Elevation	-3.29	-4.05	-4.26	---	-4.21	-3.24	-4.12	-3.08	-2.86	-2.70	-2.72	-2.47
low tide	Date	6	19	3	--	5	4	16	15	12	28	14	30
Mean high tide		2.22	1.69	1.68	---	1.28	1.70	2.00	1.94	2.01	1.85	1.86	2.29
Mean water level		.30	-.31	-.36	---	-.9e	-.28	.04	-.01	.09	-.11	-.12	.41
Mean low tide		-1.74	-2.43	-2.50	---	---	-2.36	-2.01	-2.06	-1.94	-2.16	-2.18	-1.59

e - estimated

ABSECON BAY

01410600 ABSECON CHANNEL AT ATLANTIC CITY, NJ

LOCATION.--Lat 39°22'39", long 74°25'26", Atlantic County, Hydrologic Unit 02040302, on bulkhead at U.S. Coast Guard Station Atlantic City on Clam Creek, 400 ft south of Absecon Channel, in Atlantic City, 2,200 ft southeast of the south end of bridge on State Highway 87 over Absecon Channel, 1.3 mi northwest of Absecon Inlet, and 3.3 mi southwest of Brigantine city hall.

PERIOD OF RECORD.--June 16, 1997 to June 17, 2000 (unpublished fragmentary gage-height record), June 18, 2000 to present year.

GAGE.--Water-stage, water-temperature, air-temperature, wind speed/direction, barometric pressure, and precipitation recorders. Datum of gage is at 0.00 ft North American Vertical Datum of 1988 (NAVD of 1988). To determine approximate elevations to National Geodetic Vertical Datum of 1929 (NGVD of 1929), add 1.33 ft. To determine elevations to Mean Lower Low Water Datum, add 2.49 ft (revised to tidal Epoch 1983-2001).

REMARKS.--No gage height record for Dec. 18 to Jan 1, Apr. 3 to Mar. 3, Mar. 26-29, Sept. 12-15, and short portions of numerous other days. Ice effect apparent Jan. 18-29. Summaries for months with short periods of no gage-height record have been estimated with little or no loss of accuracy unless otherwise noted. Some periods cannot be estimated and are noted by dashed (---) lines. Satellite stage and weather telemetry at station.

EXTREMES FOR PERIOD OF PUBLISHED RECORD.--Maximum elevation recorded, 4.74 ft (NAVD of 1988), Feb. 17, 2003; minimum elevation recorded, -4.94 ft (NAVD of 1988), Dec. 12, 2000.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum elevation known, 7.7 ft (adjusted to NAVD of 1988), March 6 or 7, 1962, from high-water mark at the U.S. Coast Guard Station.

EXTREMES FOR CURRENT WATER YEAR.--Maximum elevation recorded, 4.74 ft (NAVD of 1988), Feb. 17; minimum elevation recorded, -4.53 ft (NAVD of 1988), Jan. 20.

Summaries of tide elevations during water year 2003 are as follows:

TIDE ELEVATIONS, IN FEET, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

		OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
Maximum	Elevation	3.46	3.75	---	4.34	4.74	3.27	---	3.48	2.79	2.72	2.73	3.54
high tide	Date	7	6	---	3	17	19	---	16	13	10	26	18
Minimum	Elevation	-3.29	-4.05	-4.20	-4.53	-4.21	-3.23	---	-3.71	-3.57	-3.50	-2.86	-2.58
low tide	Date	6	19	3	20	5	4	---	15	12	14	14	30
Mean high tide		2.16	1.63	---	---	1.21	1.59	---	1.4e	1.41	1.40	1.81	2.27
Mean water level		.28	-.35	---	---	-.77	-.33	---	-.6e	-.55	-.58	-.17	.33
Mean low tide		-1.68	-2.40	---	---	-2.84	-2.36	---	-2.7e	-2.54	-2.62	-2.24	-1.69

e - estimated

Figure 21. U.S. Geological Survey gage continuously monitoring the stage of the Cohansey River at Seeley, NJ. Photograph taken by Richard W. Edwards, 2003.

01411000 GREAT EGG HARBOR RIVER AT FOLSOM, NJ

LOCATION.--Lat 39°35'42", long 74°51'05", Atlantic County, Hydrologic Unit 02040302, on left bank 25 ft upstream from bridge on State Highway 54, 1.0 mi south of Folsom, and 2.0 mi upstream from Pennypot Stream.

DRAINAGE AREA.--57.1 mi^2.

PERIOD OF RECORD.--September 1925 to current year. Prior to October 1947, published as "Great Egg River at Folsom".

REVISED RECORDS.--WSP 1432: 1928(M), 1933. WDR NJ-83-1: Drainage area.

GAGE.--Water-stage recorder. Concrete control since Nov. 26, 1934. Datum of gage is 53.32 ft above NGVD of 1929. Prior to Mar. 6, 1941, water- stage recorder at site 100 ft downstream at same datum. Mar. 6 to Oct. 5, 1941, nonrecording gage at site 145 ft downstream at datum 0.25 ft higher.

REMARKS.--Records good expect for estimated daily discharges, which are fair. Satellite rain and gage-height telemetry at station. Several measurements of water temperature were made during the year.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	26	88	76	100	63	179	104	85	123	83	50	59
2	24	81	73	107	71	157	102	83	133	79	54	72
3	23	72	71	124	72	168	100	82	136	87	63	83
4	23	64	68	144	76	204	97	86	135	101	59	90
5	22	59	67	145	85	214	94	85	150	98	61	100
6	21	70	67	135	87	212	93	83	170	90	73	116
7	20	80	66	125	83	235	92	82	169	86	86	153
8	20	78	66	115	80	249	99	102	183	85	96	154
9	20	72	66	108	76	231	110	108	206	81	103	124
10	20	65	64	102	e71	206	121	112	207	85	101	96
11	40	63	68	97	e67	182	139	110	174	86	98	79
12	70	70	98	92	e64	160	163	100	145	82	94	72
13	67	86	120	88	e60	145	191	91	157	78	86	74
14	53	92	157	84	e57	136	195	85	198	75	79	81
15	46	92	175	82	e54	128	171	82	222	74	72	81
16	53	86	169	79	e52	121	144	80	211	72	67	90
17	73	102	150	78	e52	117	125	80	179	68	77	96
18	71	126	128	76	e55	114	112	80	171	65	97	98
19	60	157	111	73	e60	111	104	78	198	62	86	97
20	53	162	103	71	e66	107	99	75	239	62	79	101
21	48	142	107	71	73	112	95	73	255	59	74	106
22	44	127	114	69	91	132	97	81	235	58	68	104
23	42	116	113	67	137	149	96	84	205	70	64	100
24	41	110	105	65	218	140	93	91	170	75	60	108
25	39	101	101	63	355	125	90	97	144	76	57	112
26	59	93	112	62	347	114	90	105	123	66	54	115
27	76	88	130	63	284	109	94	126	107	57	54	113
28	67	85	144	61	223	107	93	164	99	54	52	104
29	60	82	135	61	---	106	90	172	93	51	48	96
30	75	78	118	62	---	104	88	149	87	50	50	90
31	85	---	106	62	---	104	---	126	---	50	65	---
TOTAL	1,441	2,787	3,248	2,731	3,079	4,678	3,381	3,037	5,024	2,265	2,227	2,964
MEAN	46.5	92.9	105	88.1	110	151	113	98.0	167	73.1	71.8	98.8
MAX	85	162	175	145	355	249	195	172	255	101	103	154
MIN	20	59	64	61	52	104	88	73	87	50	48	59
CFSM	0.81	1.63	1.83	1.54	1.93	2.64	1.97	1.72	2.93	1.28	1.26	1.73
IN.	0.94	1.82	2.12	1.78	2.01	3.05	2.20	1.98	3.27	1.48	1.45	1.93

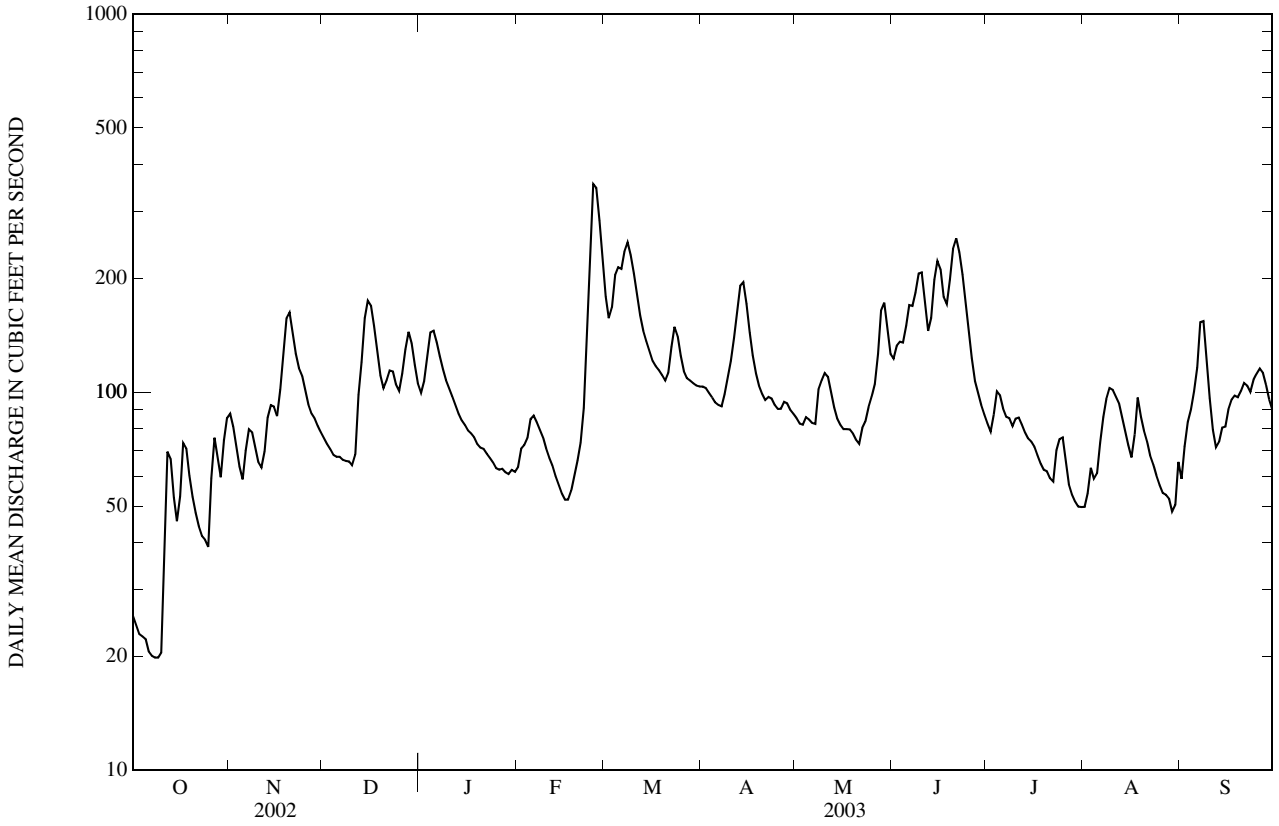
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1925 - 2003, BY WATER YEAR (WY)

MEAN	59.8	76.7	91.6	102	106	121	114	94.5	72.2	61.7	63.1	60.2
MAX	148	213	212	203	228	229	234	199	167	187	182	215
(WY)	(1939)	(1973)	(1973)	(1936)	(1939)	(1958)	(1983)	(1958)	(2003)	(1938)	(1967)	(1940)
MIN	27.4	25.8	32.8	39.3	42.0	57.6	53.9	47.1	34.4	22.1	19.3	25.6
(WY)	(2002)	(2002)	(2002)	(1981)	(2002)	(2002)	(1985)	(1955)	(1977)	(1966)	(1966)	(1964)

01411000 GREAT EGG HARBOR RIVER AT FOLSOM, NJ—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1925 - 2003	
ANNUAL TOTAL	19,507		36,862			
ANNUAL MEAN	53.4		101		85.1	
HIGHEST ANNUAL MEAN					133	1973
LOWEST ANNUAL MEAN					40.2	2002
HIGHEST DAILY MEAN	175	Dec 15	355	Feb 25	1,300	Sep 3, 1940
LOWEST DAILY MEAN	12	Aug 23	20	Oct 7-10	12	Aug 23, 2002
ANNUAL SEVEN-DAY MINIMUM	13	Aug 17	21	Oct 4	13	Aug 17, 2002
MAXIMUM PEAK FLOW			381	Feb 25	1,440	Sep 3, 1940
MAXIMUM PEAK STAGE			5.71	Feb 25	9.09	Sep 3, 1940
INSTANTANEOUS LOW FLOW			20	Oct 6-10	12	Aug 22, 2002
ANNUAL RUNOFF (CFSM)	0.94		1.77		1.49	
ANNUAL RUNOFF (INCHES)	12.71		24.02		20.24	
10 PERCENT EXCEEDS	92		169		147	
50 PERCENT EXCEEDS	47		90		72	
90 PERCENT EXCEEDS	22		57		36	

e Estimated



01411300 TUCKAHOE RIVER AT HEAD OF RIVER, NJ

LOCATION.--Lat 39°18'25", long 74°49'14", Cape May County, Hydrologic Unit 02040302, on right bank at highway bridge on State Route 49, 0.2 mi upstream from McNeals Branch, 0.4 mi southeast of Head of River, and 3.7 mi west of Tuckahoe.

DRAINAGE AREA.--30.8 mi^2.

PERIOD OF RECORD.--December 1969 to current year.

REVISED RECORDS.--WDR NJ-78-1: 1975(M), 1976(M). WDR NJ-89-1: (M). WDR NJ-91-1: 1990. WRD NJ-97-1: 1971(M), 1978(M), 1979 (M), 1983 (P), 1994(P).

GAGE.--Water-stage recorder, wooden control, and downstream tidal crest-stage gage. Datum of gage is NGVD of 1929.

REMARKS.--Records good, except for estimated daily discharges which are fair. Occasional regulation by ponds above station. Satellite gage-height telemetry at station. Several measurements of water temperature were made during the year.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.9	28	30	37	30	69	75	42	60	39	33	26
2	8.6	24	29	e50	34	72	63	41	74	37	31	26
3	8.4	23	27	e60	31	103	55	40	64	53	30	25
4	8.5	23	27	81	34	95	50	39	61	65	29	27
5	8.7	21	28	76	36	95	47	38	81	60	31	28
6	8.4	30	28	62	34	131	45	38	81	52	32	26
7	8.6	29	27	54	33	148	47	37	88	48	34	24
8	8.4	25	27	48	32	132	58	37	335	45	48	23
9	8.5	23	27	45	30	104	69	37	272	41	43	21
10	11	22	26	42	30	91	93	37	171	48	39	20
11	20	22	32	39	30	79	e100	37	123	53	38	19
12	23	27	65	37	29	70	141	35	96	52	37	20
13	20	40	60	35	28	65	139	34	85	48	35	29
14	15	35	84	34	28	61	105	32	88	57	34	30
15	13	29	83	33	28	57	81	32	92	68	32	27
16	21	28	65	33	27	54	68	33	89	59	32	27
17	23	59	51	33	e32	58	60	e35	77	49	36	25
18	20	74	43	32	e33	63	e55	36	100	43	32	e42
19	16	62	39	30	32	59	52	34	178	39	30	e30
20	14	49	41	30	32	54	49	32	201	38	28	25
21	13	41	49	30	33	59	47	31	163	35	26	24
22	12	52	45	29	50	60	50	33	135	34	24	23
23	12	58	41	27	123	55	49	37	109	34	24	25
24	12	49	38	27	190	52	46	45	88	34	24	27
25	11	42	43	28	157	49	44	44	72	33	22	26
26	26	37	49	28	121	46	52	49	60	32	22	24
27	29	35	45	27	92	47	56	60	51	30	21	23
28	22	34	40	27	76	45	52	55	42	29	20	23
29	21	32	38	27	---	46	48	50	41	37	20	22
30	32	31	36	26	---	84	45	45	40	35	21	22
31	35	---	35	27	---	92	---	40	---	35	27	---
TOTAL	498.0	1,084	1,298	1,194	1,465	2,295	1,941	1,215	3,217	1,362	935	759
MEAN	16.1	36.1	41.9	38.5	52.3	74.0	64.7	39.2	107	43.9	30.2	25.3
MAX	35	74	84	81	190	148	141	60	335	68	48	42
MIN	8.4	21	26	26	27	45	44	31	40	29	20	19
CFSM	0.52	1.17	1.36	1.25	1.70	2.40	2.10	1.27	3.48	1.43	0.98	0.82
IN.	0.60	1.31	1.57	1.44	1.77	2.77	2.34	1.47	3.89	1.65	1.13	0.92

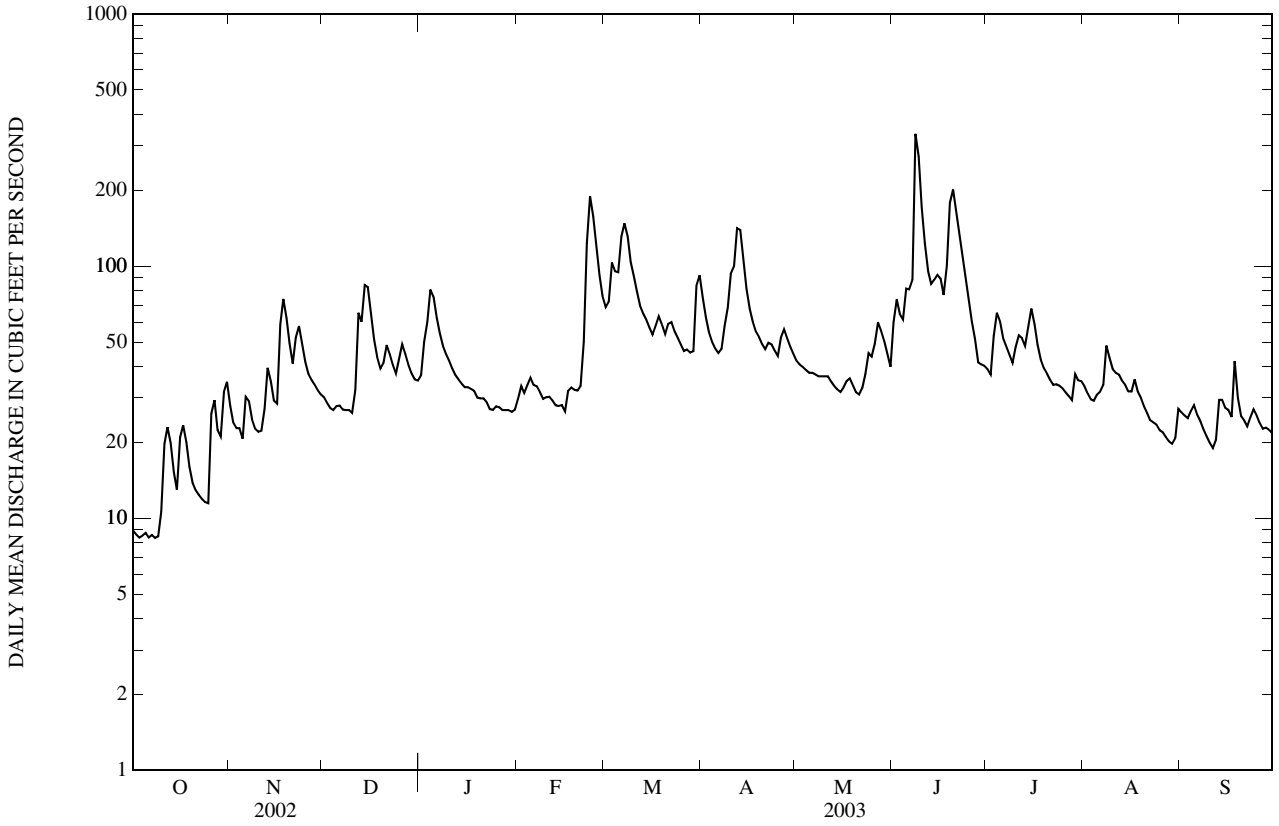
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1970 - 2003, BY WATER YEAR (WY)

MEAN	25.9	32.9	40.8	50.2	53.2	68.5	68.0	53.0	38.9	27.0	27.0	22.6
MAX	59.9	81.4	97.0	101	101	162	174	123	107	55.8	99.3	64.7
(WY)	(1997)	(1973)	(1997)	(1978)	(1973)	(1998)	(1983)	(1998)	(2003)	(1996)	(1997)	(1989)
MIN	13.7	14.3	15.6	16.0	16.4	24.5	21.3	20.0	14.8	9.40	7.72	7.04
(WY)	(2002)	(2002)	(2002)	(1981)	(2002)	(2002)	(1985)	(1977)	(1977)	(2002)	(2002)	(1980)

01411300 TUCKAHOE RIVER AT HEAD OF RIVER, NJ—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1970 - 2003	
ANNUAL TOTAL	8,101.5		17,263.0			
ANNUAL MEAN	22.2		47.3		42.2	
HIGHEST ANNUAL MEAN					66.0	1998
LOWEST ANNUAL MEAN					18.0	2002
HIGHEST DAILY MEAN	132	Apr 29	335	Jun 8	920	Aug 21, 1997
LOWEST DAILY MEAN	4.4	Aug 15	8.4	Oct 3, 6, 8	1.3	Sep 3, 1980
ANNUAL SEVEN-DAY MINIMUM	4.7	Aug 14	8.5	Oct 3	1.9	Sep 9, 1980
MAXIMUM PEAK FLOW			365	Jun 8	1,340	Aug 21, 1997
MAXIMUM PEAK STAGE			5.76	Jun 8	9.09	Aug 22, 1997
INSTANTANEOUS LOW FLOW			7.7	Oct 8, 9	3.9	Aug 15, 2002
ANNUAL RUNOFF (CFSM)	0.72		1.54		1.37	
ANNUAL RUNOFF (INCHES)	9.78		20.85		18.61	
10 PERCENT EXCEEDS	38		84		82	
50 PERCENT EXCEEDS	19		37		31	
90 PERCENT EXCEEDS	8.6		22		15	

e Estimated.



GREAT EGG HARBOR BAY

01411318 PECK BAY AT OCEAN CITY, NJ

LOCATION.--Lat 39°15'13", long 74°37'40", Cape May County, Hydrologic Unit 02040302, on left bank, about 300 ft north of bridge on County Route 623 (Roosevelt Boulevard) at All Seasons Marina, 1.3 mi southeast of Marmora, 2.1 mi south of Great Egg Harbor Bay, and 3.3 mi southwest of Ocean City city hall.

PERIOD OF RECORD.--Tidal crest-stage gage 1979-1985 and tidal gaging station 1974-1976, located 300 ft south of current station. May 22, 1997 to April 20, 2000 (unpublished fragmentary gage-height record), April 21, 2000 to present year.

GAGE.--Water-stage recorder. Datum of gage is at 0.00 ft North American Vertical Datum of 1988 (NAVD of 1988). To determine approximate elevations to National Geodetic Vertical Datum of 1929 (NGVD of 1929), add 1.28 ft. To determine approximate elevations to Mean Lower Low Water Datum, add 2.31 ft (revised to tidal Epoch 1983-2001).

REMARKS.--No gage height record for portions of Jan. 15 to Feb. 1, Feb. 6-23, and short portions of numerous other days. Summaries for months with short periods of no gage-height record have been estimated with little or no loss of accuracy unless otherwise noted. Some periods cannot be estimated and are noted by dashed (---) lines. Satellite stage telemetry at station.

EXTREMES FOR PERIOD OF PUBLISHED RECORD.--Maximum elevation recorded, 5.33 ft (adjusted to NAVD of 1988), Dec. 1, 1974; minimum elevation recorded, -4.41 ft (NAVD of 1988), Dec. 13, 2000.

EXTREMES FOR WATER YEAR 2003.--Maximum elevation recorded, 4.92 ft (NAVD of 1988), Feb. 17; minimum elevation recorded, -4.11 ft (NAVD of 1988), Dec. 3.

Summaries of tide elevations during the water year are as follows:

TIDE ELEVATIONS, IN FEET, WATER YEAR OCTOBER 2002 to SEPTEMBER 2003

		OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
Maximum	Elevation	3.37	3.66	4.34	4.37	4.92	3.32	4.17	4.01	3.23	3.19	2.70	3.66
high tide	Date	7	6	25	3	17	19	17	16	13	10	11,31	18
Minimum	Elevation	-2.68	-3.87	-4.11	---	---	-2.85	-3.81	-2.58	-2.49	-2.46	-2.40	-2.17
low tide	Date	6	19	3	--	--	4	16	13	12	27	10	30
Mean high tide		2.26	1.72	1.73	---	---	1.78	2.14	2.02	2.07	1.90	1.91	2.38
Mean water level		.55	-.13	-.15	--	--	-.02	.37	.26	.33	.10	.10	.69
Mean low tide		-1.37	-2.15	-2.24	---	---	-1.99	-1.55	-1.66	-1.57	-1.85	-1.87	-1.19

BEACH THOROFARE

01411330 BEACH THOROFARE AT MARGATE, NJ

LOCATION.--Lat 39°20'15", long 74°30'47", Atlantic County, Hydrologic Unit 02040302, on pier near southeast end of toll bridge on Margate-Northfield Road (County Route 563) at western edge of Margate, 500 ft east of Pork Island, and 3.2 mi northeast of Great Egg Harbor Inlet.

PERIOD OF RECORD.--June 1997 to March 2000 (unpublished fragmentary gage-height record), April 2000 to current year.

REVISED RECORDS.--WDR-02-1: 2001.

GAGE.--Water-stage recorder. Datum of gage is at 0.00 ft North American Vertical Datum of 1988 (NAVD of 1988). To determine approximate elevations to National Geodetic Vertical Datum of 1929 (NGVD of 1929), add 1.30 ft. To determine approximate elevations to Mean Lower Low Water Datum, add 2.49 ft (revised to tidal Epoch 1983-2001).

REMARKS.--No gage height record for portions of Dec. 11-12, Jan. 28-29, Feb. 13-24, and short portions of several other days. Summaries for months with short periods of no gage-height record have been estimated with little or no loss of accuracy unless otherwise noted. Some periods cannot be estimated and are noted by dashed (---) lines. Satellite stage telemetry at station.

EXTREMES FOR PERIOD OF PUBLISHED RECORD.--Maximum elevation recorded, 4.50 ft (NAVD of 1988), Feb. 17, 2003; minimum recorded, -4.63 ft (NAVD of 1988), Feb. 11, 2001.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum elevation known, 9.8 ft (adjusted to NAVD of 1988), tides of March 6-7, 1962, from high-water mark near the intersection of Washington and Atlantic Avenues in Margate.

EXTREMES FOR CURRENT YEAR.--Maximum elevation recorded, 4.50 ft (NAVD of 1988), Feb. 17; minimum recorded, -4.38 ft (NAVD of 1988), Jan. 22.

Summaries of tide elevations during the water year are as follows:

TIDE ELEVATIONS, IN FEET, WATER YEAR OCTOBER 2002 to SEPTEMBER 2003

		OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
Maximum	Elevation	3.46	3.76	4.45	4.34	4.50	3.19	3.97	3.84	3.26	3.16	2.67	3.38
high tide	Date	7	6	25	3	17	19	17	16	13	10	26	28
Minimum	Elevation	-3.13	-3.97	-4.13	-4.38	-4.27	-3.10	-3.98	-2.94	-2.74	-2.60	-2.63	-2.34
low tide	Date	6	19	3	22	24	4	16	15	12	28	14	30
Mean high tide		2.15	1.62	1.61	1.43	1.29	1.64	1.95	1.88	1.95	1.78	1.79	2.28
Mean water level		.25	-.41	-.47	-.55	-.79	-.33	.01	-.05	.04	-.15	-.17	.4
Mean low tide		-1.69	-2.39	-2.52	-2.52	-2.8e	-2.29	-1.96	-2.00	-1.89	-2.09	-2.13	-1.55

e - estimated.

LUDLAM THOROFARE

01411350 LUDLAM THOROFARE AT SEA ISLE CITY, NJ

LOCATION.--Lat 39°09'28", long 74°41'52", Cape May County, Hydrologic Unit 02040302, on bulkhead at Sea Isle City Municipal Marina in Sea Isle City, 700 ft southeast of east side of bridge on John F. Kennedy Boulevard (County Route 625) over Ludlam Thorofare, and 0.9 mi south of Ludlam Bay.

PERIOD OF RECORD.--May 1975 to May 1978, October 1978 to September 1984 (annual maximum elevation only), May 1997 to January 2000 (unpublished fragmentary gage-height record), February 2000 to current year.

GAGE.--Water-stage recorder. Datum of gage is at 0.00 ft North American Vertical Datum of 1988 (NAVD of 1988). To determine approximate elevations to National Geodetic Vertical Datum of 1929 (NGVD of 1929), add 1.27 ft. To determine approximate elevations to Mean Lower Low Water Datum, add 2.72 ft (revised to tidal Epoch 1983-2001). From May 1975 to May 1978, water-stage recorder at NGVD of 1929 located at 44th Street, 800 ft southwest of current station. From October 1978 to September 1984, crest-stage gage at NGVD of 1929 located at 44th Street, 800 ft southwest of current station.

REMARKS.--Gage cannot measure a tide level of less than -2.85 ft (until Aug 13 2003) and -1.50 (Aug 13 2003 to present) (NAVD of 1988). Some monthly minimum elevations, monthly mean low tides, and monthly mean water levels are undetermined. Summaries for months with short periods of no gage-height record have been estimated with little or no loss of accuracy unless otherwise noted. Some periods cannot be estimated and are noted by dashed (---) lines. Satellite stage telemetry at station.

EXTREMES FOR PERIOD OF PUBLISHED RECORD.--Maximum elevation recorded, 6.34 ft (adjusted to NAVD of 1988), March 29, 1984, from tidal crest-stage gage.

EXTREMES FOR CURRENT YEAR.--Maximum elevation recorded, 5.17 ft (NAVD of 1988), Feb. 17.

Summaries of tide elevations during the water year are as follows:

TIDE ELEVATIONS, IN FEET, WATER YEAR OCTOBER 2002 to SEPTEMBER 2003

		OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
Maximum	Elevation	3.46	3.77	4.44	4.55	5.17	3.42	4.35	4.14	3.28	3.22	2.68	3.62
high tide	Date	7	6	25	3	17	19	17	16	13	10	11	18
Minimum	Elevation	---	---	---	---	---	---	---	---	---	-2.71	---	---
low tide	Date	---	---	---	---	---	---	---	---	---	27	---	---
Mean high tide		2.24	1.67	1.68	1.54	1.27	1.74	2.08	1.96	2.01	1.82	1.82	2.31
Mean water level		.37	---	---	---	---	-.26	.21	.03	.09	-.19	---	---
Mean low tide		-1.62	---	---	---	---	-2.06	-1.7e	-1.94	-1.95	-2.19	---	---

e - estimated

INGRAM THOROFARE

01411355 INGRAM THOROFARE AT AVALON, NJ

LOCATION.--Lat 39°06'39", long 74°44'03", Cape May County, Hydrologic Unit 02040302, on fishing pier at east end of Old Avalon Boulevard, 1.0 mi west of Avalon, 1.0 mi southwest of Townsends Inlet, 1.6 mi east of Upper Island in Great Sound, and 0.5 mi east of bridge carrying County Route 601 (Avalon Boulevard) over Ingram Thorofare.

PERIOD OF RECORD.--October 1977 to May 1978, 1979 to 1981 (annual maximum elevation only), May 1997 to May 2000 (unpublished fragmentary gage-height record), May 13, 2000 to current year.

GAGE.--Water-stage recorder. Datum of gage is at 0.00 ft North American Vertical Datum of 1988 (NAVD of 1988). To determine approximate elevations to National Geodetic Vertical Datum of 1929 (NGVD of 1929), add 1.29 ft. To determine approximate elevations in Mean Lower Low Water datum, add 2.26 ft, (revised to tidal Epoch 1983-2001). From October 1977 to May 1978, water-stage recorder at NGVD of 1929 and from 1978 to 1981, crest-stage gage at NGVD of 1929 located 200 ft south of current station.

REMARKS.-- Prior to Aug. 24, gage cannot measure a tide level below -2.23 ft (NAVD of 1988). After Aug. 24, gage cannot measure a tide level below -3.29 ft (NAVD of 1988). Missing record Nov. 30, Feb. 16 to Mar. 6, Mar. 24 and 27, Mar. 30 to April 4, and short portions of numerous other days. Ice effect apparent Jan. 23 to Feb. 3. Monthly minimum elevations, monthly mean low tides, and monthly mean water levels are undetermined. Summaries for months with short periods of no gage-height record have been estimated with little or no loss of accuracy unless otherwise noted. Some periods cannot be estimated and are noted by dashed (---) lines. Satellite stage telemetry at station.

EXTREMES FOR PERIOD OF PUBLISHED RECORD.--Maximum elevation recorded, 6.29 ft (adjusted to NAVD 0f 1988), Mar.29, 1984, from tidal crest-stage gage.

EXTREMES FOR WATER YEAR 2003.--Maximum elevation recorded, 4.85 ft (NAVD of 1988), Feb. 17.

Summaries of tide elevations during water year 2003 are as follows:

TIDE ELEVATIONS, IN FEET, WATER YEAR OCTOBER 2002 to SEPTEMBER 2003

		OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
Maximum	Elevation	3.53	3.79	4.45	4.49	4.85	3.38	4.28	4.11	3.33	3.24	2.77	3.52
high tide	Date	7	6	25	3	17	19	17	16	13	10	11	9
Minimum	Elevation	---	---	---	---	---	---	---	---	---	---	---	-2.59
low tide	Date	---	---	---	---	---	---	---	---	---	---	---	11
Mean high tide		2.23	1.65	1.63	1.5e	---	---	2.08	1.95	2.00	1.81	1.81	2.31
Mean water level		---	---	---	---	---	---	---	---	---	---	---	.39
Mean low tide		---	---	---	---	---	---	---	---	---	---	---	-1.63

e - estimated.

GREAT CHANNEL

01411360 GREAT CHANNEL AT STONE HARBOR, NJ

LOCATION.--Lat 39°03'24", long 74°45'51", Cape May County, Hydrologic Unit 02040302, on county pier near east of bridge on Stone Harbor Boulevard (County Route 657) at the west edge of Stone Harbor, 3.7 mi southeast of Cape May Court House, and 3.9 mi southwest of Avalon.

PERIOD OF RECORD.--1964 to 1977, 1979 to 1999 (annual maximum elevation only), October 1977 to May 1978, May 1997 to February 2000 (unpublished fragmentary gage-height record), March 2000 to current year.

GAGE.--Water-stage recorder and tidal crest-stage gage. Datum of gage is at 0.00 ft North American Vertical Datum of 1988 (NAVD of 1988). To determine approximate elevations to National Geodetic Vertical Datum of 1929 (NGVD of 1929), add 1.30 ft. To determine approximate elevations to Mean Lower Low Water Datum, add 2.61 ft (revised to tidal Epoch 1983-2001). From October 1964 to September 1999, crest-stage gage at NGVD of 1929. From October 1977 to May 1978, water-stage recorder at south side of bridge to National Geodetic Vertical Datum of 1929.

REMARKS.--Ice effect apparent Jan. 23-30. Summaries for months with short periods of no gage-height record have been estimated with little or no loss of accuracy unless otherwise noted. Some periods cannot be estimated and are noted by dashed (---) lines. Satellite stage telemetry at station.

EXTREMES FOR PERIOD OF PUBLISHED RECORD.--Maximum elevation recorded, 6.03 ft (adjusted to NAVD of 1988), March 29, 1984, from tidal crest-stage gage; minimum elevation recorded, -4.82 ft (NAVD of 1988), Feb. 11, 2001.

EXTREMES FOR CURRENT YEAR.--Maximum elevation recorded, 5.37 ft (NAVD of 1988), Feb. 17; minimum elevation recorded, -4.57 ft (NAVD of 1988), Jan. 22.

Summaries of tide elevations during the year are as follows:

TIDE ELEVATIONS, IN FEET, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

		OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
Maximum	Elevation	3.57	3.81	4.41	4.55	5.37	3.39	4.31	4.12	3.37	3.27	2.76	3.67
high tide	Date	7	6	25	3	17	19	17	16	13	10	11	18
Minimum	Elevation	-3.05	-4.02	-4.41	-4.57	---	-3.23	-4.25	-3.08	-2.94	-2.76	-2.79	-2.50
low tide	Date	6	19	3	22	---	4	16	15	12	27	12, 14	30
Mean high tide		2.28	1.69	1.69	1.52	1.26	1.72	2.08	1.98	2.02	1.84	1.85	2.37
Mean water level		.36	-.35	-.40	-.3e	-.78	-.30	.09	-.01	.05	-.11	-.18	.44
Mean low tide		-1.75	-2.49	-2.58	-2.6e	-2.91	-2.42	-2.03	-2.09	-2.05	-2.28	-2.29	-1.62

e - estimated

GRASSY SOUND CHANNEL

01411382 GRASSY SOUND CHANNEL AT WILDWOOD, NJ

LOCATION.--Lat 38°59'25", long 74°50'10", Cape May County, Hydrologic Unit 02040302, on pier in back of pumpout station at Lighthouse Pointe Marina in Wildwood, 900 ft southwest of bridge on State Route 47, and 1,000 ft north of Ephraim Island.

PERIOD OF RECORD.--May 1997 to February 2000 (unpublished fragmentary gage-height record), Maorch 2000 to current year.

GAGE.--Water-stage recorder. Datum of gage is at 0.00 ft North American Vertical Datum of 1988 (NAVD of 1988). To determine approximate elevations to National Geodetic Vertical Datum of 1929 (NGVD of 1929), add 1.30 ft. To determine approximate elevations to Mean Lower Low Water Datum, add 2.72ft(revised to tidal Epoch 1983-2001).

REMARKS.--No gage height record for Nov. 17 and short portions of numerous other days. Ice effect apparent Jan. 21-29 and Feb. 13-17. Summaries for months with short periods of no gage-height record have been estimated with little or no loss of accuracy unless otherwise noted. Some periods cannot be estimated and are noted by dashed (---) lines. Satellite stage telemetry at station.

EXTREMES FOR PERIOD OF PUBLISHED RECORD.--Maximum elevation recorded, 4.58 ft, Jan. 3, 2003, although a higher tide elevation likely occurred Feb. 17, 2003, during period of ice effect; minimum recorded, -5.17 ft (NAVD of 1988), Feb. 11, 2001.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum elevation known, 7.5 ft (adjusted to NAVD of 1988), tides of March 6-7, 1962, from high-water mark at the intersection of 15th Street and New Jersey Avenue in North Wildwood.

EXTREMES FOR CURRENT YEAR.--Maximum elevation recorded, 4.58 ft, Jan. 3, although a higher tide elevation likely occurred Feb. 17 during period of ice effect; minimum recorded, -4.90 ft, Dec. 3.

Summaries of tide elevations during the year are as follows:

TIDE ELEVATIONS, IN FEET, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

		OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
Maximum	Elevation	3.77	3.95	4.44	4.58	---	3.46	4.22	3.91	3.54	3.41	2.97	3.54
high tide	Date	7	6	25	3	---	19	17	16	13	11	11	9
Minimum	Elevation	-3.45	-4.28	-4.90	---	-4.5e	-3.48	-4.18	-3.46	-3.24	-3.11	-3.25	-2.86
low tide	Date	6	19	3	---	5	4	1	15	12	13	12	26
Mean high tide		2.32	1.72	1.76	---	1.16	1.82	2.11	2.07	2.14	1.97	1.99	2.41
Mean water level		.22	-.41	-.48	---	-.8e	-.35	-.07	-.06	.01	-.18	-.23	.28
Mean low tide		-2.08	-2.86	-2.86	---	-3.2e	-2.70	-2.31	-2.37	-2.29	-2.49	-2.57	-1.98

e - estimated.

CAPE MAY HARBOR

01411390 CAPE MAY HARBOR AT CAPE MAY, NJ

LOCATION.--Lat 38°56'54", long 74°53'26", Cape May County, Hydrologic Unit 02040302, on Pier 2 at Cape May U.S. Coast Guard Station in Cape May, 1.0 mi west of Cape May Inlet, and 0.7 mi east of east entrance to Cape May Canal.

PERIOD OF RECORD.--Tidal crest-stage gage 1965-85, 1992. September 1997 to May 2000 (unpublished fragmentary gage-height record), June 2000 to current year.

GAGE.--Water-stage, air temperature, water temperature, wind speed and direction, barometric pressure, and precipitation recorder. Datum of gage is at 0.00 ft North American Vertical Datum of 1988 (NAVD of 1988). To determine approximate corresponding National Geodetic Vertical Datum of 1929 (NGVD of 1929), add 1.31 ft. To determine approximate corresponding elevation in Mean Lower Low Water datum, add 2.77 ft (revised to tidal Epoch 1983-2001). Online peaks have been adjusted to NAVD of 1988.

REMARKS.--Missing gage-height data Oct. 1, Oct. 15-18, Nov. 6 - Dec. 17, Jan. 5-16, Aug. 4-10, and short portions of numerous other days. Ice effect was apparent Jan. 22-28. Gage cannot measure a tide level below -4.63 ft (NAVD of 1988). Summaries for months with short periods of no gage-height record have been estimated with little or no loss of accuracy. Some periods cannot be estimated and are noted by dashed (---) lines. Satellite stage and weather telemetry at station.

EXTREMES FOR PERIOD OF PUBLISHED RECORD.--Maximum elevation recorded, 5.53 ft (adjusted to NAVD of 1988), Oct. 25, 1980.

EEXTREMES FOR CURRENT WATER YEAR.-- Maximum elevation recorded, 4.49 ft (NAVD of 1988), Jan. 3.

Summaries of tide elevations during water year 2003 are as follows:

TIDE ELEVATIONS, IN FEET, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

		OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
Maximum	Elevation	3.72	---	4.25	4.49	4.48	3.38	4.15	3.89	3.52	3.41	2.95	3.56
high tide	Date	7	---	25	3	17	19	17	16	13	10	11	28
Minimum	Elevation	-3.45	---	---	-4.48	-4.38	-3.43	-4.9e	-3.55	-3.28	-3.22	-3.22	-3.07
low tide	Date	6	---	---	20	5	4	16	15	12	13	14	4
Mean high tide		2.4e	---	---	---	1.23	1.77	2.09	2.04	2.10	1.94	1.9e	2.41
Mean water level		.2e	---	---	---	-.78	-.39	-.08	-.11	-.04	-.22	-.2e	.25
Mean low tide		-2.1e	---	---	---	-3.18	-2.63	-2.33	-2.34	-2.25	-2.50	-2.5e	-1.98

e - estimated

DENNIS CREEK BASIN

01411435 SLUICE CREEK NEAR SOUTH DENNIS, NJ

LOCATION.--Lat 39°09'42", long 74°49'55", Cape May County, Hydrologic Unit 02040206, on left upstream wingwall of bridge on State Route 47, 1.2 mi southwest of South Dennis, 1.6 mi upstream from Dennis Creek, and 3.3 mi from Delaware Bay.

DRAINAGE AREA.--9.37 mi^2.

PERIOD OF RECORD.--April 1997 to February 2000 (unpublished fragmentary gage-height record), March 2000 to current year.

GAGE.--Water-stage recorder. Datum of gage is at 0.00 ft North American Vertical Datum of 1988 (NAVD of 1988). To determine approximate elevations to National Geodetic Vertical Datum of 1929 (NGVD of 1929), add 1.27 ft. To determine approximate elevations to Mean Lower Low Water, add 3.38 ft (revised to tidal Epoch 1983-2001)

REMARKS.--Missing data Dec. 4-8, and short portions of numerous other days. Ice effect evident Jan. 15 to Feb. 4, and Feb. 15-22. Summaries for months with short periods of no gage-height record have been estimated with little or no loss of accuracy unless otherwise noted. Some periods cannot be estimated and are noted by dashed (---) lines. Satellite stage telemetry at station.

EXTREMES FOR PERIOD OF PUBLISHED RECORD.--Maximum elevation recorded, 3.74 ft (NAVD of 1988), Dec. 25, 2002; minimum recorded, -5.65 ft (NAVD of 1988), Mar. 1, 2002.

EXTREMES OUTSIDE PERIOD OF RECORD.--The flood of Dec. 11, 1992 reached a stage of 5.6 ft (adjusted to NAVD of 1988), from high-water mark near Reeds Beach, 4.5 mi southwest of station.

EXTREMES FOR CURRENT YEAR.--Maximum elevation recorded, 3.74 ft (NAVD of 1988), Dec. 25; minimum recorded, -5.36 ft (NAVD of 1988), Dec. 3, although a lower tide elevation may have occurred during period of ice effect in Jan.

Summaries of tide elevations during the year are as follows:

TIDE ELEVATIONS, IN FEET, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

		OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
Maximum	Elevation	3.34	3.37	3.74	3.56	3.01	3.24	3.33	3.22	3.23	3.18	2.99	3.15
high tide	Date	7	6	25	3	23	21	18	17	13	11	11	19
Minimum	Elevation	-4.53	-4.80	-5.36	---	-5.27	-4.19	-5.26	-4.69	-4.24	-4.05	-4.09	-3.71
low tide	Date	6	19	3	---	5	4	16	15	12	14	12	30
Mean high tide		2.45	2.22	2.18	---	----	2.25	2.41	2.40	2.47	2.40	2.42	2.62
Mean water level		.51	-.01	-.07	---	----	.02	.21	.25	.39	.22	.21	.66
Mean low tide		-2.65	-3.32	-3.4e	---	----	-3.87	-3.26	-3.18	-3.00	-3.10	-3.33	-2.70

e - estimated

01411456 LITTLE EASE RUN NEAR CLAYTON, NJ

LOCATION.--Lat 39°39'32", long 75°04'03", Gloucester County, Hydrologic Unit 02040206, on right bank 30 ft downstream from bridge on Academy Road (County Route 610), 0.9 mi west of Fries Mill, 1.3 mi east of Clayton, and 1.4 mi downstream from Beaverdam Branch.

DRAINAGE AREA.--9.77 mi^2.

PERIOD OF RECORD.--Occasional low-flow measurements, water years 1966, 1976-84, 1987. February 1988 to current year.

GAGE.--Water-stage recorder. Datum of gage is 100.94 ft above NGVD of 1929.

REMARKS.--Records good, except for estimated daily discharges which are poor. Occasional regulation from unknown sources. Several measurements of water temperature were made during the year.

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

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Feb 25	1815	65	3.62	Jun 14	1230	54	3.45
Mar 6	2030	*68	*3.66				

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.63	11	11	19	4.3	30	19	9.9	15	5.6	3.6	3.1
2	0.60	10	9.7	27	5.6	36	18	9.9	14	4.8	7.0	9.9
3	0.55	8.7	8.8	29	6.6	50	16	13	12	7.5	5.9	9.0
4	0.55	7.6	8.3	30	e7.1	46	15	13	17	7.9	6.7	23
5	0.58	6.7	7.8	28	e7.9	46	14	12	21	7.0	23	45
6	0.55	13	7.2	26	e7.1	58	13	11	20	6.7	39	37
7	0.55	14	6.9	23	e6.4	63	13	10	22	7.5	31	28
8	0.55	13	6.6	21	e5.8	52	16	21	34	9.1	27	20
9	0.55	11	6.4	19	e5.0	46	20	21	33	8.2	21	14
10	0.62	11	6.2	18	e4.4	42	24	20	27	9.0	17	11
11	4.0	11	9.1	17	e4.1	35	29	18	21	9.4	15	8.4
12	4.2	15	19	15	e3.7	29	39	15	17	7.8	12	7.1
13	2.5	18	22	14	e3.3	27	39	12	22	6.4	10	9.9
14	1.9	18	29	13	e3.1	25	32	10	50	5.5	8.6	12
15	1.6	16	30	12	e2.9	23	26	8.8	47	5.0	7.0	17
16	4.8	17	27	11	e2.6	21	22	7.8	33	4.4	6.0	45
17	5.6	26	24	10	3.0	20	19	7.6	24	3.8	6.1	37
18	3.4	31	20	9.2	3.6	19	16	6.9	37	3.3	5.4	28
19	2.5	28	17	8.0	4.9	18	15	6.3	48	2.9	4.6	44
20	2.1	26	18	7.4	6.1	18	14	5.6	43	2.6	3.9	34
21	1.9	22	22	6.9	7.3	27	13	5.6	47	2.4	3.4	24
22	1.7	21	21	6.2	18	30	13	7.7	40	2.3	3.4	20
23	1.6	20	19	5.6	38	28	12	8.1	31	5.0	6.7	24
24	1.5	18	17	4.8	53	24	12	9.9	24	7.2	4.9	31
25	1.4	16	21	4.4	60	21	11	10	18	7.9	3.6	24
26	6.4	14	30	4.3	58	18	13	18	14	6.8	3.0	21
27	5.0	14	28	4.2	46	18	13	27	11	5.4	2.8	18
28	3.4	13	26	3.8	36	16	12	28	9.5	4.4	2.5	16
29	3.8	12	23	3.7	---	16	12	25	7.8	3.7	2.2	14
30	11	11	20	3.7	---	19	11	19	6.6	3.1	2.4	11
31	12	---	18	3.8	---	20	---	15	---	2.8	3.6	---
TOTAL	88.03	473.0	539.0	408.0	413.8	941	541	412.1	765.9	175.4	298.3	645.4
MEAN	2.84	15.8	17.4	13.2	14.8	30.4	18.0	13.3	25.5	5.66	9.62	21.5
MAX	12	31	30	30	60	63	39	28	50	9.4	39	45
MIN	0.55	6.7	6.2	3.7	2.6	16	11	5.6	6.6	2.3	2.2	3.1
CFSM	0.29	1.61	1.78	1.35	1.51	3.11	1.85	1.36	2.61	0.58	0.98	2.20
IN.	0.34	1.80	2.05	1.55	1.58	3.58	2.06	1.57	2.92	0.67	1.14	2.46

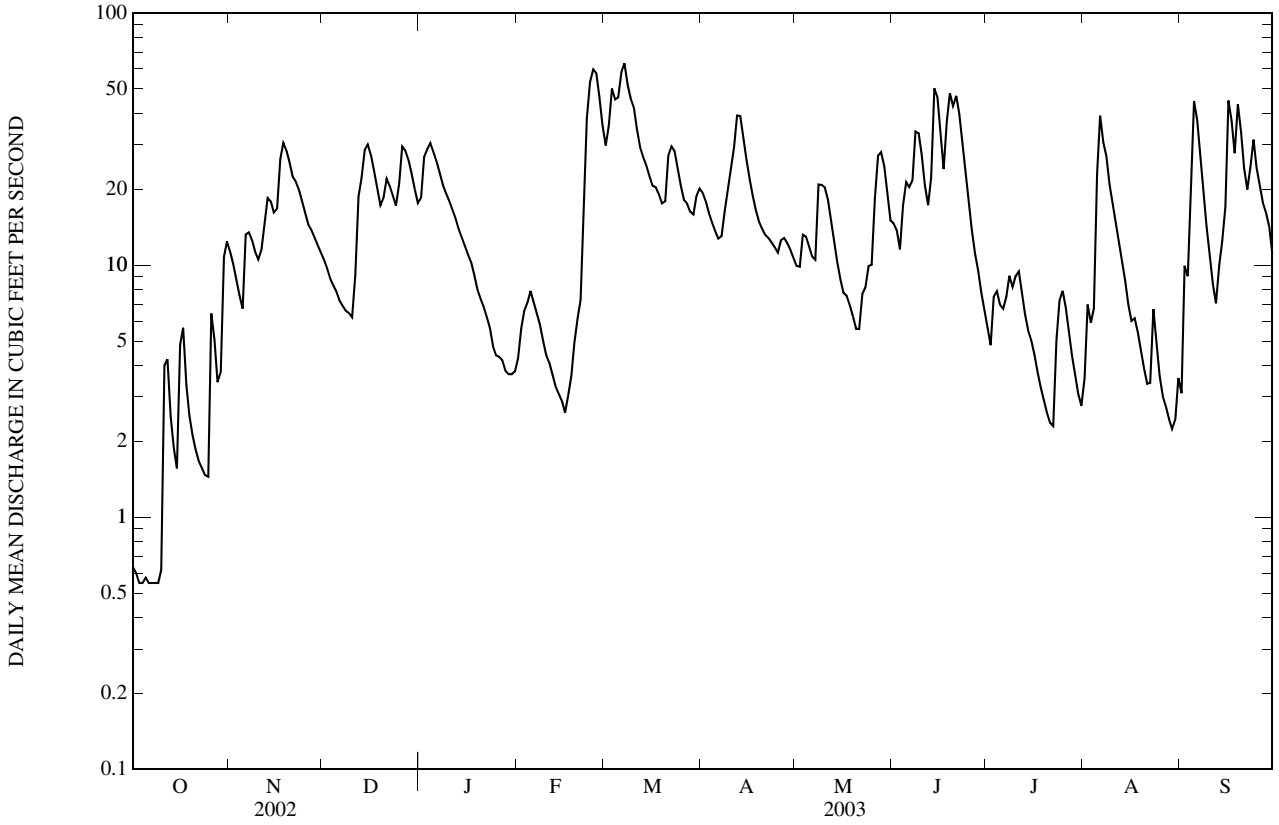
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1988 - 2003, BY WATER YEAR (WY)

MEAN	5.03	7.48	11.6	13.6	13.7	20.1	16.2	11.4	7.63	4.32	4.80	5.22
MAX	19.7	15.8	35.5	26.5	22.4	38.7	26.2	29.3	25.5	19.0	15.2	21.5
(WY)	(1990)	(2003)	(1997)	(1991)	(1997)	(1994)	(1996)	(1989)	(2003)	(1989)	(1989)	(2003)
MIN	0.75	1.21	1.60	3.17	2.40	6.16	5.14	4.45	1.38	0.70	0.56	0.56
(WY)	(2002)	(2002)	(2002)	(2002)	(2002)	(2002)	(2002)	(1999)	(1999)	(2002)	(2002)	(2001)

01411456 LITTLE EASE RUN NEAR CLAYTON, NJ—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1988 - 2003	
ANNUAL TOTAL	1,992.71		5,700.93			
ANNUAL MEAN	5.46		15.6		10.2	
HIGHEST ANNUAL MEAN					15.6	2003
LOWEST ANNUAL MEAN					2.75	2002
HIGHEST DAILY MEAN	31	Nov 18	63	Mar 7	111	Sep 20, 1989
LOWEST DAILY MEAN	0.41	Aug 18	0.55	Oct 3,4,6	0.41	Aug 16, 1988
ANNUAL SEVEN-DAY MINIMUM	0.42	Aug 17	0.55	Oct 3	0.42	Aug 17, 2002
MAXIMUM PEAK FLOW			68	Mar 6	124	Sep 20, 1989
MAXIMUM PEAK STAGE			3.66	Mar 6	4.40	Mar 22, 2000
INSTANTANEOUS LOW FLOW			0.55	many days	0.35	Aug 15, 1988
ANNUAL RUNOFF (CFSM)	0.56		1.60		1.04	
ANNUAL RUNOFF (INCHES)	7.59		21.71		14.19	
10 PERCENT EXCEEDS	15		31		23	
50 PERCENT EXCEEDS	2.7		12		6.7	
90 PERCENT EXCEEDS	0.55		3.2		1.3	

e Estimated



01411500 MAURICE RIVER AT NORMA, NJ

LOCATION.--Lat 39°29'44", long 75°04'37", Salem County, Hydrologic Unit 02040206, on right bank just upstream from bridge on Almond Road (County Route 540) at Norma, 0.8 mi downstream from Blackwater Branch, and 2.9 mi west of Vineland.

DRAINAGE AREA.--112 mi^2.

PERIOD OF RECORD.--July 1932 to current year. Monthly discharge only for December 1933, published in WSP 1302.

REVISED RECORDS.--WSP 1382: 1933. WDR NJ-79-1: 1967(P). WDR NJ-82-2: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Concrete control since Dec. 27, 1937. Datum of gage is 46.94 ft above NGVD of 1929.

REMARKS.--Records good. Occasional regulation by ponds above station. Several measurements of water temperature were made during the year. Satellite gage-height telemetry at station.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 380 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Feb 25	1415	463	3.59	Jun 21	1115	*510	*3.68
Mar 8	1230	442	3.55				

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	45	127	129	189	127	335	240	192	258	208	136	134
2	44	119	125	221	137	313	232	184	250	198	161	147
3	43	110	122	227	138	321	222	182	232	207	173	154
4	43	102	118	240	146	331	220	179	240	212	175	177
5	44	97	121	241	157	360	214	174	259	210	182	196
6	45	120	126	237	157	395	210	175	258	212	232	193
7	45	118	129	229	157	428	212	176	270	218	309	217
8	44	115	127	217	155	440	229	209	331	203	317	205
9	42	112	122	207	148	435	250	241	332	180	289	195
10	45	105	118	198	144	408	267	298	322	203	268	184
11	83	106	129	189	141	371	279	294	337	233	256	164
12	98	121	179	180	137	343	320	265	287	218	235	149
13	101	145	187	173	132	319	343	240	341	205	217	156
14	100	143	218	166	128	299	342	220	383	199	195	161
15	100	140	224	161	127	285	325	204	382	198	182	168
16	103	143	223	156	127	278	302	193	402	185	174	207
17	109	195	217	153	132	275	278	188	368	177	180	256
18	106	214	203	150	130	270	258	170	404	167	181	260
19	97	219	189	145	130	256	243	170	445	163	175	283
20	87	220	186	143	135	251	223	169	452	158	166	275
21	66	213	198	140	142	282	218	168	505	152	156	264
22	67	209	194	135	185	285	221	188	481	148	147	251
23	65	201	191	131	306	290	219	192	438	161	140	256
24	63	192	182	128	387	291	213	197	392	173	132	273
25	60	186	185	125	447	280	213	189	332	180	130	258
26	97	174	206	125	451	265	215	228	292	179	129	248
27	100	163	209	124	420	258	204	280	269	173	127	238
28	98	152	215	122	378	248	206	278	235	165	123	225
29	95	142	211	122	---	243	202	282	221	158	119	214
30	123	134	202	125	---	232	199	270	218	149	117	180
31	140	---	192	125	---	241	---	253	---	131	124	---
TOTAL	2,398	4,537	5,377	5,224	5,501	9,628	7,319	6,648	9,936	5,723	5,647	6,288
MEAN	77.4	151	173	169	196	311	244	214	331	185	182	210
MAX	140	220	224	241	451	440	343	298	505	233	317	283
MIN	42	97	118	122	127	232	199	168	218	131	117	134
CFSM	0.69	1.35	1.55	1.50	1.75	2.77	2.18	1.91	2.96	1.65	1.63	1.87
IN.	0.80	1.51	1.79	1.74	1.83	3.20	2.43	2.21	3.30	1.90	1.88	2.09

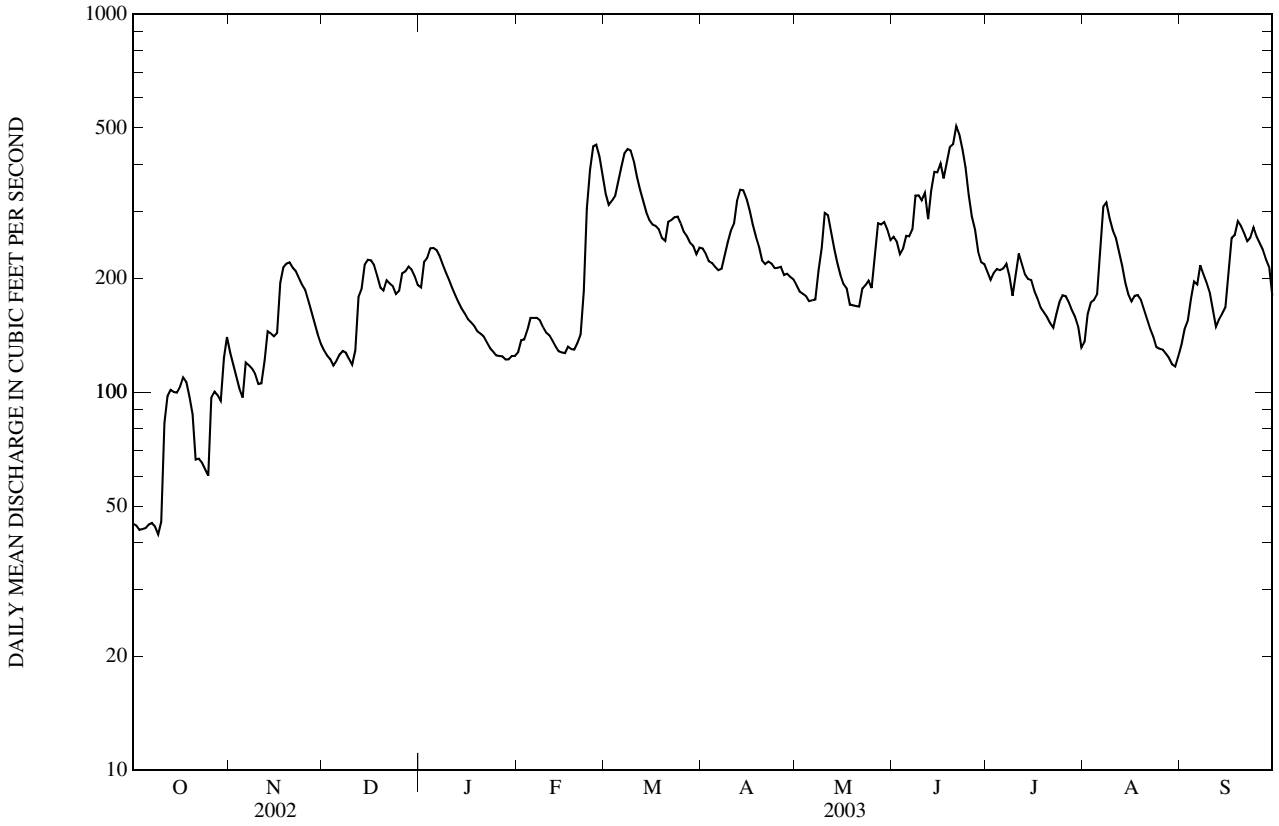
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1933 - 2003, BY WATER YEAR (WY)

MEAN	111	136	164	187	198	230	224	188	148	122	123	120
MAX	266	330	385	380	418	427	437	387	331	333	327	591
(WY)	(1990)	(1973)	(1973)	(1936)	(1939)	(1979)	(1984)	(1958)	(2003)	(1975)	(1958)	(1940)
MIN	48.6	46.7	57.1	64.7	69.4	89.9	90.9	79.5	57.7	35.6	32.1	40.6
(WY)	(1966)	(1966)	(1966)	(1966)	(2002)	(2002)	(1966)	(1977)	(1966)	(1966)	(2002)	(1965)

01411500 MAURICE RIVER AT NORMA, NJ—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1933 - 2003	
ANNUAL TOTAL	33,242		74,226			
ANNUAL MEAN	91.1		203		162	
HIGHEST ANNUAL MEAN					253	1973
LOWEST ANNUAL MEAN					67.4	1966
HIGHEST DAILY MEAN	224	Dec 15	505	Jun 21	5,260	Sep 2, 1940
LOWEST DAILY MEAN	20	Aug 16	42	Oct 9	20	Aug 16, 2002
ANNUAL SEVEN-DAY MINIMUM	20	Aug 16	44	Oct 3	20	Aug 16, 2002
MAXIMUM PEAK FLOW			510	Jun 21	7,360a	Sep 2, 1940
MAXIMUM PEAK STAGE			3.68	Jun 21	8.72	Sep 2, 1940
INSTANTANEOUS LOW FLOW			42	many days	20	Aug 15, 2002
ANNUAL RUNOFF (CFSM)	0.81		1.82		1.45	
ANNUAL RUNOFF (INCHES)	11.04		24.65		19.70	
10 PERCENT EXCEEDS	156		320		280	
50 PERCENT EXCEEDS	83		193		142	
90 PERCENT EXCEEDS	43		116		67	

a From rating curve extended above 3,000 ft^3/s by logarithmic plotting, peak was highest since 1867.



MAURICE RIVER BASIN

01412150 MAURICE RIVER AT BIVALVE, NJ

LOCATION.--Lat 39°13'54", long 75°01'59", Cumberland County, Hydrologic Unit 02040406, on pier at Long Reach Marina in Bivalve, 1.1 mi south of Port Norris, and 1.4 mi northeast of Delaware Bay.

PERIOD OF RECORD.--October 1964 to September 1985 (annual maximum elevation only), May 1997 to February 2000 (unpublished fragmentary gage-height record), March 2000 to current year.

GAGE.--Water-stage recorder. Datum of gage is at 0.00 ft North American Vertical Datum of 1988 (NAVD of 1988). To determine approximate elevations to National Geodetic Vertical Datum of 1929 (NGVD of 1929), add 1.20 ft. To determine approximate elevations to Mean Lower Low Water Datum, add 3.30 ft (revised to tidal Epoch 1983-2001). From October 1964 to September 1985, crest-stage gage at NGVD of 1929 located 0.3 mi downstream of current station.

REMARKS.--Gage cannot record a tide level of less than -4.94 ft (NAVD of 1988). Ice effect apparent Jan. 15 to Feb. 21, 2003. Summaries for months with short periods of no gage-height record have been estimated with little or no loss of accuracy unless otherwise noted. Some periods cannot be estimated and are noted by dashed (---) lines. Satellite stage telemetry at station.

EXTREMES FOR PERIOD OF PUBLISHED RECORD.--Maximum elevation recorded, 6.91 ft (adjusted to NAVD of 1988), Oct. 25, 1980, from tidal crest-stage gage; minimum recorded, -5.2 ft (NAVD of 1988), estimated, Dec. 13, 2000, Mar.11, 2002, and Dec. 3, 2003.

REVISED EXTREMES FOR 2002 WATER YEAR.--Maximum elevation recorded, 4.47 ft (NAVD of 1988), Oct. 14; minimum elevation recorded, -5.2 ft (NAVD of 1988), estimated, Mar. 11.

EXTREMES FOR 2003 WATER YEAR.--Maximum elevation recorded, 5.07 ft (NAVD of 1988),Dec. 25; minimum recorded, -5.2 ft (NAVD of 1988), estimated, Dec. 3.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum elevation since 1878, 7.3 ft (adjusted to NAVD of 1988), Nov.25, 1950, from high-water mark reported by the U.S. Army Corps of Engineers.

REVISIONS.--Tide elevations for water year 2002 have been revised as shown in the following table. These values supercede the monthly and annual tide elevations published in the annual water data report of 2002.

Summaries of tide elevations during water years 2002 and 2003 are as follows:

TIDE ELEVATIONS, IN FEET, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

		OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
Maximum	Elevation	4.47r	3.72r	3.97r	4.24r	4.15r	3.82r	4.16r	3.87r	4.07r	3.79r	3.92r	3.84r
high tide	Date	14	17	13	31	1	29	28	25	14	11	6	6
Minimum	Elevation	-4.88r	-4.18r	-4.80r	-5.0e	-5.1e	-5.2er	-4.44r	-4.01r	-4.06r	-4.04r	-3.70r	-3.79r
low tide	Date	18	14	31	14	11	11	27	15	22	24	11	7
Mean high tide		2.59r	2.46r	2.35r	2.10r	2.37r	2.16r	2.36r	2.42r	2.62r	2.62r	2.69r	2.83r
Mean water level		-.08r	-.17r	-.22r	-.6er	-.27r	-.59r	-.35r	-.27r	-.06r	-.08r	.02r	.17r
Mean low tide		-2.88r	-3.01r	-3.08r	-3.4er	-3.11r	-3.50r	-3.29r	-3.16r	-2.95r	-3.00r	-2.85r	-2.63r

TIDE ELEVATIONS, IN FEET, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

		OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
Maximum	Elevation	4.43	4.44	5.07	5.00	---	4.19	4.70	4.42	4.28	4.09	3.91	4.29
high tide	Date	7	6	25	3	---	20	18	16	13	11	11	19
Minimum	Elevation	-4.08	-4.67	-5.2e	---	---	-3.87	-4.93	-3.97	-3.71	-3.55	-3.70	-3.47
low tide	Date	6	19	3	---	---	31	16	14	12	28	30	30
Mean high tide		2.82	2.37	2.37	---	---	2.52	2.74	2.70	2.81	2.73	2.78	3.09
Mean water level		.27	-.31	-.33	---	---	-.16	-.07	.05	.14	.00	-.02	.43
Mean low tide		-2.47	-3.20	-3.32	---	---	-3.18	-3.09	-2.85	-2.74	-2.94	-3.03	-2.45

e - estimated
r - revised

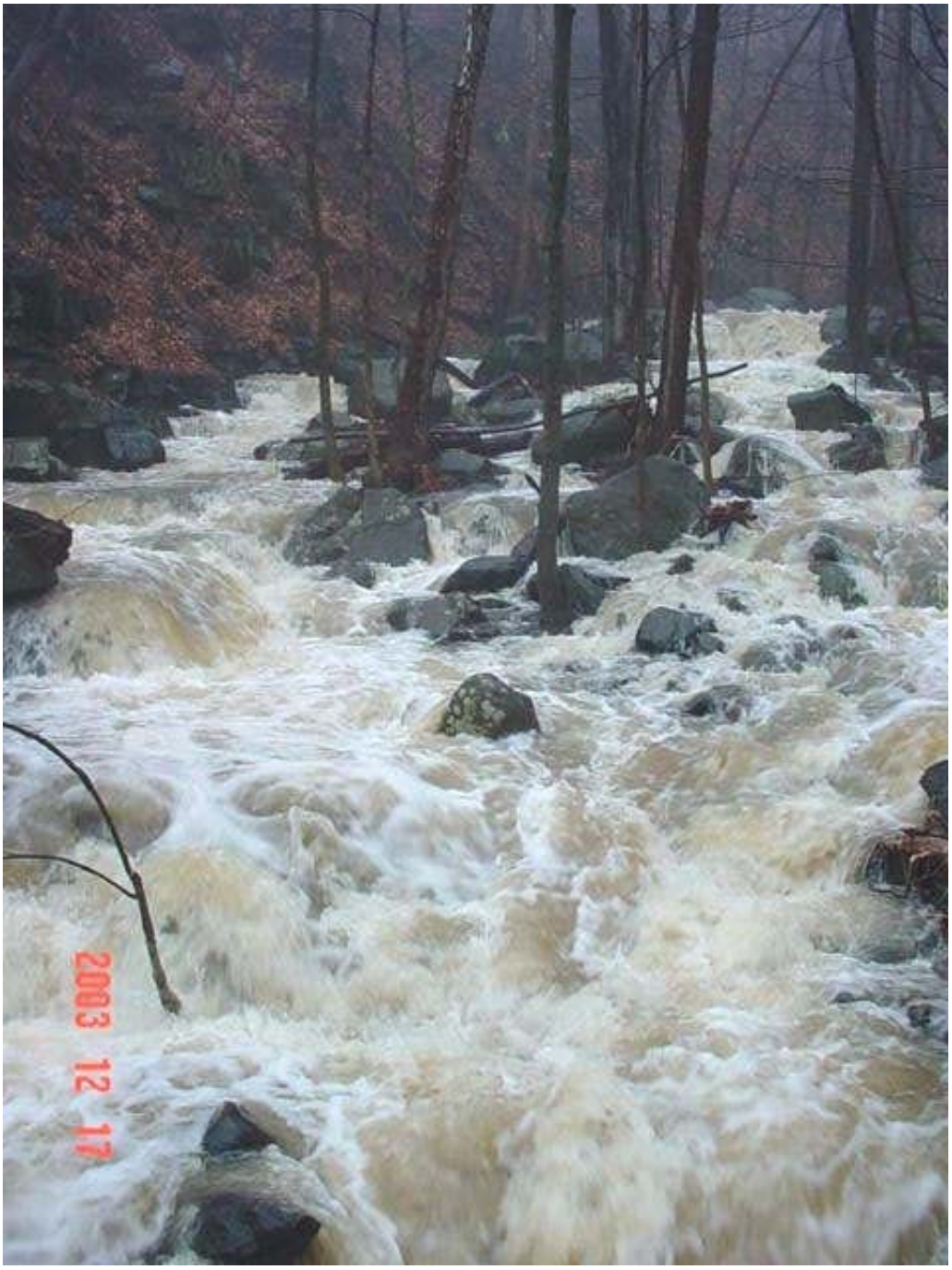


Figure 22. Upstream of U.S. Geological Survey crest-stage gage at Delaware River tributary at Byram, NJ. Photograph taken by Jason C. Shvanda, 2003.

01412800 COHANSEY RIVER AT SEELEY, NJ

LOCATION.--Lat 39°28'21", long 75°15'21", Cumberland County, Hydrologic Unit 02040206, on right bank just upstream from bridge on Silver Lake road, 0.6 mi south of Seeley, 2.6 mi east of Shiloh, 4.1 mi north of Bridgeton, and 22.5 mi upstream from mouth.

DRAINAGE AREA.--28.0 mi^2.

PERIOD OF RECORD.--October 1977 to September 1988. October 1988 to September 1995 as a crest-stage partial-record station. August 2003 to September 2003.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 26.9 ft above NGVD of 1929.

REMARKS.--Records good, expect for estimated daily discharges and those below 5 cfs, which are poor. Occasional regulation from lake gate or other activities upstream. Several measurements of water temperature were made during the year. Satellite gage-height telemetry at station.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 250 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
No peak greater than base discharge.							

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	---	---	---	36
2	---	---	---	---	---	---	---	---	---	---	---	44
3	---	---	---	---	---	---	---	---	---	---	---	43
4	---	---	---	---	---	---	---	---	---	---	---	61
5	---	---	---	---	---	---	---	---	---	---	---	63
6	---	---	---	---	---	---	---	---	---	---	---	41
7	---	---	---	---	---	---	---	---	---	---	---	38
8	---	---	---	---	---	---	---	---	---	---	---	36
9	---	---	---	---	---	---	---	---	---	---	---	35
10	---	---	---	---	---	---	---	---	---	---	---	34
11	---	---	---	---	---	---	---	---	---	---	---	34
12	---	---	---	---	---	---	---	---	---	---	---	35
13	---	---	---	---	---	---	---	---	---	---	---	64
14	---	---	---	---	---	---	---	---	---	---	---	56
15	---	---	---	---	---	---	---	---	---	---	---	42
16	---	---	---	---	---	---	---	---	---	---	---	39
17	---	---	---	---	---	---	---	---	---	---	---	38
18	---	---	---	---	---	---	---	---	---	---	---	36
19	---	---	---	---	---	---	---	---	---	---	---	81
20	---	---	---	---	---	---	---	---	---	---	---	44
21	---	---	---	---	---	---	---	---	---	---	---	28
22	---	---	---	---	---	---	---	---	---	---	---	26
23	---	---	---	---	---	---	---	---	---	---	---	e76
24	---	---	---	---	---	---	---	---	---	---	---	e41
25	---	---	---	---	---	---	---	---	---	---	---	e31
26	---	---	---	---	---	---	---	---	---	---	---	e31
27	---	---	---	---	---	---	---	---	---	---	---	29
28	---	---	---	---	---	---	---	---	---	---	---	33
29	---	---	---	---	---	---	---	---	---	---	---	28
30	---	---	---	---	---	---	---	---	---	---	33	26
31	---	---	---	---	---	---	---	---	---	---	36	---
TOTAL	---	---	---	---	---	---	---	---	---	---	---	1,249
MEAN	---	---	---	---	---	---	---	---	---	---	---	41.6
MAX	---	---	---	---	---	---	---	---	---	---	---	81
MIN	---	---	---	---	---	---	---	---	---	---	---	26
CFSM	---	---	---	---	---	---	---	---	---	---	---	1.49
IN.	---	---	---	---	---	---	---	---	---	---	---	1.66

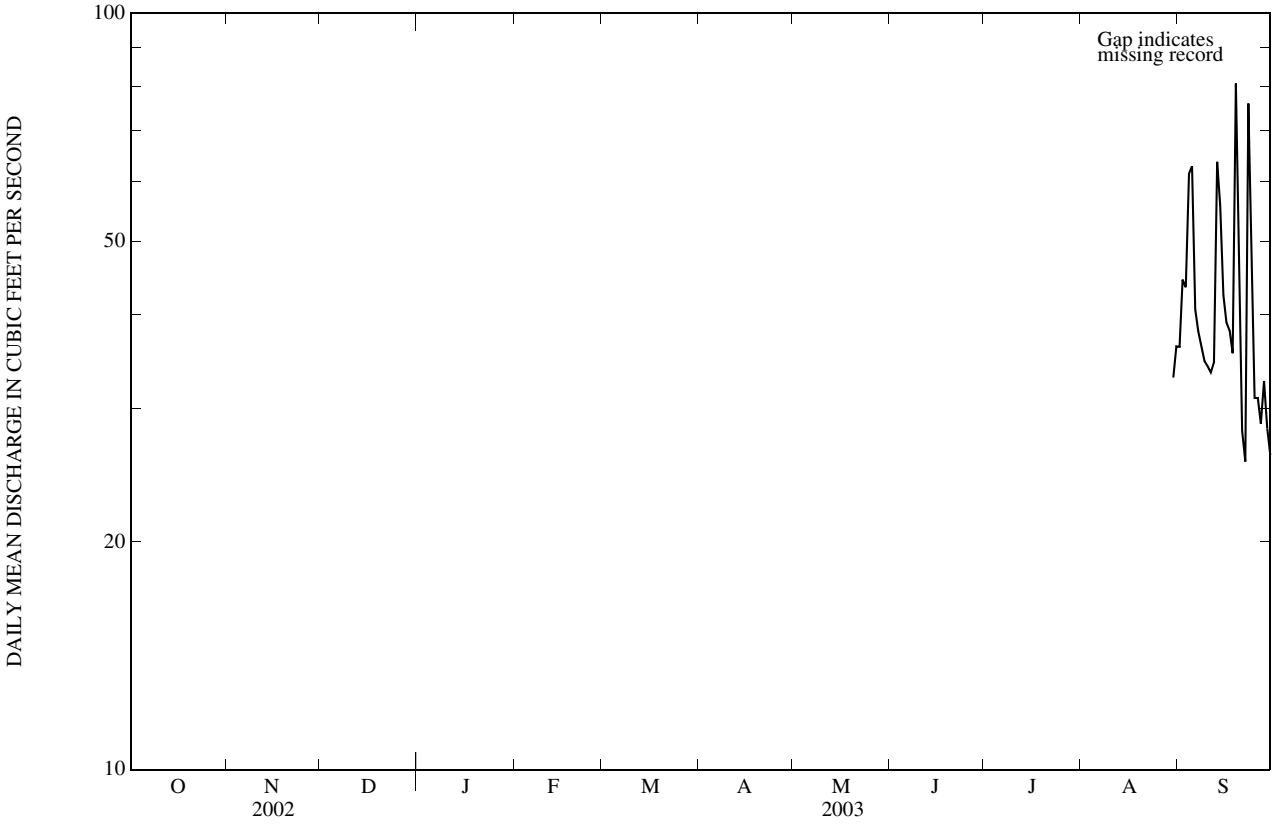
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1978 - 2003, BY WATER YEAR (WY)

MEAN	28.1	31.1	35.6	40.5	40.9	38.4	43.1	42.0	42.4	29.0	26.9	27.9
MAX	58.4	48.1	56.1	84.7	105	58.4	76.4	57.3	121	50.0	43.0	43.5
(WY)	(1980)	(1984)	(1987)	(1978)	(1979)	(1978)	(1983)	(1983)	(1983)	(1984)	(1979)	(1979)
MIN	20.5	20.5	25.1	20.8	24.5	19.3	22.2	27.9	15.3	14.9	14.8	17.8
(WY)	(1987)	(1982)	(1981)	(1981)	(1983)	(1981)	(1985)	(1986)	(1988)	(1988)	(1988)	(1988)

01412800 COHANSEY RIVER AT SEELEY, NJ—Continued

SUMMARY STATISTICS	FOR AUG 30-SEPT 30, 2003		WATER YEARS 1978-2003	
ANNUAL MEAN			35.5	
HIGHEST ANNUAL MEAN			46.3	1979
LOWEST ANNUAL MEAN			24.4	1988
HIGHEST DAILY MEAN	81	Sep 19	2,150	Jun 21, 1983
LOWEST DAILY MEAN	26	Sep 22, 30	5.3	Jul 9, 1988
ANNUAL SEVEN-DAY MINIMUM	31	Sep 24	5.8	Jul 5, 1988
MAXIMUM PEAK FLOW	93	Sep 19	10,000a	Jun 21, 1983
MAXIMUM PEAK STAGE	3.95	Sep 19	8.50	Jun 21, 1983
INSTANTANEOUS LOW FLOW	25	Sep 22, 30	4.7	Jul 9, 1988
10 PERCENT EXCEEDS			53	
50 PERCENT EXCEEDS			28	
90 PERCENT EXCEEDS			18	

a Discharge as a result of dam break at Seeley Lake, 3.1 mi upstream, from rating curve extened above 600 ft^3/s.
e Estimated



COHANSEY RIVER BASIN

01413038 COHANSEY RIVER AT GREENWICH, NJ

LOCATION.--Lat 39°22'45", long 75°21'18", Cumberland County, Hydrologic Unit 02040206, on private pier at Hancock Harbor Marina, 600 ft downstream of Pine Mount Creek, 0.5 mi downstream of Greenwich Pier, 1.2 mi southwest of Greenwich, 4.4 mi upstream of mouth and Delaware Bay, and 7.4 mi southwest of Bridgeton.

PERIOD OF RECORD.--Tidal crest-stage gage 1979-2001, located 0.5 mi upstream at Greenwich Pier. October 28, 1996 to April 27, 2000 (unpublished fragmentary gage-height record), April 28, 2000 to present year.

GAGE.--Water-stage recorder. Datum of gage is North American Vertical Datum of 1988 (NAVD of 1988). To determine approximate elevations to National Geodetic Vertical Datum of 1929 (NGVD of 1929), add 1.34 ft. To determine approximate elevations to Mean Lower Low Water Datum, add 3.07 ft (revised to tidal Epoch 1983-2001).

REMARKS.--No gage height record for Aug. 14-18, Sept. 7-30, and short portions of numerous other days. Ice effect apparent Jan. 16 to Mar. 1. No high tides were recorded Aug. 18 to Sept. 7 due to equipment failure. Summaries for months with short periods of no gage-height record have been estimated with little or no loss of accuracy unless otherwise noted. Some periods cannot be estimated and are noted by dashed (---) lines. Satellite stage telemetry at station.

EXTREMES FOR PERIOD OF PUBLISHED RECORD.--Maximum elevation recorded, 5.99 ft (adjusted to NAVD of 1988), Oct. 25, 1980; minimum elevation recorded, -5.3 ft (NAVD of 1988), estimated, Feb. 11, 2001.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum elevation known, 7.5 ft (adjusted to NAVD of 1988), Nov.25, 1950, from high-water mark reported by the U.S. Army Corps of Engineers.

EXTREMES FOR CURRENT WATER YEAR.--Maximum elevation recorded, 4.85 ft (NAVD of 1988), Feb. 17; minimum elevation recorded, -4.98 ft (NAVD of 1988), Dec. 3, although a lower elevation likely occurred during period of ice effect.

Summaries of tide elevations during water year 2003 are as follows:

TIDE ELEVATIONS, IN FEET, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

		OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
Maximum	Elevation	4.01	3.66	3.92	4.74	4.85	3.98	4.50	4.28	4.00	3.87	3.74	---
high tide	Date	4	6	25	3	17	19	18	17	13	11	9	---
Minimum	Elevation	-3.59	-4.59	-4.98	---	---	-4.02	-4.56	-3.94	-3.44	-3.44	-3.48	---
low tide	Date	6	23	3	---	---	31	1	13	12	28	30	---
Mean high tide		2.80	2.31	2.27	---	---	2.55	2.85	2.79	2.88	2.78	---	---
Mean water level		.56	-.20	-.28	---	---	-.02	.35	.34	.39	.24	---	---
Mean low tide		-2.26	-3.11	-3.27	---	---	-2.86	-2.60	-2.59	-2.58	-2.78	-2.9e	---

e - estimated

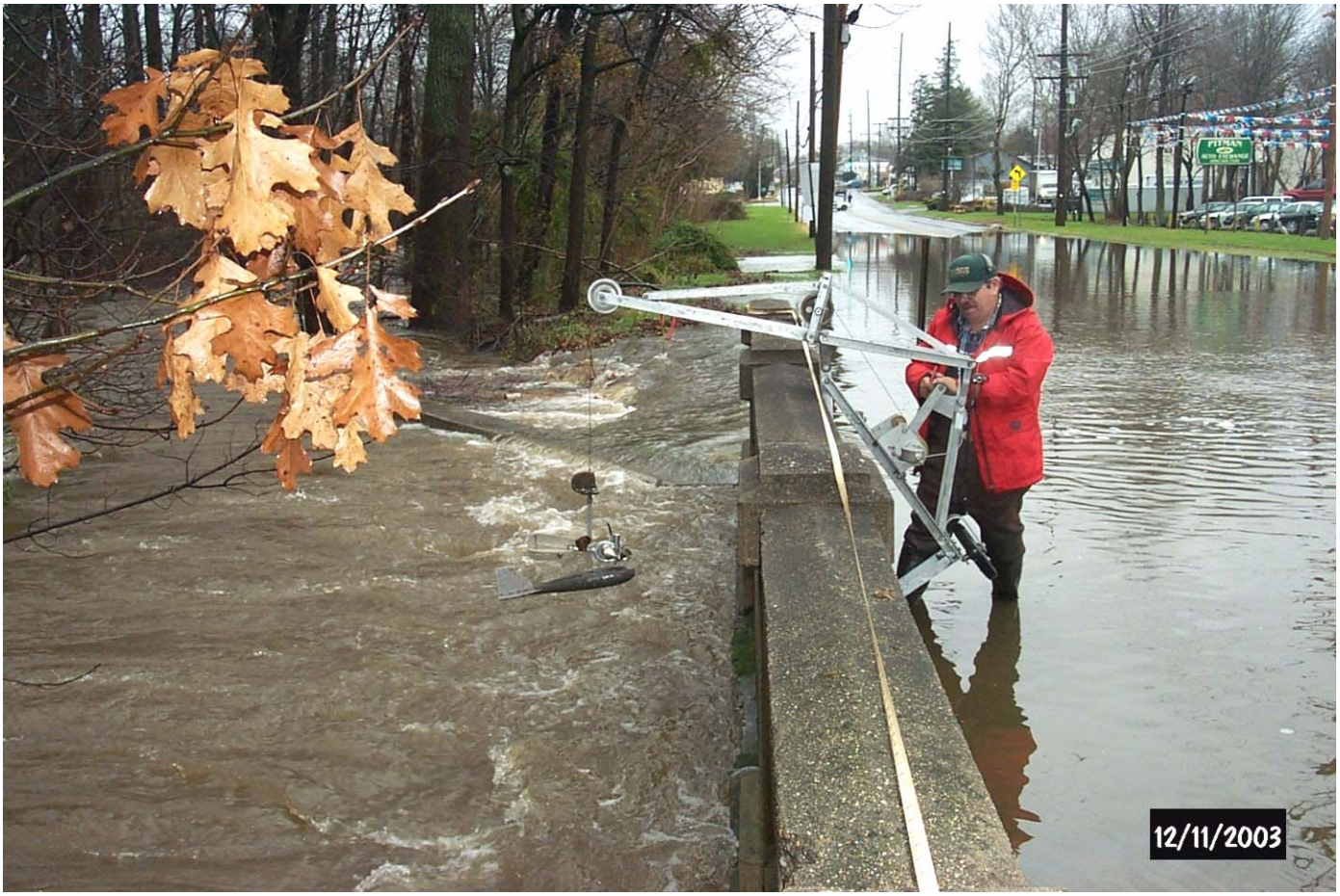


Figure 23. U.S. Geological Survey hydrographer, Guerino Centinaro, measuring flow at Mantua Creek at Pitman, NJ. Photograph taken by Joseph Orlins, Ph.D. (Rowan University) 2003.

01434000 DELAWARE RIVER AT PORT JERVIS, NY

LOCATION.--Lat 41°22'14", long 74°41'52", Pike County, PA, Hydrologic Unit 02040104, on right bank 250 ft downstream from bridge (on U.S. Highways 6 and 209) between Port Jervis, NY and Matamoras, PA, 1.2 mi upstream from Neversink River, and 6.5 mi downstream from Mongaup River.

DRAINAGE AREA.--3,070 mi^2.

PERIOD OF RECORD.--October 1904 to current year.

REVISED RECORDS.--WSP 1031: 1905-36. WDR NY-71-1: 1970. WDR NY-82-1: Drainage area. WDR NY-86-1: 1979-80.

GAGE.--Water-stage recorder. Datum of gage is 415.35 ft above NGVD of 1929. October 1904 to August 13, 1928, non-recording gage at bridge 250 ft upstream at present datum; operated by U.S. Weather Service prior to June 20, 1914.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Flow regulated by Lake Wallenpaupack and by Toronto, Cliff Lake, and Swinging Bridge Reservoirs (see Reservoirs in Delaware River Basin) and smaller reservoirs. Large diurnal fluctuations at medium and low flows caused by powerplants on tributary streams. Subsequent to September 1954, entire flow from 371 mi^2 of drainage area controlled by Pepacton Reservoir, and subsequent to October 1963, entire flow from 454 mi^2 of drainage area controlled by Cannonsville Reservoir (see Reservoirs in Delaware River Basin). Part of flow from these reservoirs diverted for New York City municipal supply. Remainder of flow (except for conservation releases and spill) impounded for release during periods of low flow in the lower Delaware River basin, as directed by the Delaware River Master. Satellite and telephone gage-height telemeters and National Weather Service telephone gage-height telemeter at station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge prior to current degree of regulation, 233,000 ft^3/s, Aug. 19, 1955, gage height, 23.91 ft, from floodmarks in gage house, from rating curve extended above 89,000 ft^3/s, on basis of slope-area measurement of peak flow; maximum discharge since current degree of regulation, 134,000 ft^3/s, Jan. 20, 1996, gage height, 18.37 ft; maximum gage height, 26.6 ft, Feb. 12, 1981 (ice jam), from floodmarks; minimum observed discharge, 175 ft^3/s, Sept. 23, 1908, gage height, 0.6 ft.

EXTREMES OUTSIDE PERIOD OF RECORD.--The U.S. Weather Bureau reported a discharge of 205,000 ft^3/s, Oct. 10, 1903, gage height, 23.1 ft, from rating curve extended above 70,000 ft^3/s, by velocity-area studies; maximum gage height, 25.5 ft, Mar. 8, 1904 (ice jam).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 46,500 ft^3/s, Mar. 22, gage height, 10.51 ft; minimum discharge, 977 ft^3/s, Oct. 3, gage height, 1.93 ft.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1,430	2,950	4,210	e5,000	e2,300	e2,500	16,000	5,240	10,100	5,180	2,370	1,970
2	1,190	2,890	e3,800	14,800	e2,200	e2,400	14,000	5,170	16,700	4,760	2,840	13,200
3	1,140	2,730	e3,200	15,800	e2,300	e2,400	13,500	8,510	12,300	4,110	3,720	25,300
4	1,370	2,380	e2,300	11,700	e2,400	e2,400	12,500	9,050	10,900	3,410	3,520	31,700
5	1,840	2,250	e2,100	9,600	e2,500	e2,300	12,200	7,800	10,200	3,320	5,720	31,900
6	1,730	2,460	e2,200	8,440	e2,300	e2,300	12,400	6,920	9,040	3,330	7,070	20,100
7	1,690	3,730	e2,100	7,540	e2,100	e2,200	12,000	6,190	8,290	3,070	7,080	14,100
8	1,740	3,660	e1,900	e5,800	e2,000	e2,200	11,300	5,520	9,750	2,870	5,460	11,100
9	1,540	3,090	e1,800	e4,700	e1,800	e2,100	10,500	5,180	8,390	2,650	5,830	8,830
10	1,710	2,560	e1,600	e4,000	e1,700	e2,100	9,800	4,440	7,210	2,540	5,760	7,450
11	2,100	2,530	e1,400	e3,700	e1,700	e2,100	9,860	3,880	6,430	2,610	5,820	6,600
12	7,980	2,600	e1,500	e3,500	e1,700	e2,100	10,300	4,310	6,800	4,090	13,400	5,570
13	11,700	4,070	e2,100	e3,000	e1,700	e2,000	9,520	5,560	8,760	2,740	10,500	4,300
14	7,270	5,070	5,700	e2,700	e1,700	e2,000	8,670	5,250	11,200	2,340	9,100	3,880
15	5,260	4,370	7,510	e2,500	e1,600	e2,000	8,040	4,980	14,000	2,510	8,320	5,360
16	5,090	4,270	7,410	e2,400	e1,500	e2,600	7,450	4,610	10,800	2,160	6,850	13,300
17	20,300	8,130	6,340	e2,300	e1,500	6,420	6,860	4,310	8,780	2,260	4,970	10,800
18	14,700	14,200	5,270	e2,400	e1,500	13,900	6,330	3,840	7,770	2,430	4,650	8,670
19	9,330	12,400	4,590	e2,500	e1,500	24,300	5,590	3,560	7,230	2,200	4,180	8,180
20	7,030	9,680	5,310	e2,600	e1,500	21,200	4,950	3,450	6,330	1,840	3,760	7,640
21	5,650	8,570	10,300	e2,600	e1,600	36,500	4,830	3,250	11,800	1,930	3,430	6,510
22	4,640	8,250	9,150	e2,600	e1,800	45,600	5,140	3,100	19,500	2,690	3,140	5,530
23	3,900	9,620	8,030	e2,500	e2,500	41,900	5,090	3,000	18,800	5,120	2,570	13,000
24	3,070	9,480	7,050	e2,500	e2,700	30,700	4,860	2,690	14,500	5,170	2,020	23,900
25	2,940	8,110	e6,200	e2,400	e2,900	23,900	4,290	2,780	11,000	4,130	2,080	15,700
26	3,590	7,040	e5,000	e2,400	e3,000	21,300	3,970	3,630	9,230	3,090	2,530	12,500
27	5,820	6,460	e5,200	e2,400	e3,100	19,300	6,110	4,890	8,070	2,880	2,320	10,100
28	4,840	5,740	e4,800	e2,400	e2,800	15,800	6,990	4,610	7,190	3,300	2,270	11,600
29	3,950	4,860	e4,500	e2,400	---	14,300	6,210	4,290	6,170	3,370	1,840	17,600
30	3,530	4,420	e4,300	e2,400	---	18,700	5,590	3,920	5,670	3,100	2,360	13,700
31	3,200	---	e4,200	e2,400	---	18,800	---	3,480	---	3,010	1,980	---
TOTAL	151,270	168,570	141,070	141,980	57,900	388,320	254,850	147,410	302,910	98,210	147,460	370,090
MEAN	4,880	5,619	4,551	4,580	2,068	12,530	8,495	4,755	10,100	3,168	4,757	12,340
MAX	20,300	14,200	10,300	15,800	3,100	45,600	16,000	9,050	19,500	5,180	13,400	31,900
MIN	1,140	2,250	1,400	2,300	1,500	2,000	3,970	2,690	5,670	1,840	1,840	1,970

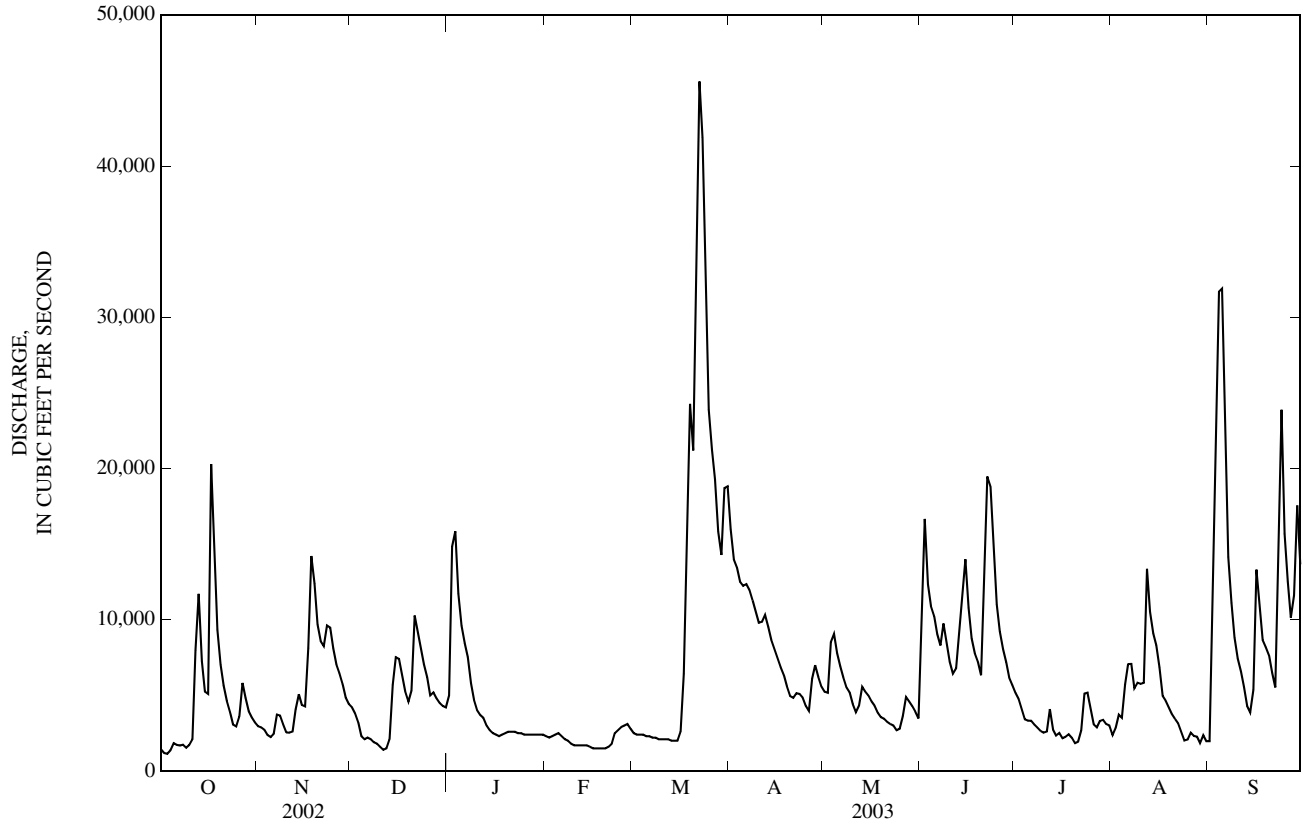
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1964 - 2003, BY WATER YEAR (WY)

MEAN	2,981	4,026	5,052	4,704	4,997	8,040	9,380	6,100	4,102	2,684	2,277	2,629
MAX	10,440	10,310	17,280	12,980	13,730	17,520	23,650	12,670	12,650	6,680	4,757	12,340
(WY)	(1978)	(1973)	(1997)	(1996)	(1976)	(1977)	(1993)	(1984)	(1972)	(1973)	(2003)	(2003)
MIN	1,001	884	1,475	1,216	1,601	2,583	2,954	1,890	993	699	963	1,144
(WY)	(1965)	(1965)	(1999)	(1981)	(1980)	(1981)	(1985)	(1995)	(1965)	(1965)	(1965)	(1965)

01434000 DELAWARE RIVER AT PORT JERVIS, NY—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1964 - 2003	
ANNUAL TOTAL	1,469,665		2,370,040			
ANNUAL MEAN	4,026		6,493		4,743	
HIGHEST ANNUAL MEAN					7,216	1973
LOWEST ANNUAL MEAN					2,028	1965
HIGHEST DAILY MEAN	23,900	May 14	45,600	Mar 22	95,200	Jan 20, 1996
LOWEST DAILY MEAN	666	Jan 20	1,140	Oct 3	385	Jul 6, 1965
ANNUAL SEVEN-DAY MINIMUM	842	Jan 16	1,480	Oct 1	432	Jul 1, 1965
10 PERCENT EXCEEDS	8,470		13,400		10,300	
50 PERCENT EXCEEDS	2,690		4,610		2,830	
90 PERCENT EXCEEDS	1,430		2,000		1,500	

e Estimated



01437500 NEVERSINK RIVER AT GODEFFROY, NY

LOCATION.--Lat 41°26'28", long 74°36'08", Orange County, Hydrologic Unit 02040104, on right bank just upstream from highway bridge on Graham Road, 0.5 mi downstream from Basher Kill, 0.8 mi southeast of Godeffroy, 1.7 mi south of Cuddebackville, and 8.5 mi upstream from mouth.

DRAINAGE AREA.--307 mi^2.

PERIOD OF RECORD.--July 1937 to current year. Gage heights and discharge measurements, August to October 1903 and August 1909 to April 1914, and twice-daily figures of discharge for January 1911 to December 1912 (which do not represent daily mean discharges because of diurnal fluctuation) are published in WSP 97, 261, 321, 351, and 381. August to October 1903, published as "Navesink River at Godeffroy, NY."

REVISED RECORDS.--WSP 1502: 1951(M). WDR NY-82-1: Drainage area. WDR NY-87-1: 1986.

GAGE.--Water-stage recorder. Datum of gage is 459.66 ft above NGVD of 1929 (levels by Corps of Engineers). Prior to Apr. 30, 1914, nonrecording gages at same site (August to October 1903 at datum 0.98 ft higher).

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Prior to 1949, diurnal fluctuation at low and medium flow caused by powerplant at Cuddebackville. Subsequent to June 1953, entire flow from 92.5 mi^2 of drainage area controlled by Neversink Reservoir (see Reservoirs in Delaware River Basin). Part of flow diverted for New York City municipal supply. Remainder of flow (except for conservation releases and spill), impounded for release during periods of low flow in the lower Delaware River basin, as directed by the Delaware River Master.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge prior to regulation, 24,500 ft^3/s, Nov. 26, 1950, gage height, 11.79 ft; maximum discharge since regulation, 33,000 ft^3/s, Aug. 19, 1955, gage height, 12.49 ft, from rating curve extended above 11,000 ft^3/s, on basis of slope-area measurement of peak flow; minimum observed, no flow July 21, 22, 28, 1911, result of regulation.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,760 ft^3/s, Mar. 30, gage height, 6.56 ft; minimum discharge, 143 ft^3/s, Oct. 9, 10, July 21, 31, Aug. 1; minimum gage height, 3.32 ft, July 21, 31, Aug. 1.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	207	386	476	575	253	395	1,610	235	2,100	307	161	191
2	191	384	435	1,340	253	411	1,400	246	2,410	292	241	2,030
3	178	380	e390	1,110	250	e470	1,300	299	1,550	257	226	1,540
4	166	355	e360	977	274	e450	1,190	272	1,320	238	418	1,440
5	167	334	348	877	e280	e430	1,140	280	1,170	234	488	1,140
6	165	494	e330	788	e270	e430	1,030	271	1,010	221	503	866
7	156	501	e320	711	e260	e410	960	253	952	210	361	669
8	151	418	e320	654	e250	e390	905	263	925	248	324	532
9	144	406	e300	e620	e250	e370	831	265	703	238	294	456
10	144	384	e300	e600	e240	e350	816	246	594	229	403	403
11	302	374	294	e540	e240	e340	970	239	522	206	621	363
12	1,810	402	453	e500	e230	e340	1,320	262	494	207	625	333
13	1,190	657	483	e450	e230	352	1,210	253	708	184	447	317
14	902	535	730	e420	e230	341	1,040	239	1,040	174	405	320
15	724	473	1,010	e390	e220	356	736	232	962	164	327	342
16	972	477	850	e370	e220	449	531	223	721	166	283	433
17	1,870	1,260	e660	e340	e220	845	475	209	445	171	279	435
18	1,170	1,740	e580	e320	e220	1,470	431	196	390	163	286	297
19	930	1,380	e560	e310	e220	1,590	402	185	397	158	279	476
20	767	1,200	720	e290	e220	1,420	370	178	365	149	247	507
21	651	1,080	1,100	e280	225	2,820	341	199	586	154	236	381
22	558	1,030	866	e270	256	3,000	341	218	1,270	299	230	321
23	495	1,040	775	e270	526	2,600	328	208	1,430	287	213	1,750
24	439	896	690	e270	e620	2,030	303	225	964	262	188	1,600
25	426	784	e620	e260	e520	1,690	280	257	713	211	180	1,010
26	625	700	e600	e260	e460	1,510	288	670	584	188	178	813
27	652	642	e580	e250	e440	1,370	335	863	479	192	170	721
28	528	580	552	e250	410	1,430	297	633	417	210	162	1,110
29	476	521	514	e250	---	1,690	273	568	373	180	158	1,440
30	436	492	479	e250	---	3,290	247	502	348	156	162	1,260
31	405	---	488	248	---	2,180	---	510	---	148	160	---
TOTAL	17,997	20,305	17,183	15,040	8,287	35,219	21,700	9,699	25,942	6,503	9,255	23,496
MEAN	581	677	554	485	296	1,136	723	313	865	210	299	783
MAX	1,870	1,740	1,100	1,340	620	3,290	1,610	863	2,410	307	625	2,030
MIN	144	334	294	248	220	340	247	178	348	148	158	191

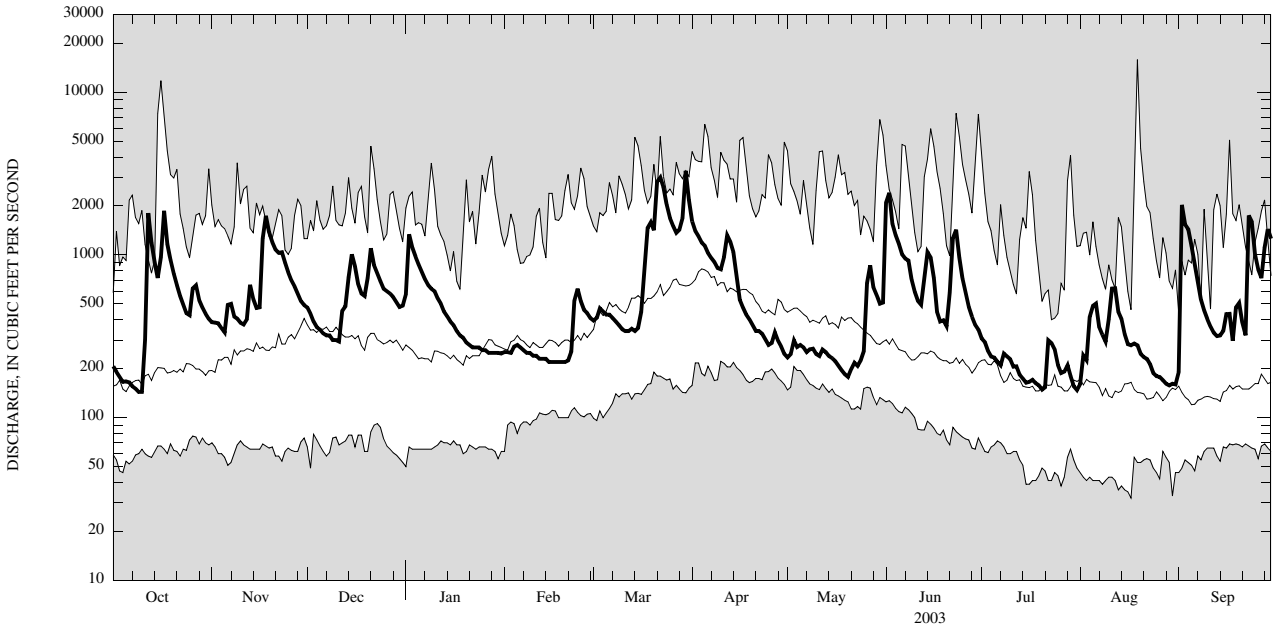
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1954 - 2003, BY WATER YEAR (WY)

MEAN	297	379	436	370	404	690	831	541	400	237	223	230
MAX	2,033	1,094	1,227	1,053	981	1,370	2,080	1,392	1,722	652	1,327	783
(WY)	(1956)	(1956)	(1974)	(1979)	(1976)	(1977)	(1993)	(1989)	(1972)	(1972)	(1955)	(2003)
MIN	80.2	80.7	86.8	72.6	118	260	248	180	111	54.2	76.0	71.1
(WY)	(2002)	(2002)	(1999)	(1981)	(1980)	(2002)	(1985)	(1962)	(1957)	(1966)	(1968)	(1972)

01437500 NEVERSINK RIVER AT GODEFFROY, NY—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1954 - 2003	
ANNUAL TOTAL	136,184		210,626			
ANNUAL MEAN	373		577		420	
HIGHEST ANNUAL MEAN					704	1956
LOWEST ANNUAL MEAN					215	1965
HIGHEST DAILY MEAN	2,320	Jun 7	3,290	Mar 30	15,900	Aug 19, 1955
LOWEST DAILY MEAN	60	Jan 19	144	Oct 9	32	Aug 17, 1965
ANNUAL SEVEN-DAY MINIMUM	64	Jan 3	156	Oct 4	38	Aug 11, 1965
10 PERCENT EXCEEDS	851		1,260		877	
50 PERCENT EXCEEDS	241		403		271	
90 PERCENT EXCEEDS	102		198		106	

e Estimated



CURRENT WATER YEAR DAILY MEAN DISCHARGE (BOLD) WITH DAILY MEDIAN FOR PERIOD OF RECORD.
SHADED AREAS SHOW HIGHEST AND LOWEST DAILY MEAN FOR PERIOD OF RECORD THROUGH PREVIOUS WATER YEAR.

01438500 DELAWARE RIVER AT MONTAGUE, NJ

LOCATION.--Lat 41°18'33", long 74°47'43", Pike County, PA, Hydrologic Unit 02040104, on right bank 1,500 ft upstream from toll bridge (on U.S. Route 206) between Montague, NJ and Milford, PA, 0.8 mi downstream from Sawkill Creek, and at river mile 246.3.

DRAINAGE AREA.--3,480 mi^2.

PERIOD OF RECORD.--March 1936 to September 1939 (gage heights only, published as "at Milford, PA"). October 1939 to current year. Monthly discharge only for some periods, published in WSP 1302.

REVISED RECORDS.--WDR-NJ-81-2: 1980.

GAGE.--Water-stage recorder. Datum of gage is 369.93 ft above NGVD of 1929. Prior to Feb. 9, 1940, nonrecording gage on upstream side of left span of subsequently dismantled bridge at present site at datum 70 ft lower.

REMARKS.-- Records good, except for estimated daily discharges which are fair. Diurnal fluctuation at medium and low flow caused by powerplants on tributary streams. Flow regulated by Lake Wallenpaupack, Cliff Lake, and by Pepacton, Cannonsville, Swinging Bridge, Toronto, and Neversink Reservoirs (see Delaware River basin, diversions). Several measurements of water temperature were made during the year. Satellite gage-height telemetry at station.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1,800	3,580	4,960	6,760	e3,440	e5,150	18,700	5,720	9,560	5,600	2,630	2,120
2	1,460	3,480	5,100	14,500	e3,120	e4,470	16,300	5,450	19,700	5,140	3,040	10,700
3	1,410	3,320	4,790	17,600	e3,260	e4,720	15,500	8,600	15,000	4,500	3,680	26,400
4	1,560	3,020	4,260	13,500	e3,710	e5,200	14,400	9,800	12,800	3,930	3,690	28,500
5	2,030	2,810	3,990	11,300	e3,650	e4,990	14,000	8,530	11,900	3,710	5,640	34,100
6	1,990	2,960	3,860	9,810	e4,190	e4,790	14,000	7,510	10,700	3,630	7,140	21,300
7	1,850	4,360	3,750	8,810	e4,470	e4,940	13,400	6,760	9,590	3,490	7,330	15,200
8	1,960	4,230	3,250	8,130	e3,990	e4,650	12,800	6,030	11,100	3,190	5,720	11,800
9	1,830	3,800	3,210	7,820	e3,740	e4,140	12,000	5,710	9,860	3,070	5,590	9,530
10	1,890	3,180	e2,910	7,400	e3,650	4,360	11,300	4,990	8,410	2,910	6,120	7,850
11	2,410	3,100	3,510	6,730	e3,570	4,390	11,300	4,450	7,340	2,800	6,340	6,910
12	8,080	3,190	4,250	6,310	e3,300	3,930	12,100	4,540	7,440	4,080	12,200	5,720
13	12,600	4,480	4,770	e5,680	e2,960	4,030	11,500	5,960	9,440	3,180	11,000	4,570
14	8,980	5,750	6,520	e5,160	e3,090	3,990	10,400	5,640	11,300	2,470	9,510	4,030
15	6,490	5,000	8,780	e4,540	e3,010	3,880	9,550	5,400	15,300	e2,770	8,560	4,560
16	5,700	4,870	8,700	e4,530	e2,270	3,980	8,640	5,030	12,100	2,500	7,100	12,500
17	19,000	8,490	7,590	e3,880	e1,940	7,180	7,930	4,740	9,790	2,400	5,360	11,400
18	17,100	15,100	6,590	e3,380	e2,240	13,800	7,230	4,280	8,530	2,640	4,730	9,020
19	10,900	14,200	5,730	e3,480	e2,860	24,800	6,530	3,930	7,970	2,500	4,350	8,510
20	8,230	11,300	6,310	e3,390	e3,100	23,200	5,740	3,780	7,020	2,000	3,960	8,260
21	6,590	9,970	10,500	e3,360	e2,740	38,000	5,450	3,710	11,200	2,030	3,600	6,820
22	5,480	9,540	11,000	e3,040	e3,060	49,900	5,750	3,530	20,500	2,850	3,320	5,660
23	4,700	10,700	9,350	e3,120	e4,550	46,400	5,720	3,420	21,600	4,690	2,980	11,700
24	3,820	10,700	8,350	e3,360	e6,230	34,400	5,510	3,260	16,600	5,260	2,250	26,200
25	3,620	9,250	7,690	e3,410	e6,810	26,700	4,950	3,190	12,300	4,260	2,040	17,400
26	4,050	8,070	7,120	e3,610	e6,220	23,700	4,720	4,300	10,300	3,460	2,680	13,600
27	6,420	7,390	7,330	e3,420	e6,050	21,700	6,160	6,100	8,840	2,980	2,500	11,200
28	5,600	6,690	7,060	e3,090	e5,930	18,400	7,820	5,620	7,970	3,350	2,460	12,100
29	4,670	5,680	6,810	e3,330	---	16,700	6,880	5,250	6,750	3,460	1,960	18,600
30	4,190	5,180	5,930	e3,530	---	22,400	6,190	4,840	6,100	3,210	2,410	15,300
31	3,850	---	5,940	e3,500	---	22,200	---	4,400	---	3,090	2,150	---
TOTAL	170,260	193,390	189,910	189,480	107,150	461,880	292,470	164,470	337,010	105,150	152,040	381,560
MEAN	5,492	6,446	6,126	6,112	3,827	14,900	9,749	5,305	11,230	3,392	4,905	12,720
MAX	19,000	15,100	11,000	17,600	6,810	49,900	18,700	9,800	21,600	5,600	12,200	34,100
MIN	1,410	2,810	2,910	3,040	1,940	3,880	4,720	3,190	6,100	2,000	1,960	2,120

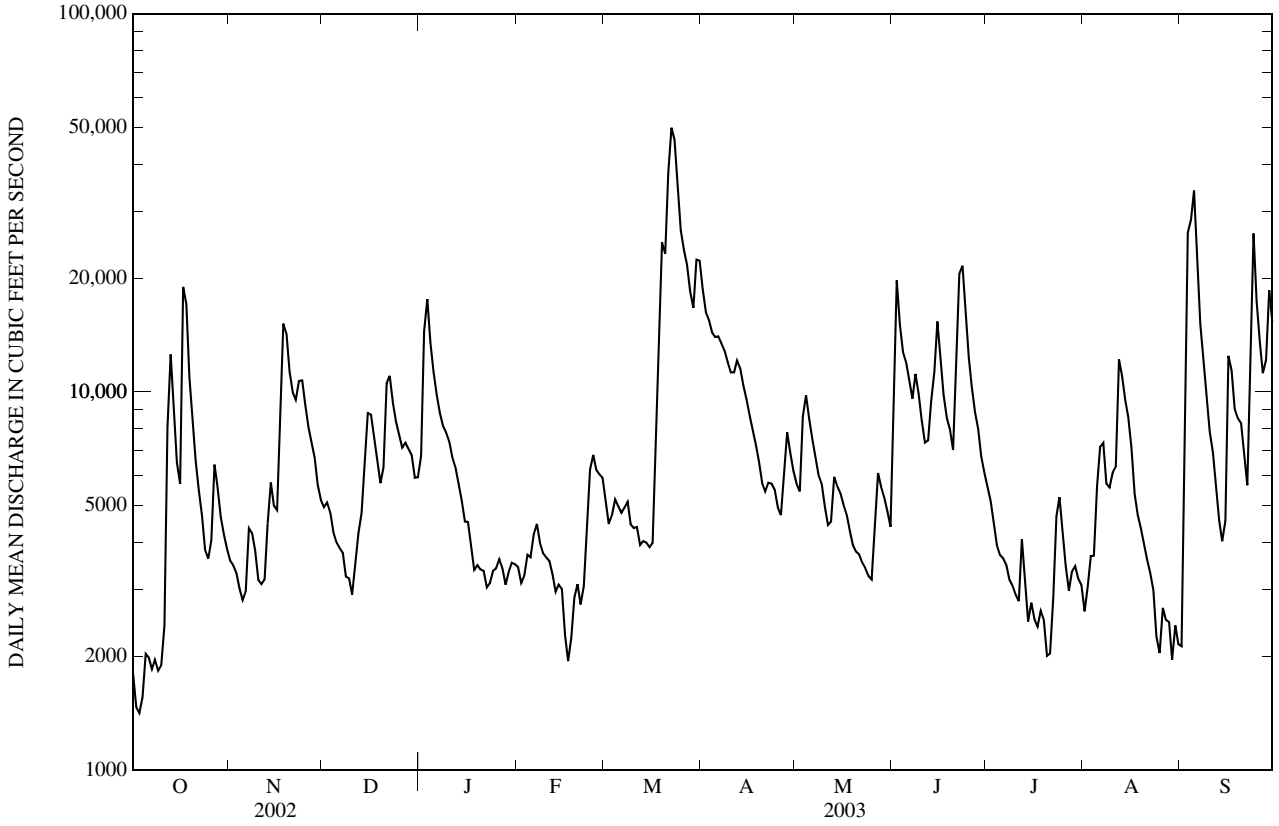
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1940 - 2003, BY WATER YEAR (WY)

MEAN	3,311	5,012	6,089	5,763	5,889	9,941	11,770	7,356	4,579	3,045	2,613	2,793
MAX	15,690	11,760	18,830	15,600	15,120	24,480	31,560	16,090	15,200	11,220	14,230	12,720
(WY)	(1956)	(1952)	(1997)	(1996)	(1976)	(1945)	(1940)	(1943)	(1972)	(1945)	(1955)	(2003)
MIN	807	995	1,665	1,318	1,748	3,191	3,322	2,215	1,214	864	715	892
(WY)	(1942)	(1965)	(1999)	(1981)	(1980)	(1981)	(1985)	(1965)	(1965)	(1954)	(1954)	(1941)

01438500 DELAWARE RIVER AT MONTAGUE, NJ—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1940 - 2003	
ANNUAL TOTAL	1,673,524		2,744,770			
ANNUAL MEAN	4,585		7,520		5,675	
HIGHEST ANNUAL MEAN					8,621	1952
LOWEST ANNUAL MEAN					2,309	1965
HIGHEST DAILY MEAN	23,800	May 14	49,900	Mar 22	187,000	Aug 19, 1955
LOWEST DAILY MEAN	943	Jan 21	1,410	Oct 3	412	Aug 23, 1954
ANNUAL SEVEN-DAY MINIMUM	1,050	Jan 16	1,730	Oct 1	565	Jul 1, 1965
MAXIMUM PEAK FLOW			51,100	Mar 22	250,000a	Aug 19, 1955
MAXIMUM PEAK STAGE			16.03	Mar 22	35.15	Aug 19, 1955
INSTANTANEOUS LOW FLOW			1,210	Oct 3	382	Aug 24, 1954
10 PERCENT EXCEEDS	9,340		14,400		12,000	
50 PERCENT EXCEEDS	3,370		5,600		3,430	
90 PERCENT EXCEEDS	1,620		2,860		1,600	

a From rating curve extended above 90,000 ft^3/s on basis of flood-routing study.
e Estimated.



01440000 FLAT BROOK NEAR FLATBROOKVILLE, NJ

LOCATION.--Lat 41°06'22", long 74°57'09", Sussex County, Hydrologic Unit 02040104, on right bank 1.0 mi upstream from Flatbrookville, and 1.5 mi upstream from mouth.

DRAINAGE AREA.--64.0 mi^2.

PERIOD OF RECORD.--July 1923 to current year

REVISED RECORDS.--WSP 1432: 1924(M), 1928(M), 1929, 1930(M), 1932, 1933(M), 1936, 1938(M), 1939-40, 1949(M), 1952-53(M). WDR-NJ-80-2: 1970(M). WDR NJ-82-2: Drainage area.

GAGE.--Water-stage recorder. Concrete control since Aug. 19, 1929. Datum of gage is 347.73 ft above NGVD of 1929. Prior to Jan. 6, 1926, nonrecording gage at same site and datum.

REMARKS.--Records fair from Oct. 1 to April 30 and good from May 1 to Sept. 30, except for estimated daily discharges which are poor. Flow occasionally regulated by ponds above station. Satellite gage-height telemetry at station. Several measurements of water temperature were made during the year.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 650 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar 19	0500	665	3.72	Jun 22	0900	*1,930	*5.95
Mar 21	1215	1,240	4.80	Sep 24	0000	784	3.96
Jun 1	2130	1,050	4.47				

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18	57	98	182	68	109	248	85	685	133	36	47
2	15	53	88	522	68	118	243	84	702	120	44	99
3	14	50	80	338	68	166	232	80	351	114	42	96
4	15	48	72	267	84	135	210	75	349	106	84	81
5	16	47	69	230	105	128	212	73	309	97	170	68
6	16	79	73	209	80	152	207	73	241	89	143	53
7	15	85	78	195	76	137	181	70	276	82	94	45
8	13	68	e65	181	e70	126	180	78	512	78	81	41
9	13	63	e65	180	e60	128	179	82	326	74	82	37
10	13	54	e55	188	e65	126	194	74	251	73	266	35
11	98	52	81	169	e60	110	205	69	210	72	305	34
12	368	53	129	146	e55	110	224	69	217	69	314	32
13	187	79	144	133	e50	111	196	66	361	62	188	31
14	113	75	224	122	e50	108	169	62	313	61	138	37
15	80	65	298	119	e55	110	154	59	288	57	108	43
16	108	69	226	e110	e45	165	148	57	223	53	91	50
17	253	271	175	e110	e30	341	167	54	191	50	82	46
18	159	405	141	e90	e50	580	129	51	198	47	74	38
19	113	293	131	e95	e70	574	124	49	200	52	66	82
20	90	220	230	e95	e65	434	117	46	194	48	59	94
21	75	188	425	e75	68	1,020	109	53	528	47	53	59
22	64	177	268	e75	81	939	110	61	1,600	106	49	48
23	56	201	214	e70	233	472	116	54	1,090	98	46	298
24	52	166	182	e75	244	332	105	67	550	77	43	443
25	49	145	173	e75	188	273	98	77	357	62	40	195
26	96	130	175	e78	152	241	96	196	276	53	38	165
27	111	126	157	e70	e140	242	105	273	221	47	37	149
28	84	115	145	e65	121	205	96	199	187	48	35	195
29	71	104	135	70	---	212	88	254	163	44	34	171
30	65	100	125	71	---	394	87	177	151	40	37	134
31	60	---	126	66	---	301	---	156	---	37	36	---
TOTAL	2,500	3,638	4,647	4,471	2,501	8,599	4,729	2,923	11,520	2,196	2,915	2,946
MEAN	80.6	121	150	144	89.3	277	158	94.3	384	70.8	94.0	98.2
MAX	368	405	425	522	244	1,020	248	273	1,600	133	314	443
MIN	13	47	55	65	30	108	87	46	151	37	34	31
CFSM	1.26	1.89	2.34	2.25	1.40	4.33	2.46	1.47	6.00	1.11	1.47	1.53
IN.	1.45	2.11	2.70	2.60	1.45	5.00	2.75	1.70	6.70	1.28	1.69	1.71

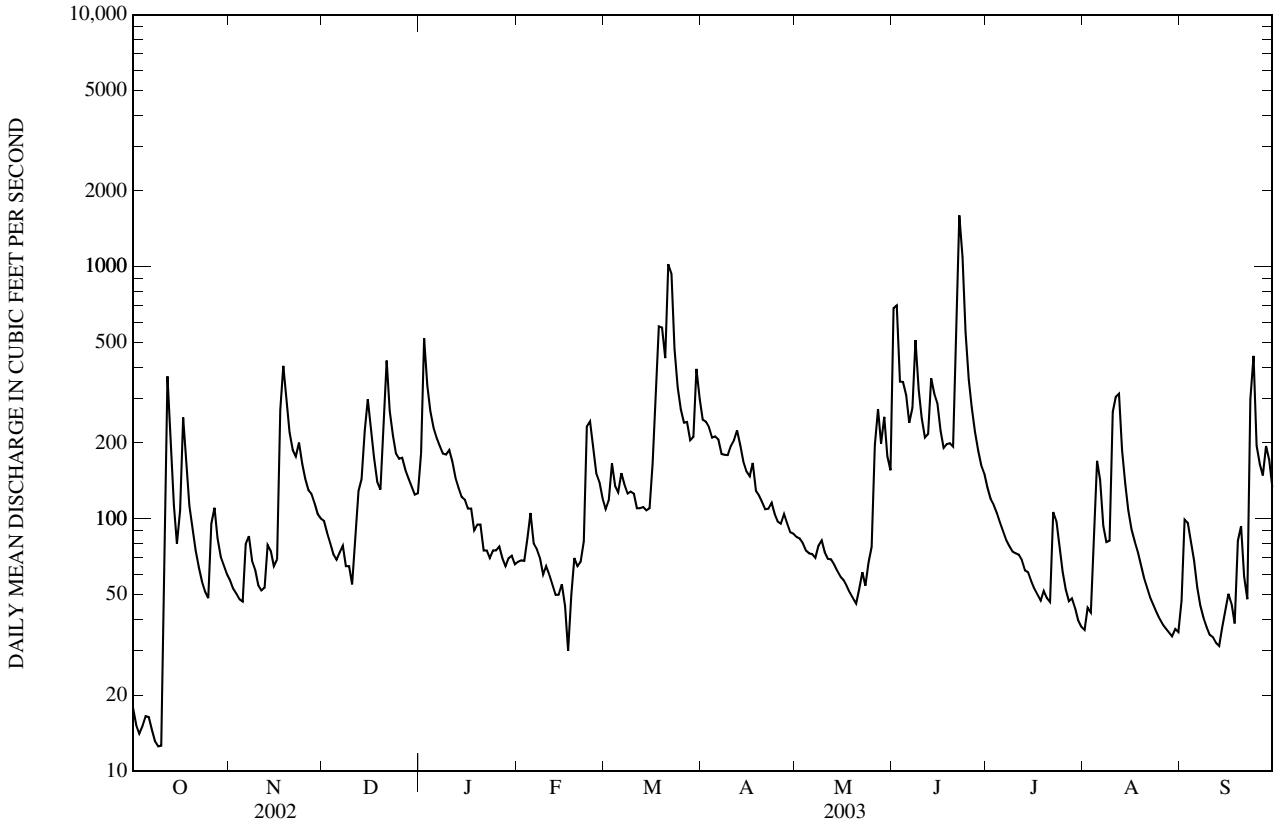
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1924 - 2003, BY WATER YEAR (WY)

MEAN	55.7	95.8	122	121	133	205	204	142	92.3	56.2	50.9	47.9
MAX	306	292	412	367	275	513	570	372	384	333	386	258
(WY)	(1956)	(1928)	(1997)	(1979)	(1951)	(1936)	(1983)	(1989)	(2003)	(1928)	(1955)	(1933)
MIN	9.57	11.0	16.7	23.5	32.3	62.0	65.9	44.0	23.7	11.1	8.96	7.01
(WY)	(1964)	(2002)	(1999)	(2002)	(2002)	(2002)	(1946)	(1941)	(1965)	(1999)	(1999)	(1964)

01440000 FLAT BROOK NEAR FLATBROOKVILLE, NJ—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1924 - 2003	
ANNUAL TOTAL	28,454.8		53,585			
ANNUAL MEAN	78.0		147		110	
HIGHEST ANNUAL MEAN					210	1928
LOWEST ANNUAL MEAN					43.4	1965
HIGHEST DAILY MEAN	558	Jun 7	1,600	Jun 22	6,310	Aug 19, 1955
LOWEST DAILY MEAN	8.6	Sep 14	13	Oct 8-10	4.1	Sep 11, 1966
ANNUAL SEVEN-DAY MINIMUM	9.6	Sep 8	14	Oct 4	5.3	Sep 6, 1995
MAXIMUM PEAK FLOW			1,930	Jun 22	9,560a	Aug 19, 1955
MAXIMUM PEAK STAGE			5.95	Jun 22	12.58b	Aug 19, 1955
INSTANTANEOUS LOW FLOW			13	Oct 3, 7-11	3.6	Sep 25, 1964
ANNUAL RUNOFF (CFSM)	1.22		2.29		1.72	
ANNUAL RUNOFF (INCHES)	16.54		31.15		23.40	
10 PERCENT EXCEEDS	175		281		236	
50 PERCENT EXCEEDS	51		98		71	
90 PERCENT EXCEEDS	14		46		16	

a From rating curve extended above 2,000 ft^3/s on basis of slope-area measurement of peak flow.
b From high-water mark in gage house.
e Estimated



01443280 EAST BRANCH PAULINS KILL NEAR LAFAYETTE, NJ

LOCATION.--Lat 41°04'35", long 74°41'43", Sussex County, Hydrologic Unit 02020007, on right downstream wingwall of bridge on Garrison Road, 0.8 mi upstream from mouth, and 1.6 mi south of Lafayette.

DRAINAGE AREA.--13.0 mi^2.

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

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 555.40 ft above NGVD of 1929 (levels from American Geodetic Survey Co. benchmark).

REMARKS.--Records fair, except for estimated daily discharges which are poor and October 1-November 21 which are poor due to backwater from beaver dams. Possible regulation from ponds and golf courses upstream. A significant portion of the base flow is the result of pumpage from a limestone quarry into a tributary approximately 1.5 mi upstream from gage.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 75 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Dec 21	0200	86	4.14	Aug 6	1245	85	3.90
Jan 2	1615	106	4.19	Aug 10	1445	111	4.26
Feb 23	2000	90	3.97	Sep 15	1215	91	3.98
Mar 18	0345	87	4.01	Sep 20	0430	82	3.86
Mar 21	1530	104	4.22	Sep 24	0145	*196	*5.16
Jun 22	1345	189	5.10	Sep 28	1630	109	4.23

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e5.0	e13	16	36	e16	e26	44	20	43	34	16	23
2	e5.0	e12	14	92	e16	e30	43	19	46	31	18	40
3	e5.0	e12	14	80	15	e38	40	19	29	29	28	40
4	e5.0	e11	13	62	18	e32	36	19	39	30	64	34
5	e5.5	12	13	54	19	e29	37	18	42	26	72	26
6	e5.5	13	15	47	e17	e37	37	19	28	24	78	21
7	e5.5	12	14	43	e16	e32	33	18	34	23	55	19
8	e5.0	13	14	40	e16	e29	35	25	62	22	39	17
9	e5.0	14	14	41	e15	e31	37	23	40	21	35	16
10	e6.0	15	14	41	e16	e32	40	21	30	21	94	15
11	28	16	13	e37	e16	e28	36	20	25	24	83	14
12	52	17	23	e32	e14	e28	37	22	31	22	81	14
13	33	18	25	e30	e13	e31	36	20	42	21	57	14
14	20	17	37	e28	e14	e32	30	18	36	19	38	22
15	14	17	44	e26	e16	e35	31	18	42	19	32	77
16	14	17	37	e23	e13	52	31	17	30	19	30	63
17	26	41	37	e23	e10	75	31	16	27	20	27	39
18	19	67	36	e20	e14	83	29	16	28	18	25	25
19	14	46	35	e20	e20	74	26	15	30	18	23	49
20	12	32	59	e21	e20	58	24	18	33	19	21	74
21	11	23	75	e18	e20	94	23	16	64	20	20	46
22	11	24	42	e17	e28	96	24	19	171	53	19	32
23	12	31	31	e16	e72	75	23	18	142	48	20	97
24	10	25	26	e17	e73	57	23	19	100	35	18	158
25	11	20	27	e18	e45	54	24	18	77	26	17	95
26	17	18	31	e17	e35	50	23	29	60	21	16	79
27	19	19	28	e16	e31	51	23	31	54	20	16	68
28	15	19	27	e15	e28	46	21	26	44	20	15	93
29	e13	17	25	e16	---	45	20	29	41	18	15	88
30	e13	17	23	e16	---	58	20	24	36	17	15	62
31	e13	---	24	e16	---	53	---	21	---	16	16	---
TOTAL	429.5	628	846	978	646	1,491	917	631	1,506	754	1,103	1,460
MEAN	13.9	20.9	27.3	31.5	23.1	48.1	30.6	20.4	50.2	24.3	35.6	48.7
MAX	52	67	75	92	73	96	44	31	171	53	94	158
MIN	5.0	11	13	15	10	26	20	15	25	16	15	14
CFSM	1.07	1.61	2.10	2.43	1.78	3.70	2.35	1.57	3.86	1.87	2.74	3.75
IN.	1.23	1.80	2.42	2.80	1.85	4.27	2.63	1.81	4.31	2.16	3.16	4.18

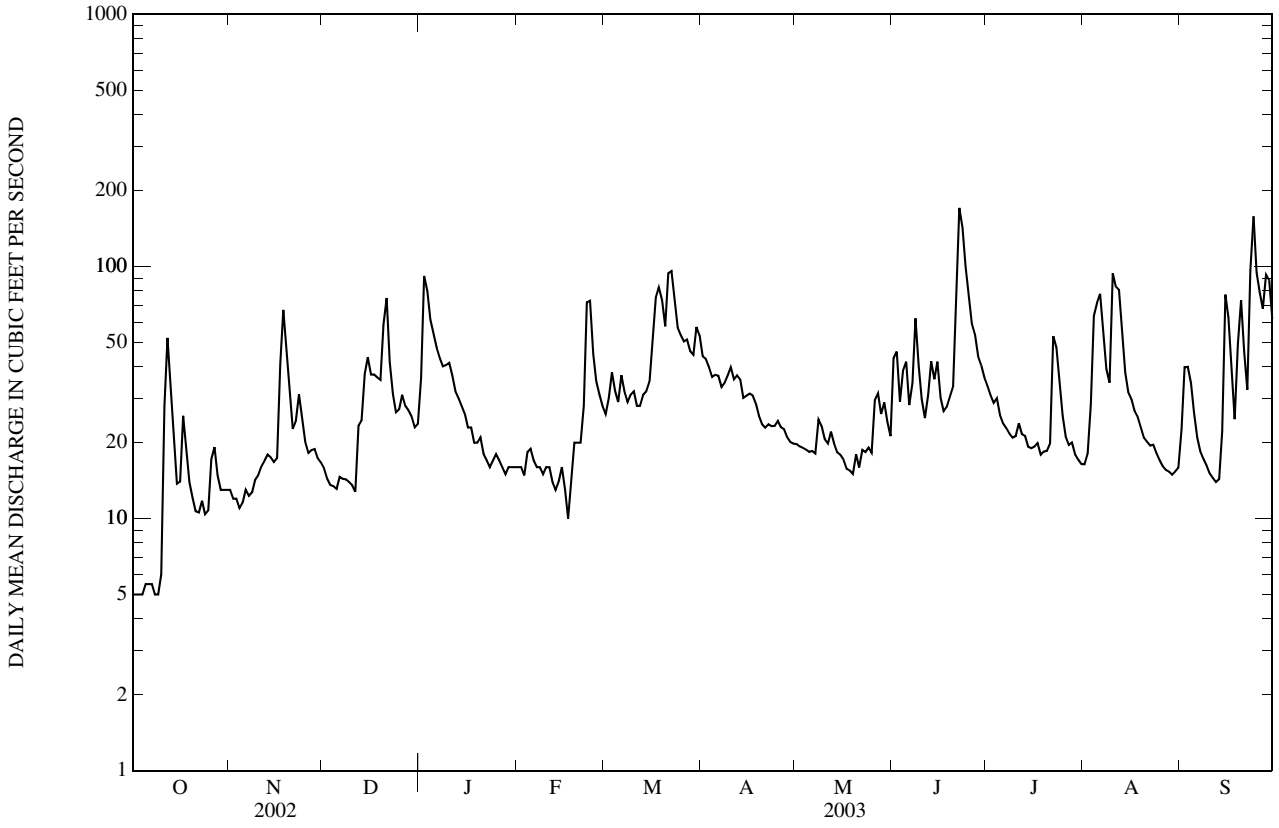
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1992 - 2003, BY WATER YEAR (WY)

MEAN	14.7	17.0	22.8	23.8	22.4	36.7	34.8	24.1	20.2	12.9	14.3	14.7
MAX	33.2	34.3	63.4	41.1	32.5	58.5	64.3	48.8	50.2	24.3	37.7	48.7
(WY)	(1997)	(1996)	(1997)	(1996)	(1996)	(1993)	(1993)	(1998)	(2003)	(2003)	(2000)	(2003)
MIN	7.25	6.06	6.77	7.22	6.33	9.90	15.2	14.3	8.27	6.68	6.21	6.04
(WY)	(2002)	(2002)	(2002)	(2002)	(2002)	(2002)	(2002)	(1995)	(1999)	(1999)	(2002)	(2002)

01443280 EAST BRANCH PAULINS KILL NEAR LAFAYETTE, NJ—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1992 - 2003	
ANNUAL TOTAL	4,700.0		11,389.5			
ANNUAL MEAN	12.9		31.2		21.6	
HIGHEST ANNUAL MEAN					31.2	2003
LOWEST ANNUAL MEAN					9.35	2002
HIGHEST DAILY MEAN	75	Dec 21	171	Jun 22	210	Aug 13, 2000
LOWEST DAILY MEAN	3.9	Aug 16	5.0	Oct 1	3.7	Nov 18, 2001
ANNUAL SEVEN-DAY MINIMUM	4.6	Aug 13	5.2	Oct 1	4.6	Aug 13, 2002
MAXIMUM PEAK FLOW			196	Sep 24	275	Jan 20, 1996
MAXIMUM PEAK STAGE			5.16	Sep 24	5.81a	Jan 20, 1996
INSTANTANEOUS LOW FLOW			4.5	Oct 1	2.9	Sep 29, 1998
ANNUAL RUNOFF (CFSM)	0.99		2.40		1.66	
ANNUAL RUNOFF (INCHES)	13.46		32.62		22.57	
10 PERCENT EXCEEDS	24		61		41	
50 PERCENT EXCEEDS	10		24		16	
90 PERCENT EXCEEDS	5.4		14		7.6	

a From crest-stage gage.
e Estimated



01443500 PAULINS KILL AT BLAIRSTOWN, NJ

LOCATION.--Lat 40°58'51", long 74°57'13", Warren County, Hydrologic Unit 02040105, on right bank 1,200 ft upstream from bridge on State Highway 94 in Blairstown, 1,400 ft upstream from Blairs Creek, and 10 mi upstream from mouth.

DRAINAGE AREA.--126 mi^2.

PERIOD OF RECORD.--October 1921 to September 1976, October 1977 to current year.

REVISED RECORDS.--WSP 971: 1942. WSP 1382: 1952-53(M).

GAGE.--Water-stage recorder. Concrete control at current location since Aug. 1941. Datum of gage is 335.86 ft above NGVD of 1929. Prior to May 23, 1922, a non-recording gage was located at former highway bridge 1,300 ft downstream of current location. From May 23, 1922 to Jun. 24, 1931, a water-stage recorder was located 1,300 ft downstream at former highway bridge. Water-stage recorder was located 100 ft downstream of current location from Aug. 8, 1931 to Jul. 28, 1939 (same datum). Water-stage recorder was relocated to current site on Jul. 28, 1939. A concrete control was 280 ft downstream of current location from Aug. 1931 until it was destroyed on Jun. 1941. Water-stage recorder was temporarily relocated to old site (100 ft downstream of current location) from Jun. 9-Aug. 4, 1941 during construction of current control.

REMARKS.--Records good, except for estimated daily discharges which are fair. Temporary fluctuations caused by unknown source and flow regulated slightly by Swartswood Lake and other lakes and ponds. Pumpage from limestone quarry enters tributary upstream from gage for decades. Satellite gage-height telemetry at station. Several measurements of water temperature were made during the year.

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

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jan 2	1345	1,320	4.16	Jun 22	1615	*2,750	*6.40
Mar 18	0145	1,020	3.59	Aug 12	0245	1,010	3.57
Mar 21	1200	1,750	4.92				

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	33	123	208	357	124	253	471	152	e665	351	66	104
2	30	116	191	1,130	124	271	461	124	e710	325	74	173
3	25	109	174	951	126	389	431	148	e450	298	79	223
4	25	104	153	753	146	319	387	139	584	255	229	229
5	28	101	161	625	179	300	383	132	570	226	595	204
6	29	127	159	552	e150	383	372	132	516	203	538	168
7	26	148	147	495	e140	326	341	131	523	183	432	137
8	21	127	152	448	e130	303	334	139	690	175	387	116
9	19	117	147	425	e115	296	339	149	643	169	338	100
10	18	107	138	434	e125	298	371	149	e575	157	618	87
11	167	107	152	395	e115	264	361	140	493	151	756	78
12	507	112	263	351	e105	251	373	142	486	142	920	72
13	386	142	301	319	e90	264	348	133	635	131	694	70
14	279	140	428	296	e95	258	313	124	635	121	543	82
15	211	127	531	281	e110	265	291	114	824	109	424	124
16	216	132	469	e240	e85	402	302	110	688	101	326	194
17	336	537	389	e230	e55	706	282	106	588	97	268	179
18	288	825	334	e185	e95	941	266	99	551	93	236	140
19	233	654	311	e190	e125	885	256	94	477	92	222	165
20	206	502	462	e185	e120	774	250	87	509	86	193	208
21	189	417	747	e160	e125	1,570	239	92	834	87	169	208
22	156	384	579	e150	167	1,400	237	95	2,350	182	150	192
23	138	399	478	e135	504	1,060	228	94	2,470	210	133	385
24	126	346	410	e140	560	787	218	105	1,810	197	119	640
25	109	304	400	e145	434	622	209	122	1,190	165	105	640
26	185	275	409	e140	360	538	207	213	827	133	92	504
27	227	264	374	e135	317	508	200	315	632	109	85	431
28	193	259	343	e125	280	449	190	289	500	101	77	491
29	166	233	321	e130	---	430	168	270	395	91	72	460
30	150	218	301	e130	---	600	147	241	371	79	74	369
31	138	---	292	129	---	544	---	213	---	70	76	---
TOTAL	4,860	7,556	9,924	10,361	5,101	16,656	8,975	4,593	23,191	4,889	9,090	7,173
MEAN	157	252	320	334	182	537	299	148	773	158	293	239
MAX	507	825	747	1,130	560	1,570	471	315	2,470	351	920	640
MIN	18	101	138	125	55	251	147	87	371	70	66	70
CFSM	1.24	2.00	2.54	2.65	1.45	4.26	2.37	1.18	6.14	1.25	2.33	1.90
IN.	1.43	2.23	2.93	3.06	1.51	4.92	2.65	1.36	6.85	1.44	2.68	2.12

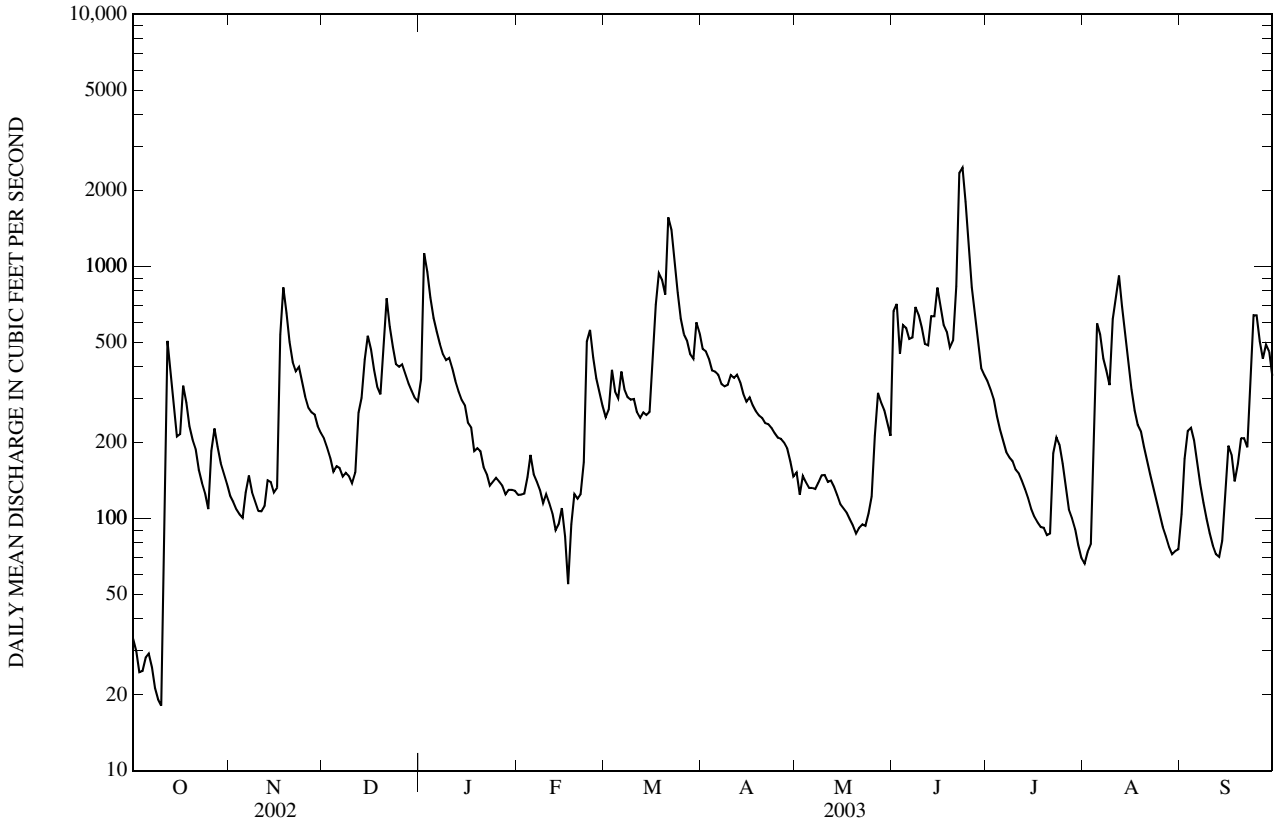
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1922 - 2003, BY WATER YEAR (WY)

MEAN	108	164	213	221	245	371	335	223	161	113	105	105
MAX	634	479	862	712	516	963	930	650	773	527	663	626
(WY)	(1956)	(1933)	(1997)	(1979)	(1951)	(1936)	(1983)	(1989)	(2003)	(1945)	(1955)	(1933)
MIN	20.5	22.1	35.5	37.8	47.3	65.0	106	54.6	41.0	19.4	19.6	18.2
(WY)	(1964)	(1965)	(1999)	(2002)	(2002)	(2002)	(1985)	(1941)	(1965)	(1955)	(1932)	(1964)

01443500 PAULINS KILL AT BLAIRSTOWN, NJ—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1922 - 2003	
ANNUAL TOTAL	47,001		112,369			
ANNUAL MEAN	129		308		197	
HIGHEST ANNUAL MEAN					362	1952
LOWEST ANNUAL MEAN					67.4	1965
HIGHEST DAILY MEAN	825	Nov 18	2,470	Jun 23	5,950	Aug 19, 1955
LOWEST DAILY MEAN	11	Sep 13	18	Oct 10	5.0	Aug 13, 1930
ANNUAL SEVEN-DAY MINIMUM	14	Sep 8	24	Oct 4	11	Aug 3, 1999
MAXIMUM PEAK FLOW			2,750	Jun 22	8,750	Aug 19, 1955
MAXIMUM PEAK STAGE			6.40	Jun 22	11.12a	Aug 19, 1955
INSTANTANEOUS LOW FLOW			17	Oct 10	2.8	Nov 1, 1922
ANNUAL RUNOFF (CFSM)	1.02		2.44		1.56	
ANNUAL RUNOFF (INCHES)	13.88		33.18		21.21	
10 PERCENT EXCEEDS	327		620		414	
50 PERCENT EXCEEDS	66		218		131	
90 PERCENT EXCEEDS	22		94		34	

a From high water mark in gage house
e Estimated



01443900 YARDS CREEK NEAR BLAIRSTOWN, NJ

LOCATION.--Lat 40°58'50", long 75°02'21", Warren County, Hydrologic Unit 02040105, on left bank 100 ft upstream from bridge on Hainesburg-Mount Vernon Road, 1.4 mi downstream from Lower Yards Creek Reservoir, 2.2 mi northeast of Hainesburg, 4.2 mi west of Blairstown, and 2.4 mi upstream from mouth.

DRAINAGE AREA.--5.34 mi^2.

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

REVISED RECORDS.--WDR NJ-77-2: 1976. WDR NJ-79-2: 1977(m). WDR NJ-82-2: Drainage area.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 606.8 ft above NGVD of 1929.

REMARKS.--Records fair, except for estimated daily discharges which are poor. Flow regulated by GPU Generation Corp., at the Lower Yards Creek Reservoir 1.4 mi above station. Several measurements of water temperature made during the year.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.1	2.7	9.6	20	2.2	9.1	32	2.6	32	12	1.3	4.3
2	1.0	2.6	8.5	36	2.3	11	33	2.8	44	12	1.7	4.7
3	0.98	2.4	6.3	39	2.4	e13	24	2.8	44	8.6	3.5	10
4	1.2	2.3	e4.5	37	3.3	e14	15	2.5	47	2.2	26	16
5	1.7	2.4	2.4	35	2.6	15	16	2.3	44	2.1	32	15
6	1.1	3.6	2.3	35	2.6	15	14	2.3	35	2.0	57	14
7	1.0	2.9	e2.2	36	2.3	e15	15	2.2	21	2.2	67	14
8	1.0	2.6	e2.2	34	e2.2	e16	15	3.0	19	1.8	56	9.0
9	1.0	2.3	e2.0	31	e2.2	e16	16	2.6	38	1.6	68	2.8
10	1.4	2.0	e2.0	25	e2.1	e16	16	2.4	47	1.6	95	2.5
11	14	2.3	3.4	22	e2.1	e16	15	2.4	39	1.9	97	2.5
12	10	2.8	5.8	e21	e2.0	16	15	3.9	47	1.5	100	2.4
13	4.1	2.8	8.9	e14	e2.0	15	15	5.0	49	1.3	112	3.1
14	2.7	2.4	17	e8.9	e2.1	e14	14	4.1	43	1.1	72	3.2
15	1.9	2.5	28	e4.6	e1.8	14	14	2.2	39	1.1	39	12
16	4.0	3.7	40	e4.2	e1.6	15	13	2.2	34	0.97	28	36
17	4.0	9.5	32	e3.4	e2.0	18	11	2.1	29	0.96	29	43
18	2.8	12	e16	e3.2	e2.9	17	10	2.0	29	1.0	21	37
19	2.2	15	15	e3.1	e11	21	10	1.9	20	1.3	15	10
20	1.8	16	30	e2.6	13	58	9.9	1.8	20	0.85	12	2.8
21	2.1	23	32	e2.0	12	82	8.9	2.4	37	1.7	3.8	2.5
22	3.9	28	30	e1.0	17	68	3.9	2.0	62	4.8	3.3	2.3
23	2.7	27	36	e1.0	19	61	2.7	2.0	76	2.3	3.1	12
24	2.2	25	37	e1.0	e17	58	2.5	2.7	93	1.6	2.8	11
25	2.2	25	29	e1.0	e16	17	2.5	2.7	88	1.4	2.5	13
26	5.9	20	27	e1.6	e16	17	3.0	7.2	46	1.1	2.2	16
27	3.6	13	28	e1.7	e15	16	2.9	7.9	14	1.1	2.2	17
28	3.3	10	26	e1.9	12	16	2.6	11	13	1.3	2.0	21
29	3.3	10	26	e2.0	---	17	2.9	11	13	1.0	2.0	23
30	3.3	9.8	22	e2.1	---	19	2.8	11	13	1.0	2.6	28
31	3.3	---	16	e2.1	---	31	---	12	---	1.0	2.1	---
TOTAL	94.78	285.6	547.1	432.4	188.7	746.1	357.6	125.0	1,175	76.38	961.1	390.1
MEAN	3.06	9.52	17.6	13.9	6.74	24.1	11.9	4.03	39.2	2.46	31.0	13.0
MAX	14	28	40	39	19	82	33	12	93	12	112	43
MIN	0.98	2.0	2.0	1.0	1.6	9.1	2.5	1.8	13	0.85	1.3	2.3

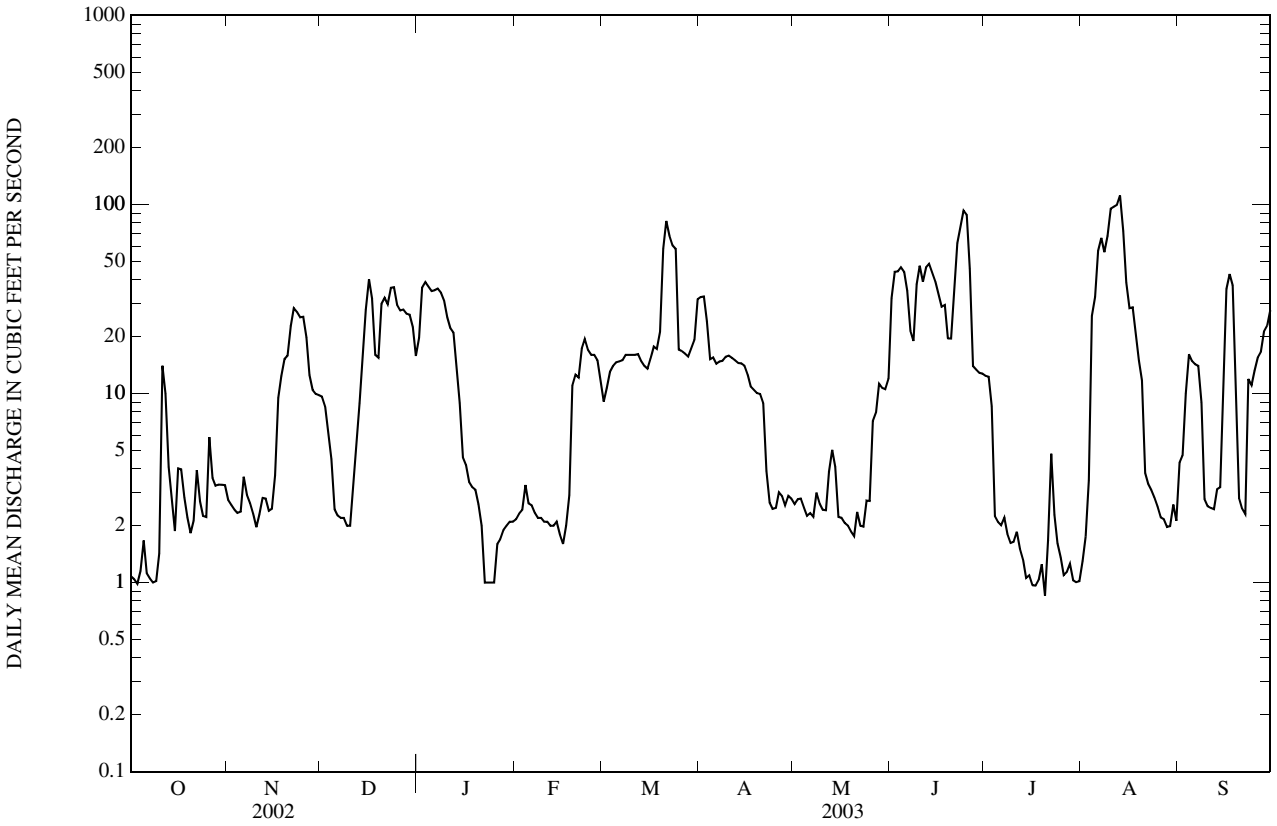
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1967 - 2003, BY WATER YEAR (WY)

MEAN	5.71	7.85	13.7	13.8	14.2	18.2	17.4	13.1	9.63	4.65	5.15	4.57
MAX	33.6	26.3	48.4	51.0	36.4	50.1	55.3	33.7	39.2	19.9	31.0	27.0
(WY)	(1990)	(1996)	(1997)	(1979)	(1979)	(1977)	(1983)	(1989)	(2003)	(1984)	(2003)	(1987)
MIN	0.97	1.20	0.91	1.66	2.17	3.42	4.43	1.58	1.00	0.89	0.65	0.58
(WY)	(1981)	(1967)	(1981)	(1981)	(2002)	(2002)	(1981)	(1970)	(1980)	(1980)	(1980)	(1980)

01443900 YARDS CREEK NEAR BLAIRSTOWN, NJ—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1967 - 2003	
ANNUAL TOTAL	2,029.65		5,379.86			
ANNUAL MEAN	5.56		14.7		10.6	
HIGHEST ANNUAL MEAN					16.1	1996
LOWEST ANNUAL MEAN					3.17	1985
HIGHEST DAILY MEAN	40	Dec 16	112	Aug 13	225	Jan 18, 1977
LOWEST DAILY MEAN	0.35	Jan 21	0.85	Jul 20	0.02	Jun 19, 1970
ANNUAL SEVEN-DAY MINIMUM	1.0	Aug 9	1.0	Jul 14	0.46	Oct 7, 1980
MAXIMUM PEAK FLOW			298	Aug 9	583	Feb 24, 1977
MAXIMUM PEAK STAGE			3.40	Aug 9	3.92	Feb 24, 1977
INSTANTANEOUS LOW FLOW			0.62	Jul 20,21	0.00	Sep 12, 1971
10 PERCENT EXCEEDS	14		37		24	
50 PERCENT EXCEEDS	2.8		8.9		4.6	
90 PERCENT EXCEEDS	1.2		1.7		1.3	

e Estimated



01445500 PEQUEST RIVER AT PEQUEST, NJ

LOCATION.--Lat 40°49'50", long 74°58'42", Warren County, Hydrologic Unit 02040105, on right bank at Pequest, 100 ft upstream from abandoned railroad bridge, and 300 ft downstream from Furnace Brook.

DRAINAGE AREA.--106 mi^2.

PERIOD OF RECORD.--October 1921 to current year. Monthly discharge only for October 1921, published in WSP 1302.

REVISED RECORDS.--WSP 1902: 1940(M), 1945, 1955(M), 1957, 1959(M).

GAGE.--Water-stage recorder. Concrete control since Sept. 29, 1929. Datum of gage is 398.78 ft above NGVD of 1929. Prior to June 22, 1926, nonrecording gage at site 10 ft upstream at same datum.

REMARKS.--Records good. Several measurements of water temperature were made during the year. Some regulation from unknown sources upstream. Satellite gage-height telemetry at station.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 650 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Nov 17	1315	724	3.34	Jun 22	0400	*1,040	*4.20
Dec 20	2030	678	3.21	Aug 6	0130	650	3.14
Jan 2	0630	913	3.86	Aug 10	0545	711	3.31
Mar 21	0515	890	3.80	Aug 12	0515	801	3.56
Jun 8	0000	699	3.27	Sep 23	1800	682	3.22

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	30	72	135	311	103	177	354	142	368	258	83	105
2	26	67	126	821	108	245	349	140	348	232	94	138
3	23	65	119	616	110	336	317	147	252	214	138	150
4	22	62	102	546	129	235	289	137	414	203	328	153
5	22	64	108	491	138	256	290	128	378	185	395	135
6	21	86	109	443	118	346	277	128	314	169	537	118
7	19	94	102	391	114	241	257	128	e350	159	346	107
8	18	84	105	353	106	227	261	140	569	153	276	98
9	18	80	97	348	97	262	296	145	412	146	248	92
10	18	78	82	353	111	266	317	140	351	142	563	87
11	99	72	108	304	98	206	301	136	298	142	430	83
12	288	69	291	255	91	205	319	150	401	138	641	79
13	184	95	258	233	77	244	280	139	459	127	380	80
14	125	84	398	209	83	228	251	130	405	121	312	94
15	85	77	360	195	96	246	235	122	345	114	248	126
16	119	76	295	169	68	364	219	117	322	111	211	180
17	211	517	253	172	49	502	206	111	286	103	198	165
18	136	518	213	134	71	533	202	106	277	97	187	131
19	104	368	198	142	97	500	195	99	280	102	166	152
20	86	304	375	155	100	500	187	93	417	97	151	159
21	75	258	478	126	96	828	186	101	851	108	140	156
22	68	248	414	112	134	747	205	105	987	223	132	125
23	61	271	347	105	477	658	197	104	944	234	124	382
24	57	227	295	111	450	545	183	110	906	191	114	381
25	55	203	288	115	327	445	171	114	738	151	109	378
26	100	176	291	111	253	395	166	225	592	126	105	330
27	111	169	277	104	214	397	163	238	467	111	103	260
28	92	160	256	90	193	356	155	190	381	108	99	376
29	78	146	234	106	---	320	152	162	324	97	95	295
30	75	141	217	101	---	413	149	144	292	89	98	242
31	77	---	215	100	---	410	---	145	---	84	94	---
TOTAL	2,503	4,931	7,146	7,822	4,108	11,633	7,129	4,216	13,728	4,535	7,145	5,357
MEAN	80.7	164	231	252	147	375	238	136	458	146	230	179
MAX	288	518	478	821	477	828	354	238	987	258	641	382
MIN	18	62	82	90	49	177	149	93	252	84	83	79
CFSM	0.76	1.55	2.17	2.38	1.38	3.54	2.24	1.28	4.32	1.38	2.17	1.68
IN.	0.88	1.73	2.51	2.75	1.44	4.08	2.50	1.48	4.82	1.59	2.51	1.88

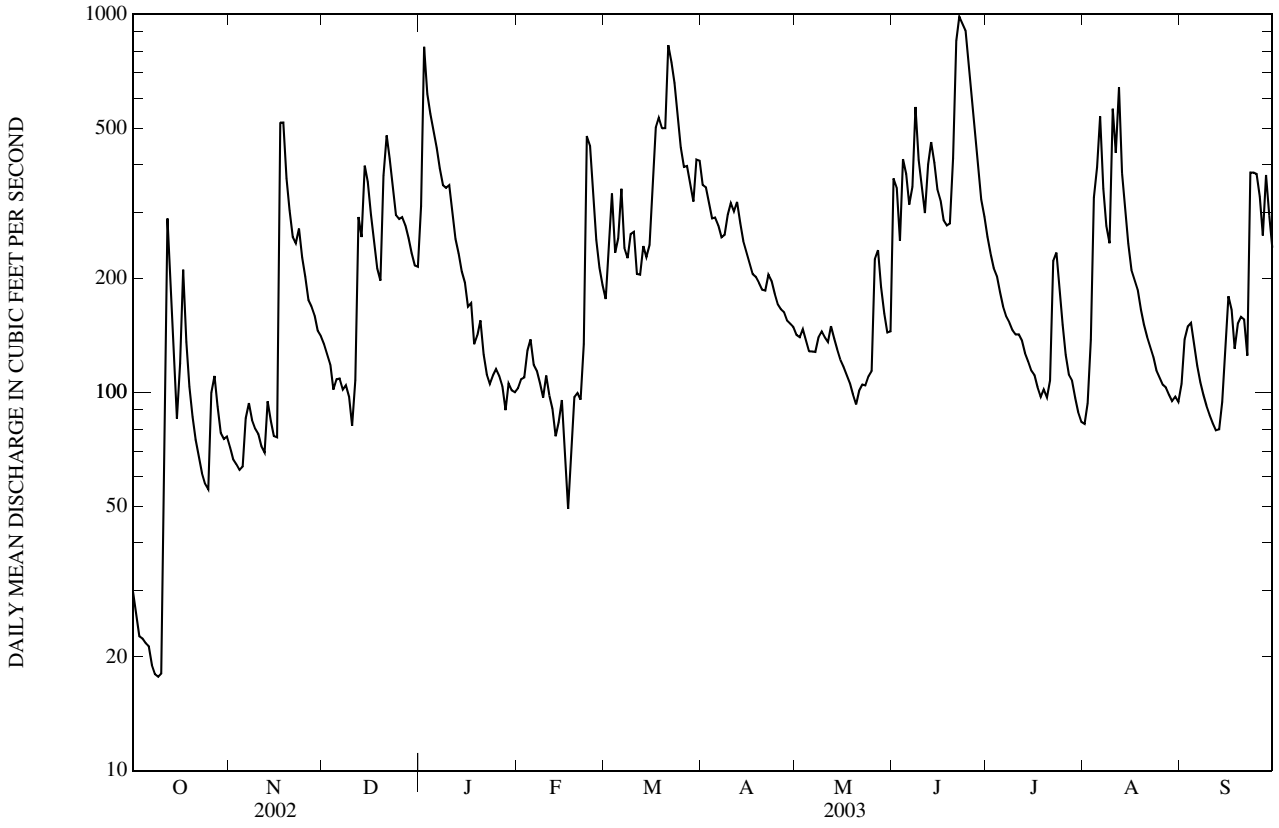
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1922 - 2003, BY WATER YEAR (WY)

MEAN	87.1	127	163	170	195	277	261	186	133	103	91.0	88.4
MAX	391	409	714	627	372	750	720	430	556	487	409	354
(WY)	(1990)	(1928)	(1997)	(1979)	(1939)	(1936)	(1983)	(1989)	(1972)	(1945)	(1928)	(1989)
MIN	18.0	21.4	27.0	33.9	42.9	52.1	76.9	55.7	35.0	19.0	15.1	16.6
(WY)	(1965)	(1966)	(1966)	(1966)	(2002)	(2002)	(1985)	(1965)	(1965)	(1965)	(1965)	(1964)

01445500 PEQUEST RIVER AT PEQUEST, NJ—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1922 - 2003	
ANNUAL TOTAL	32,204		80,253			
ANNUAL MEAN	88.2		220		157	
HIGHEST ANNUAL MEAN					285	1952
LOWEST ANNUAL MEAN					45.8	1965
HIGHEST DAILY MEAN	518	Nov 18	987	Jun 22	2,040	Jan 25, 1979
LOWEST DAILY MEAN	16	Sep 12-14	18	Oct 8-10	12	Aug 18, 1965
ANNUAL SEVEN-DAY MINIMUM	18	Sep 8	20	Oct 4	13	Aug 15, 1965
MAXIMUM PEAK FLOW			1,040	Jun 22	2,130	Jan 25, 1979
MAXIMUM PEAK STAGE			4.20	Jun 22	5.97a	Jan 25, 1979
INSTANTANEOUS LOW FLOW			17	Oct 8	12	Sep 17, 1965
ANNUAL RUNOFF (CFSM)	0.83		2.07		1.48	
ANNUAL RUNOFF (INCHES)	11.30		28.16		20.07	
10 PERCENT EXCEEDS	214		412		329	
50 PERCENT EXCEEDS	54		163		111	
90 PERCENT EXCEEDS	22		83		35	

a From high-water mark.
e Estimated



01445000 PEQUEST RIVER AT HUNTSVILLE, NJ

LOCATION.--Lat 40°58'52", long 74°46'35", Sussex County, Hydrologic Unit 02040105, on right bank 20 ft upstream from bridge on Pequest Road in Huntsville and 0.4 mi downstream from Kymers Brook.

DRAINAGE AREA.--31.0 mi^2.

PERIOD OF RECORD.--November 1939 to October 1962, October 2002 to September 2003. Annual maximum and minimum, water years 1963-74, and annual maximums, water years 1975-95.

REVISED RECORDS.--WSP 1332: 1945, 1949.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 553.81 ft above NGVD of 1929.

REMARKS.--Records good, except for estimated daily discharges which are fair. Several measurements of water temperature were made during the year. Satellite gage-height telemetry at station.

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

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Dec 21	0715	160	3.34	Jun 22	2000	*442	*4.46a
Jan 2	1615	189	3.44	Aug 6	1145	131	3.26
Mar 21	2030	249	3.65	Aug 10	2100	177	3.43
Jun 8	0945	147	3.32	Sep 24	0630	302	3.87
Jun 15	0815	142	3.30				

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.1	20	41	85	32	58	125	42	91	95	20	29
2	3.9	20	38	172	32	71	122	41	105	88	32	46
3	3.6	20	36	176	33	87	114	43	74	86	48	52
4	3.8	25	34	163	40	74	101	36	97	75	72	50
5	3.9	29	31	152	44	72	99	38	107	67	98	44
6	3.7	39	32	139	38	87	97	39	89	60	125	38
7	3.3	37	31	128	37	77	90	36	91	55	96	33
8	3.1	34	30	118	34	72	97	40	141	52	79	29
9	2.8	32	28	112	32	71	98	41	124	51	72	26
10	2.9	23	28	108	31	69	109	38	106	49	143	23
11	39	19	31	98	30	61	103	40	94	49	129	21
12	93	19	59	86	29	58	109	46	108	46	124	20
13	57	24	64	80	26	62	99	45	128	42	103	22
14	34	22	81	73	e26	61	87	42	119	36	84	31
15	27	20	89	67	e29	65	76	39	137	31	72	102
16	37	21	90	59	e20	94	72	34	115	28	63	88
17	54	83	81	58	e17	135	69	31	96	26	57	62
18	39	124	70	50	e19	162	65	27	100	25	54	50
19	30	111	67	53	e26	172	64	23	110	30	50	70
20	25	95	93	48	e28	166	58	23	108	29	46	78
21	22	89	151	45	e26	232	54	29	156	29	43	55
22	20	84	125	39	e34	241	63	32	e376	66	40	45
23	19	88	109	39	100	205	63	30	e392	69	37	112
24	19	79	97	38	100	180	56	32	315	56	33	263
25	18	66	95	35	84	160	53	32	252	45	31	146
26	30	60	102	34	71	146	51	58	204	36	29	131
27	33	55	92	34	65	143	51	67	165	32	28	116
28	27	51	82	34	59	128	51	49	137	29	27	122
29	23	46	75	33	---	121	46	46	125	24	24	110
30	23	42	72	32	---	148	44	48	106	22	25	92
31	21	---	71	32	---	144	---	42	---	19	25	---
TOTAL	726.1	1,477	2,125	2,420	1,142	3,622	2,386	1,209	4,368	1,447	1,909	2,106
MEAN	23.4	49.2	68.5	78.1	40.8	117	79.5	39.0	146	46.7	61.6	70.2
MAX	93	124	151	176	100	241	125	67	392	95	143	263
MIN	2.8	19	28	32	17	58	44	23	74	19	20	20

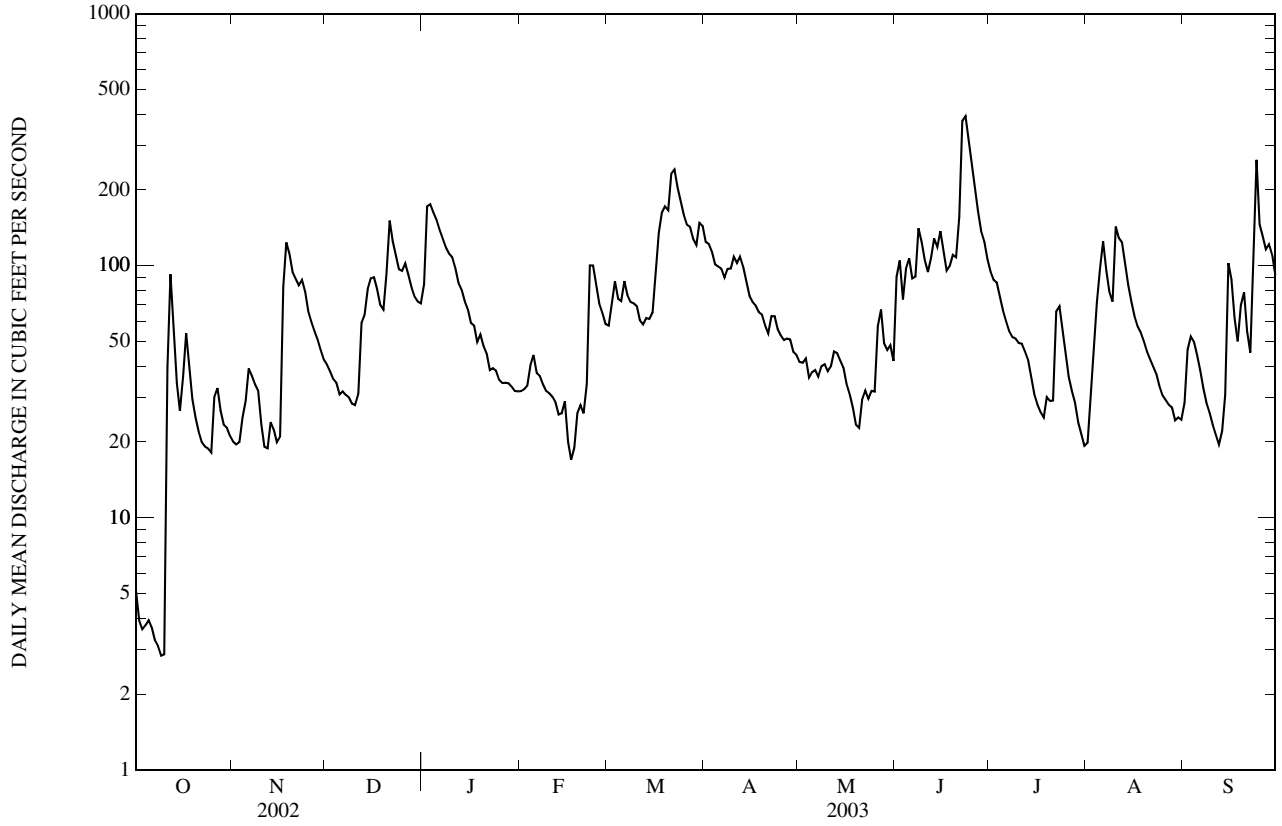
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1940 - 2003, BY WATER YEAR (WY)

MEAN	22.0	35.6	46.4	52.0	53.9	87.3	86.2	56.9	41.6	29.1	27.0	25.6
MAX	115	94.5	94.5	137	115	149	148	122	146	127	88.4	119
(WY)	(1956)	(1952)	(1951)	(1949)	(1951)	(1961)	(1952)	(1947)	(2003)	(1945)	(1955)	(1960)
MIN	3.97	6.38	7.02	11.3	15.7	46.7	42.5	16.9	10.2	3.31	2.77	3.17
(WY)	(1958)	(1950)	(1947)	(1940)	(1940)	(1960)	(1946)	(1941)	(1955)	(1955)	(1957)	(1957)

01445000 PEQUEST RIVER AT HUNTSVILLE, NJ—Continued

SUMMARY STATISTICS	2003 WATER YEAR		WATER YEARS 1940 - 2003	
ANNUAL TOTAL	24937.1			
ANNUAL MEAN	68.3		46.9	
HIGHEST ANNUAL MEAN			83.1	1952
LOWEST ANNUAL MEAN			26.3	1962
HIGHEST DAILY MEAN	392	Jun 23	481	Aug 20, 1955
LOWEST DAILY MEAN	2.8	Oct 9	1.6	Aug 3, 1955
ANNUAL SEVEN-DAY MINIMUM	3.4	Oct 4	1.8	Aug 1, 1955
MAXIMUM PEAK FLOW	442	Jun 22	640	Jan 25, 1979
MAXIMUM PEAK STAGE	4.46a	Jun 22	5.44	Jan 25, 1979
INSTANTANEOUS LOW FLOW	2.8	Oct 8-10	1.1	Aug 2, 1955
10 PERCENT EXCEEDS	128		102	
50 PERCENT EXCEEDS	54		34	
90 PERCENT EXCEEDS	23		6.2	

a Peak stage obtained from peak-stage indicator clip
e Estimated



01446000 BEAVER BROOK NEAR BELVIDERE, NJ

LOCATION.--Lat 40°50'40", long 75°02'48", Warren County, Hydrologic Unit 02040105, on right bank 2,000 ft upstream from mouth and 2 mi east of Belvidere.

DRAINAGE AREA.--36.7 mi^2.

PERIOD OF RECORD.--May 1922 to October 1961, June 2003 to September 2003. Annual maximum and minimum, water years 1963-65, and annual maximums, water years 1966-95.

REVISED RECORDS.--WSP 781: Drainage area. WSP 1432: 1923, 1924(M), 1928, 1931(M), 1934(M).

GAGE.--Water-stage recorder. Datum of gage 303.36 ft above NGVD of 1929.

REMARKS.--Records good. Several measurements of water temperature were made during the year. Satellite gage-height telemetry at station.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 230 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jun 8	1815	276	3.17	Aug 11	2045	285	3.20
Jun 23	1045	*530	*3.91	Aug 13	1745	350	3.41
Aug 5	1945	373	3.48				

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	---	85	20	44
2	---	---	---	---	---	---	---	---	---	77	29	64
3	---	---	---	---	---	---	---	---	---	70	54	66
4	---	---	---	---	---	---	---	---	---	70	123	63
5	---	---	---	---	---	---	---	---	---	61	222	53
6	---	---	---	---	---	---	---	---	---	54	264	44
7	---	---	---	---	---	---	---	---	141	50	190	39
8	---	---	---	---	---	---	---	---	237	49	133	36
9	---	---	---	---	---	---	---	---	230	46	118	34
10	---	---	---	---	---	---	---	---	177	44	212	32
11	---	---	---	---	---	---	---	---	142	45	224	29
12	---	---	---	---	---	---	---	---	151	43	241	27
13	---	---	---	---	---	---	---	---	191	39	253	28
14	---	---	---	---	---	---	---	---	184	35	209	34
15	---	---	---	---	---	---	---	---	150	33	164	49
16	---	---	---	---	---	---	---	---	124	31	130	42
17	---	---	---	---	---	---	---	---	105	29	115	34
18	---	---	---	---	---	---	---	---	102	28	121	29
19	---	---	---	---	---	---	---	---	106	30	101	34
20	---	---	---	---	---	---	---	---	138	28	84	44
21	---	---	---	---	---	---	---	---	265	31	73	35
22	---	---	---	---	---	---	---	---	422	81	66	29
23	---	---	---	---	---	---	---	---	482	70	60	86
24	---	---	---	---	---	---	---	---	360	55	54	148
25	---	---	---	---	---	---	---	---	262	42	50	96
26	---	---	---	---	---	---	---	---	198	34	47	85
27	---	---	---	---	---	---	---	---	157	29	45	79
28	---	---	---	---	---	---	---	---	128	29	42	95
29	---	---	---	---	---	---	---	---	108	26	40	100
30	---	---	---	---	---	---	---	---	95	22	41	81
31	---	---	---	---	---	---	---	---	---	21	41	---
TOTAL	---	---	---	---	---	---	---	---	---	1,387	3,566	1,659
MEAN	---	---	---	---	---	---	---	---	---	44.7	115	55.3
MAX	---	---	---	---	---	---	---	---	---	85	264	148
MIN	---	---	---	---	---	---	---	---	---	21	20	27

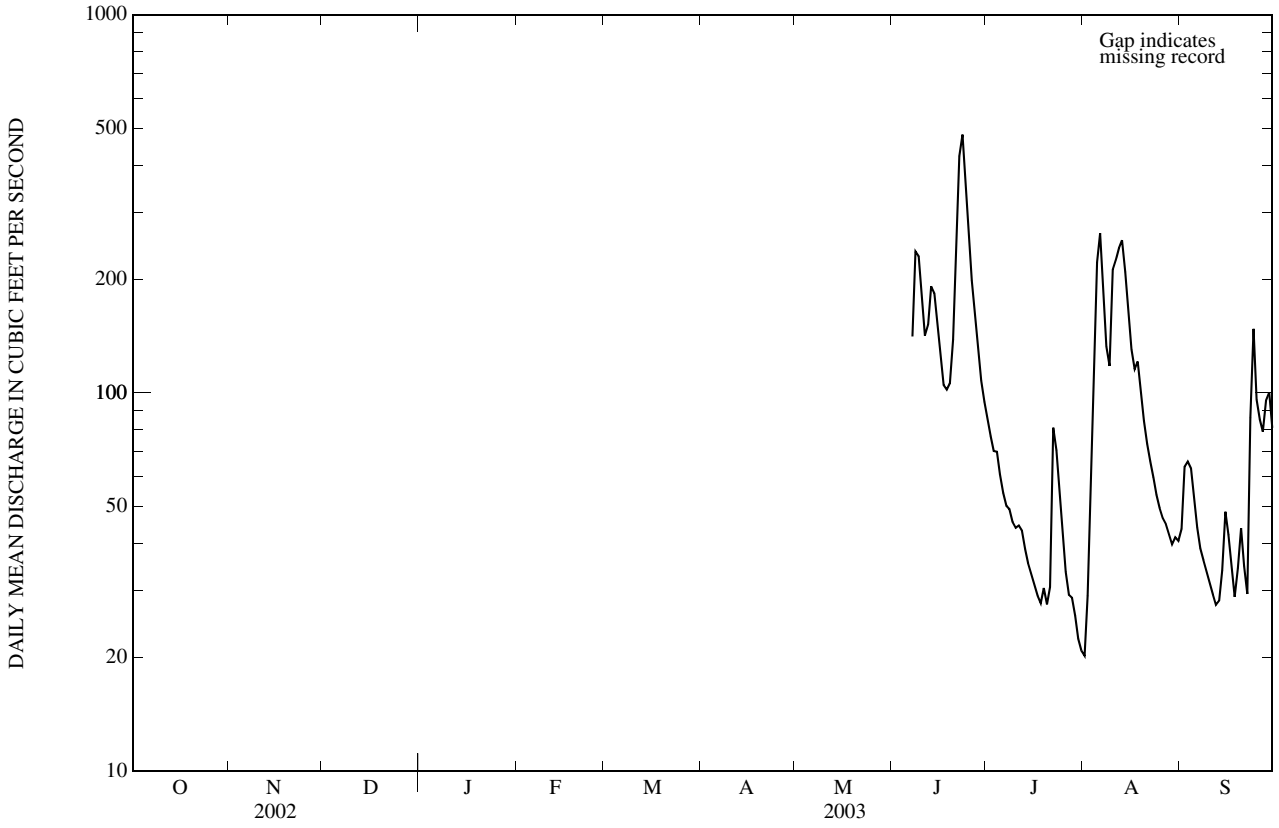
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1923 - 2003, BY WATER YEAR (WY)

MEAN	24.3	43.6	53.6	60.3	71.6	103	90.3	52.7	33.9	36.8	34.4	27.6
MAX	114	150	141	176	150	283	209	142	78.4	212	236	138
(WY)	(1956)	(1952)	(1939)	(1949)	(1925)	(1936)	(1952)	(1947)	(1946)	(1945)	(1942)	(1933)
MIN	2.63	5.12	11.9	17.1	21.3	49.4	40.7	16.0	8.47	3.09	2.42	2.05
(WY)	(1958)	(1932)	(1932)	(1925)	(1934)	(1932)	(1935)	(1941)	(1955)	(1955)	(1957)	(1957)

01446000 BEAVER BROOK NEAR BELVIDERE, NJ—Continued

SUMMARY STATISTICS	FOR JUNE 7-SEPT 30, 2003		WATER YEARS 1923-2003	
ANNUAL MEAN			52.3	
HIGHEST ANNUAL MEAN			106	1928
LOWEST ANNUAL MEAN			23.8	1932
HIGHEST DAILY MEAN	482	Jun 23	1,370	Mar 12, 1936
LOWEST DAILY MEAN	20	Aug 1	1.2	Sep 7, 1944
ANNUAL SEVEN-DAY MINIMUM			1.3	Sep 5, 1944
MAXIMUM PEAK FLOW	530	Jun 23	1,510a	Mar 12, 1936
MAXIMUM PEAK STAGE	3.91	Jun 23	5.76	Mar 12, 1936
INSTANTANEOUS LOW FLOW	20	Jul 31, Aug 1	0.3b	
10 PERCENT EXCEEDS			116	
50 PERCENT EXCEEDS			35	
90 PERCENT EXCEEDS			6.2	

a From rating curve extended above 990 ft^3/s on basis of slope-area and contracted-opening measurements of peak flow.
b Some time during period Sept. 18-30, 1964.



01446500 DELAWARE RIVER AT BELVIDERE, NJ

LOCATION.--Lat 40°49'34", long 75°04'57", revised, Warren County, Hydrologic Unit 02040105, on left bank at Belvidere, 800 ft downstream from Pequest River, and at river mile 197.7.

DRAINAGE AREA.--4,535 mi^2.

PERIOD OF RECORD.--October 1922 to current year.

REVISED RECORDS.--WSP 781: 1933(M). WSP 951: 1940-41, Drainage area. WSP 1432: 1923, 1924(M).

GAGE.--Water-stage recorder. Datum of gage 226.43 ft above NGVD of 1929. Prior to Jan. 1, 1929, nonrecording gage at site 200 ft upstream at same datum.

REMARKS.--Records good. Diurnal fluctuations at medium and low flow caused by powerplants on tributary streams. Flow regulated by lakes Wallenpaupack and Cliff, and by Pepacton, Cannonsville, Swinging Bridge, Toronto, and Neversink Reservoirs (see Delaware River basin, reservoirs in) and smaller reservoirs. Diversions from Pepacton, Cannonsville, and Neversink Reservoirs (see Delaware River basin, diversions). U. S. Geological Survey satellite gage-height telemetry and National Weather Service telephone gage-height telemetry at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Oct. 10, 1903, reached a stage of 28.6 ft, from floodmark, discharge, 220,000 ft^3/s, from rating curve extended above 170,000 ft^3/s.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2,930	5,300	7,210	9,390	5,040	8,040	26,100	7,710	11,500	9,070	3,890	3,290
2	2,210	4,940	6,960	18,800	4,800	7,430	22,900	7,260	27,400	8,200	3,920	4,200
3	1,840	4,770	6,920	27,600	4,680	7,940	21,100	8,000	23,500	7,530	4,530	26,700
4	1,790	4,540	6,140	21,700	5,020	7,750	19,900	11,400	20,100	6,620	7,370	25,500
5	1,980	4,110	5,590	17,700	5,310	8,150	18,900	10,900	18,400	5,770	10,800	41,300
6	2,420	4,320	5,390	15,400	5,370	8,140	18,800	9,650	16,500	5,530	12,700	27,800
7	2,340	5,120	5,330	13,900	6,290	7,470	17,900	8,800	15,200	5,420	11,900	19,600
8	2,190	5,780	4,630	12,600	5,690	7,380	17,400	8,160	18,300	5,080	10,300	14,800
9	2,240	5,560	4,350	11,900	5,240	6,980	16,500	7,550	17,100	4,850	8,900	12,200
10	2,100	4,840	4,020	11,800	5,060	6,820	15,800	7,030	14,300	4,550	11,900	9,770
11	3,900	4,370	4,390	10,700	4,880	6,660	15,400	6,260	12,400	4,440	11,400	8,630
12	13,100	4,440	6,740	9,470	4,560	6,480	16,100	5,850	12,400	4,490	14,800	7,490
13	18,000	5,220	7,700	8,680	4,190	6,340	16,000	6,610	17,100	5,530	17,300	6,570
14	14,900	7,190	9,920	7,720	4,030	6,500	14,600	7,230	17,200	4,220	13,800	5,760
15	10,200	7,150	13,700	7,050	4,280	6,440	13,400	6,870	21,000	3,830	12,100	7,180
16	8,830	6,650	14,000	6,400	3,660	6,820	12,200	6,510	18,700	3,840	10,600	12,200
17	17,600	10,400	12,600	6,450	2,920	9,850	11,300	6,080	15,400	3,450	9,210	15,600
18	26,200	21,200	10,400	5,100	3,140	18,600	10,300	5,750	13,400	3,530	7,210	12,200
19	16,800	22,400	9,080	5,250	4,130	31,500	9,650	5,230	12,400	3,700	6,710	10,900
20	12,400	17,700	10,000	5,160	4,640	34,300	8,560	4,920	12,200	3,360	6,050	11,000
21	9,870	15,100	14,700	5,110	4,750	47,800	7,910	4,910	18,400	3,030	5,460	9,780
22	8,150	13,900	17,300	4,760	5,180	67,500	7,930	4,750	38,400	4,340	5,050	8,280
23	6,900	14,500	14,200	4,550	8,010	64,600	8,100	4,590	40,900	5,330	4,660	13,100
24	5,950	15,000	12,900	4,910	9,490	50,700	7,880	4,610	31,100	7,060	3,950	32,900
25	5,130	13,300	11,800	4,980	10,100	37,700	7,320	4,450	22,600	6,520	3,350	27,000
26	5,950	11,700	11,200	5,180	9,450	31,600	7,010	5,910	17,800	5,340	3,310	20,100
27	7,740	10,600	10,700	5,260	8,750	29,300	6,650	8,940	14,900	4,340	3,650	16,700
28	8,560	9,850	10,600	4,500	8,430	25,400	9,740	8,930	13,100	4,170	3,430	16,500
29	7,090	8,580	9,700	4,730	---	22,400	9,350	8,400	11,100	4,400	3,310	22,100
30	6,240	7,720	9,420	5,150	---	27,000	8,460	7,610	9,880	4,300	3,000	21,900
31	5,770	---	8,420	5,100	---	30,800	---	6,920	---	3,970	3,400	---
TOTAL	241,320	276,250	286,010	287,000	157,090	644,390	403,160	217,790	552,680	155,810	237,960	471,050
MEAN	7,785	9,208	9,226	9,258	5,610	20,790	13,440	7,025	18,420	5,026	7,676	15,700
MAX	26,200	22,400	17,300	27,600	10,100	67,500	26,100	11,400	40,900	9,070	17,300	41,300
MIN	1,790	4,110	4,020	4,500	2,920	6,340	6,650	4,450	9,880	3,030	3,000	3,290

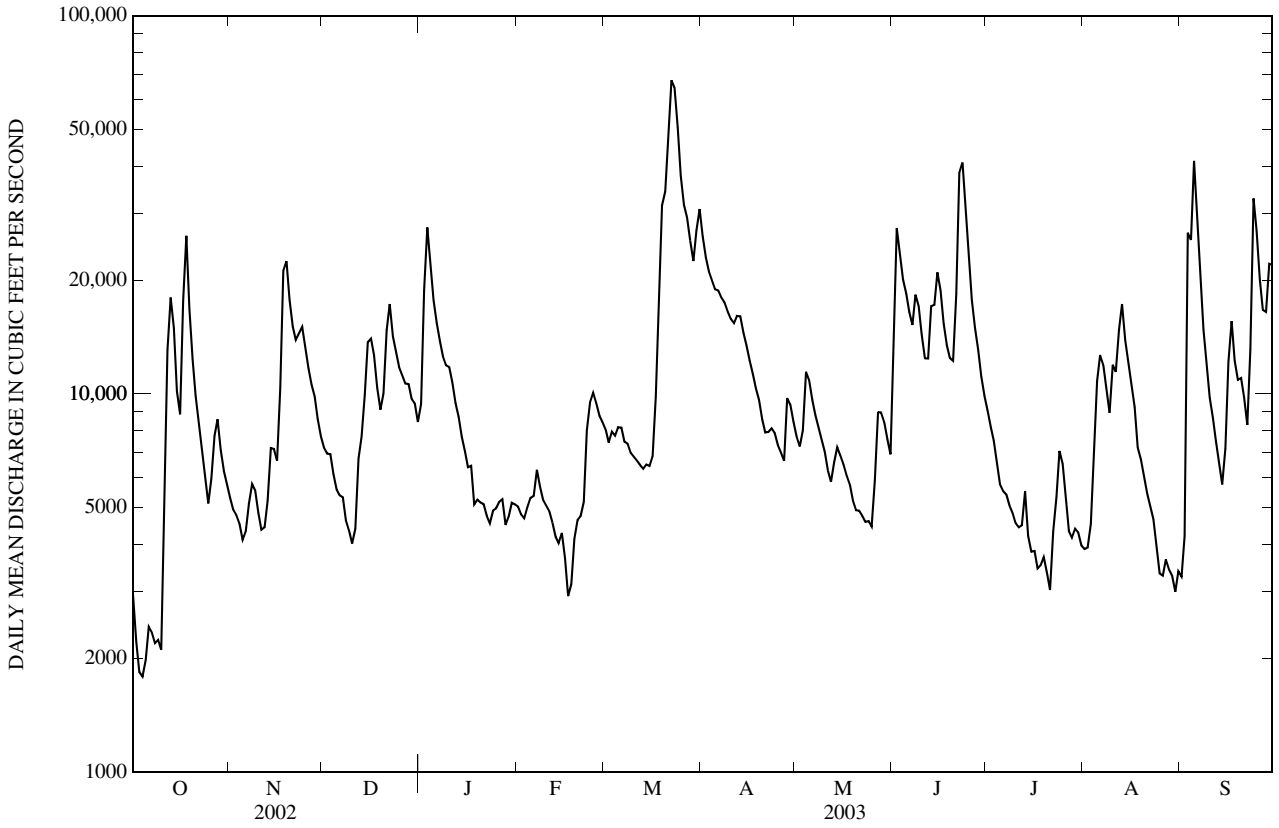
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1923 - 2003, BY WATER YEAR (WY)

MEAN	4,606	7,069	8,361	7,965	8,270	13,950	15,710	9,875	6,186	4,303	3,664	3,886
MAX	19,570	21,140	27,730	21,020	19,930	42,520	40,720	21,470	22,280	16,840	19,260	15,700
(WY)	(1956)	(1928)	(1997)	(1996)	(1976)	(1936)	(1940)	(1989)	(1972)	(1928)	(1955)	(2003)
MIN	1,055	1,226	1,481	1,683	2,452	5,243	4,512	3,261	1,590	1,017	881	1,199
(WY)	(1942)	(1965)	(1923)	(1981)	(1980)	(1981)	(1985)	(1965)	(1965)	(1965)	(1954)	(1941)

01446500 DELAWARE RIVER AT BELVIDERE, NJ—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1923 - 2003	
ANNUAL TOTAL	2,316,070		3,930,510			
ANNUAL MEAN	6,345		10,770		7,813	
HIGHEST ANNUAL MEAN					14,130	1928
LOWEST ANNUAL MEAN					2,990	1965
HIGHEST DAILY MEAN	29,900	May 15	67,500	Mar 22	184,000	Aug 19, 1955
LOWEST DAILY MEAN	1,230	Jan 21	1,790	Oct 4	610	Aug 25, 1954
ANNUAL SEVEN-DAY MINIMUM	1,410	Jan 17	2,110	Oct 2	782	Aug 14, 1954
MAXIMUM PEAK FLOW			69,600	Mar 22	273,000a	Aug 19, 1955
MAXIMUM PEAK STAGE			14.85	Mar 22	30.21b	Aug 19, 1955
INSTANTANEOUS LOW FLOW			1,650	Oct 4	609	Sep 28, 1943
10 PERCENT EXCEEDS	13,800		20,500		16,600	
50 PERCENT EXCEEDS	4,710		7,940		5,000	
90 PERCENT EXCEEDS	1,940		4,120		1,950	

a From rating curve extended above 170,000 ft^3/s on basis of flood-routing study.
b From high-water mark in gage house.



DELAWARE RIVER BASIN

01454700 LEHIGH RIVER AT GLENDON, PA
(Pennsylvania Water-Quality Network Station)

LOCATION.--Lat 40°40'09", long 75`°14'12", Northampton County, Hydrologic Unit 02040106, on right bank 140 ft upstream from highway bridge in Hugh Moore Parkway at Glendon, 2.3 mi upstream from mouth, and 2.0 mi southwest of Easton.

DRAINAGE AREA.--1,359 mi^2.

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

REVISED RECORDS.--WDR PA-72-1: 1971(M).

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 164.30 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Flow regulated by Francis E. Walter Reservoir (station 01447780), Penn Forest Reservoir (station 01449400), Wild Creek Reservoir (station 01449700), and since February 1971, by Beltzville Lake (station 01449790) about 60 mi upstream. Flows above 10,000 ft^3/s may be affected by backwater from the Delaware River. Several measurements of water temperature were made during the year. Satellite telemetry at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	889	2630	2820	3940	1660	2270	6500	2120	8790	3150	1570	1510
2	869	2370	2680	6780	1670	2650	5950	2100	8840	2840	1640	2430
3	832	2160	2580	7360	1650	3980	5750	1970	10300	2690	1670	2940
4	851	2070	2080	6030	1790	2820	5370	1850	11900	2530	2400	3380
5	877	1940	2070	5250	2360	2850	4980	1730	10300	2410	5050	2860
6	1180	2200	2070	4880	2080	3810	4660	1750	7530	2180	7720	2300
7	760	2200	1910	4720	2150	3120	4400	1730	6470	2050	7460	1990
8	661	1990	1850	4250	1820	2710	3880	1830	7530	2200	5520	1760
9	640	2000	1820	3720	1610	3060	3920	1780	5790	2070	4270	1550
10	643	2100	1580	3590	1780	3690	4130	1820	7020	1990	4500	1370
11	2900	2090	1990	3370	1500	2790	4460	1830	6300	1910	4530	1320
12	7400	2270	5280	3140	1350	2580	5220	2020	6550	1950	5910	1280
13	4340	2930	5700	3000	1250	2910	4890	1990	8460	1940	5950	1470
14	3410	2910	7280	2760	1310	3850	4530	1810	7510	1750	4910	1650
15	3300	2790	7770	2540	1440	3280	4180	1740	6370	1580	3450	4620
16	4530	2960	6630	2200	1290	3640	3750	1670	5850	1480	3110	9270
17	9190	5480	5850	2260	e1100	4670	3470	1650	5580	1390	3740	8940
18	7140	6670	5040	e1870	e1500	7070	3370	1720	5300	1330	3890	5960
19	4810	6470	4220	1950	e1700	8900	3220	1580	5080	1590	2980	5810
20	3970	7460	4720	2120	e2000	8940	3030	1470	5630	1400	2420	5160
21	3620	4930	5680	1920	2070	14500	2900	1510	23000	1500	2230	4620
22	3210	4470	5030	1830	2630	13700	2810	1540	13200	7270	2090	4490
23	2550	4470	4750	e1720	5260	11300	2700	1480	11400	5030	1940	16200
24	2100	3970	5450	e1680	5040	9680	2540	1590	13300	4370	1790	16400
25	1910	3690	5190	1730	3750	9200	2300	1750	11700	3410	1720	12500
26	2910	3370	5060	1740	3090	8050	2440	3150	10500	2640	1620	10800
27	2900	3350	4030	1630	2540	7830	2680	3310	9780	2280	1560	7980
28	2400	3180	3480	1370	2330	6600	2380	3260	6300	2290	1490	8460
29	2580	3010	3340	1620	---	5990	2300	3510	4620	1870	1390	7980
30	2790	2930	3220	1660	---	7230	2270	2990	4160	1770	1540	6510
31	2930	---	3150	1650	---	6850	---	2690	---	1650	1580	---
TOTAL	89092	101060	124320	94280	59720	180520	114980	62940	255060	74510	101640	163510
MEAN	2874	3369	4010	3041	2133	5823	3833	2030	8502	2404	3279	5450
MAX	9190	7460	7770	7360	5260	14500	6500	3510	23000	7270	7720	16400
MIN	640	1940	1580	1370	1100	2270	2270	1470	4160	1330	1390	1280
CFSM	2.11	2.48	2.95	2.24	1.57	4.28	2.82	1.49	6.26	1.77	2.41	4.01
IN.	2.44	2.77	3.40	2.58	1.63	4.94	3.15	1.72	6.98	2.04	2.78	4.48

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1967 - 2003, BY WATER YEAR (WY)

MEAN	1946	2626	3371	3036	3172	4300	4391	3381	2693	1827	1507	1736
MAX	5272	5438	9593	8414	5385	8344	10810	8542	8502	4641	4179	7920
(WY)	1977	1971	1997	1996	1976	1977	1993	1989	2003	1984	1969	1987
MIN	771	704	633	405	1278	1805	1639	1502	906	630	607	660
(WY)	1981	2002	1981	1981	1980	1981	1985	1995	1999	1999	1999	1983

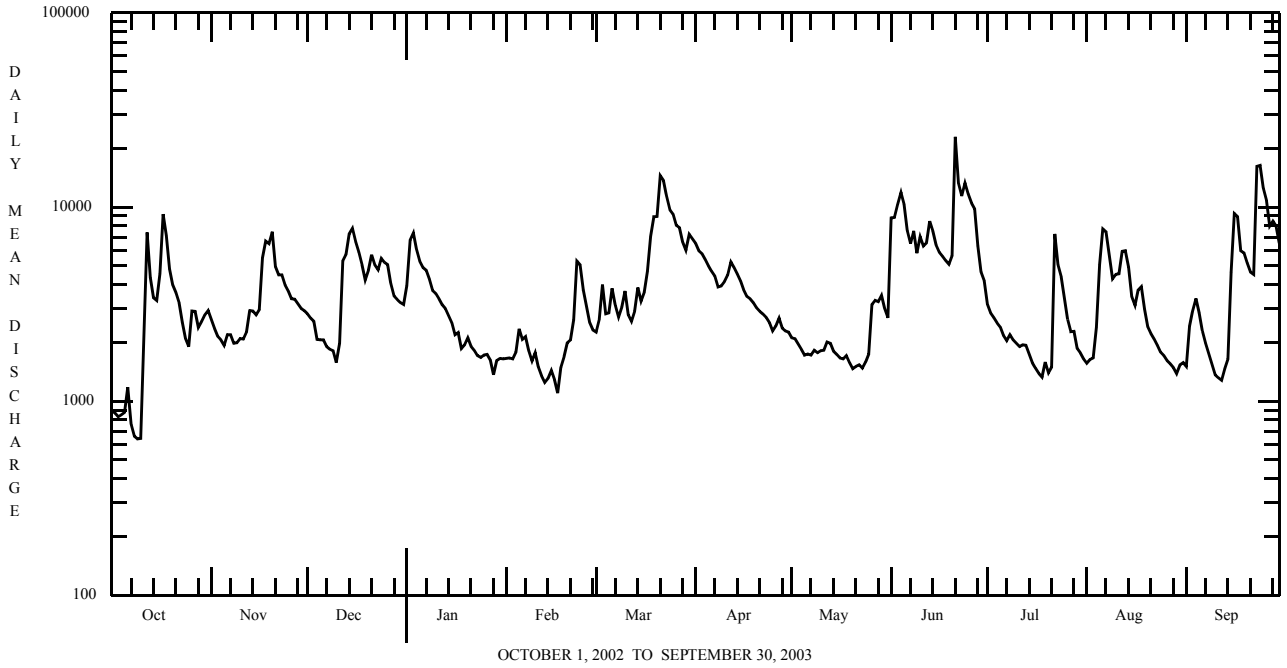
e Estimated.

DELAWARE RIVER BASIN

01454700 LEHIGH RIVER AT GLENDON, PA--Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1967 - 2003	
ANNUAL TOTAL	821272		1421632			
ANNUAL MEAN	2250		3895		2829	
HIGHEST ANNUAL MEAN					3997	1984
LOWEST ANNUAL MEAN					1594	1985
HIGHEST DAILY MEAN	9190	Oct 17	23000	Jun 21	44300	Jun 23 1972
LOWEST DAILY MEAN	472	Aug 28	640	Oct 9	330	Jan 31 1981**a**
ANNUAL SEVEN-DAY MINIMUM	525	Sep 5	802	Oct 4	349	Jan 26 1981
MAXIMUM PEAK FLOW			28000	Sep 23	**b**60600	Jun 23 1972
MAXIMUM PEAK STAGE			17.71	Sep 23	24.86	Jun 23 1972
ANNUAL RUNOFF (CFSM)	1.66		2.87		2.08	
ANNUAL RUNOFF (INCHES)	22.48		38.91		28.29	
10 PERCENT EXCEEDS	4770		7520		5580	
50 PERCENT EXCEEDS	1830		2910		2060	
90 PERCENT EXCEEDS	676		1550		858	

a Also Feb. 1, 1981.
b From rating curve extended above 36,000 ft^3/s.



01455500 MUSCONETCONG RIVER AT OUTLET OF LAKE HOPATCONG, NJ

LOCATION.--Lat 40°55'02", long 74°39'56", Morris County, Hydrologic Unit 02040105, on left bank just upstream of highway bridge on Lakeside Boulevard (County Route 607), 300 ft downstream from Lake Hopatcong Dam in Landing.

DRAINAGE AREA.--25.3 mi^2.

PERIOD OF RECORD.--July 1928 to September 1975, April 2002 to current year. Operated as crest-stage gage, water years 1976 to 1995.

REVISED RECORDS.-- WSP 781: 1928(M). WSP 1051: 1944-1945. NJ-82-2: Drainage area.

GAGE.--Water-stage and rain recorder and concrete control. Prior to August 24, 1967, concrete control at site 40 ft downstream. Datum of gage is 904.99 ft above NGVD of 1929 (New Jersey Geological Survey bench mark).

REMARKS.--Records good except discharges below 5.0 ft^3/s, which are fair, and estimated daily discharges which are poor. Flow regulated by Lake Hopatcong (see Delaware River basin, reservoirs in). Satellite rain and gage-height telemetry at station. Several measurements of water temperature were made during the year.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.3	31	155	48	17	e65	12	33	85	92	15	12
2	5.3	28	152	49	17	e48	12	34	97	82	17	40
3	5.2	27	151	49	16	e48	12	36	95	76	22	55
4	5.2	24	149	49	16	e48	12	30	124	55	44	56
5	5.3	28	154	72	16	e48	12	28	134	17	61	55
6	5.2	61	155	84	16	e48	12	27	130	17	101	77
7	5.3	54	153	84	16	e55	14	26	141	16	105	73
8	5.2	45	152	84	17	e74	14	33	186	15	95	114
9	5.2	43	151	84	22	e82	14	34	176	20	88	135
10	5.2	40	149	84	24	e82	17	33	157	17	100	125
11	5.4	36	147	84	e24	e82	24	33	138	13	112	119
12	5.5	37	146	83	e24	e82	34	31	160	12	179	119
13	5.6	41	146	83	e24	e82	40	29	172	13	163	118
14	5.9	48	162	83	e24	e82	41	28	177	11	143	118
15	6.1	55	170	83	e20	82	42	26	180	11	122	118
16	18	61	168	83	e16	71	46	28	166	11	103	129
17	31	87	167	82	e16	65	48	21	142	11	91	88
18	34	108	166	e82	e16	65	46	19	132	11	78	16
19	33	124	165	e82	e16	65	46	17	126	11	65	84
20	34	125	160	e65	e27	88	46	16	126	11	53	133
21	34	129	160	e48	61	101	44	18	162	11	45	87
22	30	147	159	e32	96	103	47	21	270	15	40	11
23	29	170	157	e16	116	103	45	20	e270	54	39	12
24	26	181	156	e16	125	103	41	22	e245	73	34	12
25	24	171	154	e16	e125	45	37	21	207	68	32	12
26	42	167	153	e16	e125	16	41	37	177	58	26	12
27	42	163	84	e16	e105	12	41	45	152	33	20	12
28	39	161	48	e16	e84	12	37	46	130	27	20	25
29	42	159	48	16	---	12	37	45	112	23	20	150
30	42	158	48	16	---	12	36	44	101	21	20	195
31	36	---	48	17	---	12	---	46	---	15	17	---
TOTAL	616.9	2,709	4,333	1,722	1,221	1,893	950	927	4,670	920	2,070	2,312
MEAN	19.9	90.3	140	55.5	43.6	61.1	31.7	29.9	156	29.7	66.8	77.1
MAX	42	181	170	84	125	103	48	46	270	92	179	195
MIN	5.2	24	48	16	16	12	12	16	85	11	15	11

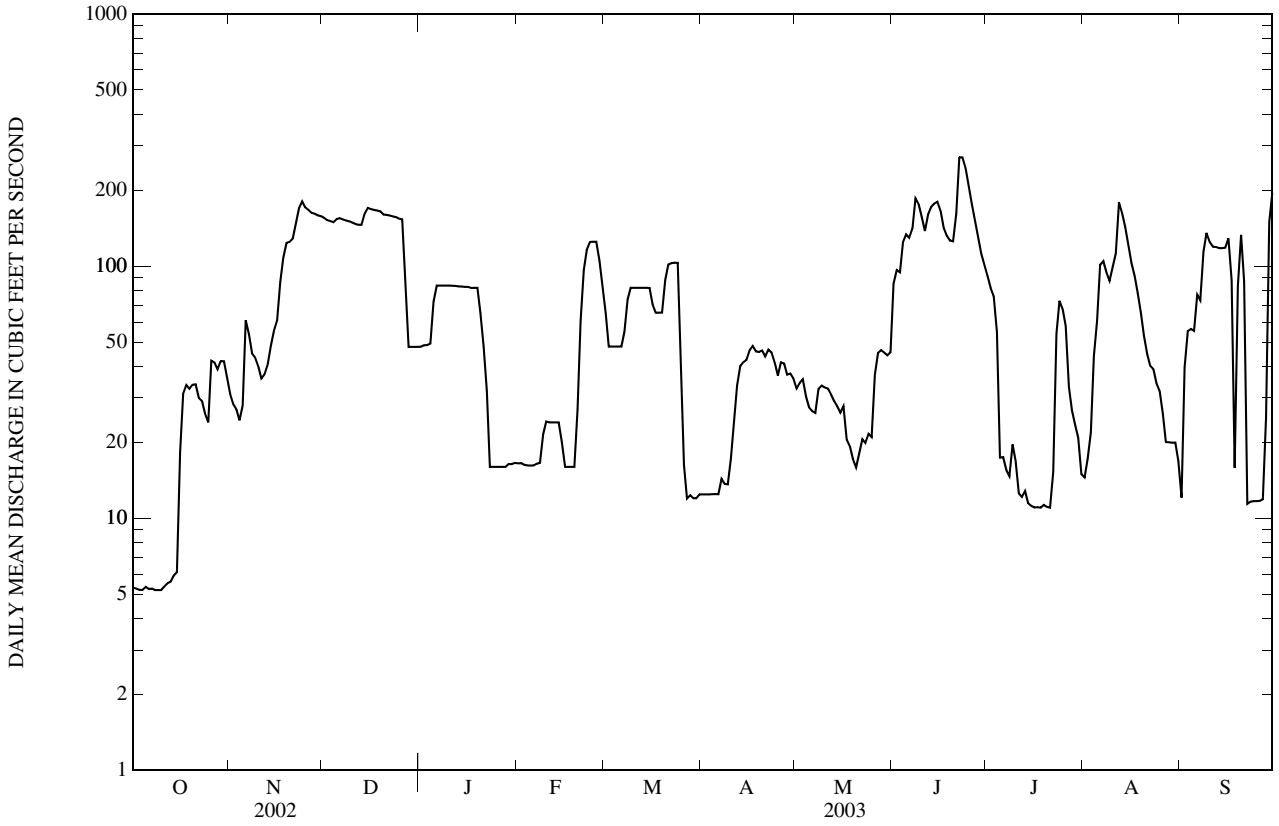
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1928 - 2003, BY WATER YEAR (WY)

MEAN	53.1	55.0	61.9	53.5	46.2	33.8	46.6	44.0	36.0	26.9	27.7	46.0
MAX	227	150	168	129	134	173	133	124	167	133	146	175
(WY)	(1935)	(1961)	(1951)	(1974)	(1958)	(1936)	(1958)	(1947)	(1972)	(1975)	(1955)	(1948)
MIN	2.77	7.83	10.5	9.96	3.04	0.055	0.72	1.43	1.87	1.76	4.08	5.46
(WY)	(1967)	(1965)	(1966)	(1949)	(1966)	(1961)	(1960)	(1960)	(1960)	(1960)	(1954)	(2002)

01455500 MUSCONETCONG RIVER AT OUTLET OF LAKE HOPATCONG, NJ—Continued

SUMMARY STATISTICS	For April To Dec 2002		FOR 2003 WATER YEAR		WATER YEARS 1928 - 2003	
ANNUAL TOTAL			43.9			
ANNUAL MEAN			66.7		44.1	
HIGHEST ANNUAL MEAN					71.9	1973
LOWEST ANNUAL MEAN					8.02	1966
HIGHEST DAILY MEAN	181	Nov 24	270	Jun 22, 23	731	Aug 20, 1955
LOWEST DAILY MEAN	3.6	Jul 12	5.2	Oct 3-6, 8-10	0.00	Mar 13, 1961
ANNUAL SEVEN-DAY MINIMUM			5.2	Oct 3	0.00	Mar 13, 1961
MAXIMUM PEAK FLOW	195	Nov 24	280	Jun 22	1,900a	Aug 13, 2000
MAXIMUM PEAK STAGE	3.37	Nov 24	3.93	Jun 22	10.74b	Aug 13, 2000
INSTANTANEOUS LOW FLOW			4.6	Oct 15, 16	0.00	Many days
10 PERCENT EXCEEDS			55		104	
50 PERCENT EXCEEDS			46		29	
90 PERCENT EXCEEDS			12		8.5	

a From rating curve extended above 340 ft^3/s on basis of computation of peak flow over dam. Level of Lake Hopatcong highest since dam built in 1928.
b From floodmark in gage house
e Estimated.



01457000 MUSCONETCONG RIVER NEAR BLOOMSBURY, NJ

LOCATION.--Lat 40°40'20", long 75°03'39", Warren County, Hydrologic Unit 02040105, on right bank just downstream from bridge on Limekiln Road (Person Road), 1.5 mi southwest of Bloomsbury, and 9.5 mi upstream from mouth.

DRAINAGE AREA.--141 mi^2.

PERIOD OF RECORD.--July 1903 to March 1907, July 1921 to current year.

REVISED RECORDS.--WSP 1051: 1944-45. WSP 1382: 1904-06, 1922, 1923-29(M), 1931(M), 1933-34(M), 1936(M), 1940, 1942(M), 1944-45(M), 1951-52(M). WDR NJ-82-2: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Concrete control since Sept. 29, 1932. Datum of gage is 274.83 ft above NGVD of 1929. July 1903 to Mar. 31, 1907, nonrecording gage at bridge 15 ft upstream at different datum. July 26 to Sept. 12, 1921, nonrecording gage at bridge at present datum.

REMARKS.--Records good. Flow occasionally regulated by Lake Hopatcong (see Delaware River basin, reservoirs in). Several measurements of water temperature were made during the year. Satellite gage-height telemetry at station.

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

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Dec 20	1900	1,070	3.74	Jun 22	2030	1,340	4.12
Jan 2	0545	1,090	3.77	Jul 22	2300	1,180	3.85
Feb 23	1715	1,530	4.42	Aug 5	2215	1,190	3.88
Mar 21	0500	1,120	3.77	Aug 12	0300	*2,170	*5.13
Jun 21	0200	1,310	4.06	Sep 23	1715	1,570	4.48

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	54	149	302	369	156	274	374	218	447	359	156	183
2	49	131	288	855	149	502	367	212	431	330	168	315
3	48	124	282	601	146	497	345	222	364	305	164	246
4	48	118	278	518	162	309	317	215	588	285	253	243
5	50	115	275	449	173	406	317	207	594	260	444	227
6	49	142	281	417	150	465	302	205	508	222	590	206
7	47	176	276	400	150	333	286	203	580	206	426	202
8	44	165	289	378	146	310	294	215	752	207	364	206
9	44	147	269	372	141	462	318	232	672	191	350	215
10	45	137	278	369	145	368	346	219	580	190	578	244
11	169	135	313	342	147	312	356	207	503	194	720	242
12	374	143	515	314	146	319	381	213	683	187	1,480	230
13	290	178	412	304	140	372	369	200	714	175	884	236
14	193	175	559	289	139	362	338	190	669	166	638	296
15	147	162	534	281	145	346	321	187	593	161	502	530
16	165	174	484	263	122	401	311	184	558	156	425	512
17	243	549	434	268	99	491	301	175	498	154	378	407
18	220	634	397	249	99	529	285	161	484	152	349	322
19	181	513	379	267	123	531	274	157	463	169	311	304
20	159	435	659	252	165	549	267	155	669	152	279	348
21	148	378	647	229	154	1,020	258	163	993	166	254	363
22	139	361	537	207	308	892	285	168	1,230	432	237	315
23	127	391	470	198	1,110	733	273	163	1,250	555	230	775
24	119	372	432	186	771	630	253	170	1,030	348	213	759
25	116	359	445	176	479	562	240	179	828	274	199	556
26	168	344	453	173	388	479	252	292	680	234	193	440
27	182	336	415	169	357	441	256	306	576	210	189	370
28	165	331	345	157	312	375	237	275	494	205	179	547
29	146	314	278	161	---	389	226	246	437	182	172	492
30	149	307	258	160	---	519	224	226	394	166	180	493
31	159	---	255	158	---	451	---	214	---	157	171	---
TOTAL	4,237	7,995	12,039	9,531	6,722	14,629	8,973	6,379	19,262	7,150	11,676	10,824
MEAN	137	266	388	307	240	472	299	206	642	231	377	361
MAX	374	634	659	855	1,110	1,020	381	306	1,250	555	1,480	775
MIN	44	115	255	157	99	274	224	155	364	152	156	183

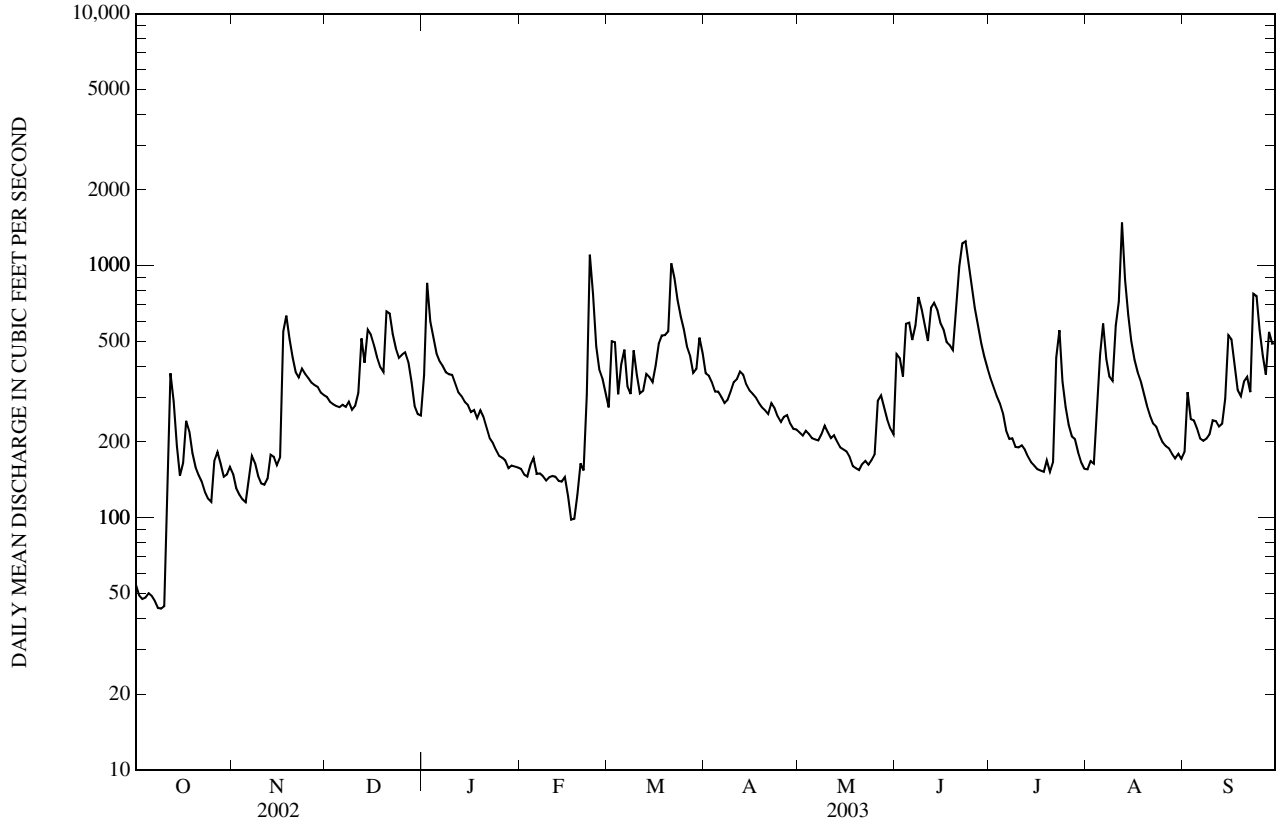
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1904 - 2003, BY WATER YEAR (WY)

MEAN	175	227	268	263	276	346	350	274	204	160	153	159
MAX	770	701	980	924	582	935	1,027	680	843	659	583	454
(WY)	(1904)	(1928)	(1997)	(1979)	(1973)	(1936)	(1983)	(1989)	(1972)	(1975)	(1928)	(1960)
MIN	41.2	61.2	57.3	73.7	77.8	99.9	103	98.1	56.8	38.1	38.5	37.3
(WY)	(1964)	(1966)	(1966)	(1977)	(2002)	(2002)	(1985)	(1965)	(1965)	(1965)	(1965)	(1965)

01457000 MUSCONETCONG RIVER NEAR BLOOMSBURY, NJ—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1904 - 2003	
ANNUAL TOTAL	53,724		119,417			
ANNUAL MEAN	147		327		238	
HIGHEST ANNUAL MEAN					425	1928
LOWEST ANNUAL MEAN					82.6	1965
HIGHEST DAILY MEAN	659	Dec 20	1,480	Aug 12	5,850	Oct 10, 1903
LOWEST DAILY MEAN	35	Sep 14	44	Oct 8,9	27	Sep 8, 1966
ANNUAL SEVEN-DAY MINIMUM	37	Aug 13	47	Oct 4	32	Aug 28, 1966
MAXIMUM PEAK FLOW			2,170	Aug 12	7,200a	Jan 25, 1979
MAXIMUM PEAK STAGE			5.13	Aug 12	8.50b	Jan 25, 1979
INSTANTANEOUS LOW FLOW			42	Oct 9,10	8.1	Aug 2, 1955
10 PERCENT EXCEEDS	327		577		458	
50 PERCENT EXCEEDS	99		279		182	
90 PERCENT EXCEEDS	45		147		76	

a From rating curve extended 1,800 ft^3/s on basis of slope-area measurement at gage height 6.95 ft.
b From floodmark.



01460440 DELAWARE AND RARITAN CANAL AT PORT MERCER, NJ

LOCATION.--Lat 40°18'16", long 74°41'07", Mercer County, Hydrologic Unit 02030105, on right bank, 300 ft upstream from bridge on Province Line (Quaker Bridge) Road at Port Mercer, 2.2 mi east of Lawrenceville, and 3.5 mi southwest of Princeton.

PERIOD OF RECORD.--August 1990 to current year. Miscellaneous measurements made 1923, 1937-38, 1942-43, 1945, 1981, 1987-90.

GAGE.--Water-stage recorder and ultrasonic-velocity meter. Datum of gage is NGVD of 1929.

REMARKS.--Records fair, except for estimated daily discharges and flows under 10 ft^3/s, which are poor. The canal diverts water from the Delaware River at Raven Rock and discharges into Raritan River at New Brunswick. Reverse flow (denoted by a negative symbol) can occur during periods of heavy precipitation due to waste gate operation upstream and inflow into canal downstream from gage. Gage is located at the drainage divide between the Delaware and Raritan River Basins. Satellite gage-height and velocity telemetry at station.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e147	138	147	121	e153	150	146	157	118	146	152	144
2	e150	138	148	127	e152	106	154	161	134	146	148	150
3	e154	140	148	138	e152	100	160	157	142	148	146	147
4	e148	143	146	130	e152	122	159	156	42	147	149	151
5	e147	146	154	133	e152	110	156	152	100	147	144	149
6	146	146	158	138	e152	87	159	157	136	147	140	149
7	150	131	157	139	e152	114	158	162	120	147	144	148
8	148	144	161	140	e152	120	155	160	117	148	148	149
9	147	146	159	140	e152	118	141	154	136	146	150	147
10	151	148	155	140	e152	123	139	160	138	145	135	145
11	e130	150	151	141	e152	124	144	164	139	145	139	145
12	e120	146	127	141	159	126	124	161	140	146	147	147
13	e140	130	136	140	158	135	150	154	127	147	151	150
14	e145	137	107	143	e155	133	153	159	126	145	150	148
15	145	139	131	144	e153	130	153	155	131	146	150	146
16	145	144	144	150	e145	133	155	150	132	146	152	129
17	143	107	146	155	e138	136	155	152	125	147	150	142
18	143	110	144	150	148	138	157	148	122	143	150	145
19	145	138	144	e154	154	138	157	151	122	135	151	145
20	147	143	140	e154	163	142	157	148	130	139	148	149
21	147	146	137	e154	161	109	157	145	114	e140	e142	147
22	148	144	142	e154	e40	128	158	147	122	135	e142	149
23	148	138	144	e154	51	137	152	147	131	e135	e144	132
24	147	143	147	e154	101	157	156	148	133	e140	e140	145
25	147	146	128	e154	129	153	158	144	139	e150	e140	147
26	127	149	115	e153	142	157	156	105	144	e145	e140	151
27	139	148	133	e153	147	153	157	121	147	e145	e145	141
28	139	146	138	e153	150	156	156	136	145	148	e145	123
29	140	146	141	e153	---	155	160	140	145	149	142	139
30	138	147	143	e153	---	145	160	145	148	147	148	140
31	137	---	144	e153	---	144	---	146	---	150	144	---
TOTAL	4,448	4,217	4,415	4,506	3,967	4,079	4,602	4,642	3,845	4,490	4,516	4,339
MEAN	143	141	142	145	142	132	153	150	128	145	146	145
MAX	154	150	161	155	163	157	160	164	148	150	152	151
MIN	120	107	107	121	40	87	124	105	42	135	135	123

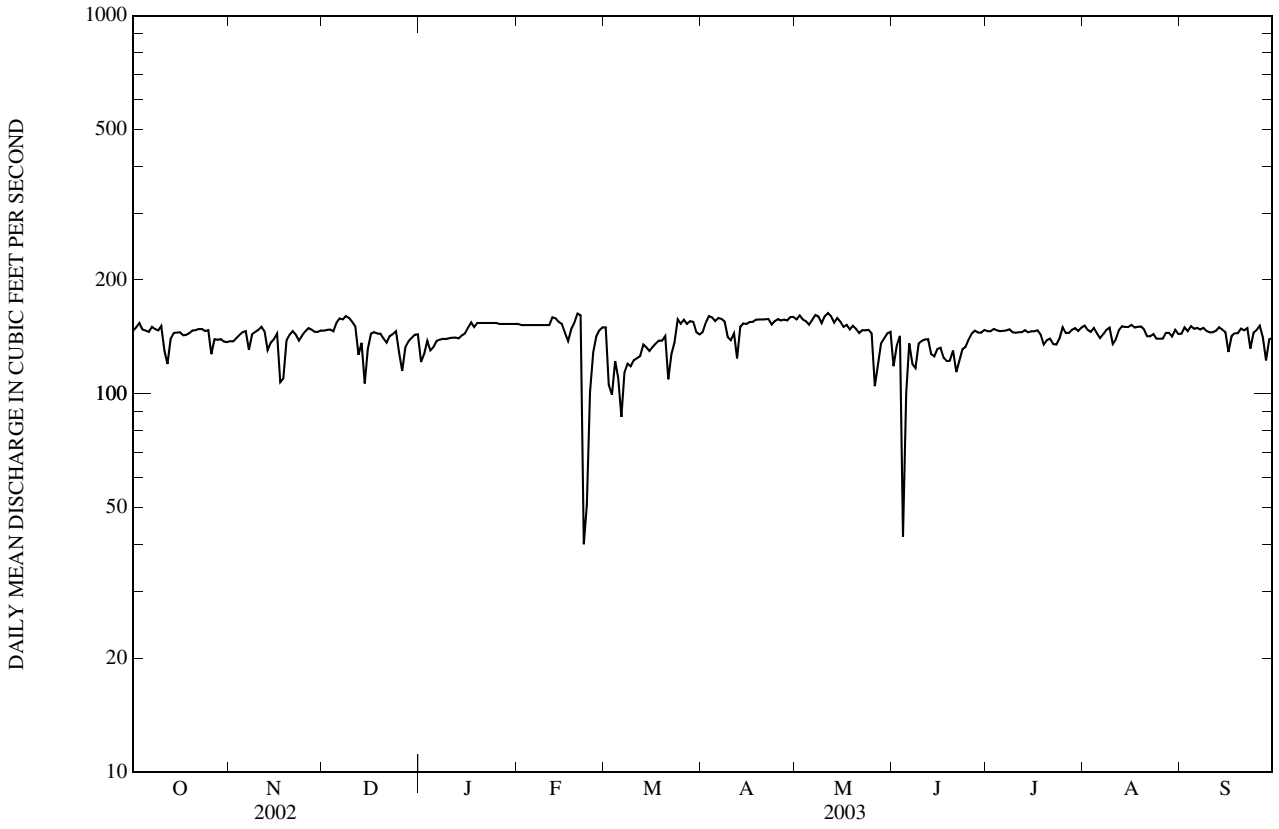
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1990 - 2003, BY WATER YEAR (WY)

MEAN	139	132	126	124	127	121	130	139	142	147	144	141
MAX	159	154	143	145	143	148	153	152	159	163	156	155
(WY)	(1999)	(1999)	(1996)	(2003)	(1995)	(1997)	(2003)	(1999)	(1999)	(1999)	(2001)	(1992)
MIN	115	99.5	91.7	93.5	97.8	91.4	95.8	102	120	123	114	112
(WY)	(1992)	(2002)	(2002)	(2002)	(2002)	(1992)	(1992)	(2002)	(1996)	(1996)	(1996)	(1999)

01460440 DELAWARE AND RARITAN CANAL AT PORT MERCER, NJ—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1990 - 2003	
ANNUAL TOTAL	45,143		52,066			
ANNUAL MEAN	124		143		134	
HIGHEST ANNUAL MEAN					143	1991
LOWEST ANNUAL MEAN					116	2002
HIGHEST DAILY MEAN	161	Dec 8	164	May 11	222	Aug 22, 1990
LOWEST DAILY MEAN	51	May 18	40e	Feb 22	-280	Sep 17, 1999
ANNUAL SEVEN-DAY MINIMUM	87	Apr 28	108	Mar 2	4.9	Sep 15, 1999
MAXIMUM PEAK STAGE			55.80	Feb 23	61.19	Sep 16, 1999
10 PERCENT EXCEEDS	149		156		154	
50 PERCENT EXCEEDS	137		146		140	
90 PERCENT EXCEEDS	92		127		103	

e Estimated



01463500 DELAWARE RIVER AT TRENTON, NJ

LOCATION.--Lat 40°13'18", long 74°46'41", Mercer County, Hydrologic Unit 02040105, on left bank 450 ft upstream from Calhoun Street Bridge at Trenton, 0.5 mi upstream from Assunpink Creek, and at river mile 134.5.

DRAINAGE AREA.--6,780 mi^2.

PERIOD OF RECORD.--February 1913 to current year. October 1912 to February 1913 monthly discharge only, published in WSP 1302. Gage- height records collected in this vicinity since 1904 are contained in reports of the National Weather Service.

REVISED RECORDS.--WSP 951: Drainage area. WSP 1302: 1913-20. WSP 1382: 1924, 1928.

GAGE.--Water-stage recorder. Datum of gage is NGVD of 1929. Prior to Sept. 30, 1965, at datum 7.77 ft higher. Feb. 24, 1913 to Oct. 2, 1928, nonrecording gage on downstream side of highway bridge at site 450 ft downstream.

REMARKS.--Records good, except estimated discharges which are fair. Diurnal fluctuations at medium and low flow caused by powerplants on tributary streams. Flow regulated by Lakes Wallenpaupack and Hopatcong, and by Pepacton, Cannonsville, Swinging Bridge, Toronto, Cliff Lake, Neversink, Wild Creek, and Merrill Creek Reservoirs (see Delaware River basin, reservoirs in) and smaller reservoirs. Diversion from Pepacton, Cannonsville, and Neversink Reservoirs. Diversion to Bradshaw and Merrill Creek Reservoirs and to Delaware and Raritan Canal (see Delaware River basin, diversions). Water diverted just above station by borough of Morrisville, PA, and city of Trenton for municipal supply (see Delaware River basin, diversions). Satellite gage-height and water-quality parameter telemetry at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Oct. 11, 1903, reached an elevation of about 28.5 ft above NGVD of 1929, discharge estimated, 295,000 ft^3/s. Maximum elevation known, 30.6 ft above NGVD of 1929, Mar. 8, 1904, from floodmark, due to ice jam.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 50,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar 22	1815	*83,100	*16.66	Jun 23	1045	60,400	14.96
Jun 4	1315	54,300	14.47	Sep 25	0115	53,800	14.43

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5,530	10,200	12,000	15,600	e8,700	12,400	37,100	11,700	15,500	14,800	6,550	5,740
2	4,430	9,390	11,400	29,000	e8,400	13,600	32,800	11,000	34,000	13,300	7,200	6,950
3	3,590	8,610	11,000	38,200	8,770	17,500	30,000	10,500	38,000	12,300	6,760	15,600
4	3,160	8,130	10,600	36,500	8,180	14,100	28,300	12,600	43,700	11,400	8,490	33,700
5	3,130	7,610	9,450	29,000	8,610	14,100	26,400	14,500	39,300	10,400	16,800	39,100
6	3,230	7,750	9,070	24,800	8,630	17,600	25,500	13,300	30,700	9,420	27,800	38,400
7	3,970	8,050	8,620	22,100	9,020	14,900	24,700	12,300	26,400	8,790	24,500	27,000
8	3,530	8,810	8,420	20,000	9,300	13,000	23,700	11,800	31,500	8,830	21,000	20,300
9	3,210	8,880	7,690	18,600	8,230	14,000	23,500	11,100	28,700	8,290	16,800	16,500
10	3,350	8,790	7,130	17,900	7,780	15,400	24,300	10,500	25,500	8,050	19,800	13,800
11	4,680	8,020	7,270	16,900	7,700	12,500	23,400	9,840	22,700	7,640	19,200	11,800
12	19,300	7,950	15,100	15,500	7,050	11,600	25,400	9,140	21,400	7,420	23,100	10,800
13	24,800	10,400	18,100	14,000	6,590	11,800	24,700	9,000	26,200	7,720	27,400	9,840
14	23,900	10,800	22,500	13,200	6,290	13,900	22,500	9,930	29,800	8,160	24,000	9,710
15	17,700	12,400	25,300	11,900	6,160	12,900	20,300	9,870	28,500	6,660	19,300	10,400
16	14,700	11,500	25,000	10,900	6,720	13,300	18,700	9,580	29,900	6,320	16,600	20,900
17	22,400	20,500	22,400	10,300	e5,500	15,500	17,100	9,160	25,200	6,040	15,500	27,400
18	36,300	30,200	19,200	10,300	e6,100	22,700	16,100	8,650	22,300	5,550	14,300	23,500
19	29,200	34,300	16,400	8,880	e7,500	36,200	15,100	8,240	21,000	5,820	12,200	21,000
20	20,200	30,500	17,400	8,970	e8,800	46,500	14,100	7,490	22,300	6,010	10,800	19,200
21	16,600	25,200	24,500	9,460	e9,600	60,300	12,900	7,170	45,200	5,350	9,670	17,300
22	14,100	21,300	25,900	8,990	13,900	78,100	12,400	7,330	52,800	11,500	8,740	15,600
23	12,100	21,000	23,700	e8,700	23,800	79,000	12,500	7,110	58,700	18,600	8,160	21,200
24	10,200	20,900	21,000	e8,400	23,200	67,700	12,200	7,100	51,400	15,000	7,490	51,100
25	8,790	20,000	20,600	e8,600	17,900	52,900	11,700	7,320	41,700	13,300	6,550	48,400
26	9,430	17,700	20,700	e8,900	15,900	43,600	11,200	10,700	33,900	11,000	5,950	37,200
27	11,800	16,300	18,200	e8,800	14,200	40,400	11,300	15,200	29,400	8,940	5,890	30,100
28	12,800	15,500	16,600	e8,400	12,800	36,400	11,400	14,700	24,200	7,900	6,010	29,300
29	12,100	14,300	15,900	e8,300	---	31,600	13,600	14,500	19,400	7,360	5,730	30,800
30	11,300	12,900	15,200	e8,600	---	34,800	12,700	13,100	16,600	7,220	5,620	33,200
31	11,000	---	14,200	e8,800	---	40,400	---	11,800	---	6,840	5,490	---
TOTAL	380,530	447,890	500,550	468,500	285,330	908,700	595,600	326,230	935,900	285,930	413,400	695,840
MEAN	12,280	14,930	16,150	15,110	10,190	29,310	19,850	10,520	31,200	9,224	13,340	23,190
MAX	36,300	34,300	25,900	38,200	23,800	79,000	37,100	15,200	58,700	18,600	27,800	51,100
MIN	3,130	7,610	7,130	8,300	5,500	11,600	11,200	7,100	15,500	5,350	5,490	5,740

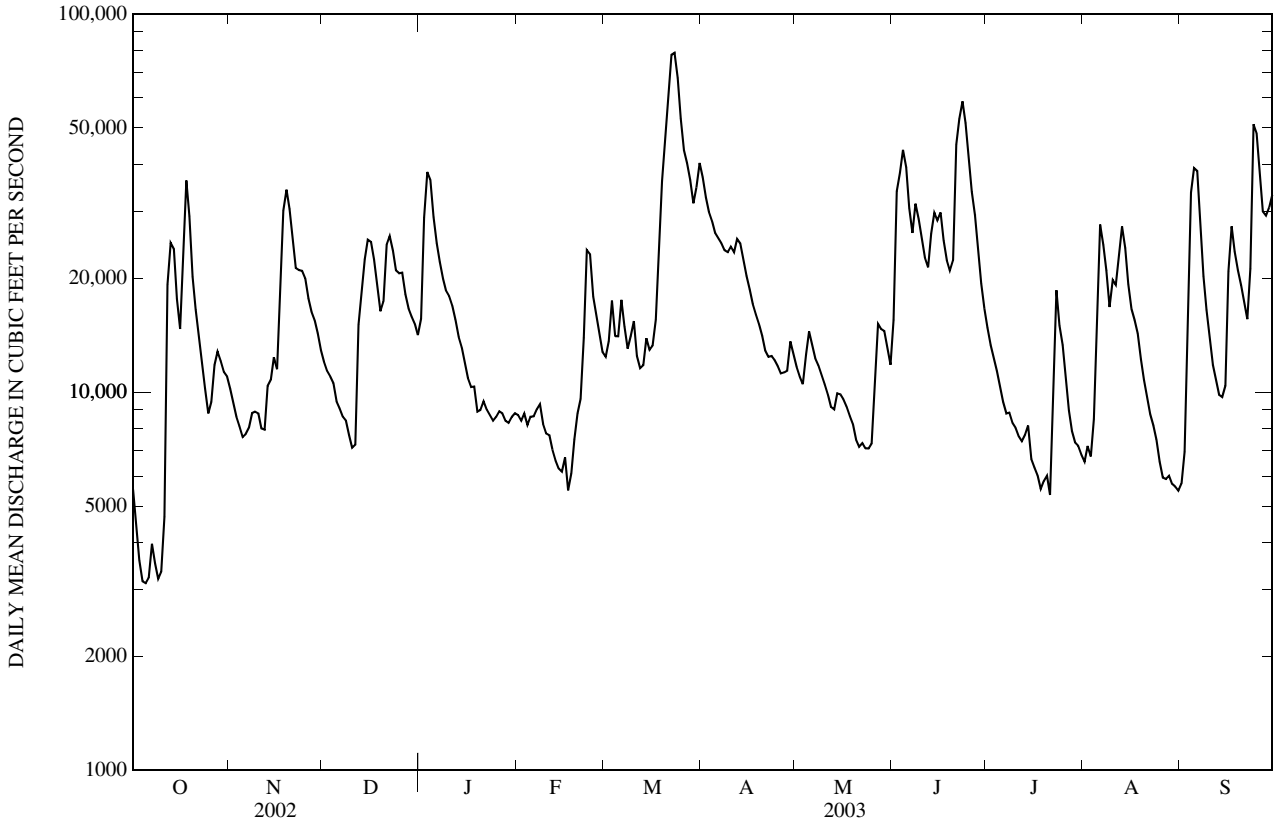
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1913 - 2003, BY WATER YEAR (WY)

MEAN	6,854	10,360	12,570	12,380	12,730	20,580	22,150	14,140	9,391	7,005	5,938	5,919
MAX	28,710	27,340	42,860	34,950	27,550	60,840	52,680	31,690	33,460	25,720	30,290	23,190
(WY)	(1956)	(1928)	(1997)	(1979)	(1951)	(1936)	(1940)	(1989)	(1972)	(1928)	(1955)	(2003)
MIN	1,632	1,868	2,037	2,539	3,500	7,715	6,828	5,074	2,572	1,548	1,808	1,762
(WY)	(1942)	(1915)	(1923)	(1981)	(1920)	(1981)	(1985)	(1995)	(1965)	(1965)	(1965)	(1932)

01463500 DELAWARE RIVER AT TRENTON, NJ—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1913 - 2003	
ANNUAL TOTAL	3,604,330		6,244,400			
ANNUAL MEAN	9,875		17,110		11,660	
HIGHEST ANNUAL MEAN					19,810	1928
LOWEST ANNUAL MEAN					4,708	1965
HIGHEST DAILY MEAN	41,800	May 15	79,000	Mar 23	279,000	Aug 20, 1955
LOWEST DAILY MEAN	2,480	Jan 21	3,130	Oct 5	1,240	Oct 31, 1914
ANNUAL SEVEN-DAY MINIMUM	2,760	Jan 18	3,370	Oct 4	1,310	Oct 31, 1914
MAXIMUM PEAK FLOW			83,100	Mar 22	329,000a	Aug 20, 1955
MAXIMUM PEAK STAGE			16.66	Mar 22	28.60b	Aug 20, 1955
INSTANTANEOUS LOW FLOW			2,920	Oct 6	1,180	Oct 31, 1963
10 PERCENT EXCEEDS	21,000		31,500		24,600	
50 PERCENT EXCEEDS	7,610		13,300		7,930	
90 PERCENT EXCEEDS	3,100		7,010		3,020	

a From rating curve extended above 230,000 ft^3/s, maximum flow since 1692.
b From high-water mark in gage house, current datum.
e Estimated



01463620 ASSUNPINK CREEK NEAR CLARKSVILLE, NJ

LOCATION.--Lat 40°16'11", long 74°40'19", Mercer County, Hydrologic Unit 02040105, on left bank 250 ft upstream from bridge on Quaker Bridge Road, 0.7 mi downstream from dam at Lake Mercer, 1.9 mi south of Clarksville, 2.0 mi upstream from Shipetaukin Creek, and 7.6 mi upstream from mouth.

DRAINAGE AREA.--34.3 mi^2.

PERIOD OF RECORD.--Occasional low-flow measurements water years 1963-67. Daily values for October 1972 to September 1981 and March 1992 to October 1995. Daily values for growing season only (growing season is April through October) for April 1996 to October 1999. Daily values for April 2000 to current year.

GAGE.--Water-stage recorder. Datum of gage is 49.28 ft above NGVD of 1929.

REMARKS.--Records fair, except estimated discharges which are poor. Regulation from flood-control dams and ponds upstream. Diversions for irrigation upstream from station. Several measurements of water temperature made during the year. Satellite gage-height telemetry at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Aug. 28, 1971, reached a stage of 10.9 ft, discharge, 1,500 ft^3/s.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.1	29	41	71	24	165	60	29	74	24	17	14
2	8.5	27	38	144	25	147	56	29	82	21	21	17
3	7.9	24	34	171	26	199	52	28	72	20	26	20
4	7.5	22	32	175	29	195	49	27	137	19	27	24
5	7.1	20	32	154	32	193	46	27	185	18	30	27
6	6.5	27	32	132	33	203	43	27	158	19	35	27
7	5.9	31	31	112	35	201	44	27	148	18	33	25
8	5.6	33	30	99	33	196	50	30	164	17	34	23
9	5.4	31	30	90	31	188	72	31	144	16	47	21
10	5.7	27	29	81	31	167	107	31	124	16	67	19
11	20	26	33	73	31	133	111	30	98	17	62	18
12	77	30	86	63	30	109	129	28	80	18	50	16
13	86	55	123	58	28	98	138	26	79	18	41	18
14	72	64	165	53	27	91	117	24	90	17	34	19
15	51	59	157	48	27	83	94	22	85	16	29	21
16	45	51	122	43	26	76	78	22	73	15	26	32
17	52	86	94	41	31	72	67	22	59	14	24	33
18	50	152	74	38	28	67	59	21	73	14	23	30
19	43	149	61	35	28	62	55	20	95	19	21	30
20	35	113	62	33	28	64	49	19	93	19	20	27
21	29	87	74	33	30	100	45	19	103	19	19	25
22	23	81	71	32	57	113	42	20	115	24	18	24
23	19	92	64	29	184	101	41	20	102	37	17	29
24	16	99	55	26	216	84	39	23	84	39	15	37
25	15	85	73	25	211	72	38	25	69	36	13	36
26	26	70	137	24	208	63	38	65	56	31	12	34
27	35	64	138	24	205	61	39	125	45	26	12	36
28	34	58	110	23	199	57	39	113	36	24	11	39
29	30	52	88	23	---	54	36	90	31	21	11	35
30	30	47	73	23	---	68	33	70	27	18	12	29
31	30	---	64	24	---	66	---	56	---	16	14	---
TOTAL	887.2	1,791	2,253	2,000	1,893	3,548	1,866	1,146	2,781	646	821	785
MEAN	28.6	59.7	72.7	64.5	67.6	114	62.2	37.0	92.7	20.8	26.5	26.2
MAX	86	152	165	175	216	203	138	125	185	39	67	39
MIN	5.4	20	29	23	24	54	33	19	27	14	11	14

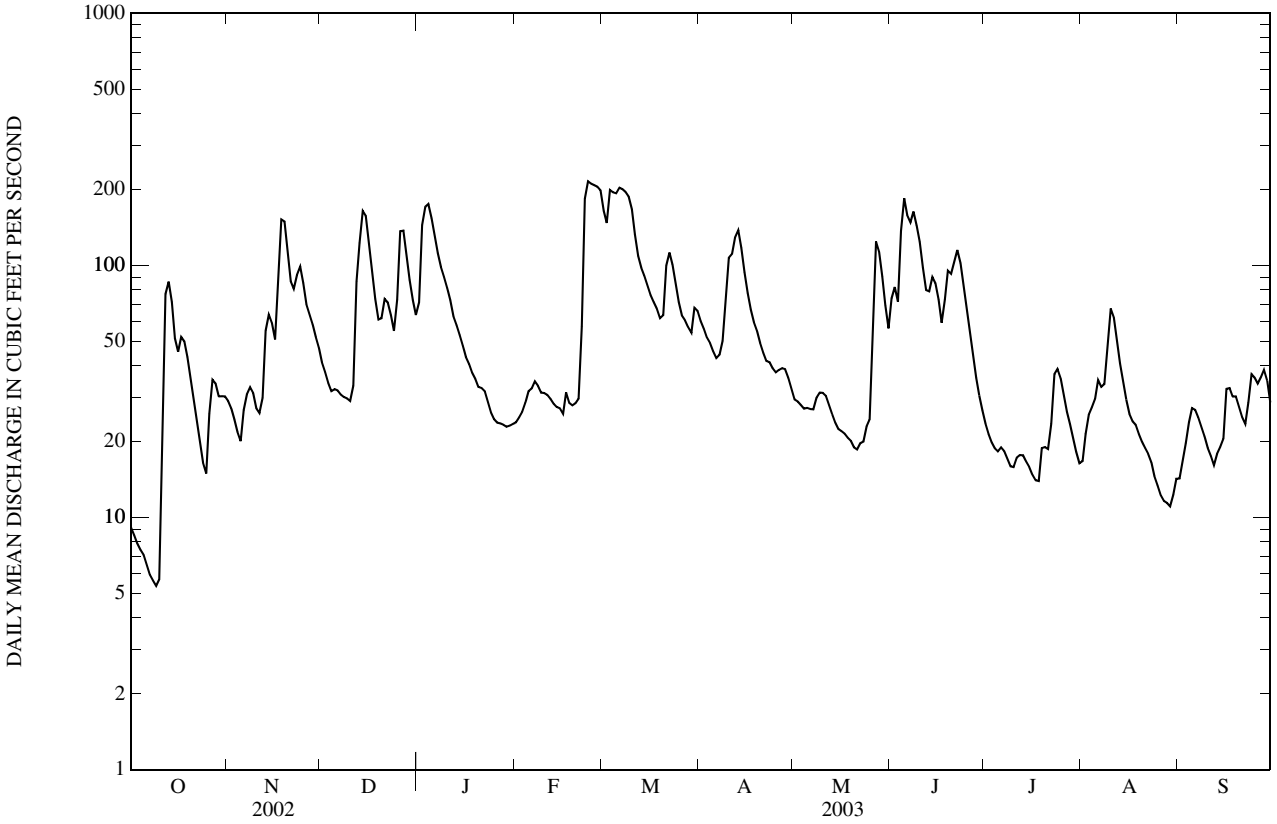
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1973 - 2003, BY WATER YEAR (WY)

MEAN	33.5	40.9	69.3	73.4	66.2	85.8	63.3	45.4	40.7	26.8	27.9	32.0
MAX	93.8	112	142	151	136	204	115	115	92.7	142	77.4	126
(WY)	(1997)	(1973)	(1993)	(1979)	(1994)	(1994)	(1973)	(1998)	(2003)	(1975)	(1994)	(1999)
MIN	5.75	6.75	13.9	12.9	19.0	33.6	23.7	16.0	9.24	2.95	4.34	5.67
(WY)	(2002)	(2002)	(2002)	(1981)	(2002)	(2002)	(1995)	(1992)	(1999)	(2002)	(2002)	(2001)

01463620 ASSUNPINK CREEK NEAR CLARKSVILLE, NJ—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1973 - 2003	
ANNUAL TOTAL	10,159.5		20,417.2			
ANNUAL MEAN	27.8		55.9		50.2	
HIGHEST ANNUAL MEAN					74.7	1994
LOWEST ANNUAL MEAN					16.6	2002
HIGHEST DAILY MEAN	165	Dec 14	216	Feb 24	832	Feb 26, 1979
LOWEST DAILY MEAN	1.1	Jul 12	5.4	Oct 9	1.0a	Sep 6, 1995
ANNUAL SEVEN-DAY MINIMUM	1.2	Jul 12	6.2	Oct 4	1.2a	Jul 26, 1999
MAXIMUM PEAK FLOW			220	Feb 23	1,050a	Jul 21, 1975
MAXIMUM PEAK STAGE			6.38	Feb 23	9.36a	Jul 21, 1975
INSTANTANEOUS LOW FLOW			5.3	Oct 9	1.0a	Sep 6, 1995
10 PERCENT EXCEEDS	65		127		102	
50 PERCENT EXCEEDS	21		35		34	
90 PERCENT EXCEEDS	3.4		18		12	

a Not all monthly record is included. See Period of Record section.



01464000 ASSUNPINK CREEK AT TRENTON, NJ

LOCATION.--Lat 40°13'27", long 74°44'57", Mercer County, Hydrologic Unit 02040105, on left bank 20 ft upstream from bridge on Chambers Street (Lincoln Avenue) in Trenton, and 1.5 mi upstream from mouth.

DRAINAGE AREA.--90.6 mi^2.

PERIOD OF RECORD.--August 1923 to current year.

REVISED RECORDS.--WDR NJ-82-2: Drainage area.

GAGE.--Water-stage recorder. Concrete control since July 10, 1932. Datum of gage is 24.76 ft above NGVD of 1929 (levels from New Jersey Geological Survey bench mark).

REMARKS.--Records good. Records include water diverted from outside the basin since February 1954 for municipal supply which returns to Assunpink Creek through Ewing-Lawrence Sewerage Authority Treatment Plant, 2.4 mi above station (records given herein). In addition there is an average inflow of about 2.0 ft^3/s from industrial use of water that originates outside the basin. Some diversion for irrigation in headwater area during summer months. Flow regulated by several flood-control reservoirs upstream from gage since mid-1970's. U. S. Geological Survey gage-height telemetry and National Weather Service telephone gage-height telemetry at station. Several measurements of water temperature were made during the year.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 900 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Feb 22	1830	*1,430	*8.04	May 26	1315	1,270	7.64
Mar 6	1315	929	6.67	Jun 4	0830	1,100	7.17

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	48	105	108	276	68	309	177	91	442	101	183	52
2	44	92	99	426	71	566	163	111	277	93	130	100
3	40	83	92	414	70	604	148	115	211	88	91	119
4	39	75	86	456	88	447	135	89	849	82	83	107
5	39	71	91	362	86	545	126	85	606	86	193	91
6	35	183	89	310	79	745	116	89	464	88	168	74
7	33	116	83	261	82	553	129	83	478	76	127	66
8	31	98	86	227	81	443	188	122	497	72	174	60
9	31	88	95	214	76	462	315	100	384	67	173	55
10	41	81	96	187	77	423	361	100	307	74	239	49
11	415	87	227	162	75	320	336	96	249	85	180	46
12	353	201	429	142	72	263	430	92	220	70	130	43
13	231	263	378	130	70	250	353	84	321	65	107	121
14	165	188	538	121	67	238	287	78	375	63	92	139
15	124	153	368	113	68	206	236	74	272	61	80	153
16	183	142	292	103	64	190	204	67	207	57	71	241
17	158	473	226	101	60	183	180	77	161	54	74	126
18	127	442	177	92	76	168	158	62	399	84	85	93
19	105	330	150	88	69	148	143	59	309	189	68	184
20	89	256	280	88	77	249	133	56	292	87	61	93
21	78	199	260	83	90	561	127	60	530	72	57	76
22	68	281	200	79	642	412	122	67	457	181	53	67
23	61	245	165	75	953	301	116	67	299	170	50	218
24	56	201	143	70	725	244	109	96	223	127	44	137
25	53	175	447	68	550	214	105	74	187	101	41	104
26	291	148	480	66	468	199	137	612	175	85	40	91
27	149	180	361	65	403	206	116	408	157	73	40	106
28	117	146	282	62	346	175	109	300	137	69	38	288
29	109	129	226	64	---	193	102	227	121	61	36	133
30	141	119	188	63	---	245	97	181	113	55	103	103
31	129	---	167	64	---	210	---	174	---	51	69	---
TOTAL	3,583	5,350	6,909	5,032	5,653	10,272	5,458	3,996	9,719	2,687	3,080	3,335
MEAN	116	178	223	162	202	331	182	129	324	86.7	99.4	111
MAX	415	473	538	456	953	745	430	612	849	189	239	288
MIN	31	71	83	62	60	148	97	56	113	51	36	43
(I)	14.9	16.6	20.1	21.0	19.0	22.8	23.2	17.5	25.8	14.5	14.3	15.6

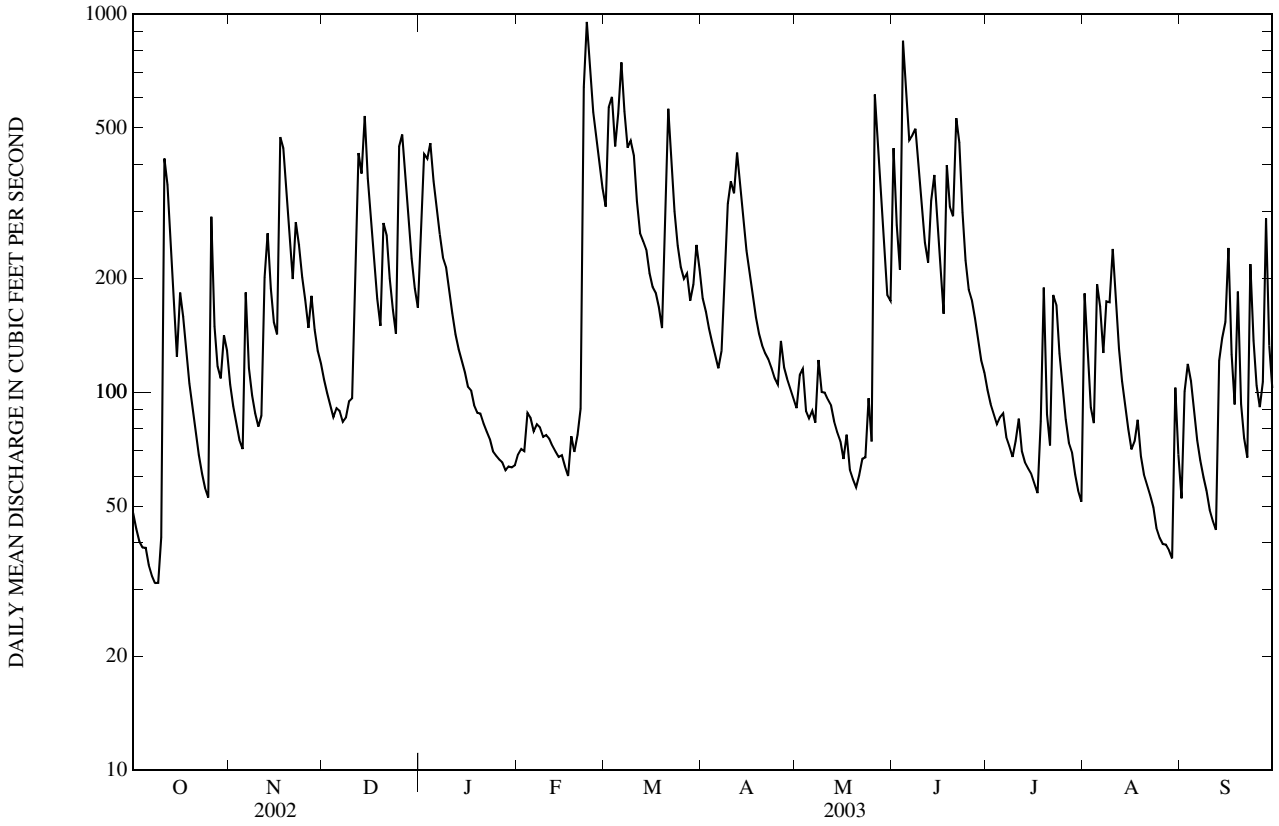
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1924 - 2003, BY WATER YEAR (WY)

MEAN	80.3	113	148	167	185	214	180	132	103	98.2	93.0	93.9
MAX	328	331	501	498	395	554	494	340	371	545	355	395
(WY)	(1997)	(1973)	(1997)	(1979)	(1939)	(1994)	(1983)	(1989)	(1996)	(1975)	(1971)	(1999)
MIN	19.1	27.6	32.0	44.2	52.0	76.7	65.2	40.0	25.9	17.2	17.3	15.8
(WY)	(1931)	(1932)	(1999)	(1981)	(1934)	(1985)	(1963)	(1941)	(1942)	(1955)	(1966)	(1943)

01464000 ASSUNPINK CREEK AT TRENTON, NJ—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1924 - 2003	
ANNUAL TOTAL	38,019		65,074			
ANNUAL MEAN	104		178		134	
(1)	15.3		18.7			
HIGHEST ANNUAL MEAN					233	1984
LOWEST ANNUAL MEAN					69.2	1931
HIGHEST DAILY MEAN	736	May 18	953	Feb 23	4,050	Jul 21, 1975
LOWEST DAILY MEAN	13	Aug 14	31	Oct 8,9	4.0	Jul 21, 1929
ANNUAL SEVEN-DAY MINIMUM	14	Aug 13	35	Oct 3	9.6	Aug 25, 1944
MAXIMUM PEAK FLOW			1,430	Feb 22	5,450	Jul 21, 1975
MAXIMUM PEAK STAGE			8.04	Feb 22	14.61a	Jul 21, 1975
INSTANTANEOUS LOW FLOW			26	Oct 8,10	1.0	Aug 21, 1931
10 PERCENT EXCEEDS	227		410		276	
50 PERCENT EXCEEDS	69		122		87	
90 PERCENT EXCEEDS	26		61		32	

a From high-water mark in gage house
(I) Inflow from outside basin, equivalent in cubic feet per second, 2.4 mi. upstream of station through plant of Ewing-Lawrence Sewerage Authority.



01464500 CROSSWICKS CREEK AT EXTONVILLE, NJ

LOCATION.--Lat 40°08'14", long 74°36'00", Mercer County, Hydrologic Unit 02040201, on right bank upstream from bridge on Extonville Road, 0.5 mi south of Extonville, 0.5 mi upstream from Pleasant Run, and 0.7 mi downstream from Mercer- Monmouth County line.

DRAINAGE AREA.--81.5 mi^2.

PERIOD OF RECORD.--August 1940 to October 1951, October 1952 to current year.

REVISED RECORDS.--WDR NJ-79-2: 1971(M). WDR NJ-82-2: Drainage area.

GAGE.--Water-stage recorder, crest-stage gage, and concrete control. Datum of gage is 24.94 ft above NGVD of 1929.

REMARKS.--Records fair, except for estimated daily discharges which are poor. Flow regulated occasionally by lakes above station. Several measurements of water temperature were made during the year. Satellite gage-height telemetry at station.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 750 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Feb 24	0300	*2,310	*11.82	Jun 8	1430	1,080	8.64
Mar 3	0830	1,000	8.41	Aug 8	1715	787	7.64

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e29	142	81	169	89	175	122	79	131	63	72	111
2	e25	106	76	584	99	356	116	76	141	59	468	220
3	e22	85	71	409	94	888	107	75	101	66	213	180
4	e22	73	65	518	91	394	99	68	352	75	116	196
5	e21	64	66	388	123	356	98	65	648	63	180	258
6	e19	151	81	250	91	559	95	80	339	55	117	138
7	e20	165	79	208	88	576	98	88	228	50	85	100
8	19	107	e75	175	84	326	183	84	871	48	585	84
9	19	84	73	172	e80	308	220	83	502	45	389	74
10	19	75	e75	153	e75	268	290	81	233	48	184	66
11	136	71	94	132	e77	195	228	78	162	55	221	62
12	334	103	447	116	e74	174	405	74	133	52	132	57
13	171	280	419	105	e70	170	394	66	298	45	101	82
14	105	214	407	97	e65	159	202	62	315	41	88	112
15	75	149	355	89	e69	140	159	60	593	42	77	91
16	106	122	209	90	e65	134	137	60	343	41	68	148
17	235	309	155	85	e65	132	116	72	179	38	80	111
18	133	491	124	e85	e100	128	103	71	e300	36	167	79
19	88	331	107	e80	e95	118	98	63	553	70	94	104
20	70	188	140	e80	e80	118	93	60	289	56	72	118
21	59	143	247	e80	e85	281	88	69	360	41	62	81
22	52	196	171	e75	259	229	123	93	393	58	57	72
23	48	247	138	e70	1,490	172	131	83	226	180	76	132
24	47	172	116	e70	1,970	144	107	105	165	121	60	249
25	45	136	203	67	940	125	96	94	133	76	49	138
26	133	114	488	67	420	114	103	227	109	58	46	102
27	156	112	298	68	257	129	107	442	93	48	51	88
28	93	108	196	61	200	115	94	208	83	46	83	90
29	75	94	159	76	---	107	85	164	76	45	56	94
30	122	87	140	82	---	144	81	121	70	42	105	80
31	187	---	130	81	---	145	---	98	---	41	257	---
TOTAL	2,685	4,719	5,485	4,782	7,295	7,379	4,378	3,149	8,419	1,804	4,411	3,517
MEAN	86.6	157	177	154	261	238	146	102	281	58.2	142	117
MAX	334	491	488	584	1,970	888	405	442	871	180	585	258
MIN	19	64	65	61	65	107	81	60	70	36	46	57
CFSM	1.06	1.93	2.17	1.89	3.20	2.92	1.79	1.25	3.44	0.71	1.75	1.44
IN.	1.23	2.15	2.50	2.18	3.33	3.37	2.00	1.44	3.84	0.82	2.01	1.61

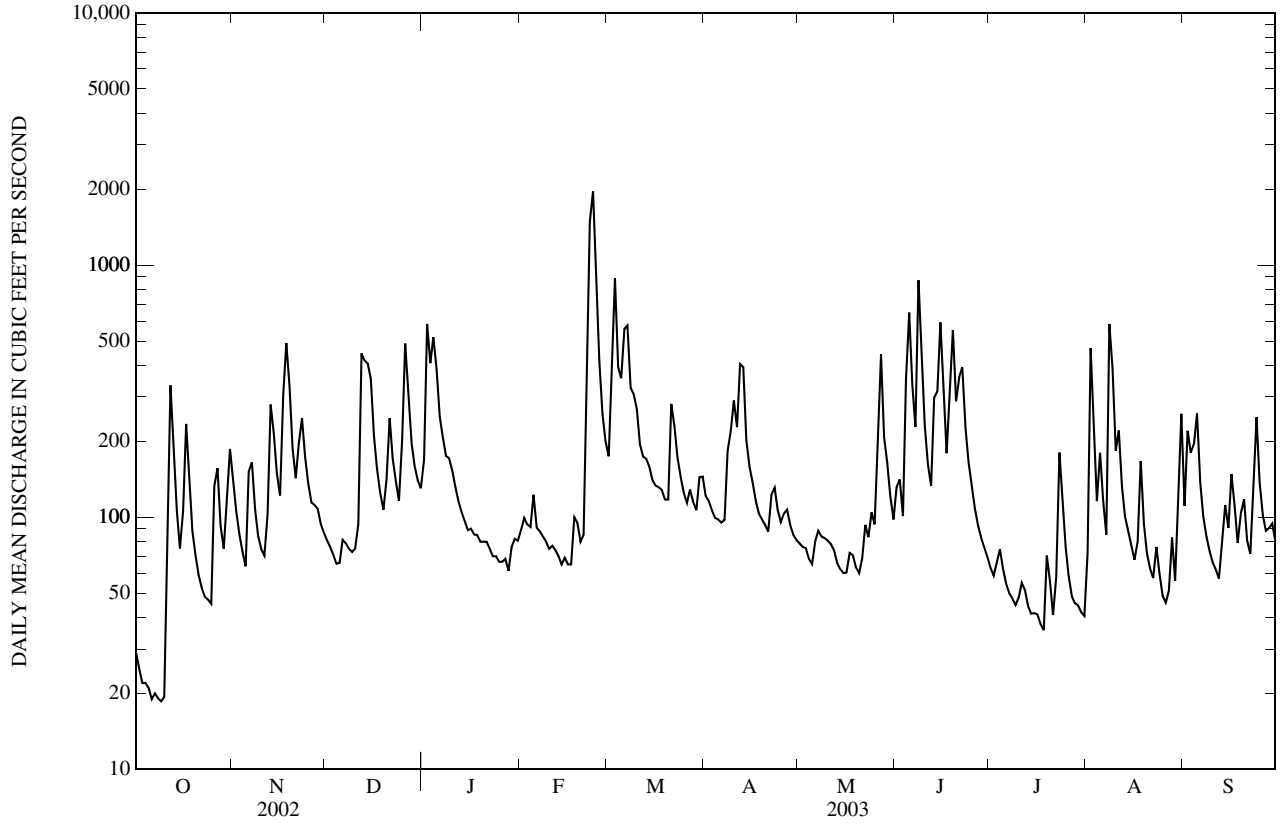
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1940 - 2003, BY WATER YEAR (WY)

MEAN	87.5	125	158	175	179	201	170	131	98.2	95.7	93.5	89.8
MAX	231	406	392	452	416	476	388	325	281	390	299	284
(WY)	(1997)	(1973)	(1997)	(1978)	(1979)	(1994)	(1983)	(1998)	(2003)	(1989)	(1971)	(1971)
MIN	32.9	36.6	42.6	62.1	55.6	86.1	68.4	55.0	35.7	20.2	22.4	28.3
(WY)	(1966)	(2002)	(1999)	(1981)	(2002)	(1985)	(1985)	(2001)	(1999)	(2002)	(2002)	(1995)

01464500 CROSSWICKS CREEK AT EXTONVILLE, NJ—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1940 - 2003	
ANNUAL TOTAL	28,957.7		58,023			
ANNUAL MEAN	79.3		159		133	
HIGHEST ANNUAL MEAN					225	1978
LOWEST ANNUAL MEAN					54.8	2002
HIGHEST DAILY MEAN	491	Nov 18	1,970	Feb 24	3,930	Aug 28, 1971
LOWEST DAILY MEAN	6.8	Aug 22	19	Oct 6, 8-10	6.8	Aug 22, 2002
ANNUAL SEVEN-DAY MINIMUM	8.6	Aug 16	20	Oct 4	8.6	Aug 16, 2002
MAXIMUM PEAK FLOW			2,310	Feb 24	4,860	Sep 1, 1978
MAXIMUM PEAK STAGE			11.82	Feb 24	14.18	Sep 1, 1978
INSTANTANEOUS LOW FLOW			17	Oct 9	5.8	Aug 22, 2002
ANNUAL RUNOFF (CFSM)	0.97		1.95		1.64	
ANNUAL RUNOFF (INCHES)	13.22		26.48		22.23	
10 PERCENT EXCEEDS	161		336		248	
50 PERCENT EXCEEDS	59		103		92	
90 PERCENT EXCEEDS	15		56		40	

e Estimated



DELAWARE RIVER BASIN

01464598 DELAWARE RIVER AT BURLINGTON, NJ

LOCATION.--Lat 40°04'43", long 74°52'25", Burlington County, Hydrologic Unit 02040201, on left bank in the intake canal of the Public Service Electric and Gas Company generating station, 0.3 mi downstream from Burlington-Bristol Bridge, 1.4 mi downstream from Assiscunk Creek, and at river mile 117.54.

DRAINAGE AREA.--7,160 mi^2.

PERIOD OF RECORD.--July 1964 to current year. March 1921 to July 1926, January 1931 to November 1939, August 1951 to June 1954, July 1957 to June 1964, in files of Philadelphia District of the Army Corps of Engineers.

REVISED RECORDS.--WDR NJ-76-1: 1973 (m).

GAGE.--Water-stage recorder. Datum of gage is 12.90 ft below National Geodetic Vertical Datum of 1929 (NGVD of 1929). Gage-height record converted to elevation above or below NGVD of 1929 for publication. To determine corresponding North American Vertical Datum of 1988 (NAVD of 1988) elevation, subtract 1.07 ft. To determine corresponding Mean Lower Low Water Datum elevation, add 2.50 ft (revised to tidal Epoch 1983-2001, correction based on data from National Ocean Service station 8539094). Prior to May 20, 1971, water-stage recorder at site 0.7 mi upstream at same datum.

REMARKS.--Ice effect evident Jan. 17 to Feb. 28. Summaries for months with short periods of no gage-height record have been estimated with little or no loss of accuracy, unless otherwise noted. The monthly minimum for January and the monthly maximum for February were obtained from data collected at the National Ocean Service tide gage 8539094 Burlington, Delaware River. Some periods cannot be estimated and are noted by dash (---) lines. Satellite stage telemetry at station.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation recorded, 8.78 ft (NGVD of 1929), Dec. 11, 1992; minimum recorded, -6.86 ft (NGVD of 1929), Nov. 21, 1989.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum elevation known, 10.8 ft (NGVD of 1929), Aug. 20, 1955, from high-water mark at site 1.4 mi upstream; minimum elevation known, -9.1 ft (NGVD of 1929), Dec. 31, 1962, at present site.

EXTREMES FOR CURRENT YEAR.--Maximum elevation recorded, 8.02 ft (NGVD of 1929), Sept. 19; minimum recorded, -5.32 ft (NGVD of 1929), Feb. 24, computed from data collected at National Ocean Service tide gage 8539094 Burlington, Delaware River.

Summaries of tide elevations during the water year are as follows:

TIDE ELEVATIONS, IN FEET, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

		OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
Maximum	Elevation	6.52	6.52	6.47	7.35	6.57 a	7.55	6.81	6.56	7.02	6.48	6.57	8.02
high tide	Date	5	22	25	3	23 a	21	18	17	14	12	10	19
Minimum	Elevation	-3.27	-3.51	-4.12	-5.32 a	-4.66	-4.58	-3.13	-3.13	-2.61	-2.96	-2.93	-2.71
low tide	Date	6	24	3	24 a	21	3	24	13	1	28	31	2
Mean high tide		5.28	4.87	4.83	---	---	5.09	5.43	5.31	5.94	5.36	5.44	5.95
Mean water level		1.91	1.42	1.33	---	---	1.77	1.97	1.77	2.46	1.69	1.79	2.52
Mean low tide		-1.82	-2.34	-2.42	---	---	-1.86	-1.82	-2.13	-1.34	-2.33	-2.21	-1.28

a - obtained from data collected by NOS station 8539094.

Figure 24. U.S. Geological Survey gage continuously monitoring the stage at Salem River at Woodstown, NJ. Photograph taken by Blaine T. White, 2003.

01465850 SOUTH BRANCH RANCOCAS CREEK AT VINCENTOWN, NJ

LOCATION.--Lat 39°56'25", long 74°45'46", Burlington County, Hydrologic Unit 02040202, on left bank 20 ft upstream from highway bridge on Landing Road (County Route 641), 0.8 mi west of Vincentown, 2.9 mi southwest of Lumberton, and 3.1 mi upstream from Southwest Branch Rancocas Creek.

DRAINAGE AREA.--64.5 mi^2.

PERIOD OF RECORD.--July 1961 to October 1975, October 1999 to June 2002, and July 2003 to September 2003. Operated as a crest-stage partial-record station 1976-95 and July 2002 to June 2003.

GAGE.--Water-stage recorder. Datum of gage is 13.17 ft above NGVD of 1929. Satellite gage-height telemetry at station. Several measurements of water temperature were made during the year.

REMARKS.--Records fair. Occasional regulation by lakes and ponds above station.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 350 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jun 9	---	510a	5.75a	Feb 24	---	*671a	*6.39a

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	---	56	38	32
2	---	---	---	---	---	---	---	---	---	50	82	39
3	---	---	---	---	---	---	---	---	---	57	76	40
4	---	---	---	---	---	---	---	---	---	70	64	46
5	---	---	---	---	---	---	---	---	---	70	81	82
6	---	---	---	---	---	---	---	---	---	63	102	105
7	---	---	---	---	---	---	---	---	---	58	77	103
8	---	---	---	---	---	---	---	---	---	53	88	90
9	---	---	---	---	---	---	---	---	---	46	97	71
10	---	---	---	---	---	---	---	---	---	46	108	63
11	---	---	---	---	---	---	---	---	---	52	122	54
12	---	---	---	---	---	---	---	---	---	51	111	46
13	---	---	---	---	---	---	---	---	---	46	96	54
14	---	---	---	---	---	---	---	---	---	42	80	80
15	---	---	---	---	---	---	---	---	---	39	62	88
16	---	---	---	---	---	---	---	---	---	36	54	142
17	---	---	---	---	---	---	---	---	---	34	49	124
18	---	---	---	---	---	---	---	---	---	32	53	100
19	---	---	---	---	---	---	---	---	---	32	48	99
20	---	---	---	---	---	---	---	---	---	29	43	93
21	---	---	---	---	---	---	---	---	---	26	39	78
22	---	---	---	---	---	---	---	---	---	25	35	73
23	---	---	---	---	---	---	---	---	---	57	33	98
24	---	---	---	---	---	---	---	---	---	62	29	134
25	---	---	---	---	---	---	---	---	---	57	26	111
26	---	---	---	---	---	---	---	---	---	49	24	95
27	---	---	---	---	---	---	---	---	e82	42	23	84
28	---	---	---	---	---	---	---	---	69	38	23	79
29	---	---	---	---	---	---	---	---	59	35	23	76
30	---	---	---	---	---	---	---	---	56	36	26	66
31	---	---	---	---	---	---	---	---	---	32	31	---
TOTAL	---	---	---	---	---	---	---	---	---	1,421	1,843	2,445
MEAN	---	---	---	---	---	---	---	---	---	45.8	59.5	81.5
MAX	---	---	---	---	---	---	---	---	---	70	122	142
MIN	---	---	---	---	---	---	---	---	---	25	23	32
CFSM	---	---	---	---	---	---	---	---	---	0.71	0.92	1.26
IN.	---	---	---	---	---	---	---	---	---	0.82	1.06	1.41

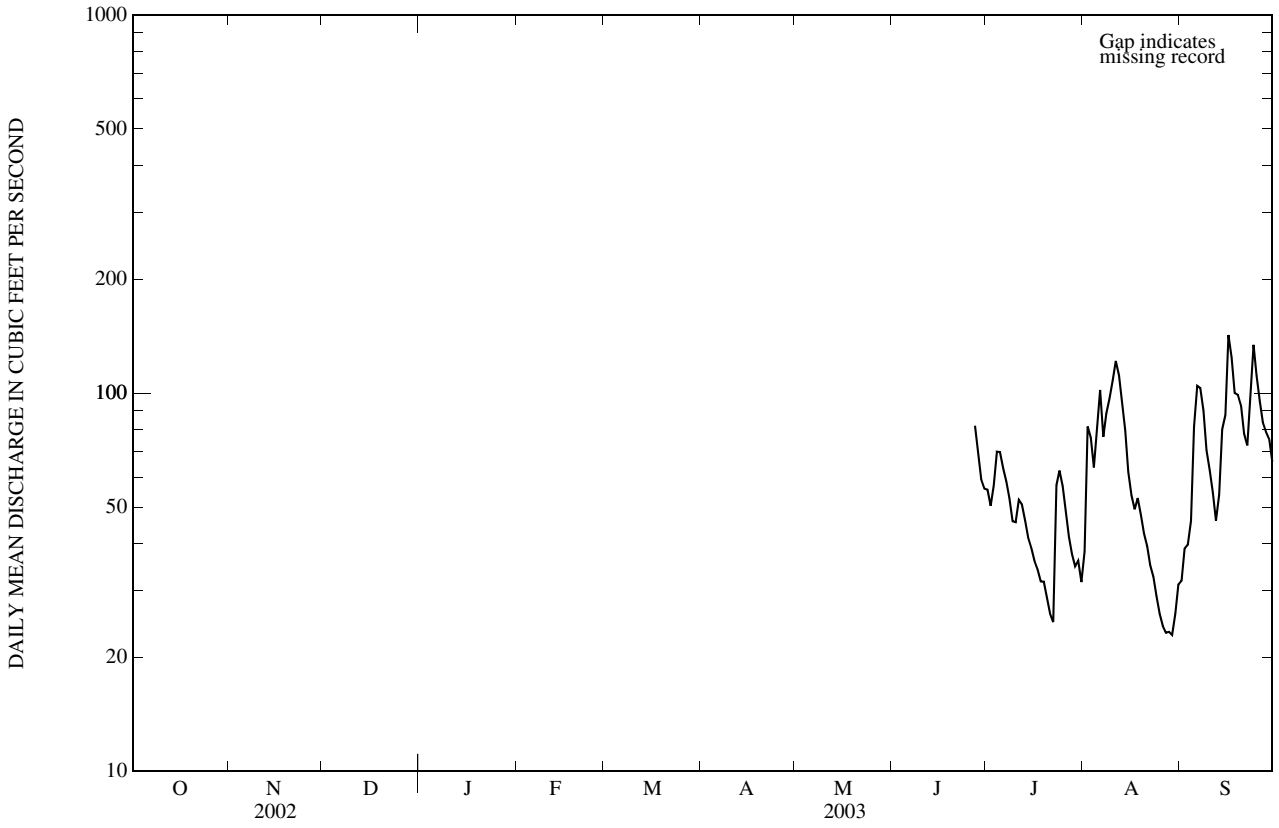
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1961 - 2003, BY WATER YEAR (WY)

MEAN	65.0	91.3	123	113	122	135	121	85.2	62.5	56.0	65.0	63.6
MAX	155	325	291	177	238	200	243	184	165	139	169	155
(WY)	(1976)	(1973)	(1973)	(1964)	(1973)	(1962)	(1970)	(1972)	(1968)	(1975)	(1967)	(1975)
MIN	15.5	15.7	18.6	31.4	37.0	61.3	56.4	38.0	16.6	14.1	14.0	13.9
(WY)	(2002)	(2002)	(2002)	(1966)	(2002)	(2002)	(2002)	(1965)	(1965)	(1971)	(1964)	(1965)

01465850 SOUTH BRANCH RANCOCAS CREEK AT VINCENTOWN, NJ—Continued

SUMMARY STATISTICS	FOR JUNE 27- SEPT 30,2003		WATER YEARS 1961-2003	
ANNUAL MEAN			94.1	
HIGHEST ANNUAL MEAN			157	1973
LOWEST ANNUAL MEAN			47.3	1966
HIGHEST DAILY MEAN	142	Sep 16	981	Nov 9, 1972
LOWEST DAILY MEAN	23	Aug 27-29	3.1	Aug 9, 1966
ANNUAL SEVEN-DAY MINIMUM			7.7	Sep 7, 1966
MAXIMUM PEAK FLOW	671a	Feb 24	1320	Aug 28, 1978
MAXIMUM PEAK STAGE	6.39a	Feb 24	7.98	Aug 28, 1978
INSTANTANEOUS LOW FLOW	22	Aug 29	2.8	Jul 17, 1966
ANNUAL RUNOFF (CFSM)			1.46	
ANNUAL RUNOFF (INCHES)			19.82	
10 PERCENT EXCEEDS			187	
50 PERCENT EXCEEDS			72	
90 PERCENT EXCEEDS			20	

a Maximum gage height and discharge for the 2003 Water Year obtained from the downstream crest-stage gage.
e Estimated



01466500 MCDONALDS BRANCH IN LEBANON STATE FOREST, NJ
(Hydrologic bench-mark station)

LOCATION.--Lat 39°53'06", long 74°30'19", Burlington County, Hydrologic Unit 02040202, on right bank, 25 ft upstream from culvert on Butterworth Road in Lebanon State Forest, 3.4 mi upstream from confluence with Cooper Branch, and 7.0 mi southeast of Browns Mills.

DRAINAGE AREA.--2.35 mi^2.

PERIOD OF RECORD.--October 1953 to current year. Prior to October 1962, published as "McDonald Branch in Lebanon State Forest".

REVISED RECORDS.--WDR NJ-82-2: Drainage area.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 117.73 ft above NGVD of 1929 (levels from New Jersey Geological Survey bench mark).

REMARKS.--Records fair, except for estimated daily discharges, which are poor. Gage-height record is collected above concrete control and discharge record, which includes leakage around control, is measured at site 785 ft downstream. Several measurements of water temperature were made during the year.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 7.0 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
		unknown	unknown				

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e0.70	1.2	1.4	e2.1	e1.5	e2.8	2.6	2.3	2.1	2.0	1.7	1.2
2	e0.71	1.2	1.4	e2.6	e1.6	e3.3	2.6	2.2	2.0	1.9	1.9	1.3
3	e0.71	1.2	1.4	e2.9	e1.6	e4.1	2.5	2.0	1.9	2.4	1.7	1.3
4	e0.72	1.2	1.4	e3.2	e1.7	e4.1	2.5	2.0	2.5	2.3	1.6	2.1
5	e0.72	1.2	1.4	e3.0	e1.7	e4.0	2.4	2.0	2.6	2.1	1.5	2.5
6	e0.74	1.3	1.3	e2.7	e1.6	e4.4	2.4	2.0	2.6	2.0	1.5	1.9
7	e0.75	1.2	1.3	e2.5	e1.7	e4.4	2.5	2.0	2.9	1.9	1.6	1.7
8	e0.76	1.2	1.4	e2.5	e1.6	4.0	2.8	2.1	3.7	1.9	1.9	1.6
9	e0.78	1.1	1.4	e2.4	e1.6	3.7	3.0	2.0	3.9	1.8	1.8	1.5
10	e0.80	1.0	1.3	e2.4	e1.6	3.7	3.4	1.9	3.1	1.9	1.7	1.5
11	e0.90	1.1	1.5	e2.3	e1.6	3.5	3.6	1.9	2.6	1.9	1.6	1.4
12	1.0	1.2	1.8	e2.3	e1.6	3.3	3.8	1.8	2.5	1.9	1.6	1.4
13	0.87	1.4	1.7	e2.2	e1.6	3.2	3.6	1.8	2.7	1.8	1.5	1.7
14	0.85	1.3	2.0	e2.1	e1.5	3.2	3.3	1.8	2.7	1.8	1.5	1.6
15	0.80	1.3	1.9	e2.0	e1.5	3.1	2.9	1.8	2.6	1.8	1.4	1.5
16	0.94	1.3	e1.8	e2.0	e1.6	3.1	2.7	1.7	2.5	1.8	1.4	1.6
17	0.98	1.5	e1.6	e1.9	e1.8	3.3	2.6	1.8	2.4	1.7	1.6	1.4
18	0.89	1.5	e1.6	e1.9	e1.7	3.1	2.5	1.7	3.7	1.6	1.6	1.4
19	0.83	1.5	e1.5	e1.8	e1.6	2.9	2.4	1.7	4.1	1.6	1.5	1.5
20	0.81	1.4	e2.0	e1.7	e1.6	2.8	2.4	1.7	3.8	1.6	1.4	1.4
21	e0.80	1.4	e2.1	e1.7	e1.7	3.5	2.4	1.7	3.4	1.5	1.4	1.4
22	e0.80	1.5	e2.0	e1.7	e2.6	3.6	2.7	1.8	3.2	1.6	1.4	1.3
23	e0.79	1.5	e1.9	e1.6	e4.5	3.5	2.6	1.8	2.9	2.1	1.4	1.6
24	e0.78	1.5	e1.9	e1.6	e4.1	3.2	2.5	1.8	2.6	1.9	1.3	1.5
25	e0.77	1.5	e2.2	e1.5	e3.5	2.9	2.4	1.8	2.5	1.8	1.3	1.4
26	1.2	1.4	e2.5	e1.5	e3.1	2.8	2.4	2.5	2.4	1.7	1.3	1.4
27	1.2	1.4	e2.2	e1.5	e2.9	2.8	2.4	2.5	2.3	1.6	1.3	1.4
28	1.2	1.4	e2.1	e1.5	e2.8	2.7	2.4	2.5	2.2	1.5	1.3	1.4
29	1.2	1.4	e2.0	e1.5	---	2.6	2.3	2.4	2.1	1.5	1.2	1.4
30	1.2	1.4	e1.9	e1.5	---	2.7	2.3	2.1	2.1	1.5	1.3	1.4
31	1.2	---	e1.9	e1.5	---	2.6	---	2.1	---	1.5	1.3	---
TOTAL	27.40	39.7	53.8	63.6	57.5	102.9	80.9	61.2	82.6	55.9	46.5	45.7
MEAN	0.88	1.32	1.74	2.05	2.05	3.32	2.70	1.97	2.75	1.80	1.50	1.52
MAX	1.2	1.5	2.5	3.2	4.5	4.4	3.8	2.5	4.1	2.4	1.9	2.5
MIN	0.70	1.0	1.3	1.5	1.5	2.6	2.3	1.7	1.9	1.5	1.2	1.2
CFSM	0.38	0.56	0.74	0.87	0.87	1.41	1.15	0.84	1.17	0.77	0.64	0.65
IN.	0.43	0.63	0.85	1.01	0.91	1.63	1.28	0.97	1.31	0.88	0.74	0.72

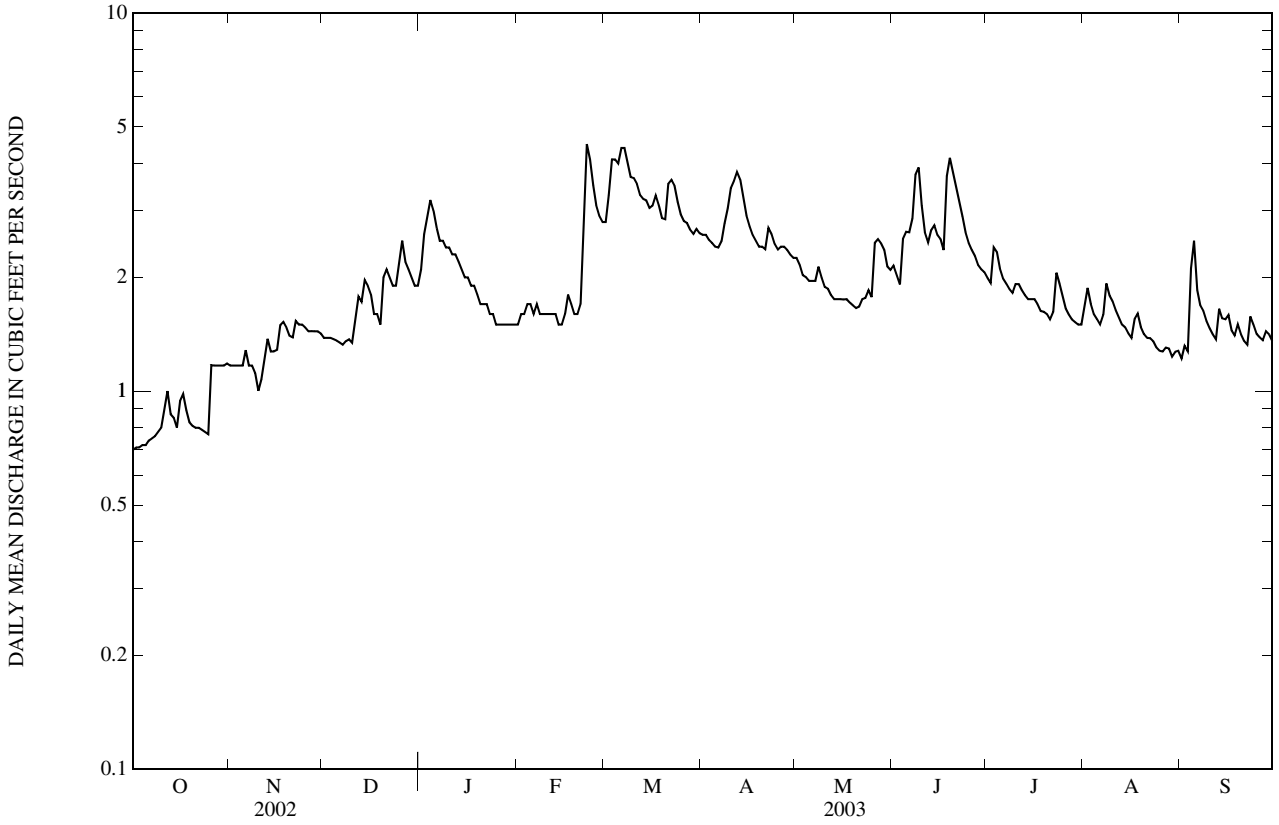
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1954 - 2003, BY WATER YEAR (WY)

MEAN	1.54	1.68	2.01	2.24	2.37	2.85	2.86	2.60	2.15	1.81	1.77	1.61
MAX	4.45	4.82	5.75	4.78	5.69	5.67	5.74	6.86	5.35	4.15	5.65	4.31
(WY)	(1959)	(1973)	(1973)	(1973)	(1973)	(1979)	(1984)	(1998)	(1979)	(1958)	(1958)	(1958)
MIN	0.80	0.88	0.87	0.85	0.83	0.94	1.10	1.17	1.05	0.90	0.80	0.71
(WY)	(1996)	(2002)	(2002)	(2002)	(2002)	(2002)	(2002)	(1995)	(1995)	(2002)	(2002)	(1995)

01466500 MCDONALDS BRANCH IN LEBANON STATE FOREST, NJ—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1954 - 2003	
ANNUAL TOTAL	383.62		717.70			
ANNUAL MEAN	1.05		1.97		2.12	
HIGHEST ANNUAL MEAN					3.85	1973
LOWEST ANNUAL MEAN					0.95	2002
HIGHEST DAILY MEAN	2.5	Dec 26	e4.5	Feb 23	20	Feb 28, 1958
LOWEST DAILY MEAN	0.66	Aug 19	e0.70	Oct 1	0.50	Oct 13, 1995
ANNUAL SEVEN-DAY MINIMUM	0.67	Aug 18	e0.72	Oct 1	0.58	Oct 8, 1995
MAXIMUM PEAK FLOW			unknown		35	Aug 25, 1958
MAXIMUM PEAK STAGE			unknown		2.33	Aug 25, 1958
INSTANTANEOUS LOW FLOW			e0.70	Oct 1	0.49	Oct 13, 1995
ANNUAL RUNOFF (CFSM)	0.45		0.84		0.90	
ANNUAL RUNOFF (INCHES)	6.07		11.36		12.28	
10 PERCENT EXCEEDS	1.4		3.1		3.6	
50 PERCENT EXCEEDS	0.97		1.8		1.8	
90 PERCENT EXCEEDS	0.75		1.2		1.1	

e Estimated



01466900 GREENWOOD BRANCH AT NEW LISBON, NJ

LOCATION.--Lat 39°57'23", long 74°37'39", Burlington County, Hydrologic Unit 02040202, on right bank, 50 ft upstream of bridge on Fourmile Road (County Route 646), 0.1 mi south of in New Lisbon, 0.7 mi upstream from mouth, and 3.1 mi east of Pemberton.

DRAINAGE AREA.--77.9 mi^2.

PERIOD OF RECORD.--Occasional miscellaneous discharge measurements, water years 1954, 1973. May 1998 to current year.

GAGE.--Water-stage recorder. Datum of gage is 50 ft above NGVD of 1929 (from topographic map).

REMARKS.--Records good, except estimated daily discharges which are fair. Water diverted for water supply to Fort Dix Army Base just upstream from gage (see Delaware River Basin, diversions and withdrawals). Satellite rain and gage-height telemetry at station. Several measurements of water temperature were made during the year.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	26	83	73	110	67	213	114	95	127	71	47	43
2	25	77	69	129	72	203	112	87	124	63	69	50
3	25	68	66	168	75	242	108	83	115	69	82	52
4	24	64	60	224	79	253	104	79	119	84	87	57
5	24	61	58	295	88	229	101	76	167	84	86	88
6	23	66	60	257	89	251	99	75	198	80	75	106
7	23	72	59	214	87	345	102	76	180	74	67	99
8	22	72	58	189	89	294	121	87	214	68	102	84
9	22	71	57	173	86	245	143	101	250	62	133	73
10	23	65	56	154	82	229	181	91	217	60	127	65
11	43	63	60	141	80	214	211	87	186	66	128	62
12	62	72	93	128	77	193	237	84	159	64	120	62
13	52	96	111	110	73	178	245	78	152	59	101	70
14	46	105	127	101	69	161	203	72	156	56	81	84
15	41	105	151	96	68	153	172	67	163	53	69	83
16	46	98	171	91	66	148	155	65	155	50	62	97
17	64	111	153	89	60	142	146	70	137	49	59	105
18	62	146	125	86	93	137	192	70	139	46	69	80
19	52	176	104	82	97	136	187	68	183	45	68	89
20	45	e153	97	79	90	132	170	65	227	44	60	87
21	44	e135	110	77	88	147	145	64	229	43	57	75
22	43	120	120	73	110	175	128	75	232	43	53	66
23	48	137	117	70	446	184	124	81	220	56	53	70
24	49	149	113	70	863	177	113	89	192	63	47	93
25	46	132	108	67	714	161	103	94	160	57	44	94
26	56	109	132	64	507	146	101	107	125	52	43	86
27	66	93	151	64	313	138	101	156	98	49	43	75
28	59	85	162	64	234	128	100	198	82	47	43	72
29	51	81	143	64	---	117	100	181	77	47	41	74
30	60	77	125	66	---	114	95	156	74	45	41	67
31	76	---	114	66	---	115	---	138	---	44	44	---
TOTAL	1,348	2,942	3,203	3,661	4,862	5,700	4,213	2,915	4,857	1,793	2,201	2,308
MEAN	43.5	98.1	103	118	174	184	140	94.0	162	57.8	71.0	76.9
MAX	76	176	171	295	863	345	245	198	250	84	133	106
MIN	22	61	56	64	60	114	95	64	74	43	41	43

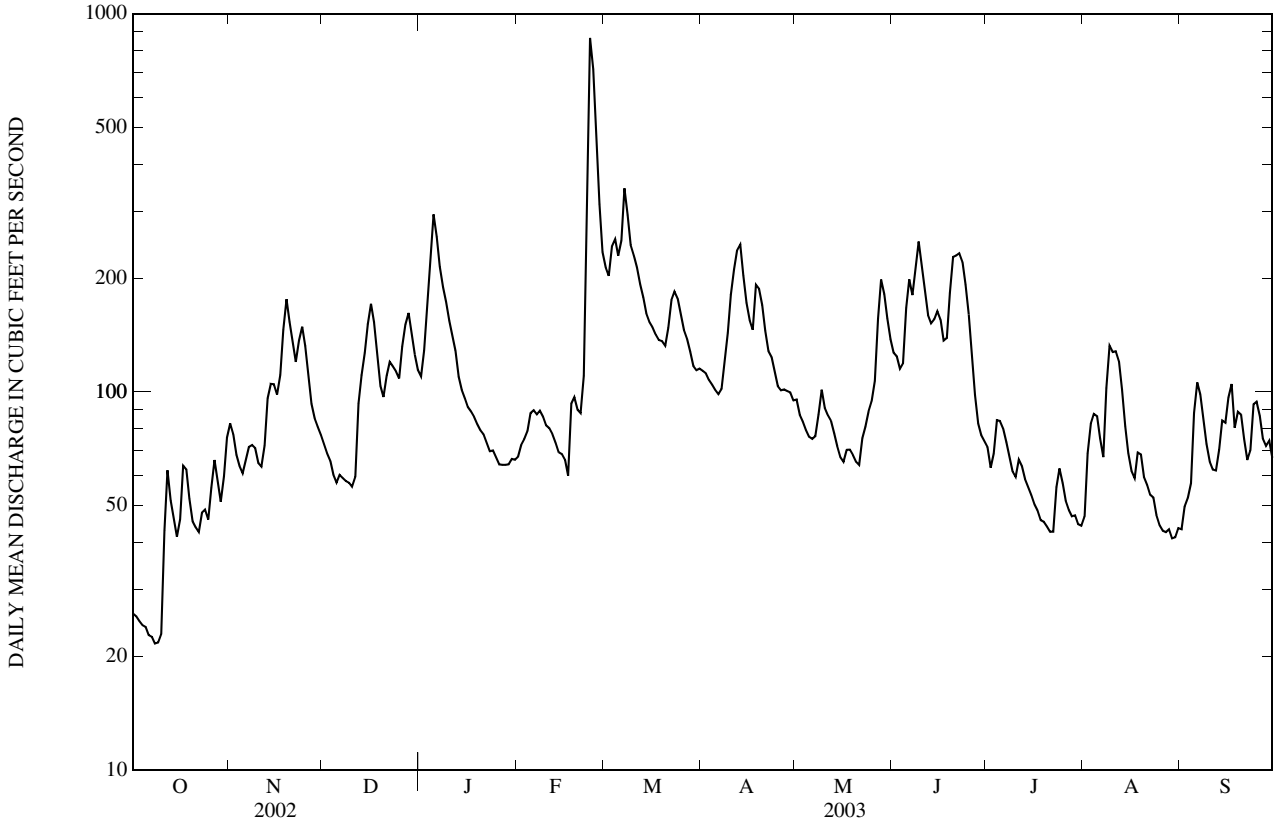
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1998 - 2003, BY WATER YEAR (WY)

MEAN	55.4	64.9	69.8	92.6	108	116	106	75.4	79.2	41.9	49.7	63.5
MAX	89.7	98.1	103	118	174	184	140	94.0	162	57.8	71.8	121
(WY)	(2000)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2000)	(1999)
MIN	32.8	34.6	29.3	42.4	37.2	48.3	61.8	60.4	39.0	27.6	21.8	28.0
(WY)	(2002)	(1999)	(1999)	(2002)	(2002)	(2002)	(2002)	(2002)	(1999)	(2002)	(2002)	(2002)

01466900 GREENWOOD BRANCH AT NEW LISBON, NJ—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1998 - 2003	
ANNUAL TOTAL	19,167		40,003			
ANNUAL MEAN	52.5		110		76.9	
HIGHEST ANNUAL MEAN					110	2003
LOWEST ANNUAL MEAN					40.7	2002
HIGHEST DAILY MEAN	176	Nov 19	863	Feb 24	940	May 11, 1998
LOWEST DAILY MEAN	18	Aug 15	22	Oct 8,9	17	Aug 4, 1999
ANNUAL SEVEN-DAY MINIMUM	18	Aug 15	23	Oct 4	18	Aug 15, 2002
MAXIMUM PEAK FLOW			891	Feb 24	940	May 11, 1998
MAXIMUM PEAK STAGE			5.57	Feb 24	7.78a	May 11, 1998
INSTANTANEOUS LOW FLOW			20	Oct 9	15	Aug 16, 2002
10 PERCENT EXCEEDS	93		192		131	
50 PERCENT EXCEEDS	45		87		69	
90 PERCENT EXCEEDS	23		47		30	

a Observed by field personnel before gage established.
e Estimated



01467000 NORTH BRANCH RANCOCAS CREEK AT PEMBERTON, NJ

LOCATION.--Lat 39°58'12", long 74°41'04", Burlington County, Hydrologic Unit 02040202, on right bank at downstream side of bridge on Hanover Street (County Route 616) in Pemberton, 12 mi upstream from confluence with South Branch Rancocas Creek.

DRAINAGE AREA.--118 mi^2.

PERIOD OF RECORD.--September 1921 to current year.

REVISED RECORDS.--WSP 1302: 1922-23. WSP 1382: 1933. WDR NJ-82-2: Drainage area.

GAGE.--Water-stage recorder above concrete dams. Datum of gage is 31.19 ft above NGVD of 1929. Prior to June 9, 1923, nonrecording gage and June 9, 1923 to Aug. 9, 1951, water-stage recorder at site 600 ft downstream at datum 6.54 ft lower.

REMARKS.--Records good, except estimated daily discharges which are fair. Flow regulated occasionally by cranberry bogs and ponds above station. Water diverted for water supply at Fort Dix army base upstream from gage. Several measurements of water temperature were made during the year. Satellite gage-height telemetry at station.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	39	146	130	205	114	343	201	142	206	118	99	88
2	39	133	122	284	122	397	196	139	192	109	155	102
3	36	117	116	330	124	462	189	139	176	121	152	103
4	37	106	107	413	136	437	182	134	250	138	145	119
5	36	101	105	438	148	409	180	128	355	135	158	156
6	34	127	109	405	145	456	172	124	359	129	138	159
7	34	139	104	352	145	496	180	124	322	119	123	150
8	34	132	102	313	145	458	224	139	408	110	253	132
9	32	126	101	290	138	412	273	153	434	101	260	115
10	33	114	96	257	130	384	325	145	380	102	241	104
11	91	110	120	227	129	350	341	139	310	114	239	97
12	129	129	227	205	126	320	394	133	257	110	215	95
13	97	186	246	182	119	301	398	122	269	102	179	121
14	75	193	287	170	112	279	339	116	298	96	147	125
15	64	178	291	161	e100	256	284	111	298	92	124	137
16	82	170	281	153	e95	251	246	112	286	88	110	183
17	111	226	243	148	e95	243	222	118	239	84	112	215
18	100	312	201	145	e130	218	249	116	305	80	148	204
19	83	336	172	137	e135	215	252	112	369	80	139	158
20	72	301	184	134	e130	224	233	111	395	79	115	115
21	67	241	220	129	e135	296	211	111	395	73	104	100
22	65	232	209	127	231	316	208	130	393	75	99	90
23	68	250	198	121	621	307	205	133	364	126	98	119
24	70	248	186	120	829	282	190	146	304	127	86	163
25	67	221	232	114	737	253	175	147	246	104	79	164
26	106	187	312	111	573	233	179	233	199	90	77	151
27	118	169	300	111	459	231	175	306	161	83	77	135
28	103	154	280	109	378	214	169	312	147	81	79	133
29	92	145	245	109	---	201	160	275	132	81	75	131
30	112	138	213	111	---	214	150	230	124	78	79	119
31	140	---	195	111	---	209	---	202	---	77	93	---
TOTAL	2,266	5,367	5,934	6,222	6,533	9,667	6,902	4,782	8,573	3,102	4,198	3,983
MEAN	73.1	179	191	201	233	312	230	154	286	100	135	133
MAX	140	336	312	438	829	496	398	312	434	138	260	215
MIN	32	101	96	109	111	201	150	111	124	73	75	88
CFSM	0.62	1.52	1.62	1.70	1.98	2.64	1.95	1.31	2.42	0.85	1.15	1.13
IN.	0.71	1.69	1.87	1.96	2.06	3.05	2.18	1.51	2.70	0.98	1.32	1.26

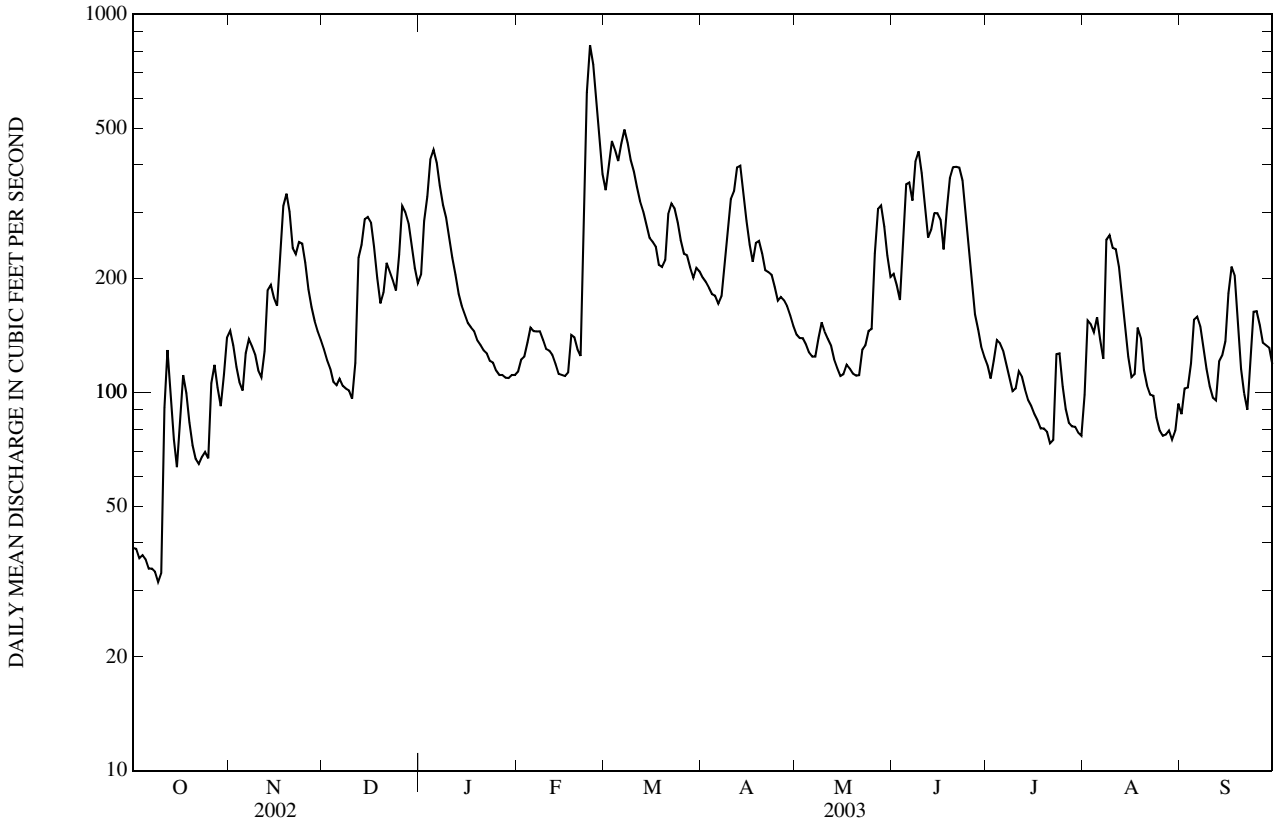
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1922 - 2003, BY WATER YEAR (WY)

MEAN	117	149	171	198	214	247	236	194	142	119	129	116
MAX	365	430	434	479	445	472	475	475	297	401	426	341
(WY)	(1928)	(1973)	(1973)	(1979)	(1939)	(1994)	(1984)	(1998)	(1968)	(1938)	(1958)	(1971)
MIN	38.7	45.7	47.1	62.1	57.1	88.5	85.4	72.0	54.1	36.6	35.6	36.5
(WY)	(1923)	(1923)	(1999)	(1981)	(2002)	(2002)	(1985)	(1992)	(1995)	(1999)	(1995)	(1995)

01467000 NORTH BRANCH RANCOCAS CREEK AT PEMBERTON, NJ—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1922 - 2003	
ANNUAL TOTAL	33,924		67,529			
ANNUAL MEAN	92.9		185		169	
HIGHEST ANNUAL MEAN					286	1978
LOWEST ANNUAL MEAN					69.0	2002
HIGHEST DAILY MEAN	336	Nov 19	829	Feb 24	1,690	Aug 21, 1939
LOWEST DAILY MEAN	26	Aug 20	32	Oct 9	9.0	Sep 29, 1932
ANNUAL SEVEN-DAY MINIMUM	27	Aug 17	34	Oct 4	27	Oct 2, 1922
MAXIMUM PEAK FLOW			846	Feb 24	1,730	Aug 21, 1939
MAXIMUM PEAK STAGE			2.78	Feb 24	10.77a	Aug 21, 1939
INSTANTANEOUS LOW FLOW			30	Oct 9	9.0	Sep 29, 1932
ANNUAL RUNOFF (CFSM)	0.79		1.57		1.43	
ANNUAL RUNOFF (INCHES)	10.69		21.29		19.47	
10 PERCENT EXCEEDS	171		332		310	
50 PERCENT EXCEEDS	78		145		139	
90 PERCENT EXCEEDS	35		84		61	

a From high-water mark, site and datum then in use.
e Estimated



01467081 SOUTH BRANCH PENNSAUKEN CREEK AT CHERRY HILL, NJ

LOCATION.--Lat 39°56'30", long 75°00'04", Camden County, Hydrologic Unit 02040202, on left bank on downstream wingwall of bridge on Mill Road in Cherry Hill, 1.1 mi south of Maple Shade and 3.8 mi upstream from confluence with the North Branch Pennsauken Creek.

DRAINAGE AREA.--8.98 mi^2.

PERIOD OF RECORD.--October 1967 to September 1976, October 1977 to current year.

REVISED RECORDS.--WDR NJ-82-2: Drainage area. WDR NJ-90-1: 1968 (P), 1970 (P), 1971 (P).

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 8.12 ft above NGVD of 1929.

REMARKS.--Records good except for estimated daily discharges, which are poor. Diurnal fluctuations apparently due to a sewage treatment plant upstream. Several measurements of water temperature were made during the year.

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

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Feb 22	1630	*495	*8.45	Jun 4	0730	363	7.59
May 26	1145	405	7.88	Jun 7	2300	335	7.36

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.6	10	6.9	54	11	e12	10	6.7	79	5.7	58	5.0
2	4.7	8.0	6.7	57	15	e148	9.6	21	20	5.5	26	36
3	3.9	6.7	6.4	32	10	e62	8.8	32	10	32	6.5	6.9
4	4.1	5.9	6.1	40	23	e20	8.3	8.1	214	8.2	7.9	35
5	4.0	7.1	7.1	17	15	75	8.9	7.2	75	6.8	23	7.7
6	3.2	61	8.8	24	8.8	159	8.1	8.6	20	6.8	9.3	4.4
7	3.0	10	9.2	17	8.8	39	30	6.9	104	7.6	9.3	3.7
8	2.8	6.9	8.9	13	8.8	25	39	13	106	5.3	40	3.6
9	2.9	6.0	10	13	8.8	30	62	8.6	22	4.8	7.0	3.5
10	5.9	5.6	7.6	11	8.1	20	25	8.0	14	6.8	28	3.3
11	138	24	73	9.5	9.3	14	96	6.5	11	9.2	8.0	3.2
12	26	52	95	8.8	7.7	13	75	6.1	20	4.9	5.4	3.5
13	9.0	49	37	8.4	e7.0	13	22	5.8	88	4.2	4.7	38
14	5.7	13	82	8.2	e6.3	12	14	5.4	50	5.2	4.3	22
15	4.8	9.4	21	7.9	e6.4	11	11	5.4	16	4.6	3.8	39
16	68	41	14	7.6	e5.5	11	10	7.7	11	4.2	4.0	40
17	18	156	11	7.9	e6.6	11	9.0	24	9.4	4.0	4.4	6.3
18	7.5	70	9.4	e7.2	e8.3	10	8.5	7.1	128	3.9	4.3	8.0
19	6.1	17	8.9	e6.9	e8.2	9.1	8.3	5.9	27	4.2	3.7	71
20	5.4	12	50	e7.1	e9.4	59	7.9	5.2	24	3.6	3.6	8.0
21	4.9	10	22	e6.9	e13	81	7.8	22	49	3.6	3.7	5.1
22	5.0	44	12	e6.7	229	32	8.5	19	15	5.0	3.7	4.5
23	4.5	18	9.8	e6.2	284	16	7.6	25	11	70	3.3	125
24	4.0	10	8.8	e6.0	159	12	7.0	32	9.1	14	2.9	22
25	4.2	8.7	135	e6.0	e35	11	7.1	11	7.9	5.6	3.0	8.9
26	77	8.2	57	e6.3	e19	14	23	219	7.6	4.3	3.4	6.9
27	11	16	19	e6.2	e16	26	8.8	38	7.3	4.0	3.2	7.0
28	6.3	9.0	14	e5.9	e14	10	7.4	21	6.4	12	3.1	18
29	25	8.0	12	e6.6	---	16	7.1	15	5.8	5.1	3.1	6.8
30	76	7.4	10	e7.1	---	29	6.5	11	5.9	4.2	26	5.4
31	45	---	9.9	e7.3	---	17	---	10	---	4.2	14	---
TOTAL	589.5	709.9	788.5	428.7	961.0	1,017.1	562.2	622.2	1,173.4	269.5	330.6	557.7
MEAN	19.0	23.7	25.4	13.8	34.3	32.8	18.7	20.1	39.1	8.69	10.7	18.6
MAX	138	156	135	57	284	159	96	219	214	70	58	125
MIN	2.8	5.6	6.1	5.9	5.5	9.1	6.5	5.2	5.8	3.6	2.9	3.2
CFSM	2.12	2.64	2.83	1.54	3.82	3.65	2.09	2.24	4.36	0.97	1.19	2.07
IN.	2.44	2.94	3.27	1.78	3.98	4.21	2.33	2.58	4.86	1.12	1.37	2.31

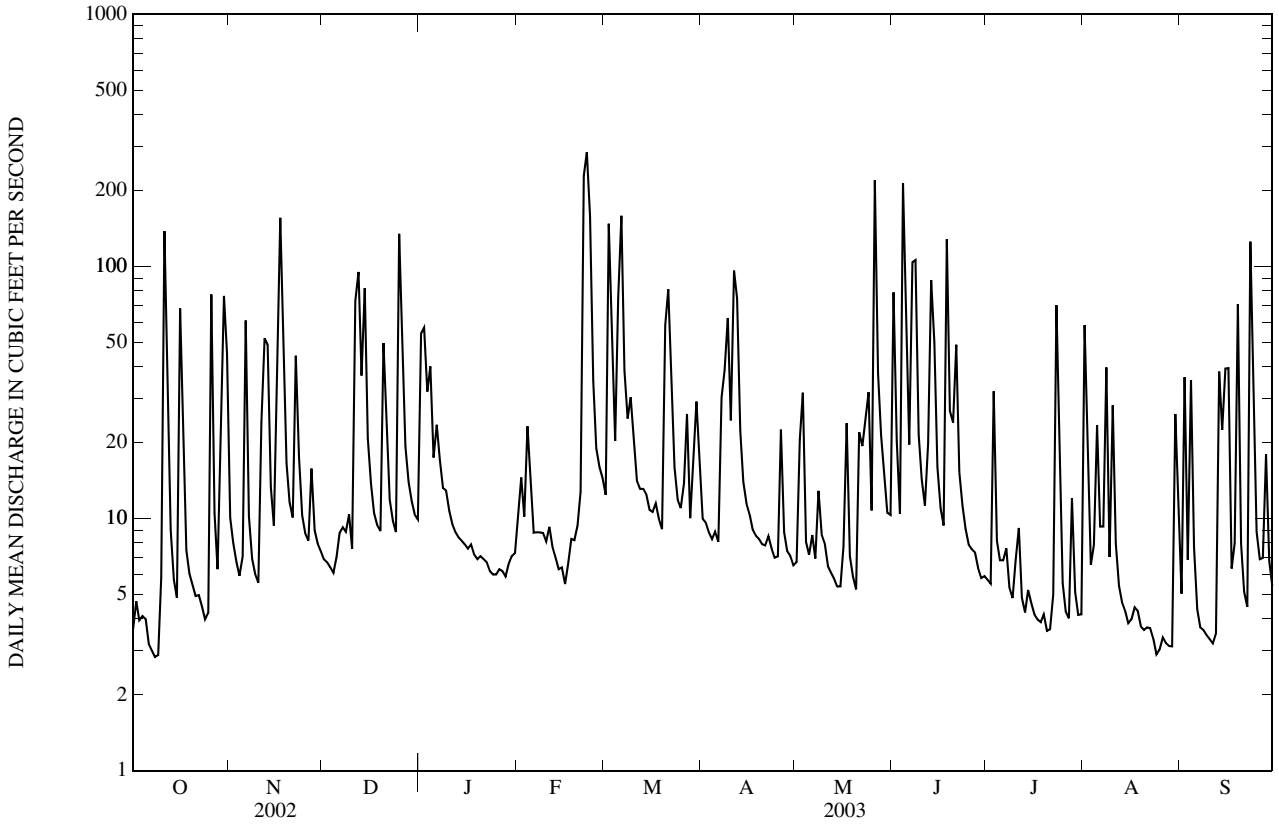
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1968 - 2003, BY WATER YEAR (WY)

MEAN	13.3	16.7	21.7	21.9	20.1	24.3	21.1	18.6	15.4	16.6	15.5	14.2
MAX	26.0	48.8	60.4	50.5	44.7	46.5	49.8	47.0	39.1	46.5	58.2	38.8
(WY)	(1990)	(1973)	(1997)	(1979)	(1979)	(1994)	(1983)	(1989)	(2003)	(1989)	(1978)	(1975)
MIN	5.76	5.13	6.38	6.55	5.71	9.29	8.08	8.24	6.50	6.30	4.17	4.71
(WY)	(2002)	(2002)	(1999)	(1981)	(2002)	(1985)	(1985)	(1993)	(1995)	(1999)	(1995)	(1968)

01467081 SOUTH BRANCH PENNSAUKEN CREEK AT CHERRY HILL, NJ—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1968 - 2003	
ANNUAL TOTAL	5,176.5		8,010.3			
ANNUAL MEAN	14.2		21.9		18.3	
HIGHEST ANNUAL MEAN					27.3	1978
LOWEST ANNUAL MEAN					10.2	2002
HIGHEST DAILY MEAN	182	Jul 20	284	Feb 23	551	Jul 5, 1989
LOWEST DAILY MEAN	2.2	Aug 19	2.8	Oct 8	2.2	Nov 14, 1998
ANNUAL SEVEN-DAY MINIMUM	2.3	Aug 15	3.1	Aug 23	2.3	Aug 15, 2002
MAXIMUM PEAK FLOW			495	Feb 22	1,500	Jul 14, 1994
MAXIMUM PEAK STAGE			8.45	Feb 22	11.63a	Jul 14, 1994
INSTANTANEOUS LOW FLOW			2.2	many days	1.1	Aug 7, 1999
ANNUAL RUNOFF (CFSM)	1.58		2.44		2.04	
ANNUAL RUNOFF (INCHES)	21.44		33.18		27.76	
10 PERCENT EXCEEDS	39		57		36	
50 PERCENT EXCEEDS	5.9		9.0		9.4	
90 PERCENT EXCEEDS	3.1		4.2		4.7	

a From high water mark.
e Estimated



01467150 COOPER RIVER AT HADDONFIELD, NJ

LOCATION.--Lat 39°54'11", long 75°01'17", Camden County, Hydrologic Unit 02040202, on right bank of Wallworth Lake in Pennypacker Park, 200 ft upstream from bridge on State Highway 41 (Kings Highway) in Haddonfield, 0.6 mi upstream from North Branch Cooper River, and 7.7 mi upstream from mouth.

DRAINAGE AREA.--17.0 mi^2.

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

REVISED RECORDS.--WRD-NJ 1969: 1967(M). WDR NJ-82-2: Drainage area.

GAGE.--Water-stage recorder above concrete dam. Datum of gage is 9.29 ft above NGVD of 1929.

REMARKS.--Records fair except for daily discharges above 40 ft^3/s, which are good. Bypass gates were installed on both ends of the dam in August 1987. Occasional regulation at low flow from small lakes and wastewater treatment plants (prior to summer 1987). Several measurements of water temperature were made during the year. Satellite gage-height telemetry at station.

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

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Feb 22	1845	*795	*3.15	Jun 7	2145	554	2.80
May 26	1315	560	2.81				

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.3	22	11	60	17	22	20	11	98	14	52	13
2	7.1	15	12	74	21	214	18	30	39	13	50	34
3	6.8	12	11	39	16	110	17	51	20	109	19	13
4	6.3	12	10	37	33	35	16	19	239	35	14	51
5	6.4	11	11	25	23	93	16	14	83	21	39	26
6	5.5	73	13	28	15	194	15	14	32	15	29	12
7	4.9	24	14	22	16	68	33	13	164	23	17	10
8	5.0	15	12	18	16	34	40	24	175	19	59	9.4
9	4.9	13	13	18	14	37	64	18	42	15	24	9.8
10	6.1	12	11	14	14	29	34	17	27	21	44	8.5
11	169	28	84	13	15	24	88	15	20	25	23	8.0
12	49	58	114	13	13	23	94	13	32	17	15	7.6
13	17	58	47	13	12	27	36	14	126	15	13	31
14	12	24	103	13	12	25	25	13	107	16	11	30
15	9.3	15	29	12	12	21	21	13	38	14	9.5	60
16	103	46	20	12	11	22	20	16	23	13	9.0	78
17	37	208	15	12	12	24	18	23	17	12	9.7	18
18	14	102	13	12	16	21	17	16	222	9.3	9.2	17
19	11	29	13	12	16	19	17	14	64	8.8	9.0	102
20	9.6	18	58	12	20	70	17	13	44	8.4	8.6	23
21	8.1	14	32	12	28	109	17	25	72	8.2	8.9	13
22	7.9	42	19	11	361	40	17	32	33	12	9.2	11
23	7.7	23	15	11	404	24	15	35	25	120	10	171
24	7.9	15	13	10	121	20	15	39	19	31	8.3	49
25	7.7	13	174	10	43	17	15	21	16	14	7.8	20
26	85	12	88	11	29	20	31	271	14	10	7.3	15
27	24	20	28	11	23	29	20	76	14	9.4	7.3	13
28	13	14	20	10	24	18	15	34	14	17	7.3	25
29	29	12	17	12	---	22	14	24	13	11	7.6	14
30	97	12	16	12	---	35	12	18	14	9.4	46	13
31	65	---	14	13	---	26	---	16	---	9.2	25	---
TOTAL	844.5	972	1,050	582	1,357	1,472	797	952	1,846	674.7	608.7	905.3
MEAN	27.2	32.4	33.9	18.8	48.5	47.5	26.6	30.7	61.5	21.8	19.6	30.2
MAX	169	208	174	74	404	214	94	271	239	120	59	171
MIN	4.9	11	10	10	11	17	12	11	13	8.2	7.3	7.6
CFSM	1.60	1.91	1.99	1.10	2.85	2.79	1.56	1.81	3.62	1.28	1.16	1.78
IN.	1.85	2.13	2.30	1.27	2.97	3.22	1.74	2.08	4.04	1.48	1.33	1.98

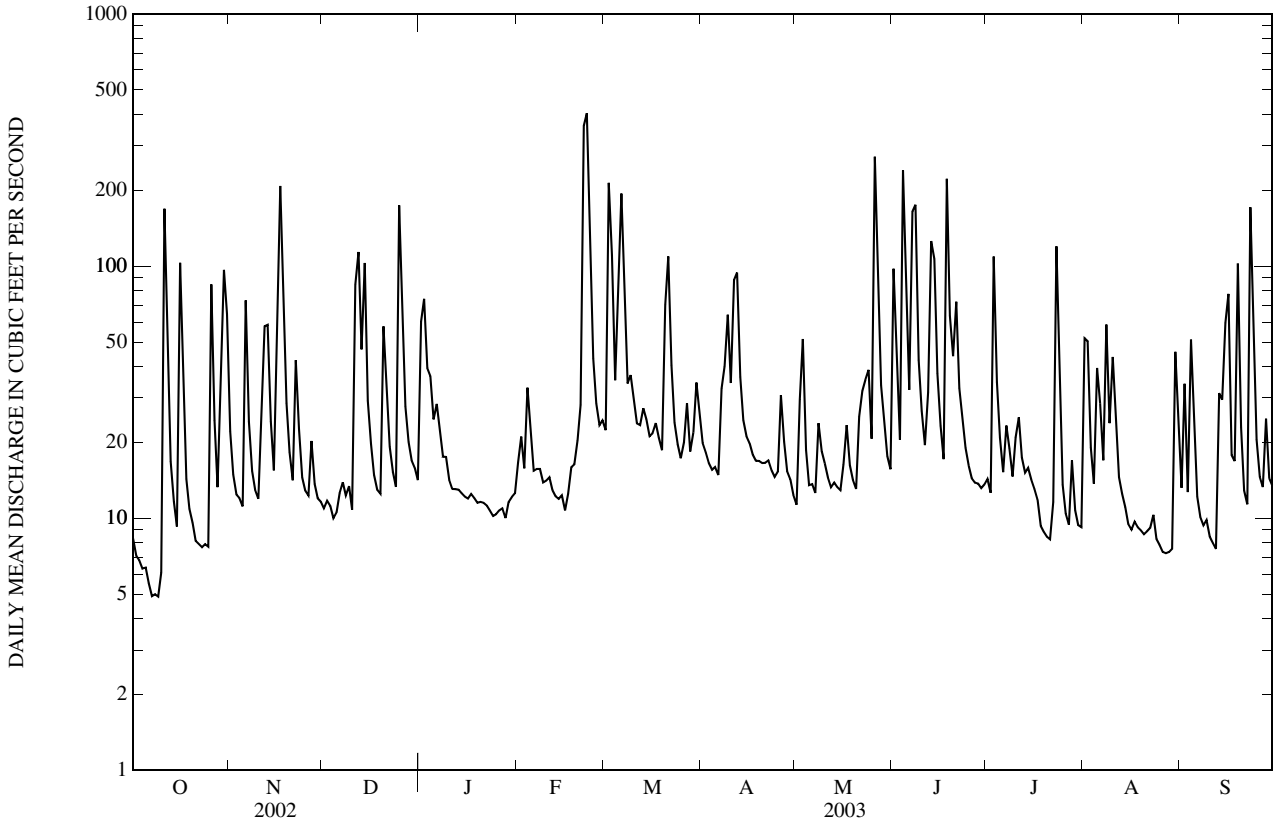
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1964 - 2003, BY WATER YEAR (WY)

MEAN	25.4	29.6	36.4	37.3	36.1	42.3	39.0	34.7	29.5	29.4	28.0	26.0
MAX	46.8	79.6	85.3	97.8	76.1	78.9	99.4	66.7	61.5	66.8	97.6	65.8
(WY)	(1976)	(1973)	(1997)	(1978)	(1979)	(1984)	(1983)	(1983)	(2003)	(1975)	(1971)	(1975)
MIN	9.26	8.03	8.21	14.6	11.0	23.2	15.1	14.2	10.9	10.5	7.79	5.67
(WY)	(1966)	(2002)	(1999)	(1992)	(2002)	(1981)	(1992)	(1965)	(1988)	(1999)	(1966)	(2001)

01467150 COOPER RIVER AT HADDONFIELD, NJ—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1964 - 2003	
ANNUAL TOTAL	7,675.0		12,061.2			
ANNUAL MEAN	21.0		33.0		32.8	
HIGHEST ANNUAL MEAN					50.6	1973
LOWEST ANNUAL MEAN					15.6	2002
HIGHEST DAILY MEAN	381	Jun 20	404	Feb 23	1,510	Aug 28, 1971
LOWEST DAILY MEAN	3.6	Aug 19	4.9	Oct 7, 9	1.2	Jun 27, 1964
ANNUAL SEVEN-DAY MINIMUM	3.9	Aug 16	5.6	Oct 4	3.6	Sep 4, 2001
MAXIMUM PEAK FLOW			795	Feb 22	3,300	Aug 28, 1971
MAXIMUM PEAK STAGE			3.15	Feb 22	5.46	Aug 28, 1971
INSTANTANEOUS LOW FLOW			4.7	Oct 7, 9, 10	0.80a	Nov 13, 1972
ANNUAL RUNOFF (CFSM)	1.24		1.94		1.93	
ANNUAL RUNOFF (INCHES)	16.79		26.39		26.22	
10 PERCENT EXCEEDS	48		75		57	
50 PERCENT EXCEEDS	11		17		22	
90 PERCENT EXCEEDS	5.1		9.4		10	

a Regulation from unknown source



DELAWARE RIVER BASIN

01474500 SCHUYLKILL RIVER AT PHILADELPHIA, PA

LOCATION.--Lat 39°58'04", long 75°11'20", Philadelphia County, Hydrologic Unit 02040203, on right bank 150 ft upstream from Fairmount Dam, 1,500 ft upstream from bridge on Spring Garden Street in Philadelphia, and 8.7 mi upstream from mouth.

DRAINAGE AREA.--1,893 mi^2.

PERIOD OF RECORD.--October 1931 to current year. Records for January 1898 to December 1912, published in WSP 35, 48, 65, 82, 97, 125, 166, 202, 214, 261, 301, and 381 have been found to be unreliable and should not be used.

REVISED RECORDS.--WSP 756: Drainage area. WSP 1302: 1936(M). WSP 1432: 1945. See also PERIOD OF RECORD.

GAGE.--Water-stage recorder, crest-stage gage, and concrete control. Datum of gage is 5.74 ft above National Geodetic Vertical Datum of 1929. Prior to Nov. 25, 1956, water-stage recorder at site on right bank just upstream from Fairmount Dam at same datum. Nov. 26, 1956, to Oct. 6, 1966, water-stage recorder at site on left bank 40 ft upstream from Fairmount Dam at same datum.

REMARKS.--No estimated daily discharges. Records good. Flow regulated by Still Creek Reservoir (station 01469200) since February 1933, Blue Marsh Lake (station 01470870) since April 1979, Green Lane Reservoir (station 01472200) since December 1956 and to some extent by Lake Ontelaunee. Daily mean discharges do not include diversion above station by city of Philadelphia for municipal water supply. Satellite and landline telemetry at station.

COOPERATION.--Records of diversion provided by Philadelphia Water Department.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Oct. 4, 1869 reached a stage of 17.0 ft, discharge, about 135,000 ft^3/s. Flood of Mar. 1, 1902 reached a stage of 14.8 ft, discharge, about 98,000 ft^3/s.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 18,000 ft^3/s and maximum (*):

Date	Time	Discharge ft^3/s	Gage Height (ft)	Date	Time	Discharge ft^3/s	Gage Height (ft)
Nov. 17	1100	18,400	8.44	June 4	1700	32,800	9.87
Dec. 14	1200	18,900	8.50	June 21	0830	*52,500	*11.43
Feb. 23	0500	21,500	8.77	Sept. 16	0030	35,500	10.11
Mar. 21	1330	20,800	8.70	Sept. 23	2000	29,200	9.54

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	972	4150	2430	6070	1420	3000	5620	2290	6490	3630	1950	1390
2	754	3350	2290	12900	1490	5000	5280	2140	11300	3090	2300	3310
3	631	2780	2040	11400	1440	10600	4910	2040	7840	2910	1960	3570
4	552	2460	1730	11700	1490	6640	4350	2010	19200	2670	3800	3520
5	835	2140	1660	8790	1970	5830	4050	1940	17600	2480	4580	3890
6	701	2560	1670	7410	2010	12100	4030	1940	10300	2510	10300	2400
7	663	2980	1600	6240	1640	9180	3780	1870	8450	2390	5940	1830
8	533	2320	1610	5170	1550	5890	3940	2340	13400	2440	4540	1600
9	547	1860	1610	5120	1350	7430	4510	2060	9560	2380	4190	1410
10	638	1750	1470	4870	1320	9530	6430	1930	7770	2090	7830	1280
11	2590	1740	2750	4720	1300	6010	6450	1830	6450	2110	5550	1120
12	7780	2280	13700	4110	1220	4890	9720	1770	5540	2090	4350	1030
13	5760	5430	11300	3680	1070	5240	7490	1670	6720	2020	4310	1380
14	3600	3610	16300	3260	950	6500	6030	1570	11600	1770	3590	2900
15	2430	2710	12800	2920	1080	6500	5430	1480	7390	1590	3580	14500
16	2670	2580	9780	2590	1010	6380	5000	1470	5580	1430	2820	20100
17	8800	13000	7580	2420	657	7420	4570	1630	4470	1350	2790	7340
18	7190	12800	6160	2160	370	7770	4180	1610	4810	1290	2660	5270
19	4790	8650	5080	1940	1020	7700	3810	1530	4710	1420	2170	10200
20	3690	6570	7540	2040	1600	8050	3410	1420	9810	1630	1930	6160
21	3180	5280	10400	1950	2370	19400	3230	1520	41200	1490	1720	4200
22	2430	4690	6220	1680	7140	15900	3260	1610	20800	5310	1510	3500
23	1740	4910	5270	1420	20700	11900	3210	1470	14300	12700	1470	14000
24	1470	4180	4670	1160	15000	9470	2890	1460	11100	7550	1470	19300
25	1300	3600	6520	1270	8270	6880	2520	1690	9150	7540	1320	10300
26	2470	3170	9300	1480	5710	5450	2640	8060	7720	4730	1180	7250
27	3560	3120	6130	1510	4310	5580	3120	7340	6740	3600	1160	5910
28	2580	3190	4830	1230	3410	4950	2920	4520	5370	3130	1270	6550
29	2160	2850	4330	1260	---	4370	2460	4020	4580	2780	1090	6070
30	3520	2530	4180	1380	---	6290	2400	3700	4270	2180	1460	4480
31	6060	---	3940	1400	---	6980	---	3120	---	1880	1490	---
TOTAL	86596	123240	176890	125250	92867	238830	131640	75050	304220	96180	96280	175760
MEAN	2793	4108	5706	4040	3317	7704	4388	2421	10140	3103	3106	5859
MAX	8800	13000	16300	12900	20700	19400	9720	8060	41200	12700	10300	20100
MIN	533	1740	1470	1160	370	3000	2400	1420	4270	1290	1090	1030
(†)	197	194	200	206	218	205	188	195	200	218	217	202

† Diversion for municipal supply of City of Philadelphia, equivalent in cubic feet per second.

DELAWARE RIVER BASIN

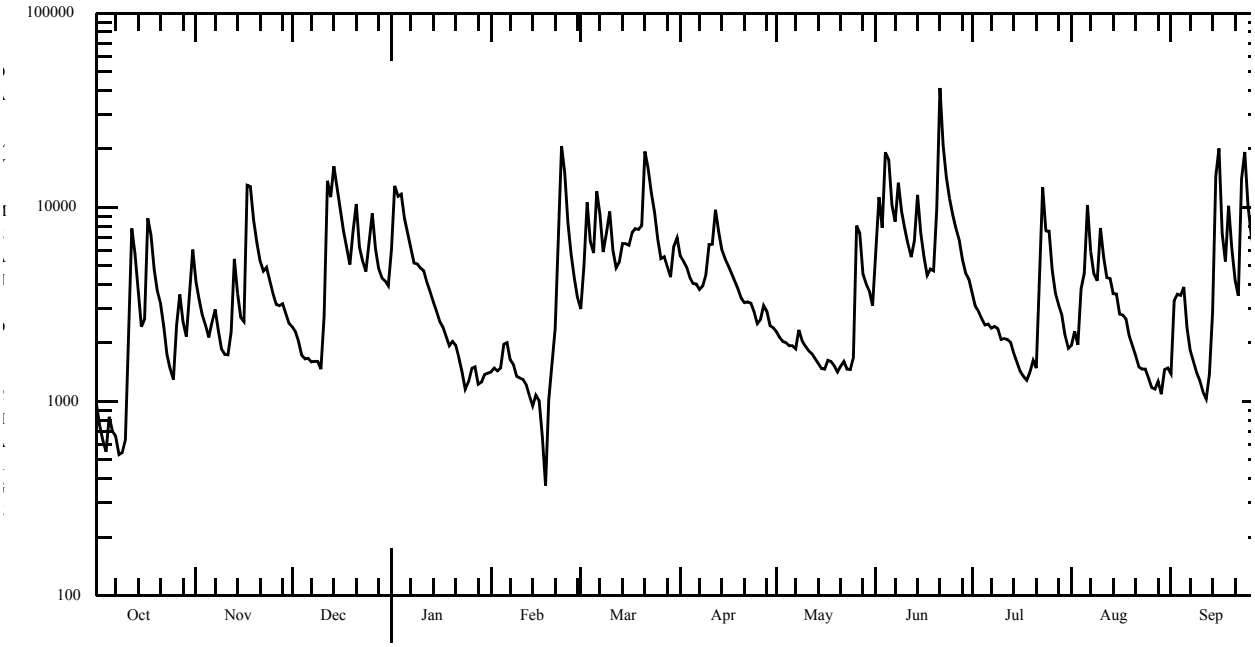
01474500 SCHUYLKILL RIVER AT PHILADELPHIA, PA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1932 - 2003, BY WATER YEAR (WY)

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1417	2310	3180	3341	3606	4884	4234	3117	2226	1628	1389	1487
MAX	5624	6272	11150	11400	8136	13320	11620	9943	11640	6434	7980	5859
(WY)	1997	1973	1997	1979	1939	1936	1983	1989	1972	1984	1933	2003
MIN	89.4	223	444	340	647	1552	1237	693	261	116	140	117
(WY)	1942	1932	1981	1981	1934	1981	1985	1965	1965	1966	1966	1932

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1932 - 2003	
ANNUAL TOTAL	827607		1722803			
ANNUAL MEAN	2267		4720		2730	
HIGHEST ANNUAL MEAN					4791	1984
LOWEST ANNUAL MEAN					1014	1965
HIGHEST DAILY MEAN	18400	May 14	41200	Jun 21	93400	Jun 23 1972
LOWEST DAILY MEAN	79	Aug 17	370	Feb 18	0.60	Sep 2 1966
ANNUAL SEVEN-DAY MINIMUM	134	Aug 12	637	Oct 3	24	Sep 28 1941
MAXIMUM PEAK FLOW			52500	Jun 21	**a**103000	Jun 23 1972
MAXIMUM PEAK STAGE			11.43	Jun 21	14.65	Jun 23 1972
INSTANTANEOUS LOW FLOW			146	Feb 18	0.00	Sep 2 1966**b**
10 PERCENT EXCEEDS	4980		9790		5880	
50 PERCENT EXCEEDS	1500		3500		1670	
90 PERCENT EXCEEDS	302		1370		440	

a From rating curve extended above 92,000 ft^3/s.
b No flow over dam at times.



OCTOBER 1, 2002 TO SEPTEMBER 30, 2003

01475000 MANTUA CREEK AT PITMAN, NJ

LOCATION.--Lat 39°44'13", long 75°06'49", Gloucester County, Hydrologic Unit 02040202, on left abutment just downstream of Wadsworth Dam on Kressey Lake, 0.9 mi east of Pitman, and 2.0 mi upstream from Porch Branch.

DRAINAGE AREA.--6.05 mi^2.

PERIOD OF RECORD.--Daily values from April 1940 to September 1976. Operated as a crest-stage gage only from October 1976 to September 1994. Daily values from May 2003 to current year.

REVISED RECORDS.--WRD-NJ 1971: Drainage area.

GAGE.--Water-stage recorder collected gage heights above Wadsworth Dam from April 1940 to September 1976 at datum 10.00 ft higher. Crest-stage gage from October 1976 to September 1994 at datum 10.00 ft higher. Water-stage recorder collects gage heights below Wadsworth Dam from May 2003 to current year. Present datum of gage is 58.51 ft above NGVD of 1929.

REMARKS.--Records good, expect for daily discharges below 10 ft^3/s which are poor. Occasional regulation from lake gate at Wadsworth Dam and/or other activities upstream. Several measurements of water temperature were made during the year. Satellite gage-height telemetry at station.

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

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
May 26	1500	80	3.18	Aug 5	2015	50	2.92
Jun 4	1015	57	2.97	Sep 4	1845	*242	*5.10
Jun 7	2115	87	3.26	Sep 15	2145	201	4.59
Jun 14	0200	73	3.11	Sep 19	0515	67	3.05
Jun 18	1030	93	3.32	Sep 23	1415	72	3.10
Jul 23	0400	81	3.19				

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	e8.0	14	8.0	12	8.7
2	---	---	---	---	---	---	---	7.8	11	8.0	18	15
3	---	---	---	---	---	---	---	11	8.8	21	11	12
4	---	---	---	---	---	---	---	7.3	38	12	18	81
5	---	---	---	---	---	---	---	7.4	24	8.5	35	51
6	---	---	---	---	---	---	---	7.8	12	8.3	31	19
7	---	---	---	---	---	---	---	7.3	32	18	19	13
8	---	---	---	---	---	---	---	20	42	22	20	11
9	---	---	---	---	---	---	---	11	17	9.6	13	11
10	---	---	---	---	---	---	---	9.7	12	16	21	11
11	---	---	---	---	---	---	---	9.0	11	12	18	11
12	---	---	---	---	---	---	---	8.0	14	9.2	13	12
13	---	---	---	---	---	---	---	7.8	34	8.2	11	20
14	---	---	---	---	---	---	---	7.6	52	8.0	10	18
15	---	---	---	---	---	---	---	7.6	30	8.3	9.5	64
16	---	---	---	---	---	---	---	8.8	16	8.0	9.4	58
17	---	---	---	---	---	---	---	10	12	7.2	11	17
18	---	---	---	---	---	---	---	9.0	52	6.6	9.8	14
19	---	---	---	---	---	---	---	8.0	31	6.7	8.7	45
20	---	---	---	---	---	---	---	7.8	25	6.5	8.4	17
21	---	---	---	---	---	---	---	10	33	7.0	7.7	12
22	---	---	---	---	---	---	---	14	19	11	7.7	11
23	---	---	---	---	---	---	---	12	15	49	7.4	39
24	---	---	---	---	---	---	---	13	12	21	7.1	22
25	---	---	---	---	---	---	---	11	12	12	7.1	12
26	---	---	---	---	---	---	---	47	11	10	7.0	10
27	---	---	---	---	---	---	---	30	9.0	10	7.1	9.5
28	---	---	---	---	---	---	---	15	8.3	9.9	6.7	16
29	---	---	---	---	---	---	---	12	8.1	10	6.7	11
30	---	---	---	---	---	---	---	8.6	7.6	9.9	7.2	9.5
31	---	---	---	---	---	---	---	8.9	---	9.9	8.7	---
TOTAL	---	---	---	---	---	---	---	362.4	622.8	371.8	387.2	660.7
MEAN	---	---	---	---	---	---	---	11.7	20.8	12.0	12.5	22.0
MAX	---	---	---	---	---	---	---	47	52	49	35	81
MIN	---	---	---	---	---	---	---	7.3	7.6	6.5	6.7	8.7

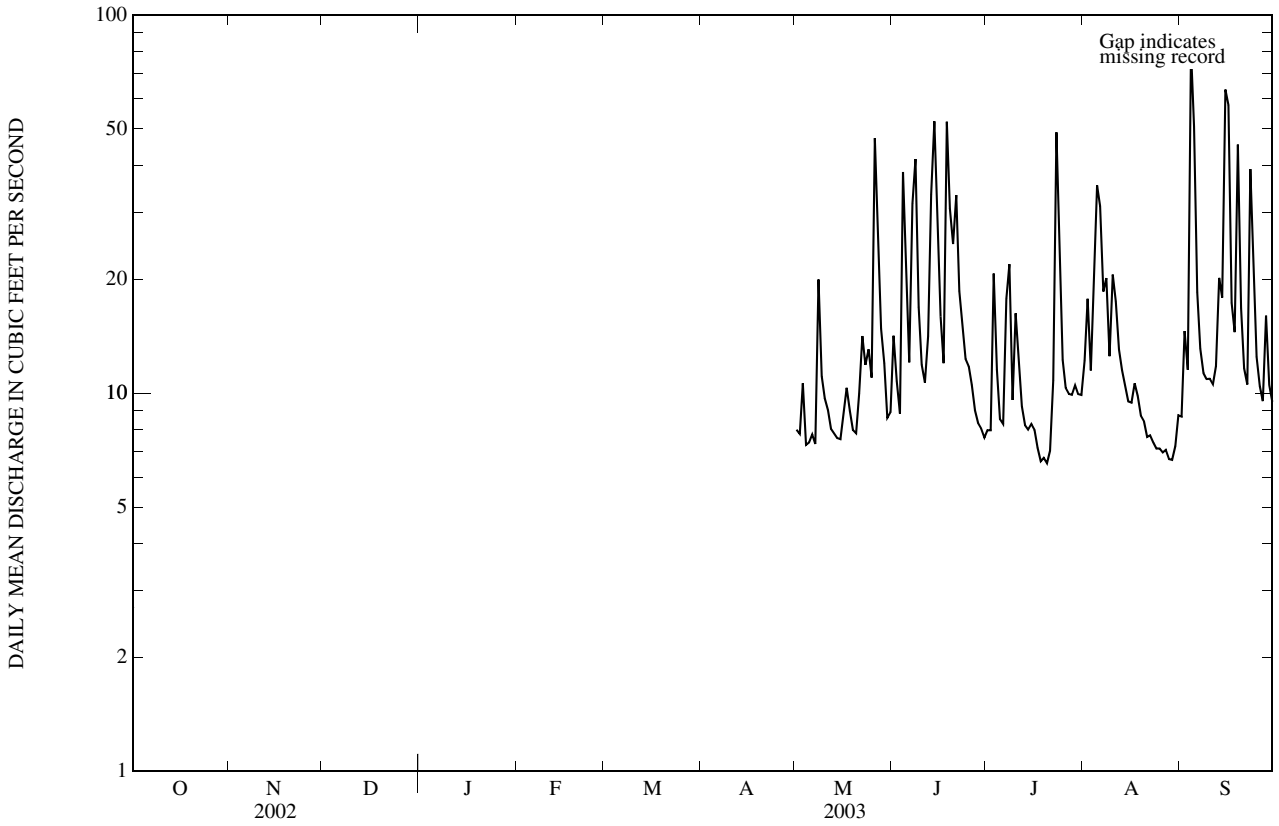
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1940 - 2003, BY WATER YEAR (WY)

MEAN	10.0	11.5	11.8	12.2	12.6	13.6	12.9	11.9	10.7	10.4	11.0	10.3
MAX	14.4	20.1	20.6	19.5	21.1	18.8	22.9	18.3	20.8	27.7	28.1	23.1
(WY)	(1976)	(1973)	(1973)	(1976)	(1973)	(1961)	(1973)	(1958)	(2003)	(1975)	(1971)	(1975)
MIN	6.49	6.37	6.58	6.60	8.16	8.16	7.80	5.93	4.72	3.18	3.44	5.12
(WY)	(1966)	(1966)	(1966)	(1966)	(1974)	(1966)	(1965)	(1965)	(1966)	(1966)	(1966)	(1968)

01475000 MANTUA CREEK AT PITMAN, NJ—Continued

SUMMARY STATISTICS	FOR MAY 1-SEPT 30, 2003		WATER YEARS 1940-2003		
ANNUAL MEAN			11.5		
HIGHEST ANNUAL MEAN			16.6		1975
LOWEST ANNUAL MEAN			6.44		1966
HIGHEST DAILY MEAN	81	Sep 4	470	Aug 27	1971
LOWEST DAILY MEAN	6.5	Jul 20	2.6	Jul 15	1966
ANNUAL SEVEN-DAY MINIMUM			2.7	Jul 12	1966
MAXIMUM PEAK FLOW	242	Sep 4	4,200 a	Sep 1	1940
MAXIMUM PEAK STAGE	5.10	Sep 4	6.64 b	Sep 1	1940
INSTANTANEOUS LOW FLOW	5.0	many days	2.5	Jul 1	1966
10 PERCENT EXCEEDS			17		
50 PERCENT EXCEEDS			10		
90 PERCENT EXCEEDS			6.7		

a By computation of flow over dam and earthen dike (peak occurred before earthen dike broke).
b Gage heights are from above Wadsworth Dam prior to May 2003.
e Estimated



01477120 RACCOON CREEK NEAR SWEDESBORO, NJ

LOCATION.--Lat 39°44'26", long 75°15'33", Gloucester County, Hydrologic Unit 02040202, on right bank 25 ft downstream from bridge on County Route 607 (Tomlin Station Road), 1.8 mi west of Mullica Hill, and 2.8 mi east of Swedesboro.

DRAINAGE AREA.--26.9 mi^2.

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

REVISED RECORDS.--WDR NJ-82-2: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is NGVD of 1929. Prior to July 28, 1969, at datum 7.96 ft higher. July 28, 1969 to Sept. 30, 1969, at datum 5.96 ft higher.

REMARKS.--Records poor. Occasional regulation from irrigation upstream of gage. Several measurements of water temperature were made during the year. Satellite gage-height telemetry at station.

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

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Feb 23	0515	*839	*13.27	Jun 8	0500	487	12.58
Mar 2	2315	507	12.65	Jun 13	0915	324	11.76
Mar 6	2200	358	11.99	Jun 14	0945	443	12.41
May 26	1645	307	11.65	Jun 18	2100	316	11.71

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.2	28	24	74	26	58	59	34	48	37	29	26
2	7.3	23	24	142	32	169	55	38	43	35	31	35
3	7.3	20	23	64	28	263	51	34	37	45	32	32
4	7.0	19	23	66	47	88	50	33	114	44	31	69
5	7.4	18	27	52	42	151	49	32	93	37	45	100
6	6.8	49	32	47	28	273	47	33	74	37	39	41
7	6.5	32	31	43	28	192	45	34	89	41	37	33
8	6.5	25	23	40	27	104	48	121	272	37	60	30
9	6.6	21	24	40	28	100	52	69	79	33	39	28
10	9.4	20	22	39	24	100	61	54	57	39	73	27
11	60	29	60	36	24	93	87	46	50	48	46	26
12	42	43	152	32	23	88	120	41	59	39	35	26
13	18	e80	70	30	e21	84	98	37	230	35	32	44
14	11	e50	132	29	e21	79	85	36	300	37	30	46
15	9.6	e44	57	28	22	66	76	35	114	36	28	47
16	32	e43	43	27	e19	58	66	35	72	33	28	70
17	30	e201	40	26	e22	60	57	40	61	31	31	33
18	16	e126	37	e26	e25	60	51	37	170	30	28	32
19	13	e68	36	e24	e28	48	48	35	129	30	27	109
20	12	e39	64	24	e30	55	46	33	93	29	26	40
21	11	e34	65	24	30	152	44	35	166	29	25	32
22	11	e34	38	e24	241	96	42	44	99	29	27	28
23	11	e34	32	e23	778	80	41	41	85	48	45	111
24	11	e30	30	e22	416	77	39	44	57	50	31	105
25	11	e28	132	24	147	72	38	39	55	36	26	43
26	45	e26	128	22	84	68	39	185	52	31	25	36
27	28	28	47	23	68	65	41	106	45	30	25	34
28	18	27	38	e20	61	61	39	54	43	30	24	38
29	20	25	35	21	---	58	36	49	40	30	23	35
30	56	25	32	22	---	58	35	43	38	29	30	31
31	51	---	30	22	---	60	---	40	---	28	29	---
TOTAL	588.6	1,269	1,551	1,136	2,370	3,036	1,645	1,537	2,864	1,103	1,037	1,387
MEAN	19.0	42.3	50.0	36.6	84.6	97.9	54.8	49.6	95.5	35.6	33.5	46.2
MAX	60	201	152	142	778	273	120	185	300	50	73	111
MIN	6.5	18	22	20	19	48	35	32	37	28	23	26
CFSM	0.71	1.57	1.86	1.36	3.15	3.64	2.04	1.84	3.55	1.32	1.24	1.72
IN.	0.81	1.75	2.14	1.57	3.28	4.20	2.27	2.13	3.96	1.53	1.43	1.92

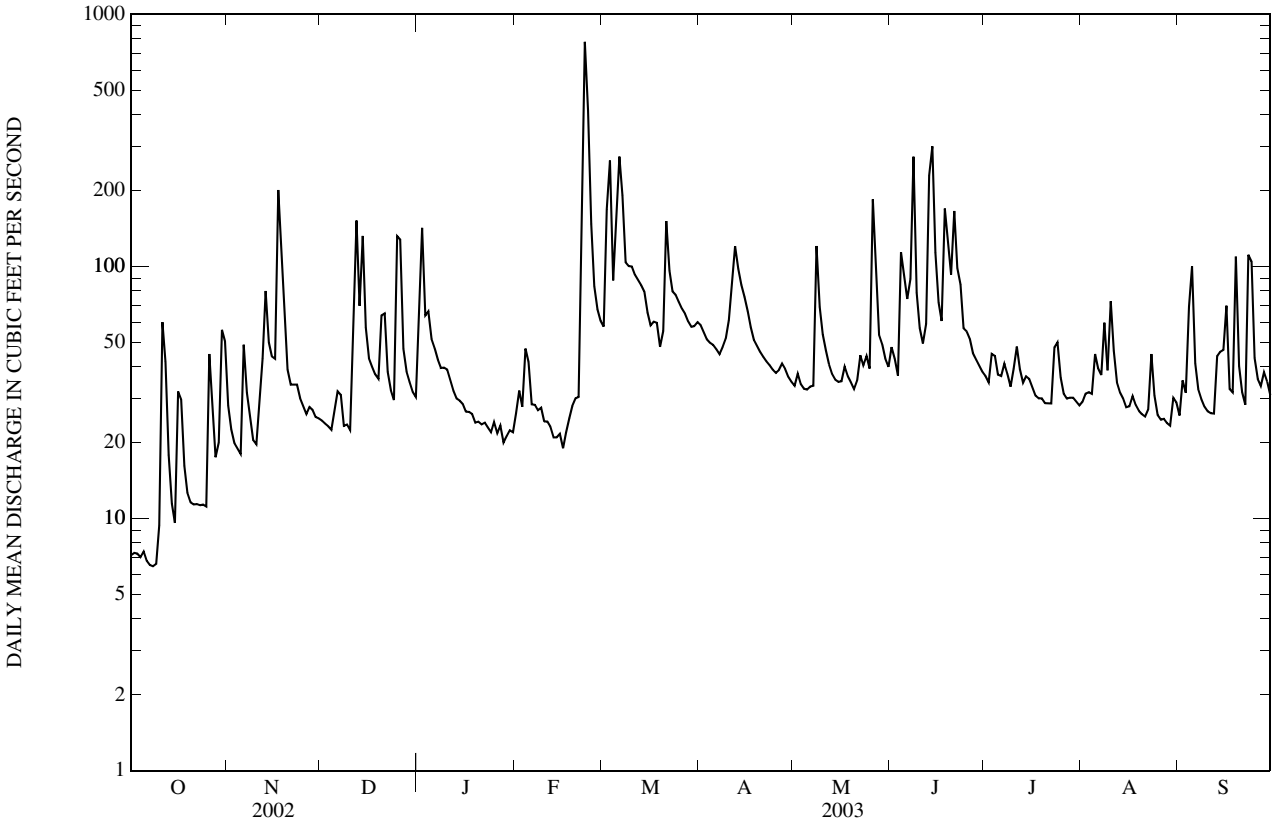
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1966 - 2003, BY WATER YEAR (WY)

MEAN	27.1	33.3	44.8	48.9	49.1	56.4	51.0	40.3	34.9	29.9	27.7	25.9
MAX	65.2	93.9	144	123	115	132	134	72.6	95.5	112	121	71.9
(WY)	(1990)	(1973)	(1997)	(1978)	(1979)	(1994)	(1983)	(1989)	(2003)	(1975)	(1967)	(1971)
MIN	13.0	15.3	16.3	20.2	16.5	22.7	21.3	15.9	10.7	6.01	5.89	8.98
(WY)	(1993)	(1999)	(1999)	(2002)	(2002)	(1981)	(1985)	(1977)	(1966)	(1966)	(1966)	(2002)

01477120 RACCOON CREEK NEAR SWEDESBORO, NJ—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1966 - 2003	
ANNUAL TOTAL	7,913.1		19,523.6			
ANNUAL MEAN	21.7		53.5		39.4	
HIGHEST ANNUAL MEAN					64.7	1973
LOWEST ANNUAL MEAN					16.5	2002
HIGHEST DAILY MEAN	201	Nov 17	778	Feb 23	1,260	Aug 28, 1971
LOWEST DAILY MEAN	4.1	Aug 22	6.5	Oct 7, 8	2.9	Jul 14, 1966
ANNUAL SEVEN-DAY MINIMUM	4.3	Aug 16	6.9	Oct 3	3.3	Aug 25, 1966
MAXIMUM PEAK FLOW			839	Feb 23	3,530	Aug 10, 1967
MAXIMUM PEAK STAGE			13.27	Feb 23	17.44a	Aug 10, 1967
INSTANTANEOUS LOW FLOW			6.3	Oct 7, 8	2.9	Jul 14, 1966
ANNUAL RUNOFF (CFSM)	0.81		1.99		1.46	
ANNUAL RUNOFF (INCHES)	10.94		27.00		19.88	
10 PERCENT EXCEEDS	43		99		66	
50 PERCENT EXCEEDS	16		37		28	
90 PERCENT EXCEEDS	6.2		22		14	

a Adjusted to current datum
e Estimated



01482500 SALEM RIVER AT WOODSTOWN, NJ

LOCATION.--Lat 39°38'38", long 75°19'49", Salem County, Hydrologic Unit 02040206, on right end of Memorial Lake Dam at Woodstown, 0.2 mi upstream from small brook and 0.3 mi downstream from Pennsylvania-Reading Seashore Lines bridge.

DRAINAGE AREA.--14.6 mi^2.

PERIOD OF RECORD.--March to September 1940, December 1941 to January 1984, June to December 1989,Octomber 2002 to current year.

REVISED RECORDS.--WDR NJ-82-2: Drainage area.

GAGE.--Water-stage recorder above concrete dam. Datum of gage is 29.49 ft above NGVD of 1929.

REMARKS.--Records good, expect for daily discharges below 5 ft^3/s which are poor. Occasional regulation from lake gate or other activities upstream. Satellite gage-height telemetry at station. Several measurements of water temperature were made during the year.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

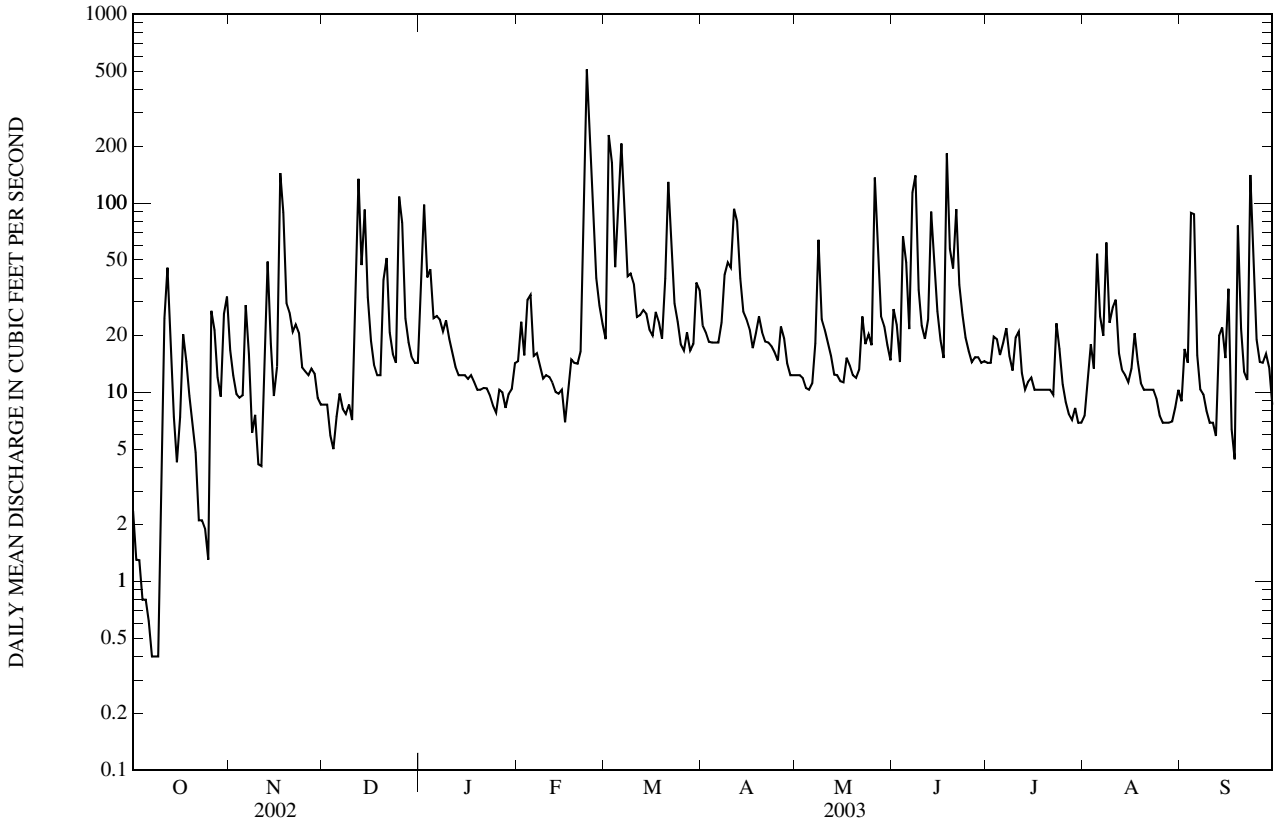
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.4	17	8.6	46	15	19	23	12	28	14	7.5	9.0
2	1.3	12	8.6	98	24	229	21	12	23	14	12	17
3	1.3	9.8	5.9	40	16	163	18	12	14	20	18	14
4	0.80	9.4	5.0	45	31	46	18	11	67	19	13	89
5	0.80	9.6	7.4	25	33	102	18	10	49	16	54	87
6	0.61	29	9.8	25	16	207	18	11	22	18	25	16
7	0.40	16	8.1	24	16	81	23	18	114	22	20	10
8	0.40	6.1	7.7	21	14	41	42	64	140	16	62	9.7
9	0.40	7.6	8.6	24	12	42	49	24	35	13	23	8.0
10	1.6	4.2	7.1	19	12	37	46	21	23	19	28	6.9
11	25	4.1	30	16	12	25	93	18	19	21	31	6.9
12	46	12	134	14	11	26	80	16	24	13	16	5.9
13	17	49	47	12	10	27	40	12	90	10	13	20
14	7.4	18	92	12	9.8	26	27	12	51	11	12	22
15	4.3	9.6	32	12	10	21	24	11	27	12	11	15
16	7.4	14	19	12	6.9	20	21	11	19	10	13	35
17	20	144	14	12	10	27	17	15	15	10	20	6.4
18	15	89	12	11	15	24	21	14	183	10	15	4.4
19	9.6	30	12	10	14	19	25	12	57	10	11	76
20	6.9	26	39	10	14	40	21	12	45	10	10	22
21	4.8	21	51	11	16	130	19	13	93	10	10	13
22	2.1	23	21	10	165	54	18	25	37	9.7	10	12
23	2.1	21	16	9.6	509	29	17	18	26	23	10	141
24	1.9	14	14	8.5	199	24	16	20	19	17	9.3	60
25	1.3	13	108	7.8	78	18	15	18	16	11	7.5	19
26	27	12	79	10	40	17	22	137	14	8.9	6.9	14
27	21	13	25	10	29	21	19	59	15	7.6	6.9	14
28	12	13	18	8.3	23	17	14	25	15	7.1	6.9	16
29	9.5	9.3	15	9.8	---	18	12	22	14	8.2	7.0	13
30	26	8.6	14	10	---	38	12	18	15	6.9	8.3	8.6
31	32	---	14	14	---	35	---	15	---	6.9	10	---
TOTAL	308.31	664.3	882.8	597.0	1,360.7	1,623	809	698	1,309	404.3	507.3	790.8
MEAN	9.95	22.1	28.5	19.3	48.6	52.4	27.0	22.5	43.6	13.0	16.4	26.4
MAX	46	144	134	98	509	229	93	137	183	23	62	141
MIN	0.40	4.1	5.0	7.8	6.9	17	12	10	14	6.9	6.9	4.4

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1940 - 2003, BY WATER YEAR (WY)

MEAN	12.4	18.9	23.0	25.2	27.5	29.7	24.9	17.4	15.2	14.4	13.7	15.9
MAX	34.6	50.9	52.6	82.7	55.7	52.4	65.7	38.5	45.6	66.1	47.5	172
(WY)	(1980)	(1973)	(1973)	(1978)	(1971)	(2003)	(1983)	(1983)	(1983)	(1984)	(1958)	(1940)
MIN	3.11	3.91	4.99	5.22	11.5	9.33	7.67	4.99	2.75	0.98	0.55	2.66
(WY)	(1966)	(1966)	(1966)	(1966)	(1980)	(1966)	(1966)	(1955)	(1954)	(1955)	(1966)	(1964)

SUMMARY STATISTICS	FOR 2003 WATER YEAR		WATER YEARS 1940 - 2003	
ANNUAL TOTAL	9954.51			
ANNUAL MEAN	27.3		19.5	
HIGHEST ANNUAL MEAN			30.8	1984
LOWEST ANNUAL MEAN			5.71	1966
HIGHEST DAILY MEAN	509	Feb 23	4,460	Sep 1, 1940
LOWEST DAILY MEAN	0.40	Oct 7	0.00	Jul 21, 1949
ANNUAL SEVEN-DAY MINIMUM	0.67	Oct 3	0.20	Jul 24, 1954
MAXIMUM PEAK FLOW	645	Feb 23	22,000a	Sep 1, 1940
MAXIMUM PEAK STAGE	12.12	Feb 23	17.98b	Sep 1, 1940
INSTANTANEOUS LOW FLOW	0.40	Oct 6	0.00	Many days
10 PERCENT EXCEEDS	54		35	
50 PERCENT EXCEEDS	16		12	
90 PERCENT EXCEEDS	7.3		4.4	

a From rating curve extended above 220 ft^3/s on basis of slope-area measurement of peak flow at site 0.5 mi downstream.
b From floodmark.
c No flow short periods during many days just after waste gate was closed and water was below spillway.



DELAWARE RIVER BASIN

RESERVOIRS IN DELAWARE RIVER BASIN

01416900 PEPACTON RESERVOIR.--Lat 42°04'38", long 74°58'04", Delaware County, NY, Hydrologic Unit 02040102, near release chamber at Downsville Dam on East Branch Delaware River, and 1.6 mi east of Downsville.
DRAINAGE AREA.-- 372 mi^2.
PERIOD OF RECORD.-- September 1954 to current year.
REVISED RECORDS.-- WDR NY-90-1: Drainage area.
GAGE.-- Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Board of Water Supply, City of New York).
REMARKS.-- Reservoir is formed by an earthfill rockfaced dam. Storage began Sept. 15, 1954. Usable capacity 140,190 mil gal between minimum operating level, elevation, 1,152.0 ft and crest of spillway, elevation, 1,280.0 ft. Capacity: at crest of spillway 149,799 mil gal; at minimum operating level, 9,609 mil gal; at sill of diversion tunnel, elevation, 1,143.0 ft, 6,098 mil gal; in dead storage below release outlet, elevation, 1,126.50 ft, 1,898 mil gal. Figures given herein represent total contents. Reservoir impounds water for diversion through East Delaware Tunnel to Rondout Reservoir on Rondout Creek, in Hudson River basin (see elsewhere in this section), for water supply to City of New York; for release during periods of low flow in the lower Delaware River basin, as directed by the Delaware River Master; and for conservation release. No diversion prior to Jan. 6, 1955. Records provided by New York City Department of Environmental Protection.
EXTREMES FOR PERIOD OF RECORD.--Maximum contents observed, 154,027 mil gal, Apr. 5, 1960, elevation, 1,282.27 ft; minimum observed (after first filling), 9,575 mil gal, Dec. 26, 1964, elevation, 1,151.92 ft.
EXTREMES FOR CURRENT YEAR.--Maximum contents observed, 152,454 mil gal, Sept. 5, elevation, 1,281.43 ft; minimum observed, 88,154 mil gal, Oct. 12, elevation, 1,241.48 ft.

01424997 CANNONSVILLE RESERVOIR.--Lat 42°03'46", long 75°22'29", Delaware County, NY, Hydrologic Unit 02040101, in emergency gate tower at Cannonsville Dam on West Branch Delaware River, and 1.8 mi southeast of Stilesville.
DRAINAGE AREA.-- 454 mi^2.
PERIOD OF RECORD.-- October 1963 to current year.
REVISED RECORDS.-- WDR NY-71-1: 1966.
GAGE.-- Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Board of Water Supply, City of New York).
REMARKS.-- Reservoir is formed by an earthfill rockfaced dam. Storage began Sept. 30, 1963. Usable capacity 95,706 mil gal between minimum operating level, elevation, 1,040.0 ft and crest of spillway, elevation, 1,150.0 ft. Capacity, at crest of spillway, 98,618 mil gal; at minimum operating level, 2,912 mil gal; at mouth of inlet channel to diversion tunnel, elevation, 1,035.0 ft, 1,892 mil gal; in dead storage below release outlet elevation, 1,020.5 ft, 328 mil gal. Figures given herein represent total contents. Impounded water is diverted for New York City water supply via West Delaware Tunnel to Rondout Reservoir in Hudson River basin (see elsewhere in this section); is released in Delaware River for downstream low flow augmentation, as directed by the Delaware River Master; and is released for conservation flow in the Delaware River. No diversion prior to January 29, 1964. Records provided by New York City Department of Environmental Protection.
EXTREMES FOR PERIOD OF RECORD.--Maximum contents observed, 109,617 mil gal, Mar. 16, 1986, elevation, 1,156.73 ft; minimum observed (after first filling), 11,901 mil gal, Nov. 7, 1968, elevation, 1,066.24 ft.
EXTREMES FOR CURRENT YEAR.--Maximum contents observed, 106,423 mil gal, Mar. 23, elevation, 1,154.85 ft; minimum observed, 36,098 mil gal, Oct. 11, elevation, 1,099.91 ft.

01428900 PROMPTON RESERVOIR.--Lat 41°35'18", long 75°19'39", Wayne County, PA, Hydrologic Unit 02040103, at dam on West Branch Lackawaxen River, 0.3 mi north of Prompton, 0.4 mi upstream from highway bridge, and 0.5 mi upstream from Van Auken Creek.
DRAINAGE AREA.-- 59.6 mi^2.
PERIOD OF RECORD.-- December 1960 to current year.
GAGE.-- Data collection platform. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by U.S. Army Corps of Engineers).
REMARKS.--Reservoir formed by an earth and rockfill dam with ungated bedrock spillway at elevation 1,205.00 ft. Storage began July 1960. Capacity at elevation 1,205.00 ft is 51,700 acre-ft. Ordinary minimum (conservation) pool is 1,125.00 ft, capacity, 3,420 acre-ft. Reservoir is used for flood control and recreation. Figures given herein represent total contents. Regulation is accomplished by discharge through an ungated tunnel.
EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 8,170 acre-ft, June 29, 1973, elevation, 1,138.40 ft; minimum (after first filling), 2,500 acre-ft, June 5, 1991, elevation, 1,121.46 ft.
EXTREMES FOR CURRENT YEAR.--Maximum contents, 5,690 acre-ft, Sept. 4, elevation, 1,131.89 ft; minimum contents, 3,230 acre-ft, Aug. 29, elevation, 1,124.04 ft.

01429400 GENERAL EDGAR JADWIN RESERVOIR.--Lat 41°36'44", long 75°15'55", Wayne County, PA, Hydrologic Unit 02040103, at dam on Dyberry Creek, 0.4 mi upstream from unnamed tributary, 2.4 mi north of Honesdale, and 2.9 mi upstream from mouth.
DRAINAGE AREA.-- 64.5 mi^2.
PERIOD OF RECORD.-- October 1959 to current year.
GAGE.-- Data collection platform. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by U.S. Army Corps of Engineers).
REMARKS.--Reservoir formed by an earth and rockfill dam with ungated concrete spillway at elevation 1,053.00 ft. Storage began October 1959. Capacity at elevation of 1,053.00 ft is 24,500 acre-ft. Reservoir is used for flood control. Figures given herein represent total contents. Regulation is accomplished by discharge through an ungated tunnel. Since Oct. 1, 1996, pool elevations below 990 ft NGVD are not recorded.
EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 6,520 acre-ft, June 19, 1973, elevation, 1,017.40 ft; minimum contents, no storage many times.
EXTREMES FOR CURRENT YEAR.--Maximum contents, 3,360 acre-ft, Sept. 4, elevation, 1,006.42 ft; minimum contents, no storage many times.

01431700 LAKE WALLENPAUPACK.--Lat 41°27'35", long 75°11'10", Wayne County, PA, Hydrologic Unit 02040103, at dam on Wallenpaupack Creek at Wilsonville, 1.2 mi south of Hawley, and 1.5 mi upstream from mouth.
DRAINAGE AREA.-- 228 mi^2.
PERIOD OF RECORD.-- January 1926 to current year.
GAGE.-- Vertical staff. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Pennsylvania Power and Light Co.).
REMARKS.--Lake formed by concrete gravity-type and earthfill dam, with concrete spillway in two sections at elevation 1,176.00 ft. Spillway equipped with 14 ft high roller gate on each section. Storage began Nov. 3, 1925; water in reservoir first reached minimum pool elevation January 1926. Total capacity at elevation 1,190.00 ft (top of gates), is 209,300 acre-ft, of which 108,900 acre-ft, above elevation 1,170.00 ft (minimum pool), is controlled storage. Prior to 1984, minimum pool elevation was 1,160.00 ft. Reservoir is used for generation of hydroelectric power. Figures given herein represent usable contents. Records prior to 1984 included additional usable contents of 48,900 acre-ft.
COOPERATION.--Records provided by Pennsylvania Power and Light Co.
EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 129,300 acre-ft, Aug. 19-21, 1955, elevation, 1,193.45 ft; minimum (after first filling), 12,280 acre-ft (old minimum pool), Mar. 28, 1958, elevation, 1,162.60 ft.
EXTREMES FOR CURRENT YEAR.--Maximum contents, 106,300 acre-ft, June 24, elevation, 1,189.6 ft; minimum contents, 27,800 acre-ft, Oct. 10, elevation 1,175.5 ft.

01433000 SWINGING BRIDGE RESERVOIR.--Lat 41°34'21", long 74°47'00", Sullivan County, NY, Hydrologic Unit 02040104, at dam on Mongaup River, and 1.8 mi northwest of Fowlersville.
DRAINAGE AREA.-- 116 mi2, excluding Cliff Lake, Lebanon Lake, and Toronto Reservoir.
PERIOD OF RECORD.-- January 1930 to current year.
REVISED RECORDS.-- WSP 1552: 1951-54. WDR NY-86-1: 1985. WDR NY-90-1: Drainage area.
GAGE.-- Nonrecording gage, daily readings at 0900. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Orange and Rockland Utilities, Inc.). All capacity figures given herein are based on zero storage at minimum operating pool level, 1,010 ft.
REMARKS.--Reservoir is formed by an earthfill dam. Storage began Jan. 19, 1930. Usable capacity, 1,436.6 mil ft^3 between elevations 1,010.0 ft, minimum operating pool, and 1,071.2 ft, top of flashboards. Capacity below elevation 1,010.0 ft, minimum operating pool, about 212.7 mil ft^3. Reservoir is used for storage of water for power. Figures given herein represent contents above 1,010.0 ft. Water is received from Cliff Lake, Lebanon Lake, and Toronto Reservoir. Records provided by Mirant New York, Inc.
EXTREMES FOR PERIOD OF RECORD.--Maximum contents observed, 1,461.6 mil ft^3, Mar. 14, 1977, elevation, 1,071.8 ft; minimum observed (after first filling), -141.4 mil ft^3, Dec. 2, 1938, elevation, 987.5 ft.
EXTREMES FOR CURRENT YEAR.--Maximum contents observed, 1,367.1 mil ft^3, Sept. 30, elevation, 1,069.5 ft; minimum observed, 1,084.5 mil ft^3, Feb. 28, elevation, 1,062.1 ft.

01433100 TORONTO RESERVOIR.--Lat 41°37'15", long 74°49'55", Sullivan County, NY, Hydrologic Unit 02040104, at dam on Black Lake Creek, and 2.5 mi southeast of village of Black Lake.
DRAINAGE AREA.-- 22.9 mi^2.
PERIOD OF RECORD.-- January 1926 to current year.
REVISED RECORDS.-- WSP 1552: 1951-54. WSP 1702: 1959 (M). WDR NY-85-1: 1984. WDR NY-86-1: 1985. WDR NY-90-1: Drainage area.
GAGE.-- Nonrecording gage, daily readings at 0900. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Orange and Rockland Utilities, Inc.). All capacity figures given herein are based on zero storage at minimum operating pool level, 1,165.0 ft.
REMARKS.--Reservoir is formed by an earthfill dam completed July 24, 1926. Storage began Jan. 13, 1926. Usable capacity 1,098.2 mil ft^3 between elevations 1,165.0 ft, minimum operating pool, and 1,220.0 ft, top of permanent flashboards. Capacity below elevation 1,165.0 ft, minimum operating pool, about 26.8 mil ft^3. Reservoir is used for storage of water for power. Figures given herein represent contents above 1,165.0 ft. Records provided by Mirant New York, Inc.
EXTREMES FOR PERIOD OF RECORD.--Maximum contents observed, 1,171.2 mil ft^3, July 20, 1945, elevation, 1,222.0 ft; minimum observed (after first filling), -26.8 mil ft^3, Nov. 15, 1928, elevation, 1,144.5 ft.
EXTREMES OF CURRENT YEAR.--Maximum contents observed, 1,116.2 mil ft^3, Apr. 14, 16, June 23, elevation, 1,220.5 ft; minimum observed, 681.9 mil ft^3, Oct. 11, elevation, 1,206.4 ft.

01433200 CLIFF LAKE.--Lat 41°35'00", long 74°47'40", Sullivan County, NY, Hydrologic Unit 02040104, at dam on Black Lake Creek, and 2.5 mi northwest of Fowlersville.
DRAINAGE AREA.-- 6.46 mi^2, excluding area above Toronto Reservoir.
PERIOD OF RECORD.-- January 1939 to current year.
REVISED RECORDS.-- WSP 1552: 1951-54. WDR NY-75-1: 1974(m). WDR NY-86-1: 1985.
GAGE.-- Nonrecording gage, daily readings at 0900. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Orange and Rockland Utilities, Inc.). All capacity figures given herein are based on zero storage at minimum operating pool level, 1,043.3 ft.
REMARKS.--Reservoir is formed by a concrete gravity-type dam. Storage began Jan. 6, 1939. Usable capacity, 136.06 mil ft^3 between elevations 1,043.3 ft, minimum operating pool, and 1,072.0 ft, top of permanent flashboards. Capacity below elevation 1,043.3 ft, minimum operating pool, about 6.54 mil ft^3. Reservoir is used for storage of water for power. Water is received from Toronto and Lebanon Lake reservoirs and is discharged through a tunnel into Swinging Bridge Reservoir. Figures given herein represent contents above 1,043.3 ft. Records provided by Mirant New York, Inc.
EXTREMES FOR PERIOD OF RECORD.--Maximum contents observed, 145.44 mil ft^3, July 30, 31, 1945, elevation, 1,073.1 ft; minimum observed (after first filling), about -6.54 mil ft^3, Mar. 16, 1963, elevation, 1,038.0 ft.
EXTREMES FOR CURRENT YEAR.--Maximum contents observed, 128.59 mil ft^3, Aug. 11, elevation, 1,071.1 ft; minimum observed, 75.40 mil ft^3, Oct. 11, May 23, elevation, 1,063.7 ft.

01435900 NEVERSINK RESERVOIR.--Lat 41°49'27", long 74°38'20", Sullivan County, NY, Hydrologic Unit 02040104, at a gatehouse at Neversink Dam on Neversink River, and 2 mi southwest of Neversink.
DRAINAGE AREA.-- 92.5 mi^2.
PERIOD OF RECORD.-- June 1953 to current year.
REVISED RECORDS.-- WDR NY-85-1: Drainage area.
GAGE.-- Nonrecording gage read daily at 0900. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Board of Water Supply, City of New York).
REMARKS.-- Reservoir is formed by an earthfill rockfaced dam. Storage began June 2, 1953. Usable capacity 34,941 mil gal between minimum operating level, elevation, 1,319.0 ft and crest of spillway, elevation, 1,440.0 ft. Capacity at crest of spillway 37,146 mil gal; at minimum operating level, 2,205 mil gal; dead storage below diversion sill and outlet sill, elevation 1,314.0 ft, 1,680 mil gal. Figures given herein represent total contents. Reservoir impounds water for diversion through Neversink-Grahamsville Tunnel to Rondout Reservoir on Rondout Creek, in Hudson River basin, for water supply of City of New York (see elsewhere in this section); for release during periods of low flow in the lower Delaware River basin, as directed by the Delaware River Master; and for conservation release. No diversion prior to Dec. 3, 1953. Records provided by New York City Department of Environmental Protection.
EXTREMES FOR PERIOD OF RECORD.--Maximum contents observed, 37,983 mil gal, Apr. 17, 1993, elevation, 1,441.68 ft; minimum observed (after first filling), 1,985 mil gal, Nov. 25, 1964, elevation, 1,316.98 ft.
EXTREMES FOR CURRENT YEAR.--Maximum contents observed, 37,564 mil gal, Mar. 30, elevation, 1,440.84 ft; minimum observed, 20,384 mil gal, Oct. 11, elevation, 1,400.12 ft.

01447780 FRANCIS E. WALTER RESERVOIR (formerly published as Bear Creek Reservoir).--Lat 41°06'45", long 75°43'15", Luzerne County, PA, Hydrologic Unit 02040106, at dam on Lehigh River, 2,200 ft downstream from Bear Creek, and 5.0 mi northeast of White Haven.
DRAINAGE AREA.-- 289 mi^2.
PERIOD OF RECORD.-- February 1961 to current year.
GAGE.-- Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by U.S. Army Corps of Engineers).
REMARKS.--Reservoir formed by an earthfill embankment covered with a rock shell, with concrete spillway at elevation 1,450.0 ft. Storage began Feb. 17, 1961; reservoir first reached conservation pool in June 1961. Total capacity (elevation 1,450.0 ft) is 110,700 acre-ft of which 108,700 acre-ft is controlled storage above elevation 1,300.0 ft, (conservation pool). Dead storage is 2,000 acre-ft. Flow regulated by three gates and low-flow by-pass system. Reservoir is used for flood control and recreation. Satellite telemetry at station.
EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 62,100 acre-ft, Sept. 28, 1985, elevation, 1,417.08 ft; minimum contents (after establishment of conservation pool), 980 acre-ft, July 6, 1982, elevation, 1,287.70 ft.
EXTREMES FOR CURRENT YEAR.--Maximum recorded contents, 29,360 acre-ft, June 23, elevation, 1,382.85 ft; minimum contents, 1,310 acre-ft, Dec. 26, elevation, 1,293.34 ft.

01449400 PENN FOREST RESERVOIR.--Lat 40°55'45", long 75°33'45", Carbon County, PA, Hydrologic Unit 02040106, at dam on Wild Creek, 0.7 mi upstream from hatchery, 2.6 mi upstream from Wild Creek Dam, 4.4 mi upstream from mouth, and 10.0 mi northeast of Palmerton.
DRAINAGE AREA.-- 16.5 mi^2.
PERIOD OF RECORD.-- October 1958 to current year.
GAGE.-- Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by city of Bethlehem).
REMARKS.--Reservoir formed by a roller-compacted concrete dam with ungated concrete spillway at elevation 1,000.60 ft (capacity, 18,510 acre-ft). Storage began October 1958. Reservoir is used for municipal water supply. Regulation by valves on pipe through dam. Figures given herein represent total contents and include diversion since October 1969 from Tunkhannock Creek Basin to Wild Creek Basin.
COOPERATION.--Records provided by city of Bethlehem.
EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 20,800 acre-ft, Apr. 16, 1983, elevation, 1,001.69 ft; minimum contents, 0 acre-ft, many days during 1996, 1997, 1998, and 1999 water years, elevation, 890.60 ft.
EXTREMES FOR CURRENT YEAR.--Maximum contents, 19,090 acre-ft, June 13, elevation, 1,001.73 ft; minimum contents, 16,170 acre-ft, Oct. 10, elevation, 995.08 ft.

01449700 WILD CREEK RESERVOIR.--Lat 40°53'50", long 75°33'50", Carbon County, PA, Hydrologic Unit 02040106, at dam on Wild Creek, 1.6 mi upstream from mouth, 2.4 mi south of hatchery, and 7.5 mi northeast of Palmerton.
DRAINAGE AREA.-- 22.2 mi^2.
PERIOD OF RECORD,.-- January 1941 to current year.
GAGE.-- Nonrecording gage. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by city of Bethlehem).
REMARKS.--Reservoir formed by earthfill dam with concrete ungated spillway at elevation 820.00 ft. Storage began January 27, 1941; reservoir first reached minimum contents pool elevation in February 1941. Total capacity at elevation 820.00 ft is 12,500 acre-ft of which 12,000 acre-ft is controlled storage. Reservoir is used for municipal water supply. Regulation by valves on pipe through dam. Figures given herein represent usable contents and include diversion since October 1969 from Tunkhannock Creek Basin to Wild Creek Basin.
COOPERATION.--Records provided by city of Bethlehem.
EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 12,880 acre-ft, May 23, 1942, elevation, 822.93 ft; minimum contents (after first filling), 2,680 acre-ft, Nov. 15, 1966, elevation, 774.10 ft.
EXTREMES FOR CURRENT YEAR.--Maximum contents, 12,490 acre-ft, June 13, elevation, 821.64 ft; minimum contents, 11,500 acre-ft, Dec. 10, elevation 817.88 ft.

01449790 BELTZVILLE LAKE.--Lat 40°50'56", long 75°38'19", Carbon County, PA, Hydrologic Unit 02040106, at dam on Pohopoco Creek, 0.4 mi upstream from gaging station on Pohopoco Creek, 0.6 mi upstream from Sawmill Run, and 2.3 mi northeast of Parryville.
DRAINAGE AREA.-- 96.3 mi^2.
PERIOD OF RECORD.-- February 1971 to current year.
GAGE.-- Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by U.S. Army Corps of Engineers).
REMARKS.--Lake formed by an earth and rockfill dam with ungated, partially lined spillway at an elevation of 651.00 ft. Storage began Feb. 8, 1971. Capacity at elevation 651.00 ft is 68,300 acre-ft. Ordinary minimum contents (conservation) pool elevation is 628.00 ft, capacity, 41,250 acre-ft. Dead storage is 1,390 acre-ft. Lake is used for recreation, flood control, low-flow augmentation, and water supply. Figures given herein represent total contents. Regulation is accomplished by a multi-level water-quality outlet system, and two flood-control gates.
EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 49,730 acre-ft, Jan. 29, 1976, elevation, 636.30 ft; minimum contents, 15,110 acre-ft, Mar. 31, 1983, elevation, 588.79 ft.
EXTREMES FOR CURRENT YEAR.--Maximum contents, 46,090 acre-ft, June 23, elevation, 632.89 ft; minimum contents, 38,760 acre-ft, Jan. 8, elevation, 625.34 ft.

01455221 MERRILL CREEK RESERVOIR.--Lat 40°43'38", long 75°06'10", Warren County, NJ, Hydrologic Unit 02040105, at dam on Merrill Creek in Harmony Township, 4.5 mi northeast of Phillipsburg, and 2.8 mi upstream from mouth.
DRAINAGE AREA.-- 3.13 mi^2.
PERIOD OF RECORD.-- March 1988 to current year.
GAGE.-- Measurement from reference point. Datum of gage is National Geodetic Vertical Datum of 1929.
REMARKS.--Reservoir formed by zoned, compacted, earth-rockfill dam constructed in November 1987. Storage began March 1988. Total capacity at spillway elevation, 16,617,000,000 gal, elevation 929.0 ft. Usable capacity, 15,6654,000,000 gal. Reservoir used for storage of water pumped from the Delaware River through a 57-inch diameter pipe 17,000 ft long. Releases are made into the Delaware River through the same pipe. Reservoir is used to augment low flow in the Delaware River. Conservation release of 3 ft^3/s made to Merrill Creek.
COOPERATION.--Records provided by the Merrill Creek Reservoir Project.
EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 16,710,000,000 gal, Jan. 15, 1990, elevation, 923.3 ft; minimum (after first filling), 14,076,000,000 gal, Jan. 23, 1992, elevation 910.40 ft.
EXTREMES FOR CURRENT YEAR.--Maximum contents, 15,539,000,000 gal, Sept. 30, elevation 922.27 ft; minimum, 14,915,000,000 gal, Dec. 11, elevation 919.18 ft.

01455400 LAKE HOPATCONG.--Lat 40°55'03", long 74°39'51", Morris County, NJ, Hydrologic Unit 02040105, in gatehouse of Lake Hopatcong Dam on Musconetcong River at Landing.
DRAINAGE AREA.-- 25.3 mi^2.
PERIOD OF RECORD.-- February 1887 to current year. Monthend contents only prior to October 1950, published in WSP 1302.
REVISED RECORDS.-- WDR NJ-82-2: Drainage area; WDR NJ-83-2: Corrections 1981 (m/m).
GAGE.-- Staff gage. Prior to June 24, 1928, daily readings obtained by measuring from high-water mark to water surface converted to gage height, present datum. Datum of gage is 914.57 ft above National Geodetic Vertical Datum of 1929.
REMARKS.--Lake is formed by concrete spillway and earthfill dam completed about 1828. Crest of spillway was lowered 0.11 ft in 1925. Usable capacity, 7,459,000,000 gal between gage height -2.6 ft, sills of gates and 9.00 ft, crest of spillway. Flow regulated by four gates (3 by 5 ft), also by one 24-inch pipe with gate valve to recreation fountain 250 ft downstream from dam. Dead storage, about 8,117,000,000 gal. Figures given herein represent usable capacity. Data collected at 0700 on the first day of the following month since Jan. 1985, previously data collected at 2400 on the last day of each month. Lake used for recreation.
COOPERATION.--Records provided by New Jersey Department of Environmental Protection.
EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 9,745,000,000 gal, Aug. 13, gage height, 11.80 ft; minimum, 1,525,000,000 gal, Dec. 29, 1960, gage height, 0.65 ft.
EXTREMES FOR CURRENT YEAR.--Maximum contents, 8,202,000,000 gal, June 22 & 23, gage height, 9.88 ft; minimum, 5,724,000,000 gal, Dec. 26-31, & Jan. 26 to Feb. 3, gage height, 6.86 ft.

01459350 NOCKAMIXON RESERVOIR.--Lat 40°28'13", long 75°11'10", Bucks County, PA, Hydrologic Unit 02040105, at dam on Tohickon Creek, 6.2 mi upstream from gaging station on Tohickon Creek, 1.3 mi east of Ottsville, and 2.9 mi upstream from Mink Run.

DRAINAGE AREA.-- 73.3 mi^2.
PERIOD OF RECORD.-- December 1973 to current year.
GAGE.-- Water stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Pennsylvania Department of Environmental Protection).
REMARKS.--Reservoir formed by earthfill dam with concrete spillway at elevation 395.0 ft. Storage began December 1973. Total capacity is 66,500 acre-ft at elevation 410 ft. Reservoir is used primarily for recreation, but can be used for water supply and flood control.
COOPERATION.--Records furnished by Pennsylvania Department of Environmental Protection.
EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 45,390 acre-ft, Sept. 17, 1999, elevation, 398.50 ft; minimum contents (after first filling), 15,900 acre-ft, around Dec. 31, 1975, elevation, 372.78 ft.
EXTREMES FOR CURRENT YEAR.--Data not available for current year.

01469200 STILL CREEK RESERVOIR.--Lat 40°51'25", long 75°59'30", Schuylkill County, PA, Hydrologic Unit 02040106, at dam on Still Creek, 1.0 mi upstream from mouth, and 2.3 mi north of Hometown.

DRAINAGE AREA.-- 7.19 mi^2.
PERIOD OF RECORD.-- January 1933 to current year.
GAGE.-- Nonrecording gage. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Panther Valley Water Co.).
REMARKS.--Reservoir formed by earthfill dam with ungated concrete spillway at elevation 1,182.00 ft. Storage began February 1933. Capacity at elevation 1,182.00 ft is 8,290 acre-ft. Reservoir is used for municipal water supply. Figures given herein represent total contents. Regulation by valves on pipe through dam. COOPERATION.--Records provided by the borough of Tamaqua.
EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 8,570 acre-ft, Oct. 15, 1955, elevation, 1,182.92 ft, but may have been greater during 1950 or 1951 water years; minimum contents (after first filling), 588 acre-ft, Dec. 8, 1944, elevation, 1,136.70 ft.
EXTREMES FOR CURRENT YEAR.--Maximum contents, 8,430 acre-ft, Aug. 4, elevation, 1,182.5 ft; minimum contents, 7,110 acre-ft, Oct. 10, elevation, 1,177.7 ft.

01470870 BLUE MARSH LAKE.--Lat 40°22'45", long 76°01'59", Berks County, PA, Hydrologic Unit 02040203, at dam on Tulpehocken Creek, 0.8 mi upstream from gaging station on Tulpehocken Creek (station 01470960), 1.0 mi northeast of Blue Marsh, 1.9 mi upstream from Rebers Bridge, and 5.1 mi southeast of Bernville.

DRAINAGE AREA.-- 175 mi^2.
PERIOD OF RECORD.-- April 1979 to current year.
GAGE.-- Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by U.S. Army Corps of Engineers).
REMARKS.--Lake formed by earthfill dam with ungated concrete spillway at elevation 307.00 ft. Storage began April 23, 1979. Capacity at elevation 307.00 ft is 50,000 acre-ft. Dead storage is 3,000 acre-ft. Lake is used for flood control, water supply, and recreation. Figures herein represent total contents. Satellite telemetry at station. COOPERATION.--Records provided by U.S. Army Corps of Engineers.
EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 39,480 acre-ft, Apr. 17, 1983, elevation, 301.65 ft; minimum contents (after first filling), 13,150 acre-ft, Mar. 18, 1994, elevation, 279.88 ft.
EXTREMES FOR CURRENT YEAR.--Maximum contents, 34,700 acre-ft, June 23, elevation, 298.78 ft; minimum contents, 14,200 acre-ft, Mar. 24, elevation, 281.25 ft.

01472200 GREEN LANE RESERVOIR.--Lat 40°20'30", long 75°28'45", Montgomery County, PA, Hydrologic Unit 02040203, at dam on Perkiomen Creek, 0.4 mi west of Green Lane, and 2.1 mi upstream from Unami Creek.

DRAINAGE AREA.-- 70.9 mi^2.
PERIOD OF RECORD.-- December 1956 to current year.
GAGE.-- Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Philadelphia Suburban Water Co.).
REMARKS.--Reservoir formed by concrete, gravity-type dam with ungated spillway at elevation 286.00 ft. Storage began December 21, 1956. Capacity at elevation 286.00 ft is 13,430 acre-ft. Reservoir is used for municipal water supply. Figures given herein represent total contents. Regulation by valves on pipe through dam. COOPERATION.--Records provided by Philadelphia Suburban Water Co.
EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 17,030 acre-ft, June 23, 1972, elevation, 290.05 ft; minimum contents (after first filling), 1,270 acre-ft, Aug. 25, 1957, elevation, 251.60 ft.
EXTREMES FOR CURRENT YEAR.--Maximum contents, 14,800 acre-ft, June 21, elevation, 287.54 ft; minimum contents, 11,070 acre-ft, Oct. 10, elevation, 283.05 ft.

01480399 CHAMBERS LAKE.--40°01'40", long 75°51'03", Chester County, PA, Hydrologic Unit 02040205, at Hibernia Dam on Birch Run, 0.6 mi upstream from gaging station on Birch Run (station 01480400), 0.9 mi upstream from mouth, and 1.4 mi northwest of Wagontown.

DRAINAGE AREA.-- 4.5 mi^2.
PERIOD OF RECORD.-- May 1997 to current year.
GAGE.-- Non-recording gage. Manual measurement from top of concrete riser at upstream flank of Hibernia Dam. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Chester County Water Resources Authority, Chester County Parks and Recreation Department).
REMARKS.--Reservoir formed by earthfill dam with principle spillway at elevation 587.5 ft, capacity 2,000 acre-ft. Dam crest at elevation 596.5 ft. Normal elevation 580 ft, capacity 1,226 acre feet. Reservoir is used for water supply, flood control, and recreation. Figures given herein represent total contents.
COOPERATION.--Records provided by Chester County Water Resources Authority, in cooperation with City of Coatesville Authority and Chester County Parks and Recreation Department.
EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 1,440 acre-ft, March 22, elevation, 582.76 ft; minimum contents, 659 acre-ft, Dec. 28, 1998, elevation, 572.42 ft.
EXTREMES FOR CURRENT YEAR.--Maximum contents, 1,240 acre-ft, Jan 1, elevation, 580.70 ft; minimum contents, 605 acre-ft, Oct. 10, elevation, 571.23 ft.

01480684 MARSH CREEK LAKE.--Lat 40°03'24", long 75°43'06", Chester County, PA, Hydrologic Unit 02040205, on right bank at dam on Marsh Creek, 0.3 mi upstream from mouth, and 3.2 mi north of Downingtown.

DRAINAGE AREA.-- 20.1 mi^2.
PERIOD OF RECORD.-- November 1973 to current year.
GAGE.-- Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Pennsylvania Department of Environmental Protection).
REMARKS.--Reservoir formed by earthfill dam with concrete spillway at elevation 359.5 ft. Storage began November 1973. Total capacity, 22,190 acre-ft, elevation 373 ft. Reservoir is used for water supply, flood control, and recreation. Figures given herein represent contents above lowest gate sill at elevation 289.5 ft.
COOPERATION.--Records provided by Pennsylvania Department of Environmental Protection.
EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 16,500 acre-ft, Sept. 18, 1999, elevation, 363.49 ft; minimum contents (after first filling), 10,410 acre-ft, Mar. 3, 1976, elevation, 351.75 ft.
EXTREMES FOR CURRENT YEAR.--Maximum contents, 16,040 acre-ft, June 22, elevation, 362.87 ft; minimum contents, 13,260 acre-ft, Oct. 10, elevation, 357.71 ft.

DELAWARE RIVER BASIN

RESERVOIRS IN DELAWARE RIVER BASIN--Continued

MONTH-END ELEVATION AND CONTENTS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Elevation (feet)††	Contents (million gallons)	Change in contents (equivalent in ft^3/s)	Elevation (feet)††	Contents (million gallons)	Change in contents (equivalent in ft^3/s)	Elevation (feet)†	Contents (acre-feet)	Change in contents (equivalent in ft^3/s)
	01416900 Pepacton Reservoir			01424997 Cannonsville Reservoir			01428900 Prompton Reservoir		
Sept.30.....	1,244.67	92,537		1,101.44	37,608		1,124.98	3,490	
Oct. 31.....	1,247.84	97,018	+ 224	1,112.05	48,669	+ 552	1,125.43	3,620	+2.1
Nov. 30.....	1,257.67	111,772	+ 761	1,128.56	68,422	+1,019	1,125.44	3,620	0
Dec. 31.....	1,263.98	121,892	+ 505	1,143.25	88,483	+1,001	1,125.55	3,650	+.5
CAL YR 2002	--	--	+ 271	--	--	+ 324			+.4
Jan. 31.....	1,266.31	125,753	+ 193	1,150.52	99,455	+ 548	1,124.85	3,460	-3.1
Feb. 28.....	1,265.04	123,639	- 117	1,150.60	99,583	+7.1	1,125.41	3,620	+2.9
Mar. 31.....	1,280.89	151,448	+1,388	1,152.34	102,384	+ 140	1,126.52	3,920	+4.9
Apr. 30.....	1,280.28	150,318	- 58.3	1,151.31	100,726	- 85.5	1,125.70	3,700	-3.7
May 31.....	1,280.41	150,559	+ 12.0	1,150.77	99,857	- 43.4	1,125.84	3,740	+.6
June 30.....	1,279.80	149,431	- 58.2	1,150.25	99,021	- 43.1	1,125.15	3,540	-3.4
July 31.....	1,276.93	144,197	- 261	1,146.86	93,841	- 258	1,124.54	3,370	-2.8
Aug. 31.....	1,278.66	147,338	+ 157	1,147.65	95,043	+ 60.0	1,124.24	3,290	-1.3
Sept.30.....	1,280.83	151,336	+ 206	1,151.20	100,549	+ 284	1,126.05	3,790	+8.4
WTR YR 2003	--	--	+249	--	--	+ 267			+.4

Date	Elevation (feet)†	Contents (acre-feet)	Change in contents (equivalent in ft^3/s)	Elevation (feet)†	Contents (acre-feet)	Change in contents (equivalent in ft^3/s)	Elevation (feet)*	Contents (million ft^3)	Change in contents (equivalent in ft^3/s)
	01429400 General Edgar Jadwin Reservoir			01431700 Lake Wallenpaupack			01433000 Swinging Bridge Reservoir		
Sept.30.....	--	0		1,176.5	32,050		1,064.0	1,153.9	
Oct. 31.....	--	0	0	1,181.7	60,830	+468	1,067.9	1,303.2	+ 55.7
Nov. 30.....	--	0	0	1,186.6	88,540	+466	1,068.2	1,315.1	+ 4.6
Dec. 31.....	--	0	0	1,185.9	84,840	-60.2	1,067.4	1,283.6	- 11.8
CAL YR 2002			0			+40.6	--	--	+ 12.4
Jan. 31.....	--	0	0	1,181.4	59,310	-415	1,062.5	1,099.0	- 68.9
Feb. 28.....	--	0	0	1,178.1	40,240	-343	1,062.1	1,084.5	- 6.0
Mar. 31.....	--	0	0	1,185.9	84,840	+725	1,067.2	1,275.7	+ 71.4
Apr. 30.....	--	0	0	1,185.3	81,790	-51.3	1,063.8	1,146.5	- 49.8
May 31.....	--	0	0	1,187.1	91,280	+154	1,065.1	1,195.1	+ 18.1
June 30.....	--	0	0	1,187.5	93,530	+37.8	1,069.1	1,350.9	+ 60.1
July 31.....	--	0	0	1,182.0	62,390	-506	1,066.8	1,260.2	- 33.9
Aug. 31.....	--	0	0	1,181.0	57,340	-82.1	1,065.3	1,202.7	- 21.5
Sept.30.....	--	0	0	1,181.7	60,830	+58.6	1,069.5	1,367.1	+ 63.4
WTR YR 2003			0			+39.8			+ 6.8

Date	Elevation (feet)*	Contents (million ft^3)	Change in contents (equivalent in ft^3/s)	Elevation (feet)*	Contents (million ft^3)	Change in contents (equivalent in ft^3/s)	Elevation (feet)††	Contents (million gallons)	Change in contents (equivalent in ft^3/s)
	01433100 Toronto Reservoir			01433200 Cliff Lake			01435900 Neversink Reservoir		
Sept.30.....	1,206.6	687.2		1,063.9	76.64		1,402.44	21,208	
Oct. 31.....	1,210.2	786.5	+37.1	1,068.1	105.11	+10.6	1,412.78	25,106	+195
Nov. 30.....	1,214.2	904.2	+45.4	1,068.1	105.11	0.0	1,420.56	28,277	+164
Dec. 31.....	1,218.1	1,032.1	+47.7	1,067.3	99.32	- 2.2	1,423.04	29,329	+ 52.5
CAL YR 2002	--	--	+19.3	--	--	+ 2.0	--	--	+ 62.1
Jan. 31.....	1,218.4	1,042.4	+ 3.8	1,064.9	83.02	- 6.1	1,427.05	31,075	+ 87.1
Feb. 28.....	1,215.3	938.9	-42.8	1,064.0	77.26	- 2.4	1,423.05	29,333	- 96.3
Mar. 31.....	1,220.0	1,098.2	+59.5	1,067.8	102.92	+ 9.6	1,440.48	37,384	+402
Apr. 30.....	1,220.1	1,101.8	+ 1.4	1,064.0	77.26	- 9.9	1,436.83	35,598	- 92.1
May 31.....	1,220.1	1,101.8	0.0	1,065.1	84.32	+ 2.6	1,440.50	37,394	+ 89.6
June 30.....	1,220.2	1,105.4	+ 1.4	1,070.2	121.28	+14.3	1,439.21	36,757	- 32.9
July 31.....	1,219.8	1,091.2	- 5.3	1,067.0	97.16	- 9.0	1,436.76	35,565	- 59.5
Aug. 31.....	1,214.0	898.0	-72.1	1,068.4	107.36	+ 3.8	1,434.56	34,516	- 52.4
Sept.30.....	1,219.3	1,073.7	+67.8	1,069.3	114.20	+ 2.6	1,440.20	37,246	+141
WTR YR 2002			+12.3			+ 1.2			+ 68.0

DELAWARE RIVER BASIN

RESERVOIRS IN DELAWARE RIVER BASIN--Continued

MONTH-END ELEVATION AND CONTENTS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Elevation (feet)*	Contents (million ft^3)	Change in contents (equivalent in ft^3/s)	Elevation (feet)*	Contents (million ft^3)	Change in contents (equivalent in ft^3/s)	Elevation (feet)††	Contents (million gallons)	Change in contents (equivalent in ft^3/s)
	01447780 Francis E. Walter Reservoir			01449400 Penn Forest Reservoir			01449700 Wild Creek Reservoir		
Sept.30.....	1,371.63	21,840	---	995.45	16,330	--	818.72	11,720	---
Oct. 31.....	1,370.75	21,290	-8.9	996.71	16,860	+8.6	818.46	11,650	-1.1
Nov. 30.....	1,326.99	5,450	-266	999.43	18,010	+19.3	818.56	11,680	+0.5
Dec. 31.....	1,304.54	2,200	-52.9	1,000.73	18,580	+9.3	820.26	12,080	+6.5
CAL YR 2002	--	--	+0.3	--	--	+4.0	--	--	+0.7
Jan. 31.....	1,302.76	2,040	-2.6	1,000.50	18,470	-1.8	820.06	12,020	-1.0
Feb. 28.....	1,302.69	2,040	0	1,000.25	18,360	-2.0	820.11	12,030	+0.2
Mar. 31.....	1,321.84	4,510	+40.2	1,000.96	18,690	+5.4	820.51	12,150	+2.0
Apr. 30.....	1,301.57	1,930	-43.4	1,000.75	18,590	-1.7	820.18	12,050	-1.7
May 31.....	1,305.56	2,310	+6.2	1,000.77	18,600	+0.2	820.28	12,080	+0.5
June 30.....	1,300.28	1,820	-8.2	1,000.93	18,680	+1.3	820.41	12,120	+0.7
July 31.....	1,300.71	1,860	+0.7	1,000.56	18,490	-3.1	819.90	11,980	-2.3
Aug. 31.....	1,301.68	1,940	+1.3	1,000.60	18,510	+0.3	819.63	11,930	-0.8
Sept.30.....	1,305.96	2,350	+6.9	1,000.90	18,660	+2.5	820.42	12,130	+3.4
WTR YR 2003			-26.9			+3.2			+0.6

Date	Elevation (feet)†	Contents (acre-feet)	Change in contents (equivalent in ft^3/s)	Elevation (feet)†	Contents (million gallons)	Change in contents (equivalent in ft^3/s)	Elevation (feet)**	Contents (million gallons)	Change in contents (equivalent in ft^3/s)
	01449790 Beltzville Lake			01455221 Merrill Creek Reservoir			01455400 Lake Hopatcong		
Sept.30.....	626.99	40,290	--	919.54	14,987		8.56	7,095	
Oct. 31.....	628.22	41,460	+19.0	919.48	14,975	-.6	9.24	7,661	+28.2
Nov. 30.....	628.13	41,370	-1.5	919.38	14,955	-1.0	8.48	7,029	-32.6
Dec. 31.....	625.71	39,090	-37.1	919.58	14,995	+2.0	6.86	5,724	-65.1
CAL YR 2002	--	--	-3.1			+6.8			-.1
Jan. 31.....	628.11	41,350	+36.8	919.64	15,007	+.6	6.86	5,724	0
Feb. 28.....	626.76	40,070	-23.0	919.75	15,029	+1.2	6.90	5,756	+1.8
Mar. 31.....	628.43	41,660	+25.9	920.49	15,178	+7.4	8.54	7,078	+66.0
Apr. 30.....	628.04	41,290	-6.2	920.74	15,229	+2.6	9.16	7,593	+26.6
May 31.....	628.23	41,470	+2.9	920.81	15,243	+.7	9.36	7,761	+8.4
June 30.....	627.16	40,450	-17.1	921.80	15,443	+10.3	9.30	7,711	-2.6
July 31.....	627.91	41,160	+11.5	921.73	15,429	-.7	9.04	7,493	-10.9
Aug. 31.....	628.04	41,290	+2.1	921.99	15,482	+2.6	8.96	7,426	-3.3
Sept.30.....	628.38	41,610	+5.4	922.27	15,539	+2.9	9.10	7,543	+6.0
WTR YR 2003			+1.8			+2.3			+1.9

Date	Elevation (feet)†	Contents (acre-feet)	Change in contents (equivalent in ft^3/s)	Elevation (feet)†	Contents (million gallons)	Change in contents (equivalent in ft^3/s)	Elevation (feet)**	Contents (million gallons)	Change in contents (equivalent in ft^3/s)
	01459350 Nockamixon Reservoir			01469200 Still Creek Reservoir			01470870 Blue Marsh Lake		
Sept.30.....	a	a		1,178.0	7,190	--	288.37	21,100	--
Oct. 31.....	a	a		1,180.0	7,740	+8.9	285.20	17,800	-53.7
Nov. 30.....	a	a		1,182.2	8,340	+10.1	284.63	17,300	-8.4
Dec. 31.....	a	a		1,182.2	8,340	0	285.01	17,600	+4.9
CAL YR 2002				--	--	+.03	--	--	-0.1
Jan. 31.....	a	a		1,182.1	8,320	-0.3	285.02	17,600	0
Feb. 28.....	a	a		1,182.1	8,320	0	285.12	17,700	+1.8
Mar. 31.....	a	a		1,182.3	8,370	+0.8	285.96	18,600	+14.6
Apr. 30.....	a	a		1,181.2	8,070	-5.0	290.17	23,100	+75.6
May 31.....	a	a		1,182.0	8,290	+3.6	290.21	23,100	0
June 30.....	a	a		1,182.1	8,320	+0.5	289.74	22,600	-8.4
July 31.....	a	a		1,181.9	8,260	-1.0	289.77	22,600	0
Aug. 31.....	a	a		1,182.0	8,290	+0.5	289.99	22,900	+4.9
Sept.30.....	a	a		1,181.7	8,210	-1.3	286.38	19,000	-65.5
WTR YR 2003						+1.4			-2.9

DELAWARE RIVER BASIN

RESERVOIRS IN DELAWARE RIVER BASIN--Continued

MONTH-END ELEVATION AND CONTENTS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Elevation (feet)†	Contents (acre-feet)	Change in contents (equivalent in ft^3/s)	Elevation (feet)†	Contents (acre-feet)	Change in contents (equivalent in ft^3/s)	Elevation (feet)†	Contents (acre-feet)	Change in contents (equivalent in ft^3/s)
	01472200 Green Lane Reservoir			01480399 Chambers Lake			01480684 Marsh Creek Lake		
Sept.30.....	283.31	11,260	--	572.68	670	---	358.04	13,430	---
Oct. 31.....	286.20	13,610	+38.2	574.00	750	+1.3	359.71	14,300	+14.2
Nov. 30.....	286.05	13,480	-2.2	577.60	1,010	+4.4	359.86	14,380	+1.3
Dec. 31.....	286.13	13,550	+1.1	580.30	1,200	+3.1	359.25	14,050	-5.4
CAL YR 2002	--	--	+4.7	--	--	+0.5	--	--	+1.5
Jan. 31.....	286.05	13,480	-1.1	580.20	1,190	-0.2	358.10	13,460	-9.6
Feb. 28.....	286.13	13,550	+1.3	580.30	1,200	+0.2	359.96	14,440	+17.6
Mar. 31.....	286.32	13,720	+2.8	580.30	1,200	0	360.45	14,710	+4.4
Apr. 30.....	286.10	13,520	-3.4	580.19	1,190	-0.2	360.40	14,680	-0.5
May 31.....	286.10	13,520	0	580.21	1,200	+0.2	360.85	14,930	+4.1
June 30.....	286.12	13,540	+0.3	580.22	1,200	0	360.75	14,870	-1.0
July 31.....	286.02	13,450	-1.5	580.08	1,180	-0.3	360.45	14,710	-2.6
Aug. 31.....	286.00	13,430	-0.3	580.00	1,180	0	360.08	14,500	-3.4
Sept.30.....	286.17	13,580	+2.5	580.20	1,190	+0.2	360.35	14,650	+2.5
WTR YR 2003	--	--	+0.01	--	--	+0.7	--	--	+1.7

* Elevation at 0900 on the first day of the following month.
** Elevation at 0700 on the first day of the following month.
† Elevation at 2400 on the last day of each month.
†† Elevation at daily reading on the first day of the following month.
a Data not available for current year.

DELAWARE RIVER BASIN

DIVERSIONS AND WITHDRAWALS

WITHDRAWALS FROM THE DELAWARE RIVER BASIN

01415200 Diversion from Pepacton Reservoir (see preceding pages) on East Branch Delaware River to Rondout Reservoir on Rondout Creek, in Hudson River basin, for municipal supply of City of New York. No diversion prior to Jan. 6, 1955. Records provided by Bureau of Water Resources Development and Department of Environmental Protection, City of New York.
National Geodetic Vertical Datum ofREVISED RECORDS, WDR NY-71-1: 1970. WDR NY-81-1: 1980.

01423900 Diversion from Cannonsville Reservoir (see preceding pages) on West Branch Delaware River to Rondout Reservoir on Rondout Creek, in Hudson River basin, for municipal supply of City of New York. No diversion prior to Jan. 29, 1964. Records provided by Bureau of Water Resources Development and Department of Environmental Protection, City of New York.
REVISED RECORDS, WDR NY-81-1: 1980.

01435800 Diversion from Neversink Reservoir (see preceding pages) on Neversink River to Rondout Reservoir on Rondout Creek, in Hudson River basin, for municipal supply of City of New York. No diversion prior to Dec. 3, 1953. Records provided by Bureau of Water Resources Development and Department of Environmental Protection, City of New York.
REVISED RECORDS, WDR NY-82-1: 1976, 1977.

01437360 Diversion from Bear Swamp Reservoir, NY, tributary to Neversink River, by the New York State Training School, Otisville, NY, for water supply outside of basin. Records provided by Delaware River Basin Commission. No more diversion as of June 10, 1999; plant closed down.

01447750 Diversion from Bear Creek, PA, tributary to Lehigh River, by Pennsylvania American Water Company for water supply outside of basin. Records provided by Delaware River Basin Commission.

01448830 Diversion from Hazle Creek Watershed by Hazelton Joint Sewerage Authority for municipal water supply. Waste effluent from the municipal water system is released to the Susquehanna River. Records provided by Delaware River Basin Commission.

01460440 Diversion by Delaware and Raritan Canal from Delaware River at Raven Rock, for municipal and industrial use. Water is discharged into the Raritan River at New Brunswick. Records of discharge are collected on the Delaware and Raritan Canal at Port Mercer since Aug. 1, 1990 (see station 01460440). Prior to Aug. 1, 1990, records of discharge were collected at Kingston.

DIVERSION, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

	WITHDRAWALS BY CITY OF NEW YORK		
MONTH	01415200 Pepacton Reservoir	01423900 Cannonsville Reservoir	01435800 Neversink Reservoir
October	421	117	68.3
November	229	122	117
December	327	0.0	153
CAL YR 2002	362	293	116
January	334	2.4	66.4
February	466	107	199
March	285	223	31.6
April	468	41.2	211
May	498	193	68.8
June	295	64.0	195
July	564	430	115
August	361	219	371
September	274	16.2	391
WTR YR 2003	377	129	165

MISCELLANEOUS WITHDRAWALS FROM BASIN, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

MONTH	01437360 Bear Swamp Reservoir	01447750 Bear Creek	01448830 Hazle Creek	01460440 Delaware and Raritan Canal
October	0	0	6.78	143
November	0	0	5.55	141
December	0	0	5.65	142
CAL YR 2002	0	1.66	6.10	124
January	0	0	5.86	145
February	0	0	6.37	142
March	0	0	7.11	132
April	0	0	6.30	153
May	0	0	5.71	150
June	0	0	7.37	128
July	0	0	5.74	145
August	0	0	5.93	146
September	0	0	6.07	145
WTR YR 2003	0	0	6.20	143

DELAWARE RIVER BASIN

DIVERSIONS WITHIN THE DELAWARE RIVER BASIN

01446572 Diversion from Delaware River at Brainards, NJ to Merrill Creek Reservoir for storage to augment low flow in the Delaware River. There is a conservation release of 3 ft^3/s to lower Merrill Creek, which eventually reaches the Delaware River. Releases other than the conservation release are designated by a minus (-) sign. Records provided by Merrill Creek Reservoir Project. REVISED RECORDS.--WDR NJ-00-1: 1999.

01459005 Diversion from the Delaware River at Point Pleasant, PA by Philadelphia Electric Company to Bradshaw Reservoir on the East Branch Perkiomen Creek, tributary to Schuylkill River, to supplement flow to Limerick Power Station. Diversion began August 1989. Records provided by the Delaware River Basin Commission. REVISED RECORDS.--WDR NJ-00-1: 1999.

01463480 Diversion from the Delaware River at the Morrisville Filtration Plant, by the Borough of Morrisville, PA for municipal supply. The water withdrawn at this site is returned to the basin after treatment, only slightly diminished by consumptive uses and losses in transmission. Records provided by the Borough of Morrisville, PA.

01463490 Diversion from the Delaware River just above the Trenton gaging station by the city of Trenton, NJ for municipal supply. The water being withdrawn is returned to the basin after treatment only slightly diminished by consumptive uses and losses in transmission. Records provided by the City of Trenton. REVISED RECORDS.--WDR NJ-82-2: Station number.

01466899 Diversion from the Delaware River just above New Lisbon gaging station by Fort Dix, NJ, for municipal supply. The water being withdrawn at this intake is returned to the basin after treatment only slightly diminished by consumptive uses and losses in transmission. Records provided by the Fort Dix Directorate of Public Works. Diversions started in 1935.

01467029 Diversion from Delaware River at Delran, 0.7 mi downstream of Rancocas Creek, by New Jersey-American Water Company for municipal supply in Burlington, Camden, and Gloucester Counties. Records provided by Delaware River Basin Commission.

01467030 Diversion from the Delaware River at the Torresdale Intake, by the City of Philadelphia, PA for municipal supply. The water being withdrawn at this intake is returned to the basin after treatment only slightly diminished by consumptive uses and losses in transmission. Records provided by the Delaware River Basin Commission.

01474500 Diversion from the Schuylkill River at the Belmont and Queen Lane Intakes, by the City of Philadelphia, PA for municipal supply. The water being withdrawn at these intakes is returned after treatment within the Delaware River basin only slightly diminished by consumptive uses and losses in transmission. Records provided by the Delaware River Basin Commission.

WITHDRAWALS, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

MONTH	01446572 Merrill Creek Reservoir	01459005 Point Pleasant	01463480 Borough of Morrisville	01463490 City of Trenton
October	0	56.7	3.90	36.1
November	0	13.5	3.96	38.2
December	0	11.1	4.23	41.6
CAL YR 2002	9.42	56.6	3.91	49.3
January	0	8.99	4.23	43.6
February	0	15.4	4.44	45.2
March	0	9.93	4.82	42.7
April	0	16.4	4.51	42.6
May	0	76.4	4.55	41.5
June	0	31.6	4.44	45.2
July	0	86.7	4.69	47.1
August	0	48.0	4.48	44.3
September	0	33.3	4.32	41.9
WTR YR 2003	0	34.3	4.38	42.5

WITHDRAWALS, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003--Continued

			City of Philadelphia		
				01474500 Schuylkill River	
MONTH	01466899 Greenwood Branch	01467029 Delran	01467030 Delaware River Torresdale	Belmont	Queen Lane
October	.77	26.5	241	87.8	109
November	.70	24.6	250	92.6	103
December	.69	23.7	254	89.1	111
CAL YR 2002	1.24	--	248	81.0	118
January	.63	27.6	256	85.1	121
February	1.19	29.8	262	89.2	129
March	.98	29.3	251	87.9	117
April	1.18	30.4	253	84.2	104
May	.56	30.0	241	86.6	108
June	.64	34.9	237	84.5	116
July	1.47	30.3	244	86.1	132
August	1.45	29.3	239	84.8	132
September	.65	29.1	228	82.0	119
WTR YR 2003	.91	28.8	246	86.7	117

DELAWARE RIVER BASIN

DIVERSIONS AND WITHDRAWALS--Continued

DIVERSIONS IMPORTED INTO BASIN

01367630 Water diverted from Morris Lake, tributary to the Wallkill River (Hudson River basin), by the Newton Water and Sewer Authority for municipal use. After use the water is released into the Paulins Kill (Delaware River basin). Records provided by the Delaware River Basin Commission.

01578420 Water diverted from West Branch Octoraro Creek (Susquehanna River basin) at the McCray Plant of the Coatesville Water Authority (formerly Octoraro Water Co.) for municipal use. After use the water is released into the Delaware River basin. Records provided by the Delaware River Basin Commission.

01578450 Water diverted from Octoraro Lake (Susquehanna River basin) by Chester Water Authority for municipal use. After use the water is released into the Delaware River basin. Records provided by the Delaware River Basin Commission.

DIVERSIONS, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003--Continued

		OCTORARO CREEK	
MONTH	01367630 Morris Lake	01578420 Coatesville Water Authority	01578450 Chester Water Authority
October	.42	1.23	46.9
November	1.37	1.10	42.6
December	1.41	1.13	44.3
CAL YR 2002	1.29a	1.28	52.6
January	1.41	1.24	68.0
February	1.81	0	70.4
March	1.87	0	80.0
April	1.80	0	65.4
May	1.73	.44	58.1
June	1.70	.93	74.9
July	1.56	0	96.4
August	1.68	.82	100.3
September	1.66	.47	98.3
WTR YR 2003	1.53	.62	70.5

a Diversion data for Morris Lake estimated from June through September 2002 due to meter repair.

DISCHARGE AT PARTIAL-RECORD STATIONS

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 U.S. 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 discharge measurements at low-flow partial-record 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 stages may have been obtained, and discharge measurements may have been made for purposes of establishing the stage-discharge relation, but these are not published herein. The years given in the period of record represent water years for which the annual maximum has been determined. Previously published peaks for these stations are available at **http://nj.usgs.gov**.

Maximum discharge at crest-stage partial-record stations

Station name and number	Location and drainage area	Period of record	Water year 2003 maximum			Period of record maximum		
			Date	Gage height (ft)	Discharge (ft^3/s)	Date	Gage height (ft)	Discharge (ft^3/s)
HACKENSACK RIVER BASIN								
Pascack Brook at Montvale, NJ (01377360)	Lat 41°02’26”, long 74°01’54”(revised), Bergen County, Hydrologic Unit 02030103, on right bank 250 ft upstream from bridge on Grand Avenue at entrance to fire station in Montvale, 800 ft west of Montvale Memorial School, and 1,300 ft upstream from Silver Lake. Drainage area is 13.2 mi^2. Radio stage telemetry at station.	1998-2003	9-27-03 @1200	2.97	a	9-16-99	9.39	5,660
Bear Brook at Park Ridge, NJ (01377440)	Lat 41°01’40”, long 74°02’48”, Bergen County, Hydrologic Unit 02030103, on upstream right wingwall of bridge on Pascack Road, 0.2 mi upstream from mouth, 0.8 mi southwest of Silver Lake, and 0.8 mi south of Park Ridge. Drainage area is 2.38 mi^2.	1998-2003	8-12-03	b	320	9-16-99	11.05	a
Woodcliff Lake at Hillsdale, NJ (01377450)	Lat 41°00’46”, long 74°02’57”, Bergen County, Hydrologic Unit 02030103, at dam on Pascack Brook, 0.7 mi north of Hillsdale, and 1.5 mi north of Westwood. Datum of gage is 0.00 ft above NGVD of 1929. Drainage area is 19.4 mi^2. Radio stage telemetry at station.	1998-2003	6-22-03 @1230	95.96	a	9-16-99	96.54	a
Pascack Brook at Woodcliff Lake outlet, at Hillsdale, NJ (01377451)	Lat 41°00’43”, long 74°02’52”, Bergen County, Hydrologic Unit 02030103, 700 ft downstream from spillway of Woodcliff Lake, 0.7 mi north of Hillsdale, and 1.5 mi northwest of Westwood. Datum of gage is 59.08 ft above NGVD of 1929. Drainage area is 19.4 mi^2. Radio stage telemetry at station.	1998-2003	1-02-03	5.89	a	9-16-99	11.25	a
Pascack Brook at Hillsdale, NJ (01377460)	Lat 41°00’06”, long 74°02’35”, Bergen County, Hydrologic Unit 02030103, on upstream left wingwall of at bridge on Patterson Street, 0.5 mi north of Westwood, and 1.1 mi downstream from Woodcliff Lake. Drainage area is 20.7 mi^2.	1998-2003	1-02-03	10.36	1,560	9-16-99	15.48	7,610
Musquapsink Brook at Westwood, NJ (01377490)	Lat 40°59’10”, long 74°01’49, Bergen County, Hydrologic Unit 02030103, on the left bank downstream side of bridge on Prospect Avenue in Westwood, 330 ft upstream from the railroad bridge, 1,100 ft downstream from former site at Bogert Pond Dam (prior to 1998 at datum 47.67 ft, drainage area 6.53 mi^2), and 1.0 mi upstream from mouth. Drainage area is 6.59 mi^2. Radio stage telemetry at station	1966-86, 1998-2003	8-04-03	4.75	a	9-16-99	7.83	465

Maximum discharge at crest-stage partial-record stations--Continued

Station name and number	Location and drainage area	Period of record	Water year 2003 maximum			Period of record maximum		
			Date	Gage height (ft)	Discharge (ft^3/s)	Date	Gage height (ft)	Discharge (ft^3/s)
HACKENSACK RIVER BASIN--Continued								
Tenakill Brook at Closter, NJ *(01378385)	Lat 40°58'29", long 73°58'04, Bergen County, Hydrologic Unit 02030103, at downstream left wingwall of bridge on High Street in Closter, 0.7 mi upstream from mouth. Datum of gage is 23.85 ft above NGVD of 1929. Drainage area is 8.56 mi^2.	1965-2003	9-16-99 7-30-00 3-31-01 5-13-02 8-04-03	6.30 2.38 1.46 1.42 2.22	1300 r 482 r 330 r 323 r 454	9-16-99	6.30	1,300 r
Van Saun Mill Brook at Oradell, NJ (01378550)	Lat 40°57'21", long 74°02'18", Bergen County, Hydrologic Unit 02030103, on the right bank, just downstream of culvert on Oradell Avenue (County Route 6), 3.3 mi west of Dumont, and 4.0 mi upstream of mouth. Drainage area is 0.37mi^2.	2001-03	8-04-03	2.92	a	6-17-01	3.68	a
Metzler Brook at Englewood, NJ *(01378590)	Lat 40°54'29", long 73°59'11", Bergen County, Hydrologic Unit 02030103, on downstream left wingwall of bridge on Lantana Avenue in Englewood, and 1.6 mi upstream from mouth. Datum of gage is 43.10 ft above NGVD of 1929. Drainage area is 1.54 mi^2.	1965-2003	8-04-03	2.47	290	9-16-99	2.91z	534
PASSAIC RIVER BASIN								
Passaic River near Bernardsville, NJ *(01378690)	Lat 40°44'03", long 74°32'25", Somerset County, Hydrologic Unit 02030103, on downstream right wingwall of bridge on U.S. Route 202, 1.8 mi northeast of Bernardsville, and 3.0 mi upstream from Great Brook. Datum of gage is 238.07 ft above NGVD of 1929. Drainage area is 8.83 mi^2.	1968-76†, 1977-2003	9-15-03	14.00	580	8-28-71	18.56	3,850
Penns Brook tributary at Basking Ridge, NJ (01378708)	Lat 40°42'30", long 74°32'52", Somerset County, Hydrologic Unit 02030103, on upstream right wingwall of culvert on North Maple Avenue in Basking Ridge, 0.3 mi upstream of mouth, and 1.2 mi west of the Passaic River. Datum of gage is 270 ft above NGVD of 1929, from topographic map. Drainage area is 0.19 mi^2.	1999-2003	6-17-01 6-06-02 8-11-03	5.64 6.35 7.37	57 d 90 d 147	8-11-03	7.37	147
Passaic River tributary at Summit, NJ (01379490)	Lat 40°42'59", long 74°23'02", Union County, Hydrologic Unit 02030103, on left bank upstream wingwall of bridge on Passaic Avenue in Summit, 0.3 mi north of intersection of Passaic Avenue and Springfield Avenue, and 0.4 mi upstream of mouth. Datum of gage is 260 ft above NGVD of 1929, from topographic map. Drainage area is 0.27 mi^2.	1999-2003	8-05-03	6.48	219	9-16-99	7.75	300
Cub Brook at Northfield, NJ (01379520)	Lat 40°46'16", long 74°18'38", Essex County, Hydrologic Unit 02030103, on upstream left wingwall of culvert on Chestnut Street in Northfield, 230 ft from intersection of Chestnut Street and Northfield Road, and 280 ft upstream of confluence with Bear Brook. Datum of gage is 280 ft above NGVD of 1929 from topographic map. Drainage area is 0.48 mi^2.	1999-2003	8-12-00 6-17-01 7-19-02 8-28-03	8.13 8.61 8.07 7.65	286 d 347 d 278 d 218	9-16-99	11.77	610
Spring Garden Brook at Madison, NJ (01379555)	Lat 40°45'16", long 74°24'23", Morris County, Hydrologic Unit 02030103, on the right bank at the upstream side of the culvert on Dean Street in Madison, 0.2 mi downstream of culvert on Main Street (State Route 124), 0.2 mi southeast of the high school in Madison, 1.5 mi northwest of Chatham, and 2.5 mi upstream of mouth. Datum of gage is 210 ft above NGVD of 1929, from topographic map. Drainage area is 1.20 mi^2.	2000-03	8-05-03	1.82	a	6-17-01	1.88	a

Maximum discharge at crest-stage partial-record stations--Continued

Station name and number	Location and drainage area	Period of record	Water year 2003 maximum			Period of record maximum		
			Date	Gage height (ft)	Discharge (ft^3/s)	Date	Gage height (ft)	Discharge (ft^3/s)
PASSAIC RIVER BASIN--Continued								
North Branch Foulerton Brook at Roseland, NJ (01379590)	Lat 40°49'11", long 74°17'21", Essex County, Hydrologic Unit 02030103, on left bank upstream wingwall of culvert on Harrison Avenue in Roseland, 300 ft southeast of intersection of Harrison Avenue and Eagle Rock Avenue, and 0.5 mi downstream of unnamed pond. Datum of gage is 375 ft above NGVD of 1929, from topographic map. Drainage area is 0.42 mi^2.	1999-2003	6-21-03	2.19	45	9-16-99	6.11	130
Rockaway River at Warren Street, at Dover, NJ (01379845)	Lat 40°53'08", long 74°33'35", Morris County, Hydrologic Unit 02030103, on left bank, 100 ft upstream from bridge on Warren Street in Dover, 4.0 mi west of Denville, and 6 mi southeast of Lake Hopatcong. Datum of gage is 561.83 ft above NGVD of 1929. Drainage area is 52.1 mi^2.	1981-94, 1999-2003	6-22-03	5.24	1,080	9-17-99	8.91	3,440
Whippany River tributary no. 5 at Boulevard Road, at Cedar Knolls, NJ (01381510)	Lat 40°49'07", long 74°26'53", Morris County, Hydrologic Unit 02030103, on left upstream wingwall of culvert on Boulevard Road, in Cedar Knoll, just north of intersection with Cedar Knolls Road, 0.2 mi upstream from mouth, and 3.8 mi northeast of Morristown. Datum of gage is 266 feet above NGVD of 1929, from topographic map. Drainage area is 0.06 mi^2.	1999-2003	8-11-03	7.10	54	9-16-99	7.60	63
Mahwah River near Suffern, NY (01387450)	Lat 41°08'27", long 74°07'00", Rockland County, NY, Hydrologic Unit 02030103, on left bank 13 ft upstream from bridge on U.S. Route 202, 4.8 mi upstream from mouth, and 2.5 mi northeast of Suffern. Datum of gage is 321.57 ft above NGVD of 1929. Drainage area is 12.3 mi^2. Satellite stage telemetry at station.	1959-95†, 1996-2003	9-28-03 @0545	5.33	517	11-08-77	9.91	1,840
Masonicus Brook at Ramsey, NJ (01387485)	Lat 41°04'32", long 74°08'25", Bergen County, Hydrologic Unit 02030103, on the left bank, just upstream of the culvert on Spring Street, 1.3 mi north of Ramsey, 2.9 mi upstream of mouth, and 0.5 mi southeast of the Camp Hlond Reservoir. Drainage area is 0.78 mi^2.	2001-03	9-28-03	5.62	a	6-23-01	7.48	a
Pond Brook at Oakland, NJ *(01387880)	Lat 41°01'36", long 74°14'03", Bergen County, Hydrologic Unit 02030103, at bridge on Interstate 287/State Route 208 in Oakland, 0.2 mi upstream from former site at Franklin Avenue (prior to October 1975), 0.6 mi upstream from mouth, and 1.5 mi northwest of Franklin Lakes. Datum of gage is 276.97 ft above NGVD of 1929. Drainage area is 6.76 mi^2.	1968-71, 1976-2003	6-21-03	1.60	255	9-16-99	7.83	1,680
Passaic River below Pompton River, at Two Bridges, NJ (01389005)	Lat 40°53'47", long 74°16'09", Passaic County, Hydrologic Unit 02030103, at right bank on Fairfield Road in Two Bridges, 400 ft downstream from the Pompton River, and 1.4 mi northwest of Little Falls. Datum of gage is 155.00 ft above NGVD of 1929. Drainage area is 734 mi^2. Satellite stage telemetry at station.	1989-2003	3-23-03 @1130	9.82	a	9-18-99	12.71	a
Preakness (Singac) Brook near Preakness, NJ (01389030)	Lat 40°56'55", long 74°13'24", Passaic County, Hydrologic Unit 02030103, on downstream side of bridge on Ratzer Road, 1.0 mi north of Preakness, and 2.0 mi upstream from Naachpunkt Brook. Datum of gage is 230.8 ft above NGVD of 1929. Drainage area is 3.24 mi^2.	1979-2003	8-04-03	<4.00h	530 e	9-16-99	7.91	1,920

Maximum discharge at crest-stage partial-record stations--Continued

Station name and number	Location and drainage area	Period of record	Water year 2003 maximum			Period of record maximum		
			Date	Gage height (ft)	Discharge (ft^3/s)	Date	Gage height (ft)	Discharge (ft^3/s)
PASSAIC RIVER BASIN--Continued								
Passaic River above Beatties Dam, at Little Falls, NJ (01389492)	Lat 40°53'04", long 74°14'04", Passaic County, Hydrologic Unit 02030103, on left bank at Little Falls, 100 ft upstream of Beatties Dam, 600 ft upstream from bridge on Union Boulevard and 1.5 mi upstream from Peckman River. Datum of gage is 150.00 ft above NGVD of 1929. Drainage area is 762 mi^2.	1984, 1991-2003†	3-23-03 @1530	11.00	a	4-07-84	14.0	a
Peckman River at Ozone Avenue, at Verona, NJ *(01389534)	Lat 40°50'42", long 74°14'07", Passaic County, Hydrologic Unit 02030103, on right downstream wingwall of bridge on Ozone Avenue in Verona, 4.0 mi west of Clifton and 1.0 mi southwest of Cedar Grove Reservoir. Datum of gage is 300.08 ft above NGVD of 1929. Drainage area is 4.45 mi^2. Radio stage telemetry at station.	1945, 1979-2003	8-04-03 @1515	2.99	520	7-23-45	---	3,800 s
Molly Ann Brook tributary near Franklin Lakes, NJ *(01389738)	Lat 40°58'52", long 74°12'10", Bergen County, Hydrologic Unit 02030103, on the right bank, just upstream of the culvert on Belmont Avenue, 0.5 mi upstream of mouth at Haledon Reservoir, 1.6 mi southeast of Franklin Lakes and 2.1 mi north of North Haledon. Drainage area is 0.33mi^2.	2001-03	6-21-03	3.38	a	12-17-00	3.83	a
Molly Ann Brook at North Haledon, NJ *(01389765)	Lat 40°57'11", long 74°11'06", Passaic County, Hydrologic Unit 02030103, on left upstream wingwall of culvert on Overlook Avenue in North Haledon, 0.5 mi upstream from Oldham Pond Dam, and 1.5 mi west of Hawthorne. Datum of gage is 209.68 ft above NGVD of 1929. Drainage area is 3.89 mi^2. Radio stage telemetry at station.	1945, 1979-2003	8-04-03 @1530	6.24	450	7-23-45	---	3,100 f
Fleischer Brook at Market Street, at Elmwood Park, NJ (01389900)	Lat 40°53'57", long 74°06'53", Bergen County, Hydrologic Unit 02030103, on left bank upstream wingwall of culvert on Market Street in Elmwood Park, and 2.0 mi upstream from mouth. Datum of gage is 33.83 ft above NGVD of 1929. Prior to 1995 at datum 1.44 ft higher. Drainage area is 1.37 mi^2.	1967-2003	8-04-03	3.69	a	9-16-99	5.66	a
Saddle River at Upper Saddle River, NJ *(01390450)	Lat 41°03'32", long 74°05'43", Bergen County, Hydrologic Unit 02030103, at downstream side of culvert on Lake Street in Upper Saddle River, and 1.3 mi downstream from Pine Brook. Datum of gage is 186.11 ft above NGVD of 1929. Drainage area is 10.9 mi^2.	1966-2003	8-04-03	4.55	1,890	9-16-99	5.64	6,290
Hohokus Brook at Allendale, NJ (01390810)	Lat 41°01'37", long 74°08'43", Bergen County, Hydrologic Unit 02030103, at bridge on Brookside Avenue in Allendale and 0.2 mi downstream from Valentine Brook. Datum of gage is 277.46 ft above NGVD of 1929. Drainage area is 9.11 mi^2.	1969-2003	7-22-03	5.02	304	9-16-99	12.15	3,010
Ramsey Brook at Allendale, NJ *(01390900)	Lat 41°01'44", long 74°08'06", Bergen County, Hydrologic Unit 02030103, at downstream side of bridge on Brookside Avenue in Allendale and 0.6 mi upstream from Hohokus Brook. Datum of gage is 270.79 ft above NGVD of 1929. Drainage area is 2.55 mi^2.	1975-2003	6-21-03	2.32	a	9-16-99	5.41	987
Hohokus Brook at Ho-Ho-Kus, NJ (01391000)	Lat 40°59'52", long 74°06'43" (revised), Bergen County, Hydrologic Unit 02030103, on left bank 500 ft upstream from bridge on Maple Avenue in Ho-Ho-Kus, and 3.5 mi upstream from mouth. Datum of gage is 120.09 ft above NGVD of 1929. Drainage area is 16.4 mi^2. Satellite stage telemetry at station.	1954-73†, 1977-96†, 1997-2003	6-21-03 @2030	2.84	769	9-16-99	7.32	4,670

Maximum discharge at crest-stage partial-record stations--Continued

Station name and number	Location and drainage area	Period of record	Water year 2003 maximum			Period of record maximum		
			Date	Gage height (ft)	Discharge (ft^3/s)	Date	Gage height (ft)	Discharge (ft^3/s)
PASSAIC RIVER BASIN--Continued								
Weasel Brook at GardenState Parkway, at Clifton, NJ (01391950)	Lat 40°52'39", long 74°10'08", Passaic County, Hydrologic Unit 02030103, on the right bank, just upstream of the culvert under the southbound exit ramp of the Garden State Parkway, 150 ft downstream of culvert on Grove Street in Clifton, 1.2 mi east of Great Notch Reservoir, and 2.9 mi south of Paterson. Datum of gage is 188 ft above NGVD of 1929 from topographic map. Drainage area is 0.71 mi^2.	2001-03	8-04-03	5.76	a	8-04-03	5.76	a
Third River at Bloomfield, NJ (01392170)	Lat 40°48'00", long 74°11'16", Essex County, Hydrologic Unit 02030103, on downstream left wingwall of bridge on entrance ramp at Interchange 149 to the Garden State Parkway in Bloomfield, 0.6 mi west of Nutley, and 5.1 mi upstream from Passaic River. Drainage area is 7.71 mi^2. Radio stage telemetry at station.	1988-2003	6-01-03 @0430	4.65	513	9-16-99	9.97	2,670
RAHWAY RIVER BASIN								
East Branch Rahway River at Maplewood, NJ *(01393890)	Lat 40°44'06", long 74°16'12", Essex County, Hydrologic Unit 02030104, on downstream right wingwall of bridge on Jefferson Avenue in Maplewood, 1,100 ft west of Fielding School, and 2.5 mi upstream of confluence of West Branch River and East Branch Rahway River. Datum of gage is 114.60 ft above NGVD of 1929. Drainage area is 5.11 mi^2. Radio stage telemetry at station.	1998-2003	6-21-03 @1745	6.33	1,030	9-16-99	10.08	3,470
East Branch Rahway River at Millburn Avenue, at Millburn, NJ (01393895)	Lat 40°43'22", long 74°17'04", Essex County, Hydrologic Unit 02030104, at downstream side of bridge on Millburn Avenue at Millburn, 0.9 mi east of Millburn, and 1.5 mi upstream of confluence with West Branch Rahway River. Datum of gage is 88.9 ft above NGVD of 1929. Drainage area is 7.09 mi^2. Radio stage telemetry at station.	1998-2003	6-21-03 @2100	6.74	a	9-16-99	11.36	a
West Branch Rahway River at Millburn, NJ *(01394000)	Lat 40°43'53", long 74°18'26", Essex County, Hydrologic Unit 02030104, on right bank 100 ft upstream from Diamond Mill Pond dam, 1,000 ft upstream from Glen Avenue in Millburn, and 1.9 mi upstream from confluence with East Branch. Datum of gage is 173.65 ft above NGVD of 1929. Drainage area is 7.10 mi^2. Radio stage telemetry at station.	1940-50†, 1973, 1998-2003	6-21-03 @1815	2.87	791	9-16-99	5.2	2,840
West Branch Rahway River at Millburn Avenue, at Millburn, NJ (01394100)	Lat 40°43'26", long 74°18'24", Essex County, Hydrologic Unit 02030104, on downstream right wingwall of bridge on Millburn Avenue, in Millburn, just upstream of Taylor Park, 0.6 mi downstream of Diamond Mill Pond, and 0.9 mi east of Short Hills. Datum of gage is 111.87 ft above NGVD of 1929 (levels by Killam Associates). Drainage area is 7.74 mi^2.	1999-2003	6-21-03	13.58	a	9-16-99	19.6	a
Rahway River at Morris Avenue, at Springfield, NJ (01394200)	Lat 40°42'29", long 74°18'06", Union County, Hydrologic Unit 02030104, on upstream right bank of bridge on Morris Avenue (State Route 82), 0.7 mi east of Springfield Municipal building, 1.4 mi west of Hamilton School, and 0.7 mi upstream of unnamed tributary. Drainage area is 18.1 mi^2.	1999-2003	6-21-03 @2200	11.62	a	9-17-99	16.6	a

Maximum discharge at crest-stage partial-record stations--Continued

Station name and number	Location and drainage area	Period of record	Water year 2003 maximum			Period of record maximum		
			Date	Gage height (ft)	Discharge (ft^3/s)	Date	Gage height (ft)	Discharge (ft^3/s)
			RAHWAY RIVER BASIN--Continued					
Rahway River at Kenilworth, NJ (01394620)	Lat 40°40'23", long 74°18'46", Union County, Hydrologic Unit 02030104, on right downstream wingwall of bridge on Kenilworth Boulevard at Kenilworth, 0.9 mi west of Harding School, 1.7 mi west of Kenilworth Municipal building, and 4.7 mi northwest of confluence of Rahway River and Robinsons Branch. Datum of gage is 57.16 ft above NGVD of 1929. Drainage area is 32.0 mi^2. Telephone stage telemetry at station.	1971, 1973, 1999-2003	1-17-03 @0845	9.13	a	8-02-73	13.8	a
Robinsons Branch at Rahway, NJ (01396000)	Lat 40°36'21", long 74°17'59", Union County, Hydrologic Unit 02030104, on right bank, 70 ft upstream fo dam on Milton Lake, 0.4 mi upstream from Maple Avenue at Milton Lake in Rahway, 0.6 mi downstream from Middlesex Reservoir Dam, and 1.6 mi upstream from mouth. Datum of gage is 19.99 ft above NGVD of 1929. Drainage area is 21.6 mi^2. Telephone stage telemetry at station.	1937-96†, 1999-2003	6-04-03 @2245	5.37	1,510	9-16-99	6.48	4,800
			WOODBRIDGE CREEK BASIN					
Spa Spring Creek at Perth Amboy, NJ (01396050)	Lat 40°32'33, long 74°16'38", Middlesex County, Hydrologic Unit 02030104, on the left bank at upstream side culvert of Convery Boulevard (State Route 35) in Perth Amboy, 0.7 mi upstream of mouth, and 1.0 mi south of Woodbridge. Drainage area is 0.68 mi².	2001-03	9-19-03	6.20	a	8-13-01	8.38	a
			RARITAN RIVER BASIN					
Alpaugh Brook at Hampton, NJ (01396570)	Lat 40°42'13", long 74°56'51", Hunterdon County, Hydrologic Unit 02030105, on upstream left wingwall of culvert on State Route 31 at Hampton, 0.1 mi upstream of mouth, 0.6 mi north of Glen Gardner. Drainage area is 0.41 mi^2.	1995-2003	8-05-03	2.39	88	10-19-96	2.83	105
South Branch Raritan River at Black Point Road at Neshanic Station, NJ (01397420)	Lat 40°30'08", long 74°44'31", Somerset County, Hydrologic Unit 02030105, on downstream left wingwall of bridge on Black Point Road, 0.7 mi southwest of Neshanic Station, and 3.2 mi southwest of Flagtown. Drainage area is 190 mi^2.	2003	2-23-03	13.72	a	2-23-03	13.72	a
Walnut Brook near Flemington, NJ (01397500)	Lat 40°30'55", long 74°52'51", Hunterdon County, Hydrologic Unit 02030105, on right bank, 1.2 mi northwest of Flemington, and 2.3 mi upstream from mouth. Datum of gage is 267.33 ft above NGVD of 1929. Drainage area is 2.24 mi^2.	1936-61†, 1963-2003	9-16-99 8-14-00 12-17-00 5-13-02 7-22-03	5.72r 3.09r 3.17r 3.76r 4.22	3,230 r 453 r 494 r 853 r 1,230	9-16-99	5.72r	3,230 r
Back Brook tributary near Ringoes, NJ (01398045)	Lat 40°25'41", long 74°49'51", Hunterdon County, Hydrologic Unit 02030105, at right upstream wingwall of bridge on Wertsville Road, 2.1 mi east of Ringoes, 1.3 mi upstream from Back Brook, and 2.3 mi southwest of Wertsville. Datum of gage is 161.6 ft above NGVD of 1929. Drainage area is 1.98 mi^2.	1978-88†, 1989-2003	2-22-03	3.94	856	9-16-99	5.95	1,580
South Branch Raritan River at South Branch, NJ (01398102)	Lat 40°32'49", long 74°41'47", Somerset County, Hydrologic Unit 02030105, on left downstream wingwall of bridge on Studdiford Drive (South Branch Road) at village of South Branch, and 2.0 mi north of Flagtown. Drainage area is 265 mi^2. Radio stage telemetry at station.	1998-2003	6-04-03 @1520	10.51	a	9-16-99	20.29	a

Maximum discharge at crest-stage partial-record stations--Continued

Station name and number	Location and drainage area	Period of record	Water year 2003 maximum			Period of record maximum		
			Date	Gage height (ft)	Discharge (ft^3/s)	Date	Gage height (ft)	Discharge (ft^3/s)
RARITAN RIVER BASIN--Continued								
Holland Brook at Readington, NJ (01398107)	Lat 40°33'30", long 74°43'47", Somerset County, Hydrologic Unit 02030105, on right bank 15 ft downstream from bridge on Old York Road, 0.9 mi southeast of Readington, and 2.5 mi upstream from mouth. Drainage area is 9.00 mi^2.	1978-96†, 1999-2003	11-17-02	4.99	546	9-16-99	10.67	4,150
Axle Brook near Pottersville, NJ (01399525)	Lat 40°41'40", long 74°43'04", Somerset County, Hydrologic Unit 02030105, on right upstream wingwall of bridge on Black River Road, 1.3 mi south of Pottersville, and 0.3 mi upstream from mouth. Datum of gage is 172.74 ft above NGVD of 1929. Drainage area is 1.22 mi^2.	1977-88†, 1989-2003	7-22-03	4.61	565	9-16-99	6.32	960
Lamington River at Burnt Mills, NJ (01399780)	Lat 40°38'05", long 74°41'12", Somerset County, Hydrologic Unit 02030105, at bridge on Walsh Road at Burnt Mills, 0.2 mi upstream of mouth, and 4.4 mi southwest of Far Hills. Drainage area is 100 mi^2. Radio stage telemetry at station.	1964, 1973, 1975-78, 1981-2003	6-04-03 @0950	8.89	a	7-07-84	90.0p	a
North Branch Raritan River at North Branch, NJ (01399830)	Lat 40°36'00", long 74°40'26", Somerset County, Hydrologic Unit 02030105, on right bank 5 ft upstream from bridge on County Route 614 in village of North Branch, 0.1 mi downstream from River Brook, and 3.6 mi upstream from confluence with South Branch Raritan River. Datum of gage is 56.94 ft above NGVD of 1929. Drainage area is 174 mi^2. Radio stage telemetry at station.	1977-81†, 1982-95, 1997-2003	6-04-03 @1130	10.14	4,600	9-16-99	21.53	27,800
North Branch Raritan River at South Branch, NJ (01400010)	Lat 40°33'25", long 74°41'16", Somerset County, Hydrologic Unit 02030105, at bridge on Old York Road, 0.8 mi northeast of village of South Branch, and 500 ft upstream from confluence with South Branch Raritan River. Datum of gage is 46.03 ft above NGVD of 1929. Drainage area is 190 mi^2. Radio stage telemetry at station.	1993-2003	6-04-03 @1350	8.54	a	9-16-99	18.98	a
Peters Brook at Mercer Street, at Somerville, NJ (01400360)	Lat 40°34'29", long 74°36'57", Somerset County, Hydrologic Unit 02030105, on the left bank on the downstream side of the bridge on Mercer Street in Somerville, 0.4 mi downstream from Macs Brook and 0.6 mi upstream from Ross Brook. Datum of gage is 42.51 ft above NGVD of 1929. Drainage area is 7.37 mi^2. Radio stage and rainfall telemetry at station.	1991-2003	2-22-03 @1600	7.14	a	9-16-99	13.97	a
Baldwins Creek at Pennington, NJ *(01400930)	Lat 40°20'18", long 74°47'49", Mercer County, Hydrologic Unit 02030105, on left upstream wingwall of culvert on State Route 31, 0.8 mi north of Pennington, and 0.9 mi upstream from Baldwin Lake dam. Datum of gage is 161.69 ft above NGVD of 1929. Drainage area is 1.99 mi^2.	1960-2003	6-04-03	4.28	230	9-16-99	8.95	1,430
Hart Brook near Pennington, NJ (01400950)	Lat 40°19'17", long 74°45'37", Mercer County, Hydrologic Unit 02030105, on right bank wingwall at culvert on Federal City Road, 1.6 mi upstream of mouth, and 1.7 mi southeast of Pennington. Datum of gage after July 1, 1975 is 163.32 ft above NGVD of 1929. Drainage area is 0.57 mi^2.	1968-2003	2-22-03	2.87	76	8-28-71 7-14-87	6.77 5.27	a 470
Millstone River at Carnegie Lake, at Princeton, NJ (01401301)	Lat 40°22'11", long 74°37'14", Middlesex County, Hydrologic Unit 02030105, at right end of Carnegie Lake dam, 2.5 mi northeast of Princeton. Datum of gage is 50.00 ft above NGVD of 1929. Drainage area is 159 mi^2.	1971, 1973-74†, 1977-87, 1988-89†, 1990-2003	6-04-03	4.52	4,530	8-28-71	7.09	13,000

Maximum discharge at crest-stage partial-record stations--Continued

Station name and number	Location and drainage area	Period of record	Water year 2003 maximum			Period of record maximum		
			Date	Gage height (ft)	Discharge (ft^3/s)	Date	Gage height (ft)	Discharge (ft^3/s)
RARITAN RIVER BASIN--Continued								
Rock Brook near Blawenburg, NJ (01401595)	Lat 40°25'47", long 74°41'04", Somerset County, Hydrologic Unit 02030105, on left bank downstream wingwall of bridge on Burnt Hill Road, 0.7 mi upstream from mouth, 1.0 mi northeast of Blawenburg, and 2.8 mi northwest of Rocky Hill. Datum of gage is 63.45 ft above NGVD of 1929. Drainage area is 9.03 mi^2.	1967-2003	9-16-99 8-14-00 6-02-01 5-18-02 2-22-03	9.20 3.67 5.77 3.99r 4.64	4,300 r 408 r 1,380 r 518 d 782	8-28-71	10.00	4,530
Beden Brook near Rocky Hill, NJ *(01401600)	Lat 40°24'52", long 74°39'01", Somerset County, Hydrologic Unit 02030105, on right bank downstream wingwall of bridge on U.S. Route 206, 0.7 mi upstream from Pike Run, 1.2 mi northwest of Rocky Hill, and 4.6 mi north of Princeton. Datum of gage is 38.09 ft above NGVD of 1929. Drainage area is 27.0 mi^2, revised.	1967-2003	6-04-03	8.85	2,940	9-16-99	18.61	15,300
Millstone River at Griggstown, NJ (01401750)	Lat 40°26'21", long 74°37'04", Somerset County, Hydrologic Unit 02030105, on left bank 300 ft downstream from bridge at Griggstown, 200 ft downstream from Simonson Brook, and 300 ft downstream from Griggstown Causeway. Datum of gage is 26.52 ft above NGVD of 1929. Drainage area is 229 mi^2. Radio stage telemetry at station.	1938, 1960-61, 1971, 1997, 1999-2003	2-24-03 @0445	13.31	a	9-16-99	23.2	a
Six Mile Run near Middlebush, NJ (01401870)	Lat 40°28'12", long 74°32'41", Somerset County, Hydrologic Unit 02030105, on left bank upstream wingwall of bridge on South Middlebush Road, 1.6 mi upstream from mouth, and 2.1 mi south of Middlebush. Datum of gage is 39.91 ft above NGVD of 1929. Drainage area is 10.7 mi^2.	1966-2003	2-22-03	7.83	1,160	7-14-75	11.77	10,200
Millstone River at Millstone, NJ (01402500)	Lat 40°30'11", long 74°35'14", Somerset County, Hydrologic Unit 02030105, on left bank at downstream side of bridge on County Route 514 (Amwell Road), in Millstone Borough, 2.7 mi south of Manville, and 4.4 mi upstream from mouth. Datum of gage is 24.4 ft above NGVD of 1929. Drainage area is 264 mi^2. Radio stage telemetry at station.	1903-04†, 1999-2003	6-05-03 @0545	11.73	a	9-17-99	22.30	a
Millstone River at Weston, NJ (01402540)	Lat 40°31'47", long 74°35'18", Somerset County, Hydrologic Unit 02030105, at downstream center pier on Wilhouski Street bridge over bypass channel at Weston, 0.8 mi south of Manville College, and 1.9 miles north of Millstone. Datum of gage is 21.9 ft above NGVD of 1929. Drainage area is 271 mi^2. Radio stage telemetry at station.	1999-2003	6-05-03 @1120	10.93	a	9-17-99	23.21	a
Royce Brook tributary near Belle Mead, NJ (01402600)	Lat 40°29'56", long 74°39'03", Somerset County, Hydrologic Unit 02030105, on right bank 25 ft upstream from bridge on County Route 514 (Amwell Road), 1,200 ft upstream from the mouth, and 2.0 mi north of Belle Mead. Datum of gage is 66.98 ft above NGVD of 1929. Drainage area is 1.20 mi^2.	1964-74†, 1980-95† 1999, 2001-03	6-02-01 2-22-03 @1930	5.58d 5.07	528 d 368	9-16-99	7.96	2,850
Cuckels Brook at U.S. Route 22, near Somerville, NJ (01403010)	Lat 40°34'43", long 74°35'11",Somerset County, Hydrologic Unit 02030105, on left upstream wingwall of culvert on U.S. Route 22, 1.5 mi northeast of Somerville, 2.7 mi upstream of mouth, 0.7 mi northwest of Adamsville School, and 3.0 mi west of Bound Brook. Datum of gage is 95 ft above NGVD of 1929, from topographic map. Drainage area is 0.32 mi^2.	1999-2003	9-16-99 9-01-00 6-01-01 6-27-02 8-05-03	10.1 9.67 7.94 7.53 7.65	562 d 466 d 179 d 132 d 145	9-16-99	10.1	562 d

Maximum discharge at crest-stage partial-record stations--Continued

Station name and number	Location and drainage area	Period of record	Water year 2003 maximum			Period of record maximum		
			Date	Gage height (ft)	Discharge (ft^3/s)	Date	Gage height (ft)	Discharge (ft^3/s)
RARITAN RIVER BASIN--Continued								
Middle Brook at Bound Brook, NJ (01403200)	Lat 40°33'38", long 74°32'53", Middlesex County, Hydrologic Unit 02030105, on downstream left wingwall of bridge on Talmadge Avenue at Bound Brook, 0.6 mi downstream from bridge on State Route 28, and 0.5 mi upstream from mouth. Datum of gage is 21.53 ft above NGVD of 1929. Drainage area is 17.2 mi^2. Radio stage and rainfall telemetry at station.	1993-2003	8-12-00 6-01-01 5-14-02 9-15-03	8.58 <7.92h <7.92h 8.11	a a a a	9-17-99	19.76m	a
Blue Brook at Seeleys Pond Dam, near Berkeley Heights, NJ *(01403395)	Lat 40°40'03", long 74°24'12", Union County, Hydrologic Unit 02030105, on wall on right bank, upstream from Seeleys Pond dam, 300 ft from mouth, 1.0 mi north of Scotch Plains, 1.0 mi west of Mountainside, and 4.5 mi southeast of Berkeley Heights. Datum of gage is 202.05 ft above NGVD of 1929. Drainage area is 3.59 mi^2.	1927, 1969, 1973, 1981-2003	8-05-03	4.74	231	8-02-73	7.55	2,080
Green Brook at Plainfield, NJ (01403500)	Lat 40°36'53", Long 74°25'54", Union County, Hydrologic Unit 02030105, on left downstream wingwall of bridge on Sycamore Avenue in Plainfield and 1.0 mi upstream from Stony Brook. Datum of gage is 70.37 ft above NGVD of 1929. Drainage area is 9.75 mi^2.	1938-84†, 1985-2003	8-05-03	3.39	778	7-23-38	5.82	2,890
East Branch Stony Brook at Best Lake, at Watchung, NJ (01403535)	Lat 40°38'26", Long 74°26'51", Somerset County, Hydrologic Unit 02030105, 700 ft upstream from dam on Best Lake in Watchung, 1,400 ft upstream from mouth, and 1.4 mi west of Plainfield.	1973, 1980-2000†, 2001-03	9-21-80 7-07-84 7-09-92 11-28-93 12-17-00 5-18-02 8-05-03	1.52 2.56 2.60 2.81 1.99d 1.80d 2.19	43 r 441 r 459 r 561 r 210 d 145 d 284	8-02-73	5.90	2,840
Stony Brook at North Plainfield, NJ (01403570)	Lat 40°37'19", long 74°26'10", Somerset County, Hydrologic Unit 02030105, on right upstream wingwall of bridge on Green Brook Road, in North Plainfield, 100 ft downstream of Crab Brook, and 1.4 mi upstream of mouth. Datum of gage is 71.59 ft above NGVD of 1929. Drainage area is 6.88 mi^2. Radio stage and rainfall telemetry at station.	1938, 1975-83, 1991-2003	8-05-03 @1700	4.86	960	7-23-38 10-19-96	10.00 7.35	a 3,130
Green Brook at Rock Avenue, at Plainfield, NJ (01403600)	Lat 40°36'07", long 74°27'27", Somerset County, Hydrologic Unit 02030105, on left downstream wingwall of bridge on Rock Avenue in Plainfield, 0.3 mi north of West Front Street, and 0.6 mi south of U.S. Route 22. Datum of gage is 45.70 ft above NGVD of 1929. Drainage area is 18.2 mi^2. Radio stage and rainfall telemetry at station.	1972-79, 1992-2003	8-05-03 @1915	7.92	a	8-02-73 10-19-96 9-16-99	10.65 11.40 12.17	10,400 a a
Bound Brook at Middlesex, NJ (01403900)	Lat 40°35'06", long 74°30'28", Somerset County, Hydrologic Unit 02030105, at bridge on Sebrings Mill Road at Middlesex, 0.4 mi downstream of mouth of Green Brook, and 2.3 mi upstream of mouth. Datum of gage is 26.52 ft above NGVD of 1929. Drainage area is 48.4 mi^2. Radio stage and rainfall telemetry at station.	1972-77†, 1992-95, 1996-2003	6-05-03	7.21	1,420	9-17-99	13.54	7,840
Sawmill Brook at South River, NJ (01405010)	Lat 40°26'02", long 74°24'01", Middlesex County, Hydrologic Unit 02030105, on right bank upstream wingwall of culvert at intersection of County Route 535 and Merrill Road at entrance to East Brunswick High School, 0.2 mi north of St. Mary Cemetery, 1.3 mi northwest of Duhernal Lake, and 1.6 mi southwest of South River. Drainage area is 0.49 mi^2.	1998-2003	2-22-03	1.42	62	8-02-02	2.22	135

Maximum discharge at crest-stage partial-record stations--Continued

Station name and number	Location and drainage area	Period of record	Water year 2003 maximum			Period of record maximum		
			Date	Gage height (ft)	Discharge (ft^3/s)	Date	Gage height (ft)	Discharge (ft^3/s)
			RARITAN RIVER BASIN--Continued					
Manalapan Brook tributary at Smithburg, NJ (01405304)	Lat 40°12'37", long 74°21'16", Monmouth County, Hydrologic Unit 02030105, on upstream left wingwall of culvert on Woodville Road at Smithburg, 0.1 mi north of intersection of Woodville Road and Freehold-Mt. Holly Road, and 0.7 mi south of Pasture Pond. Datum of gage is 190 ft above NGVD of 1929, from topographic map. Drainage area is 0.47 mi^2.	1999-2003	6-08-03	2.36	21	3-30-01	3.25	70
			EAST CREEK BASIN					
East Creek at NJ Route 35, at Centerville, NJ (01407051)	Lat 40°25'00", long 74°10'08", Monmouth County, Hydrologic Unit 02030104, on upstream left wingwall of culvert on State Route 35, 0.5 mi east of Bethany Road and Route 35, and 0.7 mi west of Centerville. Datum of gage is 79 ft above NGVD of 1929, from topographic map. Drainage area is 0.59 mi^2.	1999-2003	10-16-02	4.74	a	8-03-02	5.79	a
			MANY MIND CREEK BASIN					
Many Mind Creek at Atlantic Highlands, NJ (01407130)	Lat 40°24'12", long 74°01'48", Monmouth County, Hydrologic Unit 02030104, upstream side of culvert on State Route 36 at Atlantic Highlands, 190 ft east of intersection of State Route 36 and Valley Drive, and 1.0 mi southeast of mouth. Datum of gage is 29.54 ft above NGVD of 1929. Drainage area is 0.26 mi^2.	1999-2003	6-17-01 8-03-02 10-16-02	6.48ur 6.79ur 6.78ur	a a a	8-03-02	6.79ur	a
			SHREWSBURY RIVER BASIN					
Big Brook near Marlboro, NJ (01407290)	Lat 40°19'10", long 74°12'51", Monmouth County, Hydrologic Unit 02030104, downstream left side of bridge on Hillsdale Road, 1.7 mi east of Marlboro, and 3.0 mi northwest of Colts Neck. Drainage area is 6.42 mi^2.	1980-2003	2-23-03	4.00	340	09-20-89	10.16	1,370
			MANASQUAN RIVER BASIN					
Mingamahone Brook at Farmingdale, NJ (01408015)	Lat 40°11'38", long 74°09'41", Monmouth County, Hydrologic Unit 02040301, on upstream right wingwall of culvert on Belmar Boulevard, 0.3 mi east of Farmingdale, and 3.0 mi upstream from mouth. Datum of gage is 48.64 ft above NGVD of 1929. Drainage area is 6.20 mi^2.	1969-2003	2-23-03	4.91	157	7-21-75	7.31	425
			METEDECONK RIVER BASIN					
North Branch Metedeconk River at Smithburg, NJ (01408052)	Lat 40°12'04", long 74°21'56", Monmouth County, Hydrologic Unit 02040301, at spillway of pond just upstream from culvert on Monmouth Road (County Route 537), at Charleston Springs, 0.8 mi southwest of Smithburg, and 4.1 mi east of Clarksburg. Datum of gage is 188 ft above NGVD of 1929, from topographic map. Drainage area is 0.10 mi^2.	1999-2003	1-04-03	5.98	a	9-16-99	6.43	3.2
			TOMS RIVER BASIN					
Michaels Branch tributary at Keswick Grove, NJ (01408582)	Lat 39°56'48", long 74°20'14", Ocean County, Hydrologic Unit 02040301, on upstream right wingwall of culvert on Pinewald Road (County Route 530), 0.1 mi upstream from mouth, 1.5 mi east of intersection of Pinewald Road and Whiting-Lacey Road, and 0.4 mi southeast of Keswick Grove. Datum of gage is 98 ft above NGVD of 1929, from topographic map. Drainage area is 0.67 mi^2.	1999-2003	2-25-03	2.12	30	9-16-99	3.65	a

Maximum discharge at crest-stage partial-record stations--Continued

Station name and number	Location and drainage area	Period of record	Water year 2003 maximum			Period of record maximum		
			Date	Gage height (ft)	Discharge (ft^3/s)	Date	Gage height (ft)	Discharge (ft^3/s)
TOMS RIVER BASIN--Continued								
Wrangel Brook at Bimini Drive, near Toms River, NJ (01408590)	Lat 39°58'16", long 74°15'57", Ocean County, Hydrologic Unit 02040301, on right bank pier at downstream side of bridge on Bimini Drive, 1.0 mi south of intersection of Bimini Drive and State Route 37, 2.6 mi west of Toms River, and 3.3 mi upstream of mouth. Datum of gage is 30 ft above NGVD of 1929, from topographic map. Drainage area is 13.6 mi^2.	1998-2003	2-24-03	3.29	179	5-10-98	3.58	210
Wrangel Brook at Mule Road, near Toms River, NJ *(01408592)	Lat 39°57'39", long 74°13'41", Ocean County, Hydrologic Unit 02040301, at downstream side of bridge on Mule Road in Berkeley Township, 0.5 mi upstream from mouth, and 1.7 mi west of Toms River. Datum of gage is 11 ft above NGVD of 1929, from topographic map. Drainage area is 19.5 mi^2.	1998-2003	2-24-03	5.99	187	9-28-00	7.40	340
OYSTER CREEK BASIN								
Brookville Creek at Brookville, NJ (01409088)	Lat 39°46'58", long 74°18'09" (revised), Ocean County, Hydrologic Unit 02040301, at downstream side of bridge on Brookville Road, 0.1 mi east of Brookville, 0.9 mi south of intersection of Brookville Road, and Wells Mills Road, and 1.2 mi southwest of Wells Mills Lake. Datum of gage is 107 ft above NGVD of 1929, from topographic map. Drainage area is 0.25 mi^2. Formerly published as Oyster Creek tributary.	1999-2003	6-09-03	4.40	5.3	9-16-99	4.92	10
GREAT EGG HARBOR RIVER BASIN								
Deep Run at U.S. Route 40, at Buena, NJ (01411120)	Lat 39°30'41", long 74°55'14", Atlantic County, Hydrologic Unit 02040302, downstream left bank of culvert on U.S. Route 40, 0.2 mi upstream of Pennsylvania-Reading-Seashore railroad tracks, 0.3 mi southeast of Buena, 1.1 mi northwest of Pancoast Lake, and 1.3 mi southeast of Landisville. Drainage area is 0.33 mi^2.	1997-2003	2-25-03	2.86	a	2-25-03	2.86	a
Deep Run tributary at NJ Route 54, at Landisville, NJ (01411122)	Lat 39°31'20", long 74°55'12", Atlantic County, Hydrologic Unit 02040302, upstream right bank of culvert on State Route 54, 0.4 mi southwest of Pancoast Road, 0.6 mi southeast of Landisville, and 1.0 mi northeast of Pancoast Lake. Drainage area is 1.18 mi^2.	1997-2003	6-08-03	2.52	48	8-23-97	4.18	300
COHANSEY RIVER BASIN								
West Branch Cohansey River at Seeley, NJ (01412500)	Lat 39°29'06", long 75°15'32", Cumberland County, Hydrologic Unit 02040206, on right bank 15 ft upstream from bridge on County Route 31 at Seeley, 450 ft upstream from mouth, and 4.1 mi northwest of Bridgeton. Datum of gage is 42.23 ft above NGVD of 1929. Drainage area is 2.58 mi^2.	1952-67†, 1968-2003	7-15-03	3.98	181	6-20-83	11.17	885
DELAWARE RIVER BASIN								
White Brook tributary at Montague, NJ (01438520)	Lat 41°18'05", long 74°47'40", Sussex County, Hydrologic Unit 02040104, on right upstream wingwall of culvert on County Route 521 just north of U.S. Route 206, 0.2 mi south of Montague, 0.4 mi east of Milford Toll Bridge, and 0.5 mi upstream of mouth. Datum of gage is 515 ft above NGVD of 1929, from topographic map. Drainage area is 0.23 mi^2.	1999-2003	3-21-03	1.51	16	12-18-00	2.63	a

Maximum discharge at crest-stage partial-record stations--Continued

Station name and number	Location and drainage area	Period of record	Water year 2003 maximum			Period of record maximum		
			Date	Gage height (ft)	Discharge (ft^3/s)	Date	Gage height (ft)	Discharge (ft^3/s)
DELAWARE RIVER BASIN--Continued								
Delaware River near Delaware Water Gap, PA (01440200)	Lat 41°00'48", long 75°05'10", Warren County, Hydrologic Unit 02040105, on left bank 700 ft streamward from River Road, 1.0 mi downstream from Tocks Island, 3.7 mi northeast of Delaware Water Gap, PA, and 4.0 mi upstream from bridge on Interstate Route 80. Datum of gage is 293.64 ft above NGVD of 1929. Drainage area is 3,850 mi^2.	1955, 1964-96†, 2002-03	3-22-03 @1415	16.46	67,100	8-19-55	37.4	260,000
Paulins Kill tributary at Ross Corner, NJ (01443305)	Lat 41°07'02, long 74°42'38", Sussex County, Hydrologic Unit 02040105, on left bank upstream wingwall of culvert on State Route 15, 0.1 mi southeast of Ross Corner, 2.0 mi northwest of Lafayette, and 0.2 mi upstream of mouth. Datum of gage is 500 ft above NGVD of 1929, from topographic map. Drainage area is 0.35 mi^2.	1999-2003	6-22-03	6.30	33	8-13-00	7.06	34
Lapahannock Creek at Ridge Road, at Roxburg, NJ (01446564)	Lat 40°46'06", long 75°06'10", Warren County, Hydrologic Unit 02040105, on upstream left wingwall of culvert on Ridge Road, 0.2 mi south of unnamed pond and 0.8 mi east of County Route 519 at Roxburg. Drainage area is 0.86 mi^2.	1995-2003	6-22-03	6.00	155	1-19-96	8.10	285
Pohatcong Creek tributary near Washington, NJ (01455130)	Lat 40°47'55", long 74°56'47", Warren County, Hydrologic Unit 02040105, on downstream left wingwall of culvert on County Route 628 1.0 mi southwest of Karrsville, 0.3 mi upstream of Pohatcong Creek, and 0.5 mi upstream of Willever Lake. Datum of gage is 530 ft above NGVD of 1929, from topographic map. Drainage area is 0.55 mi^2.	1999-2003	8-11-03	3.07	a	9-16-99	3.32	a
Delaware River at Riegelsville, NJ (01457500)	Lat 40°35'36", long 75°11'16", Warren County, Hydrologic Unit 02040105, on left bank just upstream of suspension bridge at Riegelsville, 600 ft upstream from Musconetcong River (flow of which is included in the records for this station since Oct. 1, 1931). Datum of gage is 125.12 ft above NGVD of 1929. Drainage area is 6,328 mi^2. Satellite stage telemetry at station.	1906-71†, 1972-2003	3-22-03 @1430	18.20	82,600	8-19-55	38.85	340,000
Delaware River tributary at Byram, NJ (01459010)	Lat 40°25'23", long 75°03'41", Hunterdon County, Hydrologic Unit 02040105, at left bank on downstream side of culvert on State Route 29, 0.1 mi south of Byram, 0.1 mi upstream from mouth, and 0.9 mi north of Bulls Island. Datum of gage is 69.7 ft above NGVD of 1929. Drainage area is 1.23 mi^2.	1945, 1955, 1995-2003	3-22-03	9.31k	a	7-09-45 8-20-55	18.4 28.37k	2,900 a
Moores Creek tributary at Valley Road, near Lambertville, NJ (01462197)	Lat 40°20'12", long 74°54'58", Mercer County, Hydrologic Unit 02040105, at upstream side of culvert on Valley Road, 0.3 mi east of Belle Mountain, and 0.7 mi upstream of mouth, and 2.3 mi south of Lambertville. Drainage area is 0.73 mi^2.	1989, 1995-2003	2-22-03	3.21	355	8-15-89	--	1,150 j
Shabakunk Creek tributary at Texas Avenue, near Lawrenceville, NJ (01463812)	Lat 40°15'36", long 74°43'37", Mercer County, Hydrologic Unit 02040105, at downstream right wingwall of culvert on Texas Avenue, just upstream of Lawrence Shopping Center, 2.6 mi south of Lawrenceville, 600 ft west of Brunswick Pike, and 0.2 mi north of Colonial Lake. Drainage area is 0.27 mi^2.	1995-2003	9-28-03	4.09	299	9-16-99	5.13	1,780
Stony Ford Brook at New Egypt, NJ (01464405)	Lat 40°04'21", long 74°30'59", Ocean County, Hydrologic Unit 02040201, on right bank upstream wingwall of culvert on Lakewood Road, 0.7 mi northwest of New Egypt, and 0.9 mi upstream from mouth. Drainage area is 0.99 mi^2.	1979, 1995-2003	9-23-03	5.23	64	8-31-79	13.65	340

Maximum discharge at crest-stage partial-record stations--Continued

Station name and number	Location and drainage area	Period of record	Water year 2003 maximum			Period of record maximum		
			Date	Gage height (ft)	Discharge (ft^3/s)	Date	Gage height (ft)	Discharge (ft^3/s)
DELAWARE RIVER BASIN--Continued								
Doctors Creek at Clarksburg, NJ (01464510)	Lat 40°11'37", long 74°26'42", Monmouth County, Hydrologic Unit 02040201, on left bank upstream wingwall at bridge on Stage Coach Road (County Routes 524 and 571), 0.2 mi north of Clarksburg, 2.2 mi upstream of Red Valley Lake, and 2.4 mi southeast of Roosevelt. Datum of gage is 194 ft above NGVD of 1929. Drainage area is 0.25 mi^2.	1999-2003	8-08-03	1.84	26	9-16-99 8-02-02	2.02 2.17	53 a
Crosswicks Creek tributary at U.S. Route 206, near Bordentown, NJ (01464524)	Lat 40°10'15", long 74°41'58", Burlington County, Hydrologic Unit 02040201, on left bank upstream wingwall of culvert on U.S. Route 206, 0.4 mi south of Sylvan Glen, and 1.9 mi northeast of Bordentown. Drainage area is 0.43 mi^2.	1995-2003	5-26-03	1.46	33	3-30-01	4.26	107
Thorton Creek at Bordentown, NJ (01464525)	Lat 40°08'50", long 74°41'45", Burlington County, Hydrologic Unit 02040201, on right bank upstream side of abandoned dam, 50 ft upstream of Thorton Lane, 0.4 mi upstream of unnamed pond, 0.9 mi east of Bordentown, and 2.5 mi west of Crosswicks. Drainage area is 0.84 mi^2.	1976-77†, 1995-2003	8-08-03	1.75	74	9-16-99	4.21	310
Crafts Creek at Route 68, at Georgetown, NJ (01464533)	Lat 40°04'37", long 74°39'47", Burlington County, Hydrologic Unit 02040201, on right upstream wingwall of culvert on State Route 68, 0.5 mi west of Georgetown, 0.7 mi downstream of unnamed pond, and 3.1 mi east of Columbus. Drainage area is 0.58 mi^2.	1995-2003	2-22-03	3.57	26	9-16-99	4.57	43
Crafts Creek at Columbus, NJ (01464538)	Lat 40°04'44", long 74°43'06", Burlington County, Hydrologic Unit 02040201, on right downstream wingwall of culvert on Columbus-Mansfield Road, 0.4 mi north of Columbus, and 6.0 mi northeast of Mount Holly. Datum of gage is 33.71 ft above NGVD of 1929. Drainage area is 5.38 mi^2.	1978-2003	2-22-03	5.84	171	7-06-89	10.25	880
Newton Creek at Collingswood, NJ *(01467305)	Lat 39°54'30", long 75°03'12", Camden County, Hydrologic Unit 02040202, at bridge on Park Avenue in Westmont, 0.3 mi east of Cuthbert Avenue, and 1.0 mi east of Collingswood. Datum of gage is 18.74 ft above NGVD of 1929. Drainage area is 1.33 mi^2.	1964-2003	7-23-03	3.42	166	7-14-94	6.82	328
South Branch Newton Creek at Haddon Heights, NJ *(01467317)	Lat 39°52'45", long 75°04'25", Camden County, Hydrologic Unit 02040202, at bridge on 13th Avenue in Haddon Heights, and 2.6 mi south of Collingswood. Datum of gage is 23.34 ft above NGVD of 1929. Drainage area is 0.63 mi^2.	1964-2003	7-23-03	2.67	175	9-01-78	4.62	295
Gravelly Run at Somerdale, NJ (01467357)	Lat 39°46'17", long 75°01'48", Camden County, Hydrologic Unit 02040202, upstream left wingwall of culvert, on Warwick Road (County Route 669) in Somerdale 0.8 mi south of Evesham Road, 0.8 mi north of Sterling High School, and 1.2 mi upstream of mouth, where it feeds Otter Brook. Drainage area is 0.35 mi^2.	1997-2003	5-26-03	3.43	102	9-26-00	4.46	164
Bees Branch at Hurffville, NJ (01475017)	Lat 39°46'17", long 75°06'20", Gloucester County, Hydrologic Unit 02040202, upstream right bank at culvert, on State Route 47, 0.4 mi south of Barnsboro Road, 0.6 mi north of Hurffville, and 0.8 mi southwest of headwater at unnamed lake. Drainage area is 0.43 mi^2.	1997-2003	5-26-03	3.69	40	9-16-99	5.99	76 r

Maximum discharge at crest-stage partial-record stations--Continued

Station name and number	Location and drainage area	Period of record	Water year 2003 maximum			Period of record maximum		
			Date	Gage height (ft)	Discharge (ft^3/s)	Date	Gage height (ft)	Discharge (ft^3/s)
DELAWARE RIVER BASIN--Continued								
Plank Run at Glassboro, NJ *(01475033)	Lat 39°42'54", long 75°08'24", Gloucester County, Hydrologic Unit 02040202, upstream right bank at culvert, on U.S. Route 322, 0.4 mi southwest of intersection with State Route 55, 0.6 mi west of Glassboro, and 0.7 mi south of Alcyon Lake. Datum of gage is 106.85 ft above NGVD of 1929. Drainage area is 0.71 mi^2.	1997-2003	9-05-03	2.23	18	9-16-99	2.60	47
Miery Run near Ewan, NJ (01477102)	Lat 39°42'52", Long 75°11'40", Gloucester County, Hydrologic Unit 02040202, downstream left bank at culvert on County Route 623, 0.3 mi southeast of mouth of Raccoon Creek, 1.2 mi northwest of Ewan, and 1.5 mi southeast of intersection with U.S. Route 322. Drainage area is 0.73 mi^2.	1997-2003	6-08-03	2.79	109	6-08-03	2.79	109
Raccoon Creek tributary no. 3 near Mullica Hill, NJ (01477123)	Lat 39°44'47", long 75°16'04", Gloucester County, Hydrologic Unit 02040202, downstream left bank of culvert, on Mullica Hill Road, 0.3 mi upstream of mouth, 2.0 mi east of Swedesboro, and 2.3 mi northwest of Mullica Hill. Drainage area is 0.47 mi^2.	1997-2003	2-22-03	1.43	32	2-22-03	1.43	32

* Also a low-flow partial-record station.
† Operated as a continuous-record gaging station.
a Discharge not determined.
b Gage height not determined.
c Recorded at previous site.
d Previously unpublished.
e Estimated.
f Determined at Squaw Lake Dam, 0.2 mi upstream of gage.
g Gage height (NGVD 1929) from previous site location approximately 150 ft upstream of current site.
h Peak gage height for the period was less than minimum recordable gage height indicated.
i Peak discharge for the period was less than the minimum recordable discharge.
j Determined at site 0.1 mi downstream (USGS station number 01462198, drainage area 0.80 mi^2), adjusted for change in drainage area.
k Due to backwater from Delaware River.
m Due to backwater from Raritan River.
p Elevation above NGVD of 1929.
r Revised.
s Determined at Bradford Avenue, 0.2 mi downstream of gage, adjusted for change in drainage area.
t Due to backwater from debris and snow at upstream side of culvert.
u Due to backwater from debris pile-up at upstream side of culvert.
v Was probably exceeded by peak of May 24 when gage was out of operation.
w Peak gage height was less than 12.14 ft.
x From rating curve extended above 125 ft^3/s on basis of slope area measurement at gage height 3.91 ft.
z Backwater condition.

Low-flow partial-record stations and miscellaneous sites

Measurements of streamflow in New Jersey made at stream locations other than continuous-record stations and crest-stage partial-record stations are listed below as low-flow partial-record stations (labeled with an "†") or miscellaneous sites. Low-flow partial-record stations are normally measured during base-flow conditions, however, some measurements at these stations may not be base-flow conditions if the station was measured for other study purposes requiring runoff discharges. Low-flow partial-record measurements, when correlated with the simulataneous discharge of a nearby stream where continuous records are available, will give a picture of the low-flow potentiality of a stream. Miscellaneous sites are stream locations chosen for special studies (seepage studies for example) and may be measured during base flow or rainfall-runoff conditions. If low-flow partial-record stations and miscellaneous sites are or were operated to collect other types of data, they will be footnoted as such.

Discharge measurements made at low-flow partial-record stations and miscellaneous sites during water year 2003

Station No.	Station Name	Location	Drainage area (mi^2)	Period of record	Measurements	
					Date	Discharge (ft^3/s)
		HUDSON RIVER BASIN				
01367625	Wallkill River at Sparta, NJ	Lat 41°02'25", long 74°37'47", Sussex County, Hydrologic Unit 02020007, at bridge on State Route 15, 0.4 mi northeast of Sparta, 1.2 mi downstream from outlet of Lake Mohawk, and 1.8 mi east of Fox Hollow Lake.	5.88	1998-2003	11-05-02 3-03-03 5-19-03 8-13-03	4.6 20 5.8 34
†01367770	Wallkill River near Sussex, NJ	Lat 41°11'38", long 74°34'31", Sussex County, Hydrologic Unit 02020007, at bridge on Glenwood Road, 0.6 mi upstream from Papakating Creek, 1.7 mi southwest of Independence Corner, and 2.0 mi southeast of Sussex.	60.8	1977-82, 1985, 1987-2003	11-05-02 2-05-03 5-22-03 8-27-03	36 97 57 38
†01367800	Papakating Creek at Pellettown, NJ	Lat 41°09'45", long 74°40'31", Sussex County, Hydrologic Unit 02020007, at bridge on County Route 565 in Pellettown, 3.9 mi northwest of Branchville, and 4.5 mi above West Branch.	15.8	1959-64, 1999-2003	11-05-02 5-19-03 8-27-03 9-19-03@0951 9-19-03@1405	7.1 6.8 6.6 138 67
†01367850	West Branch Papakating Creek at McCoys Corner, NJ	Lat 41°11'49", long 74°37'54", Sussex County, Hydrologic Unit 02020007, 0.1 mi southwest of McCoys Corner, 1.0 mi upstream of mouth, and 4.2 mi northwest of Hamburg.	11.0	1967-72, 2001-03	11-14-02 2-13-03	13 7.2
01367875	Clove Brook at Unionville Road, near Colesville, NJ	Lat 41°15'43", long 74°37'48", Sussex County, Hydrologic Unit 02020007, at bridge on Unionville Road, 1.3 mi southeast of Colesville, and 4.4 mi downstream of Clove Acres Lake.	7.25	2001-03	11-14-02 2-13-03 8-25-03	8.5 4.1 1.3
01367910	Papakating Creek at Sussex, NJ	Lat 41°12'02", long 74°35'55", Sussex County, Hydrologic Unit 02020007, at bridge on State Route 23, 0.7 mi upstream of Clove Brook, and 0.8 mi southeast of Sussex.	59.4	1977-80, 1982, 1985, 1989-95, 1997, 1999, 2001-03	11-14-02 2-13-03	56 36
01368000	Wallkill River near Unionville, NY	Lat 41°15'36", long 74°32'55", Sussex County, Hydrologic Unit 02020007, at bridge on the Bassetts Bridge Road, 0.6 mi upstream from small tributary, 2.0 mi south of the New York-New Jersey state line, and 3.0 mi south of Unionville.	140	1958-81a, 1979-81, 1991-97, 1999, 2001-03	8-27-03	59
01368820	Double Kill at Wawayanda, NJ	Lat 41°11'13", long 74°25'12", Sussex County, Hydrologic Unit 02020007, at bridge on Laurel Pond Road, 0.4 mi downstream from Wawayanda Lake, 3.5 mi east of Vernon, and 4.6 mi upstream from Wawayanda Creek.	6.46	1998-2003	11-05-02 3-04-03 5-19-03 8-27-03	3.9 21 3.3 0.24
		HACKENSACK RIVER BASIN				
01377358	Pasack Brook 1600 ft above Grand Avenue at Montvale, NJ	Lat 41°02'37", long 74°01'51", Bergen County, Hydrologic Unit 02030103, 450 ft downstream of Muddy Creek, 1600 ft upstream of Grand Avenue, and 0.4 mi west of Montvale.	13.0	2003	10-02-02 1-14-03 4-22-03 8-28-03	3.5 13 21 7.7

Discharge measurements made at low-flow partial-record stations and miscellaneous sites during water year 2003

Station No.	Station Name	Location	Drainage area (mi^2)	Period of record	Measurements	
					Date	Discharge (ft^3/s)
		HACKENSACK RIVER BASIN--Continued				
*†01378385	Tenakill Brook at Closter, NJ	Lat 40°58'30", long 73°58'05", Bergen County, Hydrologic Unit 02030103, at bridge on High Street in Closter, 0.7 mi upstream from mouth, and 2.7 mi downstream from former crest-stage gage on Madison Avenue in Cresskill.	8.56	1964-73, 1975, 1978, 1982, 1985, 1987-89, 1991-93, 1996-97, 1999, 2000, 2002-03	2-22-03 6-04-03 8-22-03 9-09-03	47 125 10 7.7
01378400	Dwars Kill at Anderson Avenue at Alpine, NJ	Lat 40°58'37", long 73°56'03", Bergen County, Hydrologic Unit 02030103, at dead-end of Anderson Avenue, 1.5 mi north of Alpine, and 2.0 mi upstream of Oradell Reservoir.	0.35	2003	11-13-02 2-24-03 6-09-03 9-08-03	0.6 2.1 1.1 0.04
†01378410	Dwars Kill at Norwood, NJ	Lat 40°59'00", long 73°57'29", Bergen County, Hydrologic Unit 02030103, 400 ft upstream of Blanche Avenue, 600 ft upstream of Oradell Reservoir, and 1.0 mi south of Norwood.	3.23	1973-80, 1999, 2002-03	8-22-03 9-09-03	1.5 1.2
01378475	Dorotockeys Run at Harrington Park, NJ	Lat 40°59'14", long 73°58'29", Bergen County, Hydrologic Unit 02030103, at bridge on Tappan Road, 0.3 mi north of Harrington Park, 0.4 mi upstream of Oradell Reservoir.	4.10	2003	11-13-02 2-24-03 6-09-03 9-08-03	8.6 16 6.8 2.6
†01378520	Hirshfeld Brook at New Milford, NJ	Lat 40°56'49", long 74°00'59", Bergen County, Hydrologic Unit 02030103, at bridge on The Boulevard in New Milford, 0.45 mi upstream from mouth and 0.7 mi west of Dumont.	4.54	1965-72, 2002-03	8-22-03 9-09-03	2.9 2.6
†01378560	Coles Brook at Hackensack, NJ	Lat 40°54'40", long 74°02'25", Bergen County, Hydrologic Unit 02030103, at bridge on Main Street in Hackensack, 0.8 mi upstream from mouth and 1.9 mi northwest of Teaneck.	7.00	1965-72, 1998-2003	11-14-02 2-03-03 5-29-03 8-06-03	4.0 3.4 5.4 19
		PASSAIC RIVER BASIN				
*†01378690	Passaic River near Bernardsville, NJ	Lat 40°44'02", long 74°32'24", Somerset County, Hydrologic Unit 02030103, at bridge on U.S. Route 202, 1.8 mi northeast of Bernardsville, and 3.0 mi upstream of Great Brook.	8.83	1964-67, 1968-77a, 1983-84, 1987, 1989, 1992-93, 1997-98, 2001, 2003	6-01-03 6-04-03	90 180
01378775	West Branch Primrose Brook in Morristown National Historical Park, NJ	Lat 40°46'11", long 74°32'10", Morris County, Hydrologic Unit 02030103, 250 ft east of Aqueduct Loop Trail in Morristown National Historical Park, 0.6 mi upstream of Primrose Brook, 0.8 mi west of Mount Kemble, and 3.8 mi southwest of Morristown.	0.30	2003	8-26-03	.24
01378778	East Branch Primrose Brook in Morristown National Historical Park, NJ	Lat 40°46'14", long 74°31'26", Morris County, Hydrologic Unit 02030103, at bridge on New York Brigade Trail in Morristown National Historical Park, 0.3 mi north of Mount Kemble , 0.6 mi upstream of Primrose Brook, and 3.2 mi southwest of Morristown.	0.18	2003	8-26-03	.18

Discharge measurements made at low-flow partial-record stations and miscellaneous sites during water year 2003

Station No.	Station Name	Location	Drainage area (mi^2)	Period of record	Measurements	
					Date	Discharge (ft^3/s)
		PASSAIC RIVER BASIN--Continued				
01378780	Primrose Brook at Morristown National Historical Park, NJ	Lat 40°45'54", long 74°31'47", Morris County, Hydrologic Unit 02030103, at bridge on Grand Loop Trail Road in Morristown National Historic Park, 20 ft downstream from West Branch Primrose Brook, 0.5 mi west of Mount Kemble, and 3.7 mi southwest of Morristown.	1.07	1998-2003	12-16-02 3-04-03 5-20-03 8-26-03	1.4 1.3 1.3 .98
†01379200	Dead River near Millington, NJ	Lat 40°38'56", long 74°31'25", Morris County, Hydrologic Unit 02030103, at bridge on King George Road (Spur County Route 527), 100 feet upstream from mouth, 2.0 mi south of Millington, and 4.2 mi south of Basking Ridge.	20.8	1962-67, 1973-75, 1986-89, 1998-2003	3-10-03 5-12-03 9-03-03	81 13 59
†01379525	Canoe Brook near Millburn, NJ	Lat 40°44'55", long 74°20'13", Essex County, Hydrologic Unit 02030103, at bridge on Parsonage Hill Road, 0.2 mi downstream from Taylor Lake, 1.0 mi upstream from New Jersey-American Water Company pumping station, and 1.4 mi northwest of Millburn.	10.2	1989-2003	7-09-03 9-08-03	.71 .92
†01379700	Rockaway River at Berkshire Valley, NJ	Lat 40°55'51", long 74°35'41", Morris County, Hydrologic Unit 02030103, on left bank, 60 ft downstream from bridge on Berkshire Valley Road in Berkshire Valley, 2.7 mi upstream from Stephens Brook and 3.8 mi northwest of Dover.	24.4	1960-69, 1971-72, 1981, 1984-96a, 1997-98, 2002-03	7-09-03 9-08-03	7.8 12
†01380100	Beaver Brook at Rockaway, NJ	Lat 40°54'08", long 74°30'05", Morris County, Hydrologic Unit 02030103, at bridge on Gill Avenue, and 0.2 mi upstream from mouth, and 0.7 mi east of Rockaway.	22.2	1963, 1985-86, 1998-2003	11-06-02 2-06-03 5-20-03 7-09-03 8-13-03 9-08-03	28 30 12 15 85 10
†01380133	Den Brook at Denville, NJ	Lat 40°53'25", long 74°28'17", Morris County, Hydrologic Unit 02030103, at bridge on Broadway Avenue, at Denville, 150 ft from mouth, and 0.6 mi downstream from Indian Lake.	8.78	1986, 2002-03	7-09-03 9-08-03	8.4 6.0
†01380300	Stony Brook near Rockaway Valley, NJ	Lat 40°56'25", long 74°25'38", Morris County, Hydrologic Unit 02030103, at bridge on Rockaway Valley Road, 0.2 mi downstrean of unnamed tributary, 1.2 mi northeast of Rockaway Valley, and 1.7 mi west of Taylortown.	8.43	1963-67, 1985-86, 2002-03	7-09-03	3.0
†01382000	Passaic River at Two Bridges, NJ	Lat 40°53'50", long 74°16'22", Essex County, Hydrologic Unit 02030103, at bridge on Two Bridges Road, just upstream from confluence with Pompton River, 0.3 mi northeast of Two Bridges, and 2.6 mi northwest of Little Falls.	361	1902-03, 1963-68, 1983-84, 1986-98, 2002-03	8-22-03 9-09-03	286 239
†01382050	Pequannock River near Stockholm, NJ	Lat 41°06'55", long 74°30'49", Sussex County, Hydrologic Unit 02030103, at bridge on County Route 515, 1.6 mi above Pacock Brook, and 1.8 mi north of Stockholm.	5.39	1959-64, 2002-03	7-09-03	1.2
†01382090	Pacock Brook near Highland Lakes, NJ	Lat 41°08'11", long 74°28'21", Sussex County, Hydrologic Unit 02030103, at bridge on Canistear Road, 0.3 mi upstream from Canistear Reservoir, and 2.8 mi south of Highland Lakes.	---	2002-03	7-09-03	2.0
†01382360	Kanouse Brook at Newfoundland, NJ	Lat 41°02'50", long 74°25'47", Passaic County, Hydrologic Unit 02030103, at culvert on Kanouse Road, 0.3 mi east of Newfoundland, and 0.6 mi upstream from mouth.	3.87	1963-67, 2002-03	7-09-03	2.1

Discharge measurements made at low-flow partial-record stations and miscellaneous sites during water year 2003

Station No.	Station Name	Location	Drainage area (mi^2)	Period of record	Measurements	
					Date	Discharge (ft^3/s)
		PASSAIC RIVER BASIN--Continued				
†01383600	Hewitt Brook at Hewitt, NJ	Lat 41°08'28", long 74°18'54", Passaic County, Hydrologic Unit 02030103, at bridge on Lake Road, 0.2 mi west of Hewitt, 0.4 mi upstream from mouth.	---	2002-03	8-20-03 9-11-03	2.2 1.4
†01385000	Cupsaw Brook near Wanaque, NJ	Lat 41°06'37", long 74°15'22", Passaic County, Hydrologic Unit 02030103, at bridge on Carletondale Road, just upstream from Wanaque Reservior, 0.3 mi downstream from Cupsaw Lake, and 4.3 mi north of Wanaque.	4.37	1935-58a, 2001-03	8-20-03	1.2
†01387008	Meadow Brook at Highland Avenue, at Wanaque, NJ	Lat 41°02'34", long 74°17'09", Passaic County, Hydrologic Unit 02030103, at culvert on Highland Avenue, in Wanaque, 0.3 mi upstream from mouth, and 0.5 mi east of Raymond Dam.	---	2002-03	8-20-03	8.0
01387019	Posts Brook above Wanaque diversion near Wanaque, NJ	Lat 41°02'35", long 74°19'38", Passaic County, Hydrologic Unit 02030103, 0.7 mi upstream from inlet to Lake Ioscoe, 1.7 mi west of Wanaque, and 2.8 mi north of Bloomingdale.	3.55	2002-03	8-20-03	.44
†01387020	Posts Brook diversion to Wanaque Reservoir near Wanaque, NJ	Lat 41°02'35", long 74°19'36", Passaic County, Hydrologic Unit 02030103, 0.2 mi upstream from Wanaque Reservoir, 1.7 mi west of Wanaque, and 2.8 mi north of Bloomingdale.	---	1935, 1937, 1941-48, 1950-52, 1954, 1956-57, 1959-64, 2002-03	8-20-03	.65
*†01387450	Mahwah River near Suffern, NY	Lat 41°08'28", long 74°06'59", Rockland County, NY, Hydrologic Unit 02030103, on left bank 13 ft upstream from bridge on U.S. Highway 202, 2.5 mi northeast of Suffern, and 4.8 upstream of mouth.	12.3	1958-1995a, 1996-2003	11-18-02 12-17-02 8-28-03	131 45 5.7
*†01387880	Pond Brook at Oakland, NJ	Lat 41°01'36", long 74°14'03", Bergen County, Hydrologic Unit 02030103, at bridge on Interstate 287/State Route 208 in Oakland, 0.2 mi upstream from former site at Franklin Avenue (prior to October 1975), 0.6 mi upstream from mouth, and 1.5 mi northwest of Franklin Lakes.	6.76	1963-2003	6-01-03	143
01388720	Beaver Dam Brook at Ryerson Road, at Lincoln Park, NJ	Lat 40°55'35", long 74°17'34", Morris County, Hydrologic Unit 02030103, at bridge on Ryerson Road in Lincoln Park, 1.7 mi northwest of Mountain View, and 0.3 mi upstream of mouth.	13.1	2001-03	11-07-02 2-13-03 5-06-03 8-06-03	9.6 5.8 10 72
*01389005	Passaic River below Pompton River at Two Bridges, NJ	Lat 40°53'47", long 74°16'09", Passaic County, Hydrologic Unit 02030103, at right bank on Fairfield Road in Two Bridges, 400 ft downstream from the Pompton River, and 1.4 mi northwest of Little Falls. Satellite stage telemetry at station.	734	1991, 1996-2003	8-28-03 9-11-03	247 270
†01389090	Naachtpunkt Brook at Totowa, NJ	Lat 40°54'48", long 74°13'51", Passaic County, Hydrologic Unit 02030103, at bridge on Totowa Road, 1.0 mi upstream from Preakness Brook and Singac Brook, and 1.0. mi northwest of Totowa.	1.14	2002-03	8-19-03 9-09-03	.90 .78
†01389100	Singac Brook at Singac , NJ	Lat 40°53'37", long 74°15'56", Passaic County, Hydrologic Unit 02030103, at bridge on Fairfield Road, between Interstate 80 and U.S. Route 46, 60 ft upstream from mouth, 1.2 mi northwest of Singac, and 1.8 mi northwest of Little Falls.	11.1	1963-67, 1983-84, 1986-2003	8-28-03 9-11-03	16 19

Discharge measurements made at low-flow partial-record stations and miscellaneous sites during water year 2003

Station No.	Station Name	Location	Drainage area (mi^2)	Period of record	Measurements	
					Date	Discharge (ft^3/s)
		PASSAIC RIVER BASIN--Continued				
01389110	Passaic River at Route 46, at Singac, NJ	Lat 40°53'32", long 74°15'57", Passaic County, Hydrologic Unit 02030103 at bridge on U.S. Route 46, 400 downstream of Singac Brook, 1.4 mi west of Singac, and 0.6 mi downstream from Pompton River.	745	1996-2003	8-28-03 9-11-03	264 289
*†01389534	Peckman River at Ozone Avenue, at Verona, NJ	Lat 40°50'42", long 74°14'08", Passaic County, Hydrologic Unit 02030103, at bridge on Ozone Avenue in Verona, 1.0 mi southwest of Cedar Grove Reservoir, and 4.0 mi west of Clifton.	4.45	1979-2003	1-09-03 3-21-03 3-31-03 6-03-03 6-22-03 7-29-03	11 42 14 8.8 27 5.9
*†01389738	Molly Ann Brook tributary near Franklin Lakes, NJ	Lat 40°58'51", long 74°12'10", Bergen County, Hydrologic Unit 02030103, at culvert on Belmont Avenue, 0.5 mi upstream of mouth at Haledon Reservior, 1.6 mi southeast of Franklin Lakes, and 2.1 mi north of North Haledon.	0.33	2001-03	3-17-03 6-04-03 8-19-03 9-09-03	7.4 3.8 .07 .06
*†01389765	Molly Ann Brook at North Haledon, NJ	Lat 40°57'11", long 74°11'06", Passaic County, Hydrologic Unit 02030103, Overlook Avenue in North Haledon, 0.5 mi upstream from Oldham Pond Dam, and 1.5 mi west of Hawthorne.	3.89	1979-2003	6-22-03 9-09-03	41 2.0
01389785	Molly Ann Brook at Preakness Avenue, at Paterson, NJ	Lat 40°55'16", long 74°11'36", Passaic County, Hydrologic Unit 02030103, at Bridge on Preakness Avenue, 1.0 mi upstream of mouth, and 2.0 mi west of Paterson.	---	2003	2-24-03 4-08-03 7-17-03	29 15 4.2
†01389790	Molly Ann Brook at Paterson, NJ	Lat 40°54'52", long 74°11'25", Passaic County, Hydrologic Unit 02030103, at bridge on Totowa Avenue, 0.1 mi upstream from mouth, and 1.9 mi west of Paterson.	7.73	1963-1972, 1983-84, 1994, 2002-03	10-01-02 1-13-03	0 0
†01389844	Deep Brook at Goffle Road, at Hawthorne, NJ	Lat 40°57'54", long 74°09'31", Passaic County, Hydrologic Unit 02030103, at bridge on Goffle Road, 270 ft upstream from mouth, and 0.8 mi north of Hawthorne.	2.04	2002-03	8-19-03	1.1
†01389845	Goffle Brook at Arnold Dam, at Hawthorne, NJ	Lat 40°57'46", long 74°09'35", Passaic County, Hydrologic Unit 02030103, at Arnold Dam, at foot of Van Winkle Avenue in Hawthorne, and 700 ft downstream of Deep Brook.	7.2	2002-03	8-19-03	3.4
†01389850	Goffle Brook at Hawthorne, NJ	Lat 40°56'20", long 74°09'47", Passaic County, Hydrologic Unit 02030103, at bridge on Wagaraw Road, 0.1 mi upstream from mouth, 1.9 mi north of Paterson and 1.1 mi southwest of Hawthorne.	8.77	1963-67, 1983-84, 1998, 2003	10-01-02 1-13-03 4-08-03 7-17-03	.25 11 14 3.2
†01389860	Diamond Brook at Fair Lawn, NJ	Lat 40°56'37", long 74°08'30", Bergen County, Hydrologic Unit 02030103, at culvert on Bindery Entrance Road in Fair Lawn, 1,200 ft upstream from mouth, and 1.9 mi north of Paterson.	3.19	2001-03	10-22-02	1.9
01389862	Henderson Brook at railroad bridge, at Fair Lawn, NJ	Lat 40°56'57", long 74°07'28", Bergen County, Hydrologic Unit 02030103, at Conrail railroad bridge in Fair Lawn, 1.4 mi upstream of mouth, and 2.3 mi southwest of Ridgewood.	.44	2000-03	10-22-02	.05
01389863	Henderson Brook above Pollitt Drive, at Fair Lawn, NJ	Lat 40°56'47", long 74°07'47", Bergen County, Hydrologic Unit 02030103, at bridge on Pollitt Drive in Fair Lawn, 0.7 mi south of Glen Rock, and 1.0 mi upstream from mouth.	.57	2000-03	10-22-02	.25

Discharge measurements made at low-flow partial-record stations and miscellaneous sites during water year 2003

Station No.	Station Name	Location	Drainage area (mi^2)	Period of record	Measurements	
					Date	Discharge (ft^3/s)
		PASSAIC RIVER BASIN--Continued				
01389865	Henderson Brook at River Road, at Fair Lawn, NJ	Lat 40°56'24", long 74°08'33", Bergen County, Hydrologic Unit 02030103, at bridge on River Road in Fair Lawn, 200 ft upstream of mouth, and 1.2 mi southeast of Hawthorne.	1.25	2000-03	10-22-02	.87
01389870	Passaic River at Morlot Avenue, at Fair Lawn, NJ	Lat 40°55'26", long 74°08'25", Bergen County, Hydrologic Unit 02030103, at bridge on Morlot Avenue, 1.3 mi south of Fair Lawn, and 2.6 mi downstream of Goffle Brook.	797	1970, 2001-03	10-01-02 1-13-03 4-24-03 7-22-03	78 1730 1170 937
01389873	Lyncrest Brook at River Road, at Fair Lawn, NJ	Lat 40°55'23", long 74°07'50", Bergen County, Hydrologic Unit 02030103, at bridge on River Drive in Fair Lawn, 500 ft upstream of mouth, and 2.4 mi southeast of Prospect Park.	.45	2000-03	10-22-02	.05
†01390250	Saddle River at Brook Road, near Upper Saddle River, NJ	Lat 41°04'32", long 74°05'06", Bergen County, Hydrologic Unit 02030103, at bridge on Brook Road, 430 ft downstream from Penners Lake, 875 ft south of the NJ-NY state line, and 1.0 mi northeast of Upper Saddle River.	---	2002-03	8-28-03	1.1
*†01390450	Saddle River at Upper Saddle River, NJ	Lat 41°03'32", long 74°05'43", Bergen County, Hydrologic Unit 02030103, at downstream side of culvert on Lake Street in Upper Saddle River, and 1.3 mi downstream from Pine Brook.	10.9	1964-72, 1975-78, 1980-2003	10-06-02 1-14-03 4-22-03 8-28-03	15 13 19 6.1
01390600	Hohokus Brook at Franklin Lakes, NJ	Lat 41°00'59", long 74°11'43", Bergen County, Hydrologic Unit 02030103, at bridge on Woodside Avenue, 0.5 mi east of Franklin Lakes, and 0.6 mi upstream of De Yoe Pond.	---	2003	10-02-02 1-14-03 4-22-03 8-28-03	.33 1.3 2.3 .78
*01390810	Hohokus Brook at Allendale, NJ	Lat 41°01'37", long 74°08'43", Bergen County, Hydrologic Unit 02030103, at bridge on Brookside Avenue in Allendale, and 0.2 mi downstream from Valentine Brook.	9.11	1969-71, 1975, 1978-2003	6-04-03	74
*†01390900	Ramsey Brook at Allendale, NJ	Lat 41°01'44", long 74°08'06", Bergen County, Hydrologic Unit 02030103, at downstream side of bridge on Brookside Avenue in Allendale, and 0.6 mi upstream from Hohokus Brook.	2.55	1974-78, 1980-2003	6-04-03	36
01391109	Jordan Brook at Fair Lawn, NJ	Lat 40°56'52", long 74°06'13", Bergen County, Hydrologic Unit 02030103, at bridge on Saddle River Road, 0.1 mi upstream of mouth, 0.9 mi northeast of Fair Lawn, and 1.1 mi southeast of Glen Rock.	1.05	2000-03	10-22-02	.29
01391250	Beaver Dam Brook at Arcola, NJ	Lat 40°55'47", long 74°05'44", Bergen County, Hydrologic Unit 02030103, at bridge on Saddle River Road, 800 ft upstream of mouth, 0.5 mi northwest of Arcola, and 1.0 mi southeast of Fair Lawn.	.74	2000-03	10-22-02	.03
01392210	Third River at Passaic, NJ	Lat 40°49'47", long 74°08'31", Passaic County, Hydrologic Unit 02030103, on right bank 400 ft upstream from bridge on State Route 3, 0.8 mi south of Passaic, and 1.2 mi upstream from Passaic River	11.8	1977-97a, 1998, 2000, 2002-2003	10-31-02 2-04-03 5-08-03 8-18-03	13 21 25 11
01392520	Second River at Main Street, at Belleville, NJ	Lat 40°46'49", long 74°09'06", Essex County, Hydrologic Unit 02030103, at bridge on Main Street, 0.1 mi upstream of mouth, and 0.9 mi south of Belleville.	14.9	2003	10-01-02 1-13-03 4-08-03	3.9 17 40

Discharge measurements made at low-flow partial-record stations and miscellaneous sites during water year 2003

Station No.	Station Name	Location	Drainage area (mi^2)	Period of record	Measurements	
					Date	Discharge (ft^3/s)
		ELIZABETH RIVER BASIN				
01393440	Elizabeth River above Ursino Lake, at Elizabeth, NJ	Lat 40°40'40", long 74°13'32", Union County, Hydrologic Unit 02030104, at bridge on North Avenue, 0.9 mi northwest of Elizabeth, and 4.5 mi upstream of mouth.	---	2003	10-31-02 2-04-03 5-08-03 8-18-03	11 9.6 33 12
		MORSE CREEK BASIN				
01393690	Morses Creek at West Stimpson Avenue, at Linden, NJ	Lat 40°37'33", long 74°14'55", Union County, Hydrologic Unit 02030104, at bridge on West Stimpson Avenue, 0.8 mi southeast of Linden, and 3.6 mi upstream of mouth.	5.90	2003	10-07-02 1-16-03 4-07-03 7-15-03	.50 1.7 2.8 1.0
		RAHWAY RIVER BASIN				
*†01393890	East Branch Rahway River at Maplewood, NJ	Lat 40°44'06", long 74°16'13", Essex County, Hydrologic Unit 02030104, on bridge on Jefferson Avenue in Maplewood, 1,100 ft west of Fielding School, and 2.5 mi upstream of confluence of West Branch River and East Branch Rahway River.	5.11	1999-2003	3-21-03 4-29-03 6-02-03 6-04-03 6-21-03 8-27-03 9-10-03 9-11-03	17 6.2 6.3 91 477 2.7 2.7 2.8
†01393960	West Branch Rahway River at Northfield Avenue at West Orange, NJ	Lat 40°46'11", long 74°16'59", Essex County, Hydrologic Unit 02030104, at bridge on Northfield Avenue in West Orange, 0.1 mi upstream of Orange Reservoir, and 2.2 mi east of Northfield.	3.92, revised	2002-03	10-31-02 2-04-03 4-24-03 7-22-03	1.7 2.2 3.5 7.7
*†01394000	West Branch Rahway River at Millburn, NJ	Lat 40°43'54", long 74°18'27", Essex County, Hydrologic Unit 02030104, at Diamond Mill Pond Dam, 1,000 ft upstream from Glen Avenue in Millburn, and 1.9 mi upstream from confluence with East Branch.	7.10	1940-50a, 1973, 1998-2003	6-04-03 8-27-03 9-10-03	222 1.6 1.5
01394630	Rahway River at Eastman Street, at Cranford, NJ	Lat 40°39'31", long 74°18'36", Union County, Hydrologic Unit 02030104, at bridge on Eastman Street in Cranford, 1.8 mi downstream of Nomahegan Brook, and 8.0 mi upstream of Robinsons Branch.	34.1	2003	10-31-02 2-04-03 5-08-03 8-18-03	17 22 76 20
01396003	Robinsons Branch at St. Georges Avenue, at Rahway, NJ	Lat 40°36'38", long 74°17'10", Union County, Hydrologic Unit 02030104, at bridge on St. Georges Avenue, 0.4 mi west of Rahway, and 0.8 mi upstream of mouth.	21.7	2003	10-07-02 1-16-03 4-07-03 7-15-03	1.4 8.4 12 4.2
01396028	South Branch Rahway River at South Cliff Road, at Colonia, NJ	Lat 40°34'42", long 74°18'23", Union County, Hydrologic Unit 02030104, 100 ft downstream of unnamed tributary, 250 ft northwest of intersection of Chain O Hills Road and South Cliff Road in Colonia, and 2.5 mi southwest of Rahway.	9.05	2000, 2003	1-16-03 4-21-03 7-24-03	6.4 5.2 8.7
†01396030	South Branch Rahway River at Colonia, NJ	Lat 40°34'57", long 74°18'00", Union County, Hydrologic Unit 02030104, at bridge on Dover Road in Colonia, 0.7 mi northeast of Iselin, and 2.3 mi upstream of mouth.	9.31	1979-86, 2003	10-07-02	1.51
		RARITAN RIVER BASIN				
†01396108	Turkey Brook at Mount Olive, NJ	Lat 40°51'04", long 74°43'50", Morris County, Hydrologic Unit 02030105, at bridge on Jakestown Road in Mount Olive, 1.0 mi southeast of Budd Lake, and 1.2 mi above mouth.	---	1965, 2002-03	8-26-03 9-11-03	.72 .64
†01396180	Drakes Brook at Bartley, NJ	Lat 40°48'43", long 74°43'44", Morris County, Hydrologic Unit 02030105, at bridge on Bartley Road, 0.25 mi upstream from mouth, 0.9 mi southwest of Bartley and 2.5 mi of Chester.	16.6	1964-69, 1971-73, 1975-76, 1988-91, 2000-03	7-09-03 9-08-03	15 11

Discharge measurements made at low-flow partial-record stations and miscellaneous sites during water year 2003

Station No.	Station Name	Location	Drainage area (mi^2)	Period of record	Measurements	
					Date	Discharge (ft^3/s)
		RARITAN RIVER BASIN--Continued				
01396550	Spruce Run at Newport, NJ	Lat 40°43'29", long 74°54'33", Hunderdon County, Hydrologic Unit 02030105, at bridge on Newport Road in Newport, 1.2 mi northwest of Woodglen, and 6.4 mi upstream from Spruce Run Reservoir.	5.67	1998-2003	11-12-02 2-06-03 5-07-03 8-18-03	3.2 7.0 6.3 9.7
†01396587	Rocky Run near Clinton, NJ	Lat 40°40'48", long 74°55'14", Hunterdon County, Hydrologic Unit 02030105, at bridge on State Route 31, 260 ft upstream of mouth, and 2.0 mi north of Clinton.	1.99	2002-03	7-09-03 9-11-03	2.4 1.7
01396588	Spruce Run near Glen Gardner, NJ	Lat 40°40'41", long 74°55'05", Hunterdon County, Hydrologic Unit 02030105, 800 ft downstream of Rocky Run, 0.3 mi upstream of bridge on Van Syckel Road, and 1.6 mi southeast of Glen Gardner.	15.3	1979, 1981-83 1985-93 1995-97, 1999 2003	11-12-02 2-06-03 5-07-03 8-21-03	7.6 9.6 19 20
01396812	Beaver Brook at Annandale, NJ	Lat 40°38'16", long 74°52'56", Hunterdon County, Hydrologic Unit 02030105, at bride on Allerton Road in Annandale, 1.5 mi east of Clinton, and 1.9 mi upstream of mouth.	4.63	2003	12-16-02 3-05-03 6-19-02 9-22-03	11 14 10 6.1
†01396815	Beaver Brook at Clinton, NJ	Lat 40°38'10", long 74°54'35", Hunterdon County, Hydrologic Unit 02030105, at bridge on River Road in Clinton, 0.24 upstream of mouth, and 1.0 mi northeast of Franklin.	---	2002-03	7-09-03 9-11-03	6.1 4.0
†01396865	Sidney Brook at Grandin, NJ	Lat 40°37'07", long 74°55'58", Hunterdon County, Hydrologic Unit 02030105, at bridge on County Route 513 (Grandin Road) in Grandin, 1.3 mi upstream of mouth, 1.8 mi southwest of Clinton, and 2.7 mi northeast of Pittstown.	4.71	1997-99, 2001-03	8-26-03 9-11-03	4.0 3.1
01396868	Sidney Brook near Lansdowne, NJ	Lat 40°36'50", long 74°55'28", Hunterdon County, Hydrologic Unit 02030105, at bridge on Sidney Road, 0.8 mi upstream of mouth, and 1.0 mi west of Lansdowne.	5.19	2003	12-16-02 3-05-03 6-19-03 9-22-03	14 36 12 4.7
†01396900	Capoolong Creek at Lansdowne, NJ	Lat 40°36'28", long 74°54'57", Hunterdon County, Hydrologic Unit 02030105, at bridge on Lower Lansdown Road, 0.4 mi upstream from mouth, 0.5 mi west of Lansdowne, and 2.1 mi south of Clinton.	14.1	1959-65, 2002-03	7-09-03 9-11-03	18 9.1
†01399190	Lamington (Black) River at Succasunna, NJ	Lat 40°51'03", long 74°38'01", Morris County, Hydrologic Unit 02030105, bridge on Righter Road, 0.4 mi upstream from Succasunna Brook, and 0.7 mi south of Succasunna.	7.37	1977-87a, 1988-2003	7-14-03 8-01-03 8-26-03 9-11-03	8.2 5.9 5.0 4.6
†01399200	Lamington (Black) River near Ironia, NJ	Lat 40°50'07", long 74°38'39", Morris County, Hydrologic Unit 02030105, at bridge on Ironia Road, 1.0 mi downstream from Succasunna Brook, and 1.3 mi northwest of Ironia.	10.9	1964-73, 1976-87a, 1988-2003	7-14-03 8-01-03 8-26-03 9-11-03	12 7.7 7.2 7.5
†01399570	Rockaway Creek at McCrea Mills, NJ	Lat 40°39'42", long 74°45'57", Hunterdon County, Hydrologic Unit 02030105, at bridge on Rockaway Road in McCrea Mills, 1.1 mi southwest of Oldwick, 3.1 mi above South Branch Rockaway Creek, and 4.0 mi northeast of Lebanon.	17.0	1961-65, 2002-03	7-09-03 9-11-03	19 12
01399650	South Branch Rockaway Creek at Cushetunk, NJ	Lat 40°37'32", long 74°47'29", Hunterdon County, Hydrologic Unit 02030105, at bridge on Mountain Road in Cushetunk, 1.3 mi northwest of Whitehouse Station, and 1.7 mi upstream of Cushetunk Lake.	9.70	2003	12-16-02 3-05-03 6-19-03 9-22-03	18 49 17 12

Discharge measurements made at low-flow partial-record stations and miscellaneous sites during water year 2003

Station No.	Station Name	Location	Drainage area (mi^2)	Period of record	Measurements	
					Date	Discharge (ft^3/s)
		RARITAN RIVER BASIN--Continued				
†01400589	Rocky Brook at Disbrow Hill Road, at Etra, NJ	Lat 40°15'11", long 74°29'15", Mercer County, Hydrologic Unit 02030105, at bridge on Disbrow Hill Road, 0.9 mi upstream from Etra Lake and 2.2 mi east of Hightstown.	7.14	1987, 1989, 2002-03	8-25-03	2.2
†01400640	Millstone River near Grovers Mill, NJ	Lat 40°18'48", long 74°35'21", Mercer County, Hydrologic Unit 02030105, at bridge on Cranbury Neck Road, 1.0 mi east of Grovers Mill, 1.8 mi upstream from Cranbury Brook, and 1.8 mi east of Princeton Junction.	42.6	1959-65, 1971, 1986-87, 1992-93, 1995, 1998-2003	9-09-03	24
†01400700	Cranbury Brook at Cranbury Station, NJ	Lat 40°18'28", long 74°29'12", Middlesex County, Hydrologic Unit 02030105, at highway bridge on east side of railroad tracks of Conrail Share Assets Operation, 0.5 mi northeast of Cranbury Station, and 1.6 mi upstream from dam at Brainerd Lake in Cranbury.	9.56	1959-64, 1971-72, 2002-03	8-25-03	1.8
†01400725	Cranbury Brook at Plainsboro, NJ	Lat 40°19'34", long 74°36'10", Middlesex County, Hydrologic Unit 02030105, at bridge on Maple Avenue at outlet of Plainsboro Pond in Plainsboro, and 0.7 mi upstream of mouth.	22.1	1967, 1971-72, 1987-1989, 2001-03	8-25-03	4.8
*†01400930	Baldwins Creek at Pennington, NJ	Lat 40°20'18", long 74°47'49", Mercer County, Hydrologic Unit 02030105, at bridge on State Route 31, 0.8 mi north of Pennington, and 0.9 mi upstream of Baldwin Lake Dam.	1.99	1957-61, 1963-72, 1980-2003	5-26-03@1000 5-26-03@1030	49 42
†01401400	Heathcote Brook at Kingston, NJ	Lat 40°22'10", long 74°36'58", Middlesex County, Hydrologic Unit 02030105, at bridge on Mapleton Road, at abandoned railroad bridge, 0.3 mi south of Kingston, and 0.4 mi upstream from mouth.	9.00	1971-72, 1979-84, 1989, 1991-1992 1998-2003	11-07-02 11-20-02 2-04-03 5-28-03 8-05-03	8.4 13 4.5 21 2.9
*†01401600	Beden Brook near Rocky Hill, NJ	Lat 40°24'52", long 74°39'01", Somerset County, Hydrologic Unit 02030105, at bridge on U.S. Route 206, 0.7 mi upstream from Pike Run, 1.2 mi northwest of Rocky Hill, and 4.6 mi north of Princeton.	27	1959-63, 1965-67, 1971-72, 1977, 1979-2003	5-26-03	820
*01403200	Middle Brook at Bound Brook, NJ	Lat 40°33'38", long 74°32'55", Middlesex County, Hydrologic Unit 02030105, at bridge on Talmadge Avenue at Bound Brook, 0.6 mi downstream from bridge on State Route 28, and 0.5 mi upstream from mouth. Radio stage and rainfall telemetry at station.	17.2	1955, 1975, 1981-83, 1985-87, 1989-2003	11-19-02 2-24-03 4-15-03 6-05-03	40 90 34 181
01403385	Bound Brook at Route 28, at Middlesex, NJ	Lat 40°34'51", long 74°29'57", Middlesex County, Hydrologic Unit 02030105, at bridge on State Route 28, 0.3 mi upstream from Green Brook, 0.9 mi northeast of Middlesex, 2.4 mi west of the intersection of State Route 28, and Washington Avenue in Dunellen.	23.9	1998-2003	11-13-02 2-05-03 5-12-03 8-13-03	117 16 8.4 19
*†01403395	Blue Brook at Seeleys Pond Dam near Berkeley Heights, NJ	Lat 40°40'02", long 74°24'12", Union County, Hydrologic Unit 02030105, at dam on Seeleys Pond, 200 ft upstream from mouth, and 2.2 mi southeast of Berkeley Heights.	3.59	1973, 1979-80, 1989-2003	6-02-03 7-24-03 8-06-03 8-27-03 9-11-03	17 2.5 15 1.0 .79
†01405290	Matchaponix Brook at Texas, NJ	Lat 40°21'36", long 74°22'03", Middlesex County, Hydrologic Unit 02030105, at bridge on County Route 520 (Texas Road), 0.1 mi east of Texas, and 4.9 mi upstream of Duhernal Lake.	41.7	2001-03	8-25-03	26

Discharge measurements made at low-flow partial-record stations and miscellaneous sites during water year 2003

Station No.	Station Name	Location	Drainage area (mi^2)	Period of record	Measurements	
					Date	Discharge (ft^3/s)
		RARITAN RIVER BASIN--Continued				
01405340	Manalapan Brook at Federal Road, near Manalapan, NJ	Lat 40°17'46", long 74°23'52", Middlesex County, Hydrologic Unit 02030105, at bridge on Federal Road, 2.0 mi west of Englishtown, 2.6 mi north of Manalapan, and 3.0 mi downstream from Still House Brook.	20.9	1969,1971, 1979-81, 1986-95, 1997-2003	12-03-02 2-06-03 5-14-03 8-12-03	15 21 19 27
01405435	Cedar Brook at Spotswood, NJ	Lat 40°23'26", long 74°23'30", Middlesex County, Hydrologic Unit 02030105, 50 ft upstream from mouth in Spotswood, and 4.3 mi south of South River.	3.85	1943, 1949-50, 1957-87, 1987, 1989-91, 1993-2003	10-07-02 11-15-02 11-19-02 1-07-03 2-26-03 4-10-03 5-27-03 7-22-03 9-04-03	2.3 6.6 10 9.6 11 14 18 6.8 6.1
†01406040	Deep Run at Route 516 near Old Bridge, NJ	Lat 40°24'35", long 74°20'45", Middlesex County, Hydrologic Unit 02030105, at bridge on County Route 516 (Old Bridge Road), 1.6 mi southeast of Old Bridge, and 1.7 mi upstream of mouth.	15.6	2000-03	8-27-03 9-11-03	4.8 5.8
		WAACKAACK CREEK BASIN				
†01407065	Mahoras Brook at Hendrickson Corners, NJ	Lat 40°24'40", long 74°08'21", Monmouth County, Hydrologic Unit 02030104, at bridge on State Route 35, 0.2 mi west of Hendrickson Corners, and 0.8 mi upstream of mouth.	3.39	2001-03	8-27-03 9-11-03	2.3 2.4
		SHREWSBURY RIVER BASIN				
†01407200	Hop Brook at Holmdel, NJ	Lat 40°20'41", long 74°10'28", Monmouth County, Hydrologic Unit 02030104, at bridge on County Route 520, 0.5 mi east of its intersection with South Street in Holmdel and 1.7 mi downstream from Big Brook.	5.72	1969-74, 1989, 2002-03	7-09-03 9-08-03	7.5 3.8
†01407250	Willow Brook at Holmdel, NJ	Lat 40°20'17", long 74°11'13", Monmouth County, Hydrologic Unit 02030104, at bridge on South Street, 0.5mi south of its intersection with County Route 520 in Holmdel, and 1.9 mi upstream from Hop Brook.	6.88	1969-74, 1989, 2002-03	7-09-03 9-08-03	8.0 5.8
†01407400	Yellow Brook at Colts Neck, NJ	Lat 40°17'47", long 74°10'15", Monmouth County, Hydrologic Unit 02030104, at bridge on Creamery Road, 0.3 mi upstream from Mine Brook, and 0.7 mi north of Colts Neck.	9.71	1969-74, 1980-82, 1989, 2002-03	7-09-03 9-08-03	12 8.9
†01407450	Mine Brook at Colts Neck, NJ	Lat 40°17'29", long 74°10'10", Monmouth County, Hydrologic Unit 02030104, at bridge on Creamery Road, 0.4 mi northeast of Colts Neck and 0.5 mi upstream from Yellow Brook.	5.48	1969-74, 1979-80, 1982, 1989, 2002-03	7-09-03 9-08-03	5.1 5.1
		SHARK RIVER BASIN				
†01407700	Shark River at Glendola, NJ	Lat 40°12'10", long 74°04'52", Monmouth County, Hydrologic Unit 02030104, at bridge on Gully Road, 0.5 mi upstream from Robins Swamp Brook, 0.8 mi north of Glendola, and 2.8 mi west of Neptune City.	9.14	1956-57 1959-63, 1966, 2002-03	7-18-03 9-08-03	6.5 8.6
†01407755	Jumping Brook above reservior, near Neptune City, NJ	Lat 40°12'30", long 74°04'11", Monmouth County, Hydrologic Unit 02030104, at bridge on State Route 33, 0.2 mi upstream of Jumping Brook Reservior, and 2.3 mi west of Neptune City.	5.58	1989-99, 2001-03	7-18-03 9-08-03	2.5 3.3

Discharge measurements made at low-flow partial-record stations and miscellaneous sites during water year 2003

Station No.	Station Name	Location	Drainage area (mi^2)	Period of record	Measurements	
					Date	Discharge (ft^3/s)
		MANASQUAN RIVER BASIN				
†01407860	Debois Creek at Adelphia, NJ	Lat 40°13'02, long 74°15'49, Monmouth County, Hydrologic Unit 02040104, at bridge on US Route 9, 0.4 mi west of Adelphia, and 0.9 mi upstream from mouth.	7.21	1966, 1969-74, 2002-03	7-09-03 9-08-03	4.3 3.9
†01407900	Manasquan River at West Farms, NJ	Lat 40°11'34", long 74°11'43", Monmouth County, Hydrologic Unit 02040104, at highway bridge, 0.3 mi east of West Farms.	33.5	1959-63a, 1966, 1972-74, 2002-03	7-14-03 9-08-03	30 27
01408009	Mingamahone Brook near Earle, NJ	Lat 40°12'45", long 74°10'06", Monmouth County, Hydrologic Unit 02040104, at bridge on Cranberry Bog Road, 0.6 mi upstream from Branch Mingamahone Brook, and 1.7 mi southwest of Earle.	3.32	1998-2003	11-12-02 2-06-03 5-12-03 8-12-03	2.2 5.6 4.9 4.8
		METEDECONK RIVER BASIN				
†01408100	North Branch Metedeconk River at Lakewood, NJ	Lat 40°06'35", long 74°13'09", Ocean County, Hydrologic Unit 02040301, at highway bridge on U.S. Route 9, 0.3 mi north of County Line Road in Lakewood, and 3.6 mi upstream from Muddy Ford Brook.	19.4	1959-63, 1966, 1998-2003	5-12-03 8-20-03	23 14
01408123	North Branch Metedeconk River near Laurelton, NJ	Lat 40°04'54", long 74°09'07", Ocean County, Hydrologic Unit 02040301, at bridge on State Route 88 (Ocean Avenue), 0.3 mi upstream of mouth and 1.6 mi northwest of Laurelton.	38.6	2003	10-28-02 2-03-03 5-12-03 8-07-03	55 53 50 56
01408136	South Branch Metedeconk River at Bennetts Mills, NJ	Lat 40°07'37", long 74°16'40", Ocean County, Hydrologic Unit 02040301, at birdge on Bennetts Mills Road in Bennetts Mills, at outlet of Bennetts Pond, and 4.7 mi upstream of Lake Carasaljo.	18.2	2003	11-12-02 2-10-03	22 22
01408137	South Branch Metedeconk River near Whitesville, NJ	Lat 40°06'57", long 74°15'54", Ocean County, Hydrologic Unit 02040301, at bridge on Brewers Bridge Road, 1.7 mi downstream of outlet of Bennetts Pond, and 3.3 mi north of Whitesville.	19.5	2003	5-27-03 9-04-03	96 72
†01408150	South Branch Metedeconk River near Lakewood, NJ	Lat 40°05'09", long 74°11'06", Ocean County, Hydrologic Unit 02040301, at outlet of Lake Shenandoah, 0.3 mi upstream from New Hampshire Avenue, and 1.6 mi east of Lakewood.	27.5	1966, 1992-99, 2002-03	7-18-03 9-08-03	26 68
		TOMS RIVER BASIN				
01408152	South Branch Metedeconk River near Laurelton, NJ	Lat 40°04'43", long 74°09'24", Ocean County, Hydrologic Unit 02040301, at bridge on Chambers Bridge Road, 0.4 mi upstream of mouth, and 1.7 mi northwest of Laurelton.	30.8	2003	10-28-02 2-03-03 5-12-03 8-07-03	56 50 55 46
01408175	Kettle Creek at Cedarwood Park, NJ	Lat 40°02'30", long 74°08'33", Ocean County, Hydrologic Unit 02040301, at bridge on Brick Boulevard, at outlet of Lower Lake Riviera, and 0.9 mi south of Cedarwood Park.	6.29	2003	10-28-02 2-03-03 5-12-03 8-07-03	4.5 7.4 6.9 9.1
01408260	Toms River near Van Hiseville, NJ	Lat 40°06'36", long 74°22'26", Ocean County, Hydrologic Unit 02040301, at bridge on West Veterans Highway, 1.6 mi west of Van Hiseville, and 6.6 mi upstream of Maple Root Branch.	17.2	1966, 2003	11-12-02 2-10-03 5-27-03 9-04-03	15 16 77 51
01408462	Union Branch near Lakehurst, NJ	Lat 40°00'29", long 74°17'36", Ocean County, Hydrologic Unit 02040301, at bridge on Colonial Drive, 1.0 mi west of Lakehurst, and 2.3 mi upstream of Pine Lake.	27.2	2003	10-24-02 1-23-03 4-10-03 7-14-03	32 50 90 31

Discharge measurements made at low-flow partial-record stations and miscellaneous sites during water year 2003

Station No.	Station Name	Location	Drainage area (mi^2)	Period of record	Measurements	
					Date	Discharge (ft^3/s)
		TOMS RIVER BASIN--Continued				
01408485	Ridgeway Branch near Legler, NJ	Lat 40°03'18", long 74°21'18", Ocean County, Hydrologic Unit 02040301, at bridge on High Bridge Road, 0.3 mi east of Jackson State Wildlife and Game Refuge, 1.0 mi west of Legler, and 7.9 mi upstream of Pine Lake.	23.7	2003	11-12-02 2-10-03 5-27-03 9-04-03	35 23 76 35
01408492	Ridgeway Branch at Route 70 near Lakehurst, NJ	Lat 40°01'16", long 74°16'25", Ocean County, Hydrologic Unit 02040301, at bridge on State Route 70, 1.4 mi upstream of Pine Lake, and 2.0 mi east of Lakehurst.	32.1	2003	10-24-02 1-23-03 4-10-03 7-14-03	31 42 84 28
*01408582	Michaels Branch tributary at Keswick Grove, NJ	Lat 39°56'48", long 74°20'15", Ocean County, Hydrologic Unit 02040301, on upstream right wingwall of culvert on Pinewald Road (County Route 530), 0.1 mi upstream from mouth, 1.5 mi east of intersection of Pinewald Road and Whiting Lacey Road, and 0.4 mi southeast of Keswick Grove.	0.67	1998-2003	6-21-03	1.7
*†01408592	Wrangel Brook at Mule Road, near Toms River, NJ	Lat 39°57'53", long 74°14'38", Ocean County, Hydrologic Unit 02040301, at bridge on Mule Road in Berkeley Township, 2.7 mi upstream from mouth, and 2.7 mi west of Toms River.	14.3	1998-2003	9-11-03 9-26-03	27 26
01408600	Wrangel Brook near Toms River, NJ	Lat 39°57'39", long 74°13'41", Ocean County, Hydrologic Unit 02040301, at bridge on Southampton Road in Berkeley Township, 0.5 mi upstream of mouth, and 1.7 mi west of Toms River.	19.5	1993-2000, 2003	10-24-02 1-23-03 4-10-03 7-14-03	28 40 75 36
†01408620	Davenport Branch near Dover Forge, NJ	Lat 39°56'29", long 74°17'48", Ocean County, Hydrologic Unit 02040301, at bridge on County Route 530 (Pinewald Road), 2.2 mi north of Dover Forge, 2.3 mi east of Keswick Grove, and 3.0 mi northeast of Cedar Crest.	7.41	1994-2003	9-11-03 9-26-03	5.0 4.5
		CEDAR CREEK BASIN				
01408830	Cedar Creek at Cedar Crest, NJ	Lat 39°53'50", long 74°18'59", Ocean County, Hydrologic Unit 02040301, at bridge on Whiting-Lacey Road in Cedar Crest, 0.2 mi downstream from outlet of Bamber Lake, and 3.7 mi southeast of Keswick Grove.	20.1	1998-2003	11-25-02 5-14-03 8-25-03	49 36 29
		FORKED RIVER BASIN				
01409048	North Branch Forked River at power lines at Barnegat Pines, NJ	Lat 39°51'30", long 74°13'31", Ocean County, Hydrologic Unit 02040301, at power lines 0.1 mi upstream of Garden State Parkway, 0.5 mi upstream of Deer Head Lake, and 0.7 mi north of Barnegat Pines.	13.2	2003	11-18-02 2-26-03 5-19-03 8-05-03	31 51 19 13
		WARETOWN CREEK BASIN				
01409108	Waretown Creek at U.S. Route 9, at Waretown, NJ	Lat 39°47'35", long 74°11'46", Ocean County, Hydrologic Unit 02040301, at bridge on U.S. Route 9 in Waretown, 0.3 mi upstream of mouth, and 1.8 mi north of Pebble Beach.	2.98	2003	11-18-02 2-26-03 5-19-03 8-05-03	8.3 7.2 4.1 2.6
		MILL CREEK BASIN				
†01409150	Mill Creek near Manahawkin, NJ	Lat 39°42'54", long 74°16'55", Ocean County, Hydrologic Unit 02040301, at bridge on State Route 72, 0.3 mi northwest of intersection of State Route 72 and Garden State Parkway, 1.8 mi northwest of Manahawkin, and 6.5 mi above mouth.	10.4	1961-67, 2002-03	11-07-02 2-06-03 5-19-03 8-05-03	16 17 19 16

Discharge measurements made at low-flow partial-record stations and miscellaneous sites during water year 2003

Station No.	Station Name	Location	Drainage area (mi^2)	Period of record	Measurements	
					Date	Discharge (ft^3/s)
		TUCKERTON CREEK BASIN				
01409305	Mill Branch at Nugentown Road at Tuckerton, NJ	Lat 39°36'37", long 74°20'59", Ocean County, Hydrologic Unit 02040301, at bridge on Nugentown Road, 0.5 mi upstream of Pohatcong Lake, and 0.7 mi northwest of Tuckerton.	9.86	2003	11-07-02 2-06-03 5-13-03 7-31-03	7.5 8.2 12 12
		MULLICA RIVER BASIN				
†01409375	Mullica River near Atco, NJ	Lat 39°47'08", long 74°51'37", Camden County, Hydrologic Unit 02040301, at bridge on Jackson-Medford Road, 0.7 mi north of intersection of County Route 534 with Jackson-Medford Road, and 1.6 mi east of Atco.	3.22	1974-85, 1991-2003	12-09-02 3-19-03 7-02-03	1.0 3.2 2.0
01409385	Mullica River at Burnt House Road, near Atsion, NJ	Lat 39°44'35", long 74°45'26", Camden County, Hydrologic Unit 02040301, at bridge on Burnt House Road, on Burlington-Camden County line, 0.7 mi upstream of Atsion Lake, and 1.6 mi west of Atsion.	25.3	2001, 2003	11-19-02 3-20-03 5-29-03 9-02-03	95 57 80 19
†01409387	Mullica River at outlet of Atsion Lake, at Atsion, NJ	Lat 39°44'25", long 74°43'36", Burlington County, Hydrologic Unit 2040301, at bridge on U.S. Route 206 in Atsion, at outlet of Atsion Lake, and 0.2 mi upstream from Wesickaman Creek.	26.7	1980-81, 1985-93 1995-2003	11-26-02 3-11-03 5-08-03 8-11-03	71 127 37 57
0140940050	Mullica River at Constable Bridge near Batsto, NJ	Lat 39°39'33", long 74°39'31", Burlington County, Hydrologic Unit 02040301, at Constable Bridge on unnamed sand road, 1.0 mi upstream of Sleeper Branch, 1.2 mi northwest of Batsto, and 1.6 mi northeast of Nescochague Lake.	47.0	1996-1998, 2003	11-19-02 3-19-03 6-02-03 8-26-03	233 158 199 36
†01409401	Hays Mill Creek at Atco, NJ	Lat 39°45'32", long 74°53'01", Camden County, Hydrologic Unit 02040301, at bridge on U.S. Route 30, at outlet of Atco Lake in Atco, and 3.3 mi southeast of Berlin.	3.80	1979, 1991-2003	12-09-02 3-19-03 7-02-03	3.3 4.1 4.1
†0140940200	Hays Mill Creek near Chesilhurst, NJ	Lat 39°45'02", long 74°50'27", Camden County, Hydrologic Unit 02040301, at bridge on Tremont Avenue in Wharton State Forest, 0.6 mi upstream of mouth, and 2.0 mi northeast of Chesilhurst.	7.13	1974-80, 1991-2003	12-09-02 3-19-03 7-02-03	7.2 13 10
†0140940310	Wildcat Branch near Chesilhurst, NJ	Lat 39°44'21", long 74°49'58", Camden County, Hydrologic Unit 02040301, at bridge on Burnt Mill Road, 0.1 mi downstream from outlet of Beaverdam Lake, 1.4 mi northeast of Waterford Works, and 1.9 mi east of Chesilhurst.	2.27	1979, 1991-2003	12-09-02 3-19-03 7-02-03	2.5 3.6 .34
0140940360	Sleeper Branch above diversion near Atsion, NJ	Lat 39°43'46", long 74°46'14", Camden County, Hydrologic Unit 02040301, 500 ft upstream of Burnt House Road, just upstream of Sleeper Branch diversion channel (Saltars Ditch), and 2.4 mi west of Atison (discharge is sum of 0140940365 & 0140940370).	16.1	1991-2003	12-09-02 3-19-03 7-02-03	21 38 24
†0140940365	Sleeper Branch Diversion (Saltars Ditch) near Atsion, NJ	Lat 39°43'48", long 74°46'08", Camden County, Hydrologic Unit 02040301, at bridge on Burnt House Road, 600 ft downstream from Sleeper Branch, and 2.3 mi west of Atsion.	---	1979, 1991-2003	12-09-02 3-19-03 7-02-03	1.8 4.9 1.9
†0140940370	Sleeper Branch near Atsion, NJ	Lat 39°43'42", long 74°46'11", Camden County, Hydrologic Unit 02040301, at bridge on Burnt House Road, 500 ft downstream from Sleeper Branch diversion (Saltars Ditch) and 2.3 mi west of Atsion.	16.1	1991-2003	12-09-02 3-19-03 7-02-03	19 33 22

Discharge measurements made at low-flow partial-record stations and miscellaneous sites during water year 2003

Station No.	Station Name	Location	Drainage area (mi^2)	Period of record	Measurements	
					Date	Discharge (ft^3/s)
		MULLICA RIVER BASIN--Continued				
†0140940480	Clark Branch near Atsion, NJ	Lat 39°42'53", long 74°46'24", Camden County, Hydrologic Unit 02040301, at abandoned railroad bridge, 0.2 mi downstream from Price Branch and 2.8 mi west of Atsion.	6.42	1979, 1991-2003	12-09-02 3-19-03 7-02-03	3.6 13 5.4
†01409408	Pump Branch near Waterford Works, NJ	Lat 39°41'59", long 74°50'39", Camden County, Hydrologic Unit 02040301, at bridge on Old Whitehorse Pike, 0.5 mi downstream from lake at Camp Ha-Lu-Wa-Sa, and 1.6 mi south of Waterford Works.	9.78	1991-2003	12-09-02 3-19-03 7-02-03	8.6 12 16
†0140940950	Blue Anchor Brook at Elm, NJ	Lat 39°41'17", long 74°50'05", Camden County, Hydrologic Unit 02040301, at bridge on U.S. Route 30 (Whitehorse Pike) at Elm, at outlet of unnamed lake, and 1.4 mi upstream from confluence with Pump Branch.	4.86	1991-2003	11-06-02 12-09-02 2-24-03 3-19-03 5-08-03 7-02-03 8-11-03	1.8 2.0 12 6.4 5.9 5.2 4.3
†0140940970	Albertson Brook near Elm, NJ	Lat 39°41'34", long 74°48'23", Camden County, Hydrologic Unit 02040301, at bridge on Fleming Pike, 0.4 mi downstream from confluence of Blue Anchor Brook and Pump Branch, and 1.6 mi northeast of Elm.	17.1	1991-2003	12-09-02 3-19-03 7-02-03	16 31 22
†01409411	Nescochague Creek at Pleasant Mills, NJ	Lat 39°38'29", long 74°39'41", Atlantic County, Hydrologic Unit 02040301, at bridge on sand road in Pleasant Mills, 0.2 mi upstream from Mullica River and 0.6 mi west of Batsto	43.7	1975-86, 1996-98, 2003	11-19-02 3-20-03 6-02-03 8-26-03	171 98 105 41
01409416	Hammonton Creek at Wescoatville, NJ	Lat 39°38'02", long 74°43'04", Atlantic County, Hydrologic Unit 02040301, at bridge on Chestnut Road, 0.4mi south of Wescoatville, and 1.6 mi upstream from Norton Branch.	9.57	1974, 1978-81, 1983, 1985-2003	11-25-02 2-24-03 6-05-03 8-21-03	18 121 41 13
01409470	Batsto River at Quaker Bridge, NJ	Lat 39°42'35", long 74°39'59", Burlington County, Hydrologic Unit 02040301, at Quaker Bridge on sand road, 1.1 mi southeast of Lower Forge, 2.3 mi upstream from Penn Swamp Brook, and 4.7 mi north of Batsto.	55.7	1996-98, 2003	11-19-02 3-19-03 5-29-03 9-02-03	230 142 176 58
01409570	Landing Creek at Hamburg Avenue, at Egg Harbor City, NJ	Lat 39°32'13", long 74°39'04", Atlantic County, Hydrologic Unit 02040301, at bridge on Hamburg Avenue, 0.5 mi northwest of Egg Harbor City, and 2.1 mi upstream of Union Creek.	3.57	2003	11-21-02 11-21-02 3-10-03 5-15-03 8-12-03	3.6 5.3 13 2.5 1.8
01409605	Landing Creek near Weekstown, NJ	Lat 39°34'48", long 74°34'51", Burlington County, Hydrologic Unit 02040301, at bridge on Clarks Landing Road, 1.3 mi upstream of Rubins Run, and 1.6 mi southeast of Weekstown.	---	2003	11-21-02 3-10-03 5-15-03	52 87 34
01409815	West Branch Wading River at Maxwell, NJ	Lat 39°40'30", long 74°32'27", Burlington County, Hydrologic Unit 02040301, at bridge on County Hightway 563 in Maxwell, 1.6 mi southeast of Washington, 1.8 mi southwest of Jenkins, and 2.2 mi upstream from mouth.	85.9	1985-90, 1998-2003	11-25-02 2-24-03 6-05-03 8-20-03	191 577 272 77
01410230	Mattix Run near Smithvillle, NJ	Lat 39°29'44", long 74°28'43", Atlantic County, Hydrologic Unit 02040301, at bridge on East Moss Hill Road, 1.2 mi west of Smithville, and 2.4 mi upstream of mouth.	---	2003	11-21-02 3-10-03 5-15-03 8-12-03	4.9 8.3 2.9 2.2

Discharge measurements made at low-flow partial-record stations and miscellaneous sites during water year 2003

Station No.	Station Name	Location	Drainage area (mi^2)	Period of record	Measurements	
					Date	Discharge (ft^3/s)
		ABSECON CREEK BASIN				
01410455	South Branch Absecon Creek near Pomona, NJ	Lat 39°26'23", long 74°33'58", Atlantic County, Hydrologic Unit 02040302 at bridge on Atlantic Avenue, 0.3 mi upstream of Atlantic City Reservoir, and 2.7 mi south of Pomona.	5.73	2003	11-26-02 3-03-03 6-10-03 9-15-03	3.3 9.8 11 5.3
		GREAT EGG HARBOR RIVER BASIN				
†01410784	Great Egg Harbor River near Sicklerville, NJ	Lat 39°44'02", long 74°57'05", Camden County, Hydrologic Unit 02040302, at bridge on Williamstown-New Freedom Road, 1.5 mi northeast of Sicklerville and 3.2 mi upstream from Fourmile Branch	15.1	1971-81, 1985-87, 1989-99, 2001-2003	11-25-02 3-18-03 6-03-03 9-11-03	16 22 23 13
†01410803	Fourmile Branch at Winslow Crossing, NJ	Lat 39°42'07", long 74°58'10", Camden County, Hydrologic Unit 02040302, at bridge on Andrews Road in Winslow Crossing, 1.4 mi northeast of Williamstown, and 2.1 mi upstream of Great Egg Harbor.	6.22	1972-80, 1990-96, 2001-03	12-10-02 7-21-03	3.9 3.3
01410810	Fourmile Branch at New Brooklyn, NJ	Lat 39°41'47", long 74°56'24", Camden County, Hydrologic Unit 02040302, at bridge on Malaga Road in New Brooklyn, 0.4 mi upstream of mouth, and 2.7 mi northeeast of Williamstown.	7.74	1971-72, 1973-79a, 1982, 1985, 1989-97, 2001-03	12-10-02 7-21-03	6.0 5.7
†01410865	Squankum Branch at Malaga Road, near Williamstown, NJ	Lat 39°40'04", long 74°57'38", Gloucester County, Hydrologic Unit 02040302, at bridge on Malaga Road, 1.0 mi upstream of Hedges Branch, and 2.2 mi east of Williamstown.	3.02	1974, 1990-96, 2001-03	12-10-02 7-21-03	.50 1.7
†01411035	Hospitality Branch at Blue Bell Road near Cecil, NJ	Lat 39°38'36", long 74°58'39", Gloucester County, Hydrologic Unit 02040302, at bridge on Blue Bell Raod, 1.2 mi upstream of Timber Lakes, and 2.0 mi west of Cecil.	4.51	1990-96, 1998-2003	11-25-02 12-10-02 3-05-03 5-13-03 7-21-03 8-12-03	1.9 1.9 11 5.8 4.2 6.0
†01411047	Whitehall Branch below Victory Lakes, near Cecil, NJ	Lat 39°37'59", long 74°56'44", Gloucester County, Hydrologic Unit 02040302, at bridge on unnamed dirt road off of Yardley Road in Friendly Village trailer park, 800 ft below Victory Lakes and 1.0 mi south of Cecil.	4.60	1990-96, 2001-03	12-10-02 7-21-03	1.9 3.5
01411071	Hospitality Branch at railroad bridge near Folsom, NJ	Lat 39°35'18", long 74°51'30", Atlantic County, Hydrologic Unit 02040302, at railroad bridge 100 ft downstream of State Route 54 (Twelfth Street), 0.3 mi upstream of Three Pond Branch, and 1.3 mi southwest of Folsom.	62.2	2003	11-25-02 3-18-03 6-03-03 9-11-03	58 91 111 38
01411110	Great Egg Harbor River at Weymouth, NJ	Lat 39°30'50", long 74°46'46", Atlantic County, Hydrologic Unit 02040302, at bridge on U.S. Route 322 in Weymouth, 0.5 mi upstream of Deep Run, and 8.5 mi east of Landisville.	154	1978-81, 1985-2003	11-06-02	158
†01411140	Deep Run at Weymouth, NJ	Lat 39°30'27", long 74°46'55", Atlantic County, Hydrologic Unit 02040302, at bridge on County Route 559, 0.3 mi upstream of mouth and 0.5 mi southwest of Weymouth.	20.0	1976-86, 2003	11-25-02 3-18-03 6-03-03 9-11-03	37 48 66 16
01411196	Babcock Creek near Mays Landing, NJ	Lat 39°28'08", long 74°41'33", Atlantic County, Hydrologic Unit 02040302, at bridge on U.S. Route 322, 2.2 mi northeast of Mays Landing, and 2.8 mi upstream from Watering Race Branch.	16.3	1998-2003	11-06-02 5-14-03 8-19-03	33 15 9.7

Discharge measurements made at low-flow partial-record stations and miscellaneous sites during water year 2003

Station No.	Station Name	Location	Drainage area (mi^2)	Period of record	Measurements	
					Date	Discharge (ft^3/s)
		TUCKAHOE RIVER BASIN				
†01411299	Tarkiln Brook near Head of River, NJ	Lat 39°18'19", long 74°49'46", Cape May County, Hydrologic Unit 02040302, at bridge on County Route 548, 0.3 mi upstream of mouth, and 0.7 mi west of Head of River.	7.4	1990-92, 2003	12-17-02	14
†01411302	Mill Creek near Steelmantown, NJ	Lat 39°17'03", long 74°47'32", Cape May County, Hydrologic Unit 02040302, at bridge on County Route 557, 1.6 mi south of Marshallville, 0.5 mi upstream of Back Run tributary, and 1.3 mi north of Steelmantown.	3.82	1990-92, 2003	12-17-02	7.5
		PATCONG RIVER BASIN				
†01411305	Mill Branch near Northfield, NJ	Lat 39°23'45", long 74°35'35", Atlantic County, Hydrologic Unit 02040302, at bridge on County Route 684, 0.4 mi downstream of Cedar Branch, 1.1 mi south of Cardiff, and 4.5 mi northwest of Northfield.	7.47	1986-93, 2003	11-26-02 3-03-03 6-10-03 9-15-03	6.4 17 16 6.5
		MILL CREEK BASIN				
†01411351	Mill Creek at outlet Magnolia Lake, at Ocean View, NJ	Lat 39°10'24", long 74°44'11", Cape May County, Hydrologic Unit 02040302, at the outlet of Magnolia Lake on U.S. Route 9, 0.3 mi south of Ocean View, and 1.4 mi east of South Seaville.	2.28	1991-92, 2003	12-18-02	2.0
†01411388	Mill Creek at Cold Spring, NJ	Lat 38°58'24", long 74°54'40", Cape May County, Hydrologic Unit 02040302, at culvert under U.S. Route 9, 0.4 mi upstream of Bradley Run, and 0.5 mi north of Cold Spring.	1.34	1991-92, 2003	12-18-02	1.5
		FISHING CREEK BASIN				
†01411400	Fishing Creek at Rio Grande, NJ	Lat 39°01'39", long 74°53'47" Cape May County, Hydrologic Unit 02040206, at bridge on State Route 47, at Wildwood pumping station, and 1.4 mi northwest of Rio Grande.	2.29	1965-72, 1990-92, 1998-2003	11-05-02 12-18-02 3-12-03 5-22-03 9-03-03	.76 3.2 3.4 2.7 1.3
		DIAS CREEK BASIN				
†01411408	Dias Creek near Cape May Court House, NJ	Lat 39°04'24", long 74°52'09", Cape May County, Hydrologic Unit 02040206, at culvert pipe on Stage Coach Road, 2.4 mi southwest of Cape May Court House, 2.1 mi northwest of Burleigh, and 3.0 mi above mouth.	1.27	1965-73, 1991-92, 2003	12-18-02	2.3
		BIDWELL CREEK BASIN				
†01411410	Bidwell Creek tributary near Cape May Court House, NJ	Lat 39°06'34", long 74°50'14", Cape May County, Hydrologic Unit 02040206, at culvert pipe on Goshen Road, 2.0 mi northwest of Cape May Court House, 2.3 mi southeast of Goshen, and 3.6 mi upstream from mouth.	0.41	1967-73, 1990-92, 2003	12-18-02	.54
		GOSHEN CREEK BASIN				
†01411418	Goshen Creek at Goshen, NJ	Lat 39°07'39", long 74°50'44", Cape May County, Hydrologic Unit 02040206, at culvert pipe on Goshen Road, 1.0 mi southeast of Goshen, 3.3 mi northwest of Cape May Court House, and 3.3 mi above mouth.	0.33	1967-72, 1990-92, 2003	12-18-02	.49

Discharge measurements made at low-flow partial-record stations and miscellaneous sites during water year 2003

Station No.	Station Name	Location	Drainage area (mi^2)	Period of record	Measurements	
					Date	Discharge (ft^3/s)
		DENNIS CREEK BASIN				
†01411428	Dennis Creek tributary 2 at Dennisville, NJ	Lat 39°11'33", long 74°49'30", Cape May County, Hydrologic Unit 02040206, at bridge at outlet of Johnson Pond on State Highway 47, 0.1 mi west of Dennisville, and 0.9 upstream of mouth.	4.00	1990-92, 2003	12-17-02	7.1
†01411434	Sluice Creek at outlet of Clint Mill Pond at South Dennis, NJ	Lat 39°09'21", long 74°49'05", Cape May County, Hydrologic Unit 02040206, at bridge at outlet of Clint Mill Pond, 0.3 mi upstream of Dennisville Road, 1.5 mi south of South Dennis, and 2.7 mi upstream from mouth.	8.47	1991-92, 2003	12-18-02	9.6
†01411438	Dennis Creek tributary 1 near North Dennis, NJ	Lat 39°11'41", long 74°50'29", Cape May County, Hydrologic Unit 02040206, at bridge at outlet of Ludlums Pond on State Highway 47, 0.8 mi southeast of North Dennis, and 1.2 mi from mouth.	2.74	1990-92, 2003	12-17-02	6.6
01411440	Old Robins Branch near North Dennis, NJ	Lat 39°11'50", long 74°52'10", Cape May County, Hydrologic Unit 02040206, at culvert on Beaver Causeway in Belleplain State Forest, 1.0 mi west of North Dennis, 1.9 mi upstream from mouth.	2.96	1998, 2003	10-22-02 1-22-03 4-30-03 7-29-03	.50 1.4 4.2 2.1
01411441	Savages Run in Belleplain State Forest, NJ	Lat 39°14'31", long 74°52'34", Cape May County, Hydrologic Unit 02040206, at bridge on Sunset Road in Belleplain State Forest, 1.0 mi upstream of East Creek Pond, and 3.6 mi west of Woodbine.	5.55	2003	10-22-02 1-22-03 4-30-03 7-29-03	1.3 4.4 10 9.6
		EAST CREEK BASIN				
†01411442	East Creek near Eldora, NJ	Lat 39°13'21", long 74°53'11", Cape May County, Hydrologic Unit 02040206, at bridge at outlet of East Creek Pond on East Creek Mill Road, 1.2 mi northeast of Eldora, and 3.3 mi upstream of Roaring Ditch.	8.10	1990-92, 2003	12-17-02	13
		WEST CREEK BASIN				
01411444	West Creek near Leesburg, NJ	Lat 39°15'36", long 74°54'41", Cumberland County, Hydrologic Unit 02040206, at bridge on County Route 550, 1.3 mi upstream from Hands Mill Pond, and 3.7 mi east of Leesburg.	6.64	1999-2003	11-05-02 2-25-03 5-28-03 9-03-03	.36 28 6.7 34
†01411445	West Creek near Eldora, NJ	Lat 39°13'37", long 74°54'46", Cape May County, Hydrologic Unit 02040206, at bridge at outlet of Pickle Factory Pond on Moslander-Paper Mill Road (County Route 550 Spur), 0.9 mi North of Eldora and 1.3 mi downstream of Hand Mills Pond.	11.9	1990-92, 2003	12-17-02	33
		MAURICE RIVER BASIN				
01411453	Still Run near Malaga, NJ	Lat 39°35'07", long 75°04'54", Gloucester County, Hydrologic Unit 02040206, at bridge on U.S. Route 40, 1.5 mi northwest of Malaga, and 2.3 mi upstream of Willow Grove Lake.	26.9	1957, 2003	12-03-02 3-13-03 6-12-03 9-09-03	37 128 101 85
01411466	Indian Brook near Malaga, NJ	Lat 39°35'27", long 75°03'35", Gloucester County, Hydrologic Unit 02040206, at bridge on State Route 47 (Delsea Drive), 0.4 mi upstream from Malaga Lake, and 1.4 mi north of Malaga.	6.50	1957, 1998-2003	11-25-02 5-13-03	7.3 13
01411495	Blackwater Branch at Norma, NJ	Lat 39°30'21", long 75°04'20", Cumberland County, Hydrologic Unit 02040206, 25 ft upstream from bridge on Maurice River Parkway, 0.7 mi northeast of Norma, and 0.4 mi from mouth.	12.5	1992-94a, 2003	12-03-02 3-13-03 6-12-03 9-09-03	14 27 28 15

Discharge measurements made at low-flow partial-record stations and miscellaneous sites during water year 2003

Station No.	Station Name	Location	Drainage area (mi^2)	Period of record	Measurements	
					Date	Discharge (ft^3/s)
		MAURICE RIVER BASIN--Continued				
†01411650	Muddy Run near Elmer, NJ	Lat 39°36'48", long 75°11'20", Salem County, Hydrologic Unit 02040206, at bridge on Friendship Church Road, 1.6 mi north of Elmer, and 1.8 mi upstream of Elmer Lake.	4.94	1994-99, 2001-2003	8-22-03 9-09-03	2.9 3.9
†01411680	Palatine Branch at Palatine, NJ	Lat 39°33'25", long 75°10'27", Salem County, Hydrologic Unit 02040206, at bridge on Elmer-Palatine Road, at Palatine, 0.6 mi upstream of Palatine Lake, and 2.5 mi south of Elmer.	5.39	1994-99, 2001-2003	12-17-02 3-04-03 6-05-03 8-22-03 9-09-03 9-25-03	6.5 14 11 6.0 4.5 7.4
†01411800	Maurice River near Millville, NJ	Lat 39°26'53", long 75°04'20", Cumberland County, Hydrologic Unit 02040206, at bridge on Sherman Avenue, 1.0 mi upstream of Union Lake, 4.0 mi northwest of Millville.	191	1966-72, 1992-94a, 2003	12-03-02	176
01411907	White Marsh Run at Millville, NJ	Lat 39°23'23", long 75°02'39", Cumberland County, Hydrologic Unit 02040206, at bridge on South Race Street in Millville, 0.2 mi upstream from mouth,and 2.1 mi northeast of Millville Municipal Airport.	8.77	2003	12-02-02 2-25-03 5-20-03 8-21-03	.25 1.8 .61 .60
01411955	Gravelly Run at Laurel Lake, NJ	Lat 39°20'14", long 75°03'03", Cumberland County, Hydrologic Unit 02040206, at bridge on Battle Lane, 0.3 mi upstream from mouth, and 1.1 mi west of community of Laurel Lake.	3.19	1998-2003	11-05-02 2-25-03 5-22-03 6-04-03 6-17-03 7-16-03 8-18-03 8-18-03 8-21-03 9-19-03	.71 4.4 1.4 2.0 1.8 2.9 1.4 1.4 .69 2.8
01412005	Menantico Creek at Route 49 at Millville, NJ	Lat 39°23'11", long 74°59'21", Cumberland County, Hydrologic Unit 02040206, at bridge on State Route 49 (East Main Street) in Millville, 0.2 mi upstream of Berryman Branch, and 2.8 mi northwest of Cumberland.	26.3	2003	12-02-02 2-25-03 6-10-03 9-15-03	31 157 73 36
01412080	Manumuskin River at Cumberland, NJ	Lat 39°22'24", long 74°56'44", Cumberland County, Hydrologic Unit 02040206, at bridge on State Route 49, at outlet of Cumberland Pond, 0.3 mi northwest of Cumberland, and 1.6 mi upstream of Hooks Branch.	27.4	1967, 1997, 2003	12-02-02 2-25-03 5-02-03 8-21-03	17 115 22 20
		NANTUXENT CREEK BASIN				
01412200	Pages Run at Newport, NJ	Lat 39°18'19", long 75°09'52", Cumberland County, Hydrologic Unit 02040206, at bridge on County Route 553, 0.7 mi downstream of Shaws Mill Pond, and 0.9 mi northeast of Newport.	3.86	2003	12-02-02 2-25-03 5-20-03 8-21-03	2.1 5.6 3.7 4.1
		COHANSEY RIVER BASIN				
01412710	Foster Run at Seeley, NJ	Lat 39°29'14", long 75°15'13", Cumberland County, Hydrologic Unit 02040206, at bridge on Finley Road, 0.4 mi north of Seeley, and 0.5 mi upstream from mouth.	5.75	1951, 2003	12-17-02 3-04-03 6-05-03 9-25-03	7.5 12 9.8 8.6
		DELAWARE RIVER BASIN				
†01438090	Clove Brook at N.J. Route 23 at Duttonville, NJ	Lat 41°21'06", long 74°41'10", Sussex County, Hydrologic Unit 02040104, at bridge on State Route 23, 500 ft north of Duttonville, and 1.0 mi upstream of mouth.	10.4	2001-03	8-25-03	3.1

Discharge measurements made at low-flow partial-record stations and miscellaneous sites during water year 2003

Station No.	Station Name	Location	Drainage area (mi^2)	Period of record	Measurements	
					Date	Discharge (ft^3/s)
		DELAWARE RIVER BASIN--Continued				
†01438400	Shimers Brook near Montague, NJ	Lat 41°18'47", long 74°46'51", Sussex County, Hydrologic Unit 02040104, at culvert on County Route 521 (River Road), 0.8 mi upstream of mouth, and 1.0 mi northeast of Montague.	7.06	1943, 1958-64, 1966 2001-03	10-09-02	1.5
					10-30-02	6.6
					12-18-02	19
					5-07-03	9.3
					5-21-03	4.1
					6-04-03	29
					6-18-03	14
					7-09-03	6.2
					7-23-03	8.5
					8-06-03	8.2
					8-20-03	4.3
					9-03-03	6.0
†01439830	Big Flat Brook at Tuttles Corner, NJ	Lat 41°12'00", long 74°48'55", Sussex County, Hydrologic Unit 02040104, at bridge on County Route 560, 0.7 mi west of Tuttles Corner, and 2.4 mi upstream of mouth.	28.3	1964, 1970-73, 1978-81, 2001-03	10-09-02	4.8
					10-30-02	23
					12-18-02	61
					5-07-03	23
					5-21-03	26
					6-04-03	172
					6-18-03	87
					7-09-03	18
					7-23-03	37
					8-06-03	50
					8-20-03	13
					9-03-03	34
					9-24-03	163
†01439920	Little Flat Brook at Peters Valley, NJ	Lat 41°11'54", long 74°50'09", Sussex County, Hydrologic Unit 02040104, 0.8 mi east of Peters Valley, 1.1 mi upstream of mouth, and 5.5 mi downstream of bridge on U.S. Route 206.	14.7	1964, 2001-03	10-09-02	1.5
					10-30-02	7.8
					12-18-02	20
					5-07-03	14
					5-21-03	16
					6-04-03	54
					6-18-03	29
					7-09-03	16
					7-23-03	21
					8-06-03	20
					8-20-03	7.7
					8-25-03	5.4
					9-03-03	15
					9-24-03	32
†01440100	Vancampens Brook near Millbrook, NJ	Lat 41°03'28", long 75°00'12", Warren County, Hydrologic Unit 02040104, at bridge on Francis Road, 2.3 mi upstream of mouth, and 2.5 mi southwest of Millbrook.	7.40	1958-68, 2002-03	10-09-02	.99
					10-30-02	11
					12-18-02	20
					5-07-03	6.1
					5-21-03	5.4
					6-04-03	48
					6-18-03	29
					7-09-03	5.0
					7-23-03	6.9
					8-06-03	39
					8-20-03	16
					9-03-03	13
					9-24-03	37
01442760	Dunnfield Creek at Dunnfield, NJ	Lat 40°58'14", long 75°07'34", Warren County, Hydrologic Unit 02040104, at foot bridge on Appalachian Trail/Dunnfield Rest Area in Dunnfield, 1,300 ft upstream from mouth, and 3.5 mi northwest of Columbia.	3.56	1998-2003	11-05-02	5.5
					2-13-03	3.6
					5-05-03	4.4
					8-20-03	5.4
†01443409	Dry Brook at Main Street, at Branchville, NJ	Lat 41°08'37", long 74°44'42", Sussex County, Hydrologic Unit 02040105, at bridge on Main Street, 0.1 mi downstream of Culvers Creek, 0.2 mi southeast of Branchville, and 1.4 mi upstream of mouth.	17.0	2001-03	8-25-03	3.1
01445160	Bear Brook at Dark Moon Road, near Johnsonburg, NJ	Lat 40°58'30", long 74°50'58", Warren County, Hydrologic Unit 02040105, at bridge on Dark Moon Road 1.3 mi northeast of Johnsonburg, and 0.4 mi northwest of Francis Lake.	5.1	2001-2003	11-12-02	1.7
					2-04-03	3.3
					5-13-03	4.7
					8-11-03	32

Discharge measurements made at low-flow partial-record stations and miscellaneous sites during water year 2003

Station No.	Station Name	Location	Drainage area (mi^2)	Period of record	Measurements	
					Date	Discharge (ft^3/s)
		DELAWARE RIVER BASIN--Continued				
01445430	Pequest River at Townsbury, NJ	Lat 40°51'06", long 74°56'00", Warren County, Hydrologic Unit 02040105, at bridge on Pequest Road in Townsbury, 2.8 mi northeast of Pequest, and 3.7 mi upstream of Furnace Brook.	92.5	1977-80a, 1983, 1989, 1990, 1993, 2003	11-20-02 1-27-03 4-21-03 7-24-03	258 141 164 157
01445498	Furnace Brook at mouth, at Pequest, NJ	Lat 40°49'46", long 74°58'40", Warren County, Hydrologic Unit 02040105, 100 ft upstream from mouth, in Pequest, 0.1 mi south of abandoned railroad bridge over Pequest River, and 4.8 mi north of Washington.	7.74	2003	2-24-03 2-24-03 3-21-03 6-22-03	35 32 58 67
01446400	Pequest River at Belvidere, NJ	Lat 40°49'45", long 75°04'43", Warren County, Hydrologic Unit 02040105, at bridge on County Route 519 in Belvidere, 0.3 mi upstream of mouth, and 2.8 mi west of Bridgeville.	157	1974, 1977-2003	11-26-02 12-10-02 3-04-03 5-13-03 6-03-03 9-04-03	260 91 317 200 395 246
†01455135	Pohatcong Creek at Tunnel Hill Road, near Washington, NJ	Lat 40°47'06", long 74°57'41", Warren County, Hydrologic Unit 02040105, at bridge on Tunnel Hill Road, 0.8 mi downstream of Willever Lake, 1.1 mi upstream of bridge on State Route 31, and 1.8 mi northeast of Washington.	9.2	2000-03	8-26-03 9-11-03	9.5 5.2
†01455200	Pohatcong Creek at New Village, NJ	Lat 40°42'57", long 75°04'19", Warren County, Hydrologic Unit 02040105, at bridge on Edison Road, 0.5 mi southeast of New Villiage, and 8.1 mi downstream of Brass Castle Creek.	33.3	1960-69a, 1982-97, 2000-03	8-26-03 9-11-03	26 20
†01455370	Weldon Brook at Hurdtown, NJ	Lat 40°58'10", long 74°35'54", Morris County, Hydrologic Unit 02040105, at bridge on Union Turnpike at Hurdtown, and 400 ft downstream from Lake Shawnee Dam.	8.09	1973-80, 2002-03	10-01-02 10-31-02 12-09-02 12-31-02 1-30-03 2-27-03 3-25-03	.20 12 8.4 19 6.4 18 53
01455371	Lake Hopatcong tributary 18 at Hurdtown, NJ	Lat 40°58'32", long 74°36'11", Morris County, Hydrologic Unit 02040105, 0.5 mi from outflow of Lake Shawnee, 0.6 mi northwest of Hurdtown, 4.1 miles northeast of Hopatcong.	---	2002-03	10-01-02 10-30-02 11-26-02 12-30-02 1-29-03 2-27-03 3-27-03	.02 .15 1.0 .77 .26 .71 1.5
01455372	Lake Winona outlet at Woodport, NJ	Lat 40°59'21", long 74°36'25", Morris County, Hydrologic Code 02040105, 150 ft upstream from Lake Hopatcong, 150 ft downstream from Lake Winona outlet, and 0.5 mi north of Woodport, NJ.	---	2002-03	10-01-02 10-30-02 12-09-02 12-31-02 1-29-03 2-27-03 3-25-03	.11 1.6 1.4 3.4 1.2 3.5 7.7
01455373	Lake Hopatcong tributary 16 at Woodport, NJ	Lat 40°59'17", long 74°36'41", Morris County, Hydrologic Code 02040105, 300 ft upstream of Lake Hopatcong, 0.3 mi southwest of Lake Winona outlet, and 0.5 mi north of Woodport.	---	2002-03	10-01-02 10-30-02 11-26-02 12-31-02 1-29-03 2-27-03 3-25-03	.02 .77 1.8 1.5 .33 3.5 4.2
01455374	Lake Hopatcong tributary 15 at Woodport, NJ	Lat 40°59'12", long 74°36'58", Morris County, Hydrologic Unit 02040105, 20 ft upstream from Lake Hopatcong, 0.5 mi southwest of Lake Winona outlet, and 0.6 mi northwest of Woodport.	---	2002-03	10-01-02 10-30-02 11-26-02 12-31-02 1-29-03 2-27-03 3-25-03	.36 1.1 2.2 1.4 .43 2.0 3.1

Discharge measurements made at low-flow partial-record stations and miscellaneous sites during water year 2003

Station No.	Station Name	Location	Drainage area (mi^2)	Period of record	Measurements	
					Date	Discharge (ft^3/s)
		DELAWARE RIVER BASIN--Continued				
01455376	Jaynes Brook at Northwood, NJ	Lat 40°58'34", long 74°37'43", Sussex County, Hydrologic Unit 02040105, 300 ft upstream of Northwood Road, 0.2 mi upstream from Henderson Cove on Lake Hopatcong, and 0.5 mi northeast of Northwood.	---	2002-03	10-01-02 10-30-02 11-26-02 12-31-02 1-29-03 2-27-03 3-25-03	.03 .45 1.1 .86 .31 1.0 2.3
01455377	Mountain Brook at Northwood, NJ	Lat 40°58'27", long 74°38'30", Sussex County, Hydrologic Unit 02040105, 0.3 mi upstream from Lake Hopatcong, 0.4 mi northwest of Northwood, and 1.9 mi southwest of Woodport.	---	2002-03	10-30-02 11-26-02 12-30-02 1-29-03 2-27-03 3-24-03	.37 .65 .46 .05 .86 1.5
01455378	Mountain Brook tributary at Northwood, NJ	Lat 40°58'27", long 74°38'19", Sussex County, Hydrologic Unit 02040105, 0.2 mi north of Northwood, 1.7 mi from Woodport, and 2.0 mi southwest of Lake Winona outlet.	---	2002-03	10-30-02 11-26-02 12-30-02 1-29-03 2-27-03 3-24-03	.27 .58 .38 .13 .64 1.2
01455380	Lake Hopatcong tributary 6 at Byram Cove, NJ	Lat 40°57'18", long 74°39'42", Sussex County, Hydrologic Unit 02040105, at Byram Cove, 500 ft upstream of Byram Cove on Lake Hopatcong, and 1.8 mi southwest of Northwood.	---	2002-03	10-29-02 11-25-02 12-30-02 1-28-03 2-26-03 3-24-03	.10 .31 .25 .04 .60 .57
01455381	Lake Hopatcong tributary 7 at Byram Cove, NJ	Lat 40°57'17", long 74°39'37", Sussex County, Hydrologic Unit 02040105, at Byram Cove, 200 ft upstream from Byram Cove on Lake Hopatcong, and 1.8 mi southwest of Northwood.	---	2002-03	10-29-02 11-25-02 12-30-02 1-28-03 2-26-03 3-24-03	.23 .51 .32 .09 .64 1.2
01455382	Lake Hopatcong tributary 8 at Byram Cove, NJ	Lat 40°57'27", long 74°39'48", Sussex County, Hydrologic Unit 02040105, 0.2 mi northwest of Byram Cove, 1.7 mi southwest of Northwood, and 3.7 mi southwest of Lake Winona outlet.	---	2002-03	10-28-02 11-26-02 12-30-02 1-28-03 2-26-03 3-24-03	.05 .19 .19 .05 .23 .48
01455383	Lake Hopatcong tributary 10 near Sisters Island, near Northwood, NJ	Lat 40°58'01", long 74°39'00", Sussex County, Hydrologic Unit 02040105, 350 ft upstream from Lake Hopatcong, 0.8 mi southwest of Northwood, and 2.7 mi southwest of Lake Winona outlet.	---	2002-03	10-30-02 11-26-02 12-30-02 1-28-03 2-26-03 3-24-03	.08 .18 .12 .01 .27 .31
01455384	Lake Hopatcong tributary 9 near Sisters Island, near Northwood, NJ	Lat 40°57'54", long 74°39'13", Sussex County, Hydrologic Unit 02040105, 250 ft upstream of Lake Hopatcong near Sister Islands, 1.1 mi southwest of Northwood, and 2.7 mi southwest of Woodport.	---	2002-03	10-29-02 11-26-02 12-30-02 1-28-03 2-26-03 3-24-03	.04 .03 .08 .01 .08 .10
01455385	Lake Hopatcong tributary 5 at Sperry Springs, NJ	Lat 40°57'19", long 74°38'52", Sussex County, Hydrologic Unit 02040105, at Sperry Springs, 200 ft upstream of Byram Bay on Lake Hopatcong, 1.3 mi southwest of Northwood.	---	2002-03	10-29-02 11-25-02 12-30-02 1-28-03 2-26-03 3-24-03	.01 .03 .02 .01 .02 .04
01455387	Lake Hopatcong tributary 4 near Sperry Springs, NJ	Lat 40°56'58", long 74°38'50", Sussex County, Hydrologic Unit 02040105, 0.3 mi upstream from Lake Hopatcong, 0.4 mi south of Sperry Springs, and 1.7 mi southwest of Northwood.	---	2002-03	10-29-02 11-25-02 12-30-02 1-28-03 2-26-03 3-24-03	.03 .11 .05 .02 .14 .25

Discharge measurements made at low-flow partial-record stations and miscellaneous sites during water year 2003

Station No.	Station Name	Location	Drainage area (mi^2)	Period of record	Measurements	
					Date	Discharge (ft^3/s)
		DELAWARE RIVER BASIN--Continued				
01455388	Lake Hopatcong tributary 25 at Espanong, NJ	Lat 40°56'46", long 74°36'53", Morris County, Hydrologic Unit 02040105, 0.2 mi east of Espanong, 0.4 mi upstream from Great Cove on Lake Hopatcong, and 2.0 mi southeast of Northwood.	---	2002-03	10-01-02 10-31-02 12-09-02 1-06-03 1-30-03 2-27-03 3-27-03	.21 .77 .54 1.9 .41 1.4 2.6
01455390	Lake Hopatcong tributary 3 at River Styx, at Hopatcong, NJ	Lat 40°56'24", long 74°39'20", Sussex County, Hydrologic Unit 02040105, 150 ft upstream from River Styx on Lake Hopatcong, 0.5 mi north of Hopatcong, and 0.5 mi south of Lookout Mountain.	---	2002-03	10-29-02 11-25-02 12-30-02 1-28-03 2-26-03 3-24-03	0 .005 .005 0 0.001 0.02
01455391	Lake Hopatcong tributary 22 at Van Every Cove, at Mount Arlington, NJ	Lat 40°56'02", long 74°37'47", Morris County, Hydrologic Unit 02040105, 200 ft upstream from Van Every Cove on Lake Hopatcong, 0.6 mi north of Mount Arlington, and 1.5 mi east of Hopatcong.	---	2002-03	10-01-02 10-31-02 12-09-02 1-06-03 1-30-03 2-27-03 3-27-03	.01 .09 .12 .53 .10 .24 .75
01455393	Lake Hopatcong tributary 23 at Mount Arlington, NJ	Lat 40°55'40", long 74°38'15", Morris County, Hydrologic Unit 02040105, at Mount Arlington, 600 ft upstream from Lake Hopatcong, and 1.2 mi east of Hopatcong.	---	2002-03	10-01-02 10-31-02 12-09-02 1-06-03 1-30-03 3-03-03 3-27-03	.09 .25 .22 1.0 .26 1.1 1.8
01455395	Lake Hopatcong tributary 2 at Hopatcong, NJ	Lat 40°55'52", long 74°39'25", Sussex County, Hydrologic Unit 02040105, at culvert at Lakeside Boulevard at Hopatcong, and 200 ft upstream of Lake Hopatcong.	---	2002-03	10-29-02 11-25-02 12-30-02 1-28-03 2-26-03 3-24-03	.08 .15 .15 .13 .22 .41
01455397	Lake Hopatcong tributary 1 at Ingram Cove, at Hopatcong, NJ	Lat 40°55'38", long 74°39'40", Sussex County, Hydrologic Unit 02040105, 300 ft upstream of Ingram Cove on Lake Hopatcong, 0.4 mi south of Hopatcong, and 1.4 mi south of Lookout Mountain.	---	2002-03	10-29-02 11-25-02 12-30-02 1-28-03 2-26-03 3-24-03	.14 .16 .20 .18 .26 .29
01455398	Lake Hopatcong tributary 24 at King Cove, near Landing, NJ	Lat 40°55'08", long 74°38'44", Morris County, Hydrologic Unit 02040105, 500 ft upstream from King Cove on Lake Hopatcong, 1.3 mi northeast of Landing, and 2.0 mi south of Lookout Mountain.	---	2002-03	10-01-02 10-31-02 12-09-02 1-06-03 1-30-03 3-03-03 3-27-03	.06 .12 .17 .48 .22 .28 .61
01457400	Musconetcong River at Riegelsville, NJ	Lat 40°35'32", long 75°11'19", Warren County, Hydrologic Unit 02040105, at bridge on County Route 627 in Riegelsville, 0.2 mi north of Mount Joy, and 0.2 mi upstream from mouth.	156	1940-55, 1973, 1977-81, 1983, 1985-86, 1988-2003	11-07-02 2-03-03 5-05-03	183 157 238
†01458100	Hakihokake Creek at Milford, NJ	Lat 40°34'06", long 75°05'43", Hunterdon County, Hydrologic Unit 02040105, at bridge on Bridge Street, in Milford, 4,000 ft upstream from mouth.	17.2	1944, 1958-64, 1977-81, 2002-03	10-08-02 1-27-03 5-05-03 7-21-03	4.9 16 20 14
01458300	Harihokake Creek at Harpence Road near Mount Pleasant, NJ	Lat 40°36'01", long 75°01'50", Hunterdon County, Hydrologic Unit 02040105, at culverts on Hartpence Road, 1.7 mi northeast of Mount Pleasant, and 7.1 mi upstream from mouth.	0.98	2003	10-08-02 1-27-03 5-05-03 7-21-03	.19 1.1 1.4 1.3

Discharge measurements made at low-flow partial-record stations and miscellaneous sites during water year 2003

Station No.	Station Name	Location	Drainage area (mi^2)	Period of record	Measurements	
					Date	Discharge (ft^3/s)
		DELAWARE RIVER BASIN--Continued				
†01458400	Hakihokake Creek near Frenchtown, NJ	Lat 40°32'53", long 75°04'08", Hunterdon County, Hydrologic Unit 02040105, at bridge on Frenchtown-Milford Road, 1,600 ft upstream from mouth, and 1.5 mi north of Frenchtown.	9.75	1944, 1958-65, 1979-81, 2002-03	10-08-02 1-27-03 5-05-03 7-21-03	1.0 5.0 6.7 6.9
01458570	Nishisakawick Creek near Frenchtown, NJ	Lat 40°32'32", long 75°02'48", Hunterdon County, Hydrologic Unit 02040105, site along Creek Road, 1.3 mi north of Frenchtown, 2.1 mi upstream from mouth, and 3.1 mi southeast of Milford.	10.1	1998-2003	11-06-02 2-03-03 5-05-03 8-21-03	17 6.7 8.8 7.1
†01460900	Lockatong Creek near Raven Rock, NJ	Lat 40°24'28", long 75°00'51", Hunterdon County, Hydrologic Unit 02040105, at bridge on State Route 29, 1.1 mi east of Raven Rock, and 300 ft upstream from mouth.	23.2	1944-45, 1958-64, 2002-03	10-10-02 1-28-03 5-06-03 8-11-03	.77 5.3 6.7 54
01461282	Wickecheoke Creek at Sergeantsville, NJ	Lat 40°26'38", long 74°57'58", Hunterdon County, Hydrologic Unit 02040105, at bridge on Rosemount Ringoes Road, 1.2 mi west of Sergeantsville, and 3.5 mi upstream from mouth.	22.8	2003	10-10-02 1-28-03 5-06-03 8-11-03	.77 2.1 4.2 49
†01461900	Alexauken Creek near Lambertville, NJ	Lat 40°22'51", long 74°56'53", Hunterdon County, Hydrologic Unit 02040105, at bridge on State Route 29, 0.4 mi upstream from mouth and 1.1 mi north of Lambertville.	14.8	1945, 1955, 1958-62, 1964 1977-82, 2000, 2002-03	10-10-02 1-28-03 4-02-03 7-07-03	.81 5.0 24 4.7
01462739	Jacobs Creek at Bear Tavern, NJ	Lat 40°18'26", long 74°50'02", Mercer County, Hydrologic Unit 02040105, at bridge on Pennington Road, 0.5 mi upstream from Woolsey Brook, and 0.8 east of Bear Tavern.	5.16	2003	10-10-02 1-28-03 5-06-03 8-11-03	.14 1.2 1.8 1.5
01463610	Assunpink Creek at Edinburg, NJ	Lat 40°15'28", long 74°37'04", Lat 40°15'28", long 74°37'05", Mercer County, Hydrologic Unit 02040105, at bridge on Old Trenton Road (County Route 535), 0.1 mi west of Edinburg, 0.1 mi upstream from Bridegroom Run and 3.0 mi north of Robbinsville.	25.0	1981, 1983-84, 2001, 2003	10-16-02 1-09-03 4-02-03 7-07-03	34 63 37 14
01463850	Miry Run at Route 533, at Mercerville, NJ	Lat 40°14'50", long 74°41'13", Mercer County, Hydrologic Unit 02040105, at bridge on County Route 533 (Quaker Bridge Road), 2.1 mi upstream of mouth, 0.7 mi north of Mercerville, and 3.8 mi northwest of Robbinsville.	10.7	1998-2003	11-07-02 2-04-03 5-08-03 8-05-03	10 2.1 5.0 2.6
01463920	Pond Run near White Horse, NJ	Lat 40°12'56", long 74°41'24", Mercer County, Hydrologic Unit 02040105, at bridge on Whitehorse-Mercerville Road, 2.0 mi north of White Horse, and 4.2 mi upstream from mouth.	3.89	2003	10-16-02 1-09-03 4-02-03 7-07-03	12 3.8 3.5 .70
01464020	Assunpink Creek at Peace Street, at Trenton, NJ	Lat 40°13'01", long 74°46'03", Mercer County, Hydrologic Unit 02040105, at bridge on Peace Street in Trenton, 0.1 mi upstream of mouth, and 4.4 mi west of Mercerville.	91.4	1963, 1967, 1998-2003	5-20-03 8-20-03	58 69
†01464300	Crosswicks Creek near Cookstown, NJ	Lat 40°02'44, long 74°32'22, Burlington County, Hydrologic Unit 02040201, at bridge on Bunting Bridge Road, 0.7 mi upstream from North Run, and 1.2 mi east of Cookstown.	24.9	1966, 1969-70, 1972-74, 2002-03	10-17-02 1-30-03 4-28-03 8-04-03	78 18 26 39

Discharge measurements made at low-flow partial-record stations and miscellaneous sites during water year 2003

Station No.	Station Name	Location	Drainage area (mi^2)	Period of record	Measurements	
					Date	Discharge (ft^3/s)
		DELAWARE RIVER BASIN--Continued				
†01464380	North Run at Cookstown, NJ	Lat 40°02’58, long 74°33’46, Burlington County, Hydrologic Unit 02040201, at bridge on Spur County Route 528, at downstream end of Cookstown Pond at Cookstown.	7.28	1966, 1969-74, 2002-03	10-17-02 1-30-03 4-28-03 8-04-03	13 3.8 6.2 7.2
01464445	Lahaway Creek tributary near Prospertown, NJ	Lat 40°06’50”, long 74°27’30”, Ocean County, Hydrologic Unit 02040201, 100 ft downstream of culvert on North Stump Tavern Road, 1.0 mi southeast of Prospertown, and 2.1 mi upstream from mouth.	2.15	2003	6-11-03 7-01-03 7-22-03 7-23-03 8-06-03 9-19-03	2.8 2.3 3.6 4.1 2.0 2.3
†01464460	Lahaway Creek near Hornerstown, NJ	Lat 40°06’24, long 74°32’11, Monmouth County, Hydrologic Unit 02040201, at bridge on Allentown-New Egypt Road, 1.0 mi west of Hornerstown.	21.4	1966, 1969-74, 2002-03	10-15-02 1-06-03 4-01-03 7-10-03	20 59 28 15
01464504	Crosswicks Creek at Groveville Road, at Groveville, NJ	Lat 40°10’02", long 74°40’39", Mercer County, Hydrologic Unit 02040201, at bridge on Groveville Road (Main Street) in Groveville, 1.2 mi upstream from Doctors Creek, and 2.2 mi northeast of Bordentown.	98.0	1966, 1998-2003	11-19-02 3-05-03 5-29-03 8-25-03	409 458 219 55
01464512	Doctors Creek at Red Valley, NJ	Lat 40°09’42”, long 74°28’06”, Monmouth County, Hydrologic Unit 02040201, at bridge on Allentown-Red Valley Road (County Route 526) in Red Valley, 100 ft downstream of Red Valley Lake, and 2.5 mi east of Imlaystown.	3.83	2003	10-15-02 1-06-03 4-01-03 7-10-03	2.4 10 5.2 .95
†01464515	Doctors Creek at Allentown, NJ	Lat 40°10’37”, long 74°35’56”, Monmouth County, Hydrologic Unit 02040201, at bridge on Breza Road, 0.8 mi west of Allentown and 0.8 mi downstream from Conines Mill Pond.	17.4	1966, 1968-72, 1974-75, 1979-95, 1998-2003	11-13-02 2-10-03 6-11-03 8-18-03	48 15 26 22
01464523	Back Creek at Yardville, NJ	Lat 40°11’32”, long 74°39’55”, Mercer County, Hydrologic Unit 02040201, at bridge on Yardville-Hamilton Square Road, 0.7 mi downstream of Edges Brook, and 0.9 mi north of Yardville.	6.51	2003	10-17-02 1-30-03 4-28-03 8-04-03	8.1 1.4 2.5 1.4
01464527	Blacks Creek at Chesterfield, NJ	Lat 40°06’34", long 74°38’30", Burlington County, Hydrologic Unit 02040201, at bridge on Chesterfield-Georgetown Road, 0.4 mi south of Chesterfield, 2.2 mi north of Georgetown, and 2.4 mi upstream of mouth.	8.91	1969, 2001-03	11-20-02 2-10-03 5-20-03 8-18-03	7.6 7.2 7.3 17
0146452750	Blacks Creek near Chesterfield, NJ	Lat 40°06’52”, long 74°40’48”, Burlington County, Hydrologic Unit 02040201, at bridge on Bordentown Road, 0.8 mi upstream of Bacons Run, and 2.1 mi west of Chesterfield.	13.3	2002-03	6-04-03 6-05-03 6-05-03 6-24-03 7-22-03 7-23-03 9-29-03	152 77 76 20 16 26 13
01464529	Bacons Run near Mansfield Square, NJ	Lat 40°06’27”, long 74°41’06”, Burlington County, Hydrologic Unit 02040201, at bridge on White Pine Road, 0.2 mi upstream of Blacks Creek, and 1.3 mi southeast of Mansfield Square.	4.41	2003	10-21-02 2-20-03 5-22-03 8-19-03	1.4 2.9 4.0 2.3
01464537	Crafts Creek at Island Road, at Columbus, NJ	Lat 40°04’26”, long 74°42’05”, Burlington County, Hydrologic Unit 02040201, at bridge on Island Road, 1.0 mi east of Columbus, and 8.6 mi upstream from mouth.	3.43	2003	10-21-02 2-20-03 5-22-03 8-19-03	.88 2.5 2.9 2.3
†01464540	Crafts Creek at Hedding, NJ	Lat °40’06”01, long 74°45’22”, Burlington County, Hydrologic Unit 02040201, at bridge on Old York Road, 0.8 mi southwest of Hedding, and 3.6 mi upstream from mouth.	10.6	1959-63, 2003	10-29-02 1-07-03 4-03-03 7-08-03	3.6 19 10 7.5

Discharge measurements made at low-flow partial-record stations and miscellaneous sites during water year 2003

Station No.	Station Name	Location	Drainage area (mi^2)	Period of record	Measurements	
					Date	Discharge (ft^3/s)
		DELAWARE RIVER BASIN--Continued				
01464578	Annaricken Brook near Jobstown, NJ	Lat 40°03'19", long 74°42'08", Burlington County, Hydrologic Unit 02040201, at bridge on Island Road, 500 ft upstream of Assiscunk Creek, and 1.3 mi north of Jobstown.	2.82	2003	12-04-02 2-20-03 5-22-03 8-19-03	1.1 2.6 1.5 .99
01464587	Assiscunk Creek at Jacksonville, NJ	Lat 40°03'53", long 74°45'24", Burlington County, Hydrologic Unit 02040201, at bridge on Jacksonville Road, 1.0 mi north of Jacksonville, and 10 mi upstream from mouth.	33.6	2003	10-29-02 1-07-03 4-03-03 7-08-03	15 65 36 7.4
†01465847	Jade Run at Vincentown, NJ	Lat 39°56'10", long 74°44'36", Burlington County, Hydrologic Unit 02040202, at bridge on U.S. Route 206, 0.4 mi east of Vincentown, and 0.08 mi upstream of mouth.	11.3	2001-03	9-11-03 9-26-03	0 0
†01465865	Barton Run at Tuckerton Road, near Medford, NJ	Lat 39°52'43", long 74°51'37", Burlington County, Hydrologic Unit 02040202, at bridge on Tuckerton Road, 1.5 mi upstream of Southwest Branch Rancocas Creek, and 2.5 mi southwest of Medford.	12.0	2001-03	8-25-03 9-09-03	11 8.6
01465893	Little Creek at Chairville, NJ	Lat 39°53'53", long 74°47'18", Burlington County, Hydrologic Unit 02040202, at bridge on State Route 70 in Chairville, 1.9 mi east of Medford, and 4.7 mi upstream from mouth.	6.32	1998-2003	11-03-02 3-04-03 5-07-03 8-19-03	23 36 5.4 3.4
†01465900	Southwest Branch Rancocas at Eayrestown, NJ	Lat 39°56'49", long 74°47'57", Burlington County, Hydrologic Unit 02040202, at bridge on Bridge Road (County Route 612) 0.3 mi above mouth, and 0.5 mi west of Eayrestown.	76.0	1959-61, 1999, 2001-03	9-26-03	29
†01465965	Ong Run at Browns Mills, NJ	Lat 39°58'35", long 74°34'36", Burlington County, Hydrologic Unit 02040202, 200 ft upstream of Mirror Lake, 0.7 mi north of Browns Mills, and 1.5 mi downstream of bridge on County Route 545.	1.87	2001-03	9-11-03 9-26-03	1.9 2.0
†0146700260	Indian Run at Birmingham, NJ	Lat 39°58'50", long 74°42'41", Burlington County, Hydrologic Unit 02040202, at bridge on Birmingham Road, 0.2 mi upstream of mouth, and 0.4 mi north of Birmingham.	5.89	2001-03	10-09-02 1-15-03 8-25-03	.87 6.0 3.2
01467005	North Branch Rancocas Creek at Iron Works Park, at Mount Holly, NJ	Lat 39°59'31", long 74°46'56", Burlington County, Hydrologic Unit 02040202, at Iron Works Park in Mount Holly, 2.4 mi east of Hainesport, and 4.0 mi downstream of Smithville Lake.	140	1970, 1998-2003	2-27-03 5-15-03 8-28-03	585 133 66
†0146702680	Swede Run at Conrow Road, at Delran, NJ	Lat 40°00'21", long 74°56'46", Burlington County, Hydrologic Unit 02040202, at bridge on Conrow Road, in Delran, 3.0 mi upstream from mouth.	4.29	2002-03	8-25-03 9-09-03	.56 .95
01467063	North Branch Pennsauken Creek at Mount Laurel, NJ	Lat 39°55'12", long 74°53'53", Burlington County, Hydrologic Unit 02040202, at culvert on Church Road, 1.0 mi southwest of Mount Laurel, and 5.1 mi from mouth.	1.70	1998, 2002-03	10-01-02	.26
01467066	North Branch Pennsauken Creek at Gaither Drive, at Fellowship, NJ	Lat 39°56'15", long 74°56'58", Burlington County, Hydrologic Unit 02040202, at bridge on Gaithers Drive, 1.0 mi northeast of Fellowship, and 1.2 mi from mouth.	6.61	2002-03	10-01-02	5.3
01467069	North Branch Pennsauken Creek near Moorestown, NJ	Lat 39°57'07", long 74°58'09", Burlington County, Hydrologic Unit 02040202, at bridge on State Route 41 (Kings Highway), and 1.7 mi southwest of Moorestown.	12.8	1974-75, 1978-97, 2002-03	10-01-02	3.8

Discharge measurements made at low-flow partial-record stations and miscellaneous sites during water year 2003

Station No.	Station Name	Location	Drainage area (mi^2)	Period of record	Measurements	
					Date	Discharge (ft^3/s)
		DELAWARE RIVER BASIN--Continued				
01467075	South Branch Pennsauken Creek at Springdale, NJ	Lat 39°54'21", long 74°57'08", on Burlington-Camden County line, Hydrologic Unit 02040202, at bridge on Green Tree Road, 0.7 mi west of Springdale, and 10.7 mi from mouth.	2.47	1998, 2002-03	10-01-02	1.4
01467077	South Branch Pennsauken Creek at Springdale Road, at Fellowship, NJ	Lat 39°55'14", long 74°57'52", on Burlington-Camden County line, Hydrologic Unit 02040202, at bridge on Springdale Road, 0.4 mi south of Fellowship, and 9.2 mi from mouth.	4.40	2002-03	10-01-02	3.3
01467120	Cooper River at Norcross Road, at Lindenwold, NJ	Lat 39°49'43", long 74°58'54", Camden County, Hydrologic Unit 02040202, at bridge on Norcross Road, at downstream end of Linden Lake at Lindenwold, and 0.4 mi upstream from Nicholson Branch.	1.13	1971, 1979-81, 1985-90, 2002-03	10-01-02	.25
†01467140	Cooper River at Lawnside, NJ	Lat 39°52'14", long 75°00'58", Camden County, Hydrologic Unit 02040202, at bridge on Melrose Avenue at Lawnside, 300 ft downstream from former Lawnside sewage treatment plant, and 2.0 mi upstream from New Jersey Turnpike.	12.7	1964-72, 1979-81, 1985-98, 2002-03	10-01-02	3.4
01467155	North Branch Cooper River at Kresson, NJ	Lat 39°51'33", long 74°55'45", Camden County, Hydrologic Unit 02040202, at bridge on Kresson Road, 0.5 mi northwest of Kresson, and 9.0 mi from mouth.	1.04	2002-03	10-01-02	0
01467181	North Branch Cooper River at Erlton, NJ	Lat 39°54'31", long 75°01'31", Camden County, Hydrologic Unit 02040202, at bridge on Cooper River Drive, 600 ft upstream from mouth, and 0.6 mi southwest of Erlton.	11.0	2002-03	10-01-02	3.8
*†01467305	Newton Creek at Collingswood, NJ	Lat 39°54'30", long 75°03'12", Camden County, Hydrologic Unit 02040202, at bridge on Park Avenue in Collingswood, 0.3 mi east of Cuthbert Avenue.	1.33	1964-72, 1983-84, 1993-95, 1997-98, 2002-03	6-03-03	.59
*†01467317	South Branch Newton Creek at Haddon Heights, NJ	Lat 39°52'45", long 75°04'25", Camden County, Hydrologic Unit 02040202, at bridge on 13th Avenue in Haddon Heights, and 2.6 mi south of Collingswood.	0.63	1964-68,1971, 1977, 1982-86, 1990, 1994-95, 1997-98, 2001-03	2-22-03 2-22-03 2-22-03 5-26-03 6-02-03	8.6 7.1 30 32 .88
01467327	South Branch Big Timber Creek tributary at Grenloch, NJ	Lat 39°46'46", long 75°03'14", Gloucester County, Hydrologic Unit 02040202, at bridge on unnamed road, 250 ft west of Black Horse Pike (State Route 168), 50 ft upstream of Grenloch Lake, and 0.4 mi south of Grenloch.	4.27	2003	5-05-03 6-04-03 6-05-03 7-09-03 8-06-03 9-29-03	4.7 31 12 5.1 14 5.5
01467359	North Branch Big Timber Creek at Glendora, NJ	Lat 39°50'04", long 75°04'01", Camden County, Hydrologic Unit 02040202, at bridge on Chews Landing-Clementon Road (County Route 683), 0.7 mi south of Glendora, 1.8 mi upstream from South Branch Big Timber Creek, and 2.5 mi north of Blackwood.	18.8	1998-2003	11-20-02 3-05-03 5-15-03 9-08-03	26 88 61 81
*†01475033	Plank Run at Glassboro, NJ	Lat 39°42'54", long 75°08'24", Gloucester County, Hydrologic Unit 02040202, at culvert on U.S. Route 322, 0.6 mi west of Glassboro, and 0.7 mi south of Alcyon Lake.	.71	1996-97, 1999-2000, 2002-03	5-24-03 5-26-03 5-26-03 6-04-03 8-22-03 9-09-03 9-19-03	1.3 8.4 7.7 7.8 1.3 1.2 1.6

Discharge measurements made at low-flow partial-record stations and miscellaneous sites during water year 2003

Station No.	Station Name	Location	Drainage area (mi^2)	Period of record	Measurements	
					Date	Discharge (ft^3/s)
		DELAWARE RIVER BASIN--Continued				
†01475100	Edwards Run near Mantua, NJ	Lat 39°46'20", long 75°11'34", Gloucester County, Hydrologic Unit 02040202, at bridge on State Route 45 (Bridgeton Pike), 1.7 mi soutwest of Mantua, and 3.3 mi above mouth.	6.45	1957, 1966, 2002-03	8-25-03 9-09-03	2.2 3.7
†01475210	Clonmell Creek near Gibbstown, NJ	Lat 39°49'08", long 75°15'04", Gloucester County, Hydrologic Unit 02040202, at bridge on Swedesboro Avenue, 2.3 mi east of Gibbstown, and 2.7 mi above mouth.	1.13	1957, 1966, 2002-03	8-25-03 9-09-03	0 0
†01476640	Pargey Creek at Swedesboro Avenue, at Repaupo, NJ	Lat 39°47'34", long 75°17'12", Gloucester County, Hydrologic Unit 02040202, 0.8 mi southeast of Repaupo, 1.5 mi upstream of bridge on U.S. Route 130/Interstate Route 295, and 6.0 mi upstream of Delaware River	4.44	2001-03	8-25-03 9-09-03	1.7 1.7
†01477110	Raccoon Creek at Mullica Hill, NJ	Lat 39°44'10", long 75°13'29", Gloucester County, Hydrologic Unit 02040202, at bridge on State Routes 45 and 77 in Mullica Hill, 1,200 ft downstream of Mullica Hill Pond, and 5.5 mi west of Pitman.	15.6	1940, 1977-79, 1983, 1985-86, 1988-90, 1992, 1994-95, 2002-03	8-22-03 9-09-03	11 14
†01477130	Basgalore Creek at Russell Mill Road, near Swedesboro, NJ	Lat 39°44'15", long 75°16'59" Gloucester County, Hydrologic Unit 02040202, at bridge on Russell Mill Road, 0.8 mi above mouth, and 1.7 mi east-southeast of Swedesboro.	3.30	1957c, 1966c, 1994-2003	8-22-03 9-09-03	2.0 2.1
01482455	Salem River at Route 77, near Pole Tavern, NJ	Lat 39°36'10", long 75°14'17", Salem County, Hydrologic Unit 02040206, at bridge on State Highway 77, 1.1 mi southwest of Pole Tavern, and 2.0 mi upstream of Slabtown Lake.	0.65	2003	12-12-02 3-11-03 6-17-03 9-17-03	1.3 1.4 1.3 .89
†01482530	Major Run at Sharptown, NJ	Lat 39°38'56", long 75°22'28", Salem County, Hydrologic Unit 02040206, at bridge on Kings Highway, 0.4 mi upstream from mouth, and 0.7 mi southwest of Sharptown.	3.04	1966-72, 1974-75, 2003	12-12-02 3-11-03 6-17-03 9-17-03	16 3.8 2.3 1.3
01482880	Alloway Creek near Yorktown, NJ	Lat 39°35'28", long 75°17'46", Salem County, Hydrologic Unit 02040206, at bridge on Watson Mill Road, 1.6 mi upstream of Cool Run, and 1.6 mi south of Yorktown.	2.42	2003	12-12-02 3-11-03 6-17-03 9-17-03	7.4 4.0 2.9 2.4
01482890	Alloway Creek near Watson Corner, NJ	Lat 39°35'13", long 75°18'20", Salem County, Hydrologic Unit 02040206, at bridge on Stockington-Pleasant Hill Road, 0.9 mi upstream of Cool Run, and 1.5 mi north-west of Watson Corner.	---	2002-03	6-04-03 6-11-03 7-09-03 8-18-03 9-19-03	5.5 3.3 2.5 2.0 4.3

† Active low-flow partial-record station

* Active crest-stage partial-record station.

a Operated as a continuous-record gaging station by U.S. Geological Survey.

The following table contains annual maximum elevations 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 NGVD of 1929 unless otherwise noted. Only the maximum elevation is given. Information on some other high elevations 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 elevation has been determined.

Maximum elevation at tidal crest-stage partial-record stations

Station name and number	Location	Period of record	Water year 2003 maximum		Period of record maximum	
			Date	Elevation (ft)	Date	Elevation (ft)
Hackensack River below dam, at New Milford, NJ (01378501)	Lat 40°56'52", long 74°01'33", Bergen County, Hydrologic Unit 02030103, on right bank approx. 50 ft downstream from gaging station at New Milford, on dam wingwall 10 ft downstream from dam.	1997-2003	1-02-03	10.24	9-16-99	17.7d
Hackensack River at NJ Route 3, near Lynhurst, NJ (01378626)	Lat 40°48'17", long 74°03'54", Bergen County, Hydrologic Unit 02030103, on downstream side of concrete left channel pier on the westbound State Route 3 bridge, 0.5 mi east of East Rutherford, and 0.6 mi east of Lynhurst.	1997-2003	12-25-02	6.34	10-19-96	6.90a
Passaic River at Garfield, NJ (01390000)	Lat 40°51'53", long 74°06'36", Bergen County, Hydrologic Unit 02030103, on left downstream wingwall of bridge on Passaic Street at Garfield, 0.3 mi west of intersection of Midland Avenue and Passaic Street.	1997-2003	3-23-03	7.28	9-16-99	14.7
Elizabeth River at Linden, NJ (01393510)	Lat 40°38'50", long 74°12'18", Union County, Hydrologic Unit 02030104, on upstream right concrete wingwall of bridge on Atlantic Avenue in Linden, just east of Mattano Park, and 0.8 mi east of Bayway Circle.	1997-2003	12-25-02	5.80	10-19-96	6.98
Rahway River at U.S. Route 1, at Rahway, NJ (01396035)	Lat 40°35'56", long 74°16'08", Union County, Hydrologic Unit 02030104, on downstream right abutment of bridge on U.S. Route 1 (at Lawrence Street prior to 1999) in Rahway, 930 ft downstream of South Branch Rahway River, and 1.6 mi south of Linden.	1997-2003	1-03-03	6.87	10-19-96	8.57
Raritan River at State Route 18, at New Brunswick, NJ (01404171)	Lat 40°30'31", long 74°27'25", Middlesex County, Hydrologic Unit 02030105, on left bank, 100 ft downstream from bridge on State Route 18, on the downstream end of culvert headwall over small tributary in Johnson Park, next to unnamed road, and 0.8 mi northwest of New Brunswick.	1997-2003	6-04-03	7.93	9-16-99	17.2
Raritan River at Perth Amboy, NJ (01406700)	Lat 40°30'31", long 74°17'29", Middlesex County, Hydrologic Unit 02030105, on upstream left bridge pier of Victory Bridge on State Route 35 in Perth Amboy, 0.5 mi downstream from Garden State Parkway bridge, and 1.5 mi upstream from mouth.	1938, 1944, 1950, 1953, 1955, 1960, 1967-70†, 1980-2003	12-25-02	6.83	12-11-92	10.4
Luppatatong Creek at Keyport, NJ (01407030)	Lat 40°26'08", long 74°12'26", Monmouth County, Hydrologic Unit 02030104, on left bank upstream side of bridge on West Front Street (Amboy Avenue) in Keyport, 0.1 mi upstream from mouth, and 2.0 mi northwest of Matawan.	1944, 1950, 1960, 1980-2003	12-25-02	7.41	9-12-60	10.3
Navesink River at Red Bank, NJ (01407535)	Lat 40°21'14", long 74°03'59", Monmouth County, Hydrologic Unit 02030104, on wooden piling upstream side of old boat ramp at right bank, in Red Bank, 0.15 mi north of East Front Street, on the east side of Riverview Hospital.	1997-2003	12-25-02	5.57	10-19-96	5.77
Branchport Creek at Oceanport, NJ (01407590)	Lat 40°19'12", long 74°00'10", Monmouth County, Hydrologic Unit 02030104, on wooden piling at right bank bulkhead, just upstream from bridge on Monmouth Boulevard in Oceanport, and 1.2 mi north of Long Branch.	1997-2003	12-25-02	4.83b	2-24-98	5.11b
Metedeconk River at Laurelton, NJ (01408155)	Lat 40°03'58", long 74°08'00", Ocean County, Hydrologic Unit 02040301, on downstream right wingwall of the bridge on State Route 70, just downstream of Forge Pond, at Laurelton.	1997-2003	9-19-03	2.08b	2-24-98	2.54b

Maximum elevation at tidal crest-stage partial-record stations--Continued

Station name and number	Location	Period of record	Water year 2003 maximum		Period of record maximum	
			Date	Elevation (ft)	Date	Elevation (ft)
Barnegat Bay at Bay Shore, NJ (01408200)	Lat 39°56'56", long 74°06'52", Ocean County, Hydrologic Unit 02040301, at downstream side of the west end of bridge on State Route 37 over Barnegat Bay at Bay Shore, 2.2 mi west of Seaside Heights, and 4.5 mi east of Toms River.	1965-86, 1992, 1993-2002, 2003	12-25-02	<3.38f	10-30-91	4.27
Toms River at Toms River, NJ (01408700)	Lat 39°57'02", long 74°11'57", Ocean County, Hydrologic Unit 02040301, on fourth piling at the left bank bulkhead, downstream from bridge on South Main Street in Toms River, upstream from bridge on State Route 166, and 0.8 mi northwest of Beechwood.	1962, 1997-2003	10-16-02	3.53	3-06-62	4.1
Barnegat Bay at Loveladies, NJ (01409135)	Lat 39°43'24", long 74°08'06", Ocean County, Hydrologic Unit 02040301, on the bulkhead at Matthew's Point Park on the east shore of Barnegat Bay in Loveladies on Long Beach Island, 2.0 mi north of Harvey Cedars, and 3.0 mi south of Barnegat Inlet.	1993-2002, 2003	12-25-02	4.23	2-06-96	4.46
Manahawkin Bay near Manahawkin, NJ (01409145)	Lat 39°40'01", long 74°12'53" (revised), Ocean County, Hydrologic Unit 02040301, at west end of bridge on State Route 72 over Manahawkin Bay, 2.5 mi northwest of Ship Bottom, and 3.1 mi southeast of Manahawkin.	1965-2003	3-19-03	4.10g	12-11-92	6.02
Little Egg Harbor at Beach Haven, NJ (01409285)	Lat 39°33'10", long 74°15'06", Ocean County, Hydrologic Unit 02040301, in Beach Haven at U.S. Coast Guard station, 6.0 mi east of Tuckerton and 7.4 mi southwest of Ship Bottom.	1979-2003	2-17-03	4.74	12-11-92	6.93
Batsto River at Pleasant Mills, NJ (01409510)	Lat 39°37'55", long 74°38'39", Ocean County, Hydrologic Unit 02040301, on right bank, 1.0 mi southeast of Pleasant Mills, and 0.5 mi upstream from mouth.	1958-2003†	9-19-03	4.66	3-07-62	7.2
Mullica River near Port Republic, NJ (01410100)	Lat 39°33'12", long 74°27'45", Atlantic County, Hydrologic Unit 02040301, on right bank on bulkhead piling at south end of U.S. Route 9 and Garden State Parkway bridge over Mullica River, 2.8 mi northeast of Port Republic, and 2.8 mi south of New Gretna.	1962, 1965-2003	2-17-03	5.05	3-06-62	7.9
Absecon Creek at Absecon, NJ (01410500)	Lat 39°25'45", long 74°31'15", Atlantic County, Hydrologic Unit 02040302, on right abutment of bridge on Mill Road, 50 ft downstream of former gaging station, 1.0 mi west of Absecon, and 3.4 mi upstream from mouth.	1923-29†, 1933-38†, 1946-84†, 1985-2003	2-17-03	5.76	3-29-84	7.77
Beach Thorofare at Atlantic City, NJ (01410570)	Lat 39°21'56", long 74°26'43", Atlantic County, Hydrologic Unit 02040302, on south side of east abutment of AMTRAK railroad swivel bridge in Atlantic City, 0.5 mi northeast of former Bader Field airport, and 2.7 mi northeast of Ventnor City.	1944, 1950, 1960, 1962, 1978†, 1969-2003	1-03-03	5.90	3-06-62	8.3
Great Egg Harbor River at U.S. 40, at Mays Landing, NJ (01411175)	Lat 39°26'55", long 74°43'37", Atlantic County, Hydrologic Unit 02040302, at Mays Landing river access parking lot on the south side of River Drive and intersection of Farragut Avenue, in Mays Landing, 0.1 mi downstream of bridge on U.S. Route 40.	1997-2003	2-17-03	5.57	2-05-98	6.21
Tuckahoe River at Head of River, NJ (01411300)	Lat 39°18'25", long 74°49'14", Cape May County, Hydrologic Unit 02040302, downstream right abutment of highway bridge on State Route 49, 0.2 mi upstream from McNeals Branch, 0.4 mi southeast of Head of River, and 3.7 mi west of Tuckahoe.	1979-2003†	2-17-03	4.68	12-11-92	7.01
Great Egg Harbor Bay at Beesleys Point, NJ (01411315)	Lat 39°17'16", long 74°37'40", Cape May County, Hydrologic Unit 02040302, on upstream side of earth filled pier at Tuckahoe Inn, 250 ft east of U.S. Route 9 toll bridge over Great Egg Harbor Bay at Beesleys Point, 2.5 mi southwest of Somers Point.	1963-78†, 1979-81, 1997-2003	2-17-03	6.38	2-05-98r	7.12r

Maximum elevation at tidal crest-stage partial-record stations--Continued

Station name and number	Location	Period of record	Water year 2003 maximum		Period of record maximum	
			Date	Elevation (ft)	Date	Elevation (ft)
Great Egg Harbor Bay at Ocean City, NJ (01411320)	Lat 39°17'03", long 74°34'40", Cape May County, Hydrologic Unit 02040302, on bulkhead at west end of 7th Street (prior to October 1974, gage was located at 5th Street), in Ocean City, and 2.5 mi southeast of Somers Point.	1965-2003	2-17-03	6.54	12-11-92	7.89
Lakes Bay at Pleasantville, NJ (01411325)	Lat 39°22'54", long 74°31'07", Atlantic County, Hydrologic Unit 02040302, on west shore of Lakes Bay, at east end of East Bayview Avenue, on pier on south side of road, in Pleasantville and 5.2 mi west of Atlantic City.	1997-2003	1-03-03	4.64b	2-05-98	5.97
Strathmere Bay at Strathmere, NJ (01411335)	Lat 39°12'04", long 74°39'18", Cape May County, Hydrologic Unit 02040302, on right bank upstream side of Corsons Inlet Bridge on County Route 619, in Strathmere, 3.9 mi north of Sea Isle City, and 5.5 mi south of Ocean City.	1997-2003	2-17-03	4.88b	2-05-98r	6.47br
Grassy Sound Channel at Nummy Island, near North Wildwood, NJ (01411370)	Lat 39°01'43", long 74°48'04', Cape May County, Hydrologic Unit 02040302, on pier at Dad's Place Marina at the south end of bridge from Nummy Island, 1.0 mi west of Hereford Inlet, and 1.1 mi northwest of North Wildwood.	1993-96†, 1997-2003	2-17-03	7.38	2-05-98	8.19
Maurice River at Millville, NJ (01411900)	Lat 39°23'43", long 75°02'26", Cumberland County, Hydrologic Unit 02040206, at bridge on State Route 49 on downstream concrete wall at left bank bridge abutment in Millville, 300 ft west of intersection with High Street, and 0.4 mi south of Broad Street.	1997-2003	12-25-02	4.18b	8-22-97	4.53b
Cohansey River at Bridgeton, NJ (01413015)	Lat 39°25'45", long 75°14'12", Cumberland County, Hydrologic Unit 02040206, at bridge on Commerce Street on upstream concrete wall at right bank bridge abutment, approx. 700 ft north of bridge on Broad Street (State Route 49) in Bridgeton.	1997-2003	2-17-03	6.08	2-05-98r	6.38r
Delaware River at Marine Terminal, at Trenton, NJ (01464040)	Lat 40°11'21", long 74°45'21", Mercer County, Hydrologic Unit 02040201, on downstream left bank concrete wall near Trenton Marine Terminal on Lamberton Road, approx. 0.2 mi south of the intersection with State Route 29.	1921-46†, 1951-55†, 1957-92†, 1997-2003	9-19-03	7.56	8-20-55	16.8b
Delaware River near Gibbstown, NJ (01476550)	Lat 39°49'52", long 75°19'57", Gloucester County, Hydrologic Unit 02040202, on left bank on floodgate at mouth of Repaupo Creek 2.2 mi northeast of Bridgeport, 5.5 mi north of Swedesboro, and at river mile 84.00, prior to October 1980 located at Reynolds Aluminum Company pier in Chester, PA at river mile 82.30.	1972-77†, 1979-85, 1997-2003	9-19-03	7.47	2-26-79	7.53
Salem River at Salem NJ, (01482650)	Lat 39°34'40", long 75°28'36", Salem County, Hydrologic Unit 02040206, on left bank downstream side of bridge on State Route 49 at Salem.	1997-2003	2-17-03	3.92b	2-05-98	4.42br
Alloway Creek at Hancocks Bridge, NJ (01483050)	Lat 39°30'31", long 75°27'38", Salem County, Hydrologic Unit 02040206, on left bank at downstream side of bridge on Locust Island Road (County Route 658) in Hancocks Bridge, 3.7 mi southwest from Quinton, and 4.0 mi south of Salem.	1980-85, 1993, 1997-2003	2-17-03	5.50	12-11-93	7.57

a Not previously published.
b Elevation is to North American Datum of 1988, not National Geodetic Vertical Datum of 1929.
d Peak based on high-water marks at the New Milford gage house, not the actual crest-stage gage.
f Peak gage-height for the period was less than minimum recordable gage height.
g May have been exceeded by high tide on Feb. 17, 2003.
r Revised.
† Operated as a continuous-record gaging station.

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Conversion Factors

Multiply	By	To obtain
	Length	
inch (in.)	2.54×10^{1}	millimeter (mm)
	2.54×10^{-2}	meter
foot (ft)	3.048×10^{-1}	meter (m)
mile (mi)	1.609×10^{0}	kilometer (km)
	Area	
acre	4.047×10^{3}	square meter (m^2)
	4.047×10^{-1}	square hectometer (hm^2)
	4.047×10^{-3}	square kilometer (km^2)
square mile (mi^2)	2.590×10^{0}	square kilometer (km^2)
	Volume	
gallon (gal)	3.785×10^{0}	liter (L)
	3.785×10^{-3}	cubic meter (m^3)
	3.785×10^{0}	cubic decimeter (dm^3)
million gallons (Mgal)	3.785×10^{3}	cubic meter (m^3)
	3.785×10^{-3}	cubic hectometer (hm^3)
cubic foot (ft^3)	2.832×10^{-2}	cubic meter (m^3)
	2.832×10^{1}	cubic decimeter (dm^3)
cubic-foot-per-second-per-day [(ft^3/s/d]	2.447×10^{3}	cubic meter (m^3)
	2.447×10^{-3}	cubic hectometer (hm^3)
acre-foot (acre-ft)	1.223×10^{3}	cubic meter (m^3)
	1.223×10^{-3}	cubic hectometer (hm^3)
	1.223×10^{-6}	cubic kilometer (km^3)
	Flow rate	
cubic foot per second (ft^3/s)	2.832×10^{1}	liter (L/s)
	2.832×10^{-2}	cubic meter per second (m^3/s)
	2.832×10^{1}	cubic decimeter per second (dm^3/s)
gallon per minute (gal/min)	6.309×10^{-2}	liter per second (L/s)
	6.309×10^{-5}	cubic meter per second (m^3/s)
	6.309×10^{-2}	cubic decimeter per second (dm^3/s)
million gallons per day (Mgal/d)	4.381×10^{-2}	cubic meter per second
	4.381×10^{1}	cubic decimeter per second (dm^3/s)
	Mass	
ton, short (2,000 lb)	9.072×10^{-1}	megagram (Mg) or metric ton

Temperature in degrees Celsius (°C) may be converted to degrees Fahrenheit (°F) as follows:

$$°F = (1.8 \times °C) + 32$$

U.S. DEPARTMENT OF THE INTERIOR
U.S. Geological Survey
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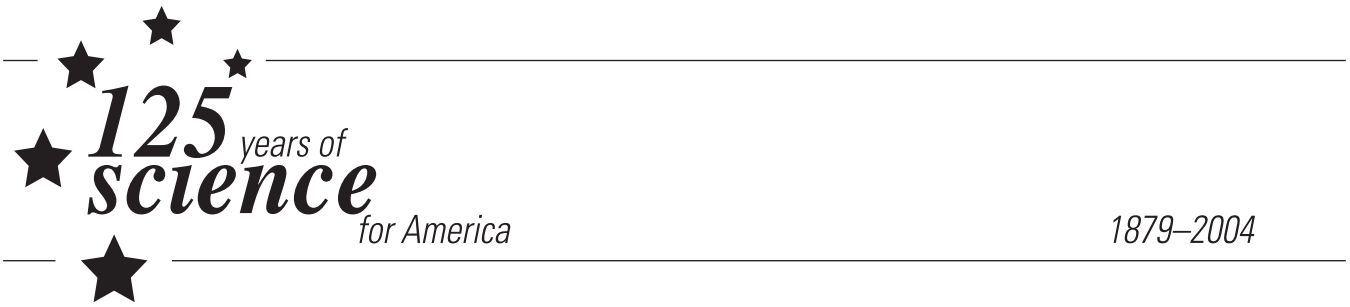
West Trenton, NJ 08628-1099

Water Resources Data, New Jersey, Water Year 2003—Volume 1. Surface-Water Data—NJ-03-1



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